

**Ceja Vista Development**  
(Dennis Chavez Blvd. / Unser Blvd.)

**Traffic Impact Study**

August 25, 2019

FINAL

**Presented to:**

New Mexico Dept. of Transportation  
District 3

City of Albuquerque  
Transportation Development

Bernalillo County  
Public Works Department

**Prepared for:**

Westpac New Mexico, LLC  
6330 Riverside Plaza Ln. Suite 230  
Albuquerque, NM 87120



A handwritten signature in blue ink that reads "Terry O. Brown".

Terry O. Brown P.E.  
P.O. Box 92051  
Albuquerque, NM 87199  
505 · 883 · 8807

# Agency Letters of Comment and Consultant Responses

## *New Mexico Department of Transportation*



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Date: December 28, 2018  
TO: Terry Brown, P.E.  
FROM: Margaret Haynes, NMDOT Assistant District 3 Traffic Engineer  
SUBJECT: Ceja Vista Development Traffic Impact Study  
South of NM 500 from 98<sup>th</sup> to Unser  
Albuquerque, Bernalillo County, New Mexico

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A handwritten signature in blue ink, appearing to be "MHA", is written over the "FROM:" line of the memo.

The NMDOT received the TIS dated September 30, 2018. District Three and Traffic Technical Support's comments are below.

*General comments:*

NMDOT recommends 98<sup>th</sup> Street and Unser Blvd be realigned through Ceja Vista as a true North-South route with eventual connectivity to Gun Club Rd. Furthermore, connectivity should be planned to Grace Vigil/Karol Street for future access to Gun Club via NM 45.

98<sup>th</sup> Street and Unser roadway alignments shall be defined by coordination with Bernalillo County for connectivity of the future roadway network with adjacent County Roads.

It is unclear what methodology is used for calculating queue lengths, use HCM methodology.

Provide summary of crashes for most recent 5 years of crash data for all intersections along NM 500.

Was existing signal timing used? Include those timing sheets in the appendix.

At plan development of the 98<sup>th</sup> Street signal, the developer shall initiate the development of the Signal and Lighting Agreement between the NMDOT and COA for all the signals along NM 500 that the COA currently maintains and will continue to maintain.

NMDOT supports additional partial access to help establish a roadway network and connectivity to NM 500 from Ceja Vista.

*Report Comments:*

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Page 2 – Enlarge site map, unable to read access labels.

Page 3 – Proposed developments in this area include (1) Residential development - Sunrise Village south of NM 500 on Condershire and (2) Las Estancias Development on Coors and Las Estancias.

Page 3 – Either the Study Area Conditions or the Existing Conditions Analysis needs to describe the relation of the signalized intersections in the study area. Are they coordinated? If they are coordinated then the existing conditions analysis needs to identify the green band through the system (if any) as part of the traffic analysis.

Page 4 – This development has identified phasing per the City of Albuquerque's Infrastructure List. Include write-up based on those phases and add to appendix.

Page 12 – For Gun Club/Coors, how does SBL no build yield a metered queue when full build does not during the AM peak? How is this true with Las Estancias being over 2500-feet away? Consider running additional analysis until both no build and build coincide better?

Page 13 – There were some improvements requested at the Dennis Chavez & Coors intersection associated with the with Sunrise Village development. Both developments will be responsible for building any warranted off-site improvements it warrants.

Page 13 – The eastbound approach is analyzed as having an exclusive right turn lane, yet the pavement markings show a combination through/right turn lane. There is a channelized right turn lane but it has a very short deceleration length associated with it. A dedicated eastbound right turn lane shall be installed. The full build trips alone warrant a deceleration lane.

Page 14 – The eastbound left turn is shown as having a length of 115'. It measures as about 350'.

Page 14 - The traffic analysis shows an exclusive eastbound right turn lane. The queueing chart shows no exclusive lane. As stated above, the eastbound right turn lane needs to be lengthened.

Page 14 – There are two existing eastbound through lanes but they are only dual lanes for a distance of approximately 500'. The queue for the eastbound through in the AM peak is over 600' length. These two through lanes need to extend for a distance long enough to ensure that they operate as needed.

Page 14 – The mitigated geometry for the westbound through movement is also two lanes. This will require the construction of an exclusive right turn lane as well.

Page 17 – The northbound left turn at Dennis Chavez & NM 118 is a LOS F in the AM Peak. This is not an acceptable movement. The report states that all movements are acceptable.

Page 17 – The WB left turn at Dennis Chavez & NM 118 has a v/c ratio of 1.02 in the AM Peak. This is a LOS F instead of LOS E as shown in the table.

Page 18 – There are 497 westbound left turns shown for the 2022 No Build AM peak at Dennis Chavez & NM 118 . There are only 487 westbound left turns shown in the 2022 Build Condition. It seems like they should be the same.

Page 20 – Verify proposed geometry with COA infrastructure list. Bike lanes shall be added as described.

Page 20 – It should be noted that the additional geometry added to NM 500 & 98<sup>th</sup> St, NM 500 & Unser, and NM 500 and NM 45 shall require signal improvements for potentially all approaches based on the proposed geometry.

Page 21 – The Mitigated Build Condition for the northbound right turn at Dennis Chavez & 98<sup>th</sup> St shows 2 lanes but the queuing chart shows just 1.

Page 22 –All auxiliary lanes feeding into a NMDOT facility shall meet NMDOT deceleration and taper lane lengths.

Page 23 – The Mitigated Build Condition for the northbound right turn at Dennis Chavez & Unser still results in a LOS F. A right in-right out should be considered at appropriate spacing between 98<sup>th</sup> St and Unser along Dennis Chavez. The internal circulation of the development should be designed to make the right in-right out access attractive to a large portion of the trips. That potential partial access will also require a deceleration lane and a 14' wide median along NM 500 to manage that access.

Page 24 – It should be noted that the additional geometry added to NM 500 & Unser shall require signal improvements for northbound and southbound approaches.

Page 26 – All auxiliary lanes feeding into a NMDOT facility shall meet SAMM requirements.

Page 27 - It is unclear the extents and financial responsibility of the proposed intersection improvements at NM 500 and Condershire. There are currently no planned projects for this intersection in the STIP.

Page 29 – Where is Rio Bravo Sq. Driveway? Provide map of all study intersections in the front end of the report.

Page 35 – At NM 45 and NM 500 it is noted that by 2032 no build, build and build with proposed mitigation conditions the intersection will be a LOS F in the PM peak hour.

Page 36 – At NM 500 and 118<sup>th</sup> Street it is noted that by 2032 no build and build conditions the intersection will be a LOS F in the AM peak hour.

Page 37 – At NM 500 and 98<sup>th</sup> Street it is noted that by 2032 no build and build conditions the intersection will be a LOS F and mitigated condition will be a LOS E for the AM peak hour.

Page 38 – At NM 500 and Unser it is noted that by 2032 no build, build and build with proposed mitigation conditions the intersection will be a LOS F for the AM peak hour.

Page 42 – The extent of the recommendations is not clear. Provide a typical section of the corridor improvements for each, noting existing and proposed by Ceja Vista.

Page 43 – The report identifies multiple improvements to be made at several intersections; however given the proximity of the intersections and the existence of the Hubbell Channel that is limiting the existing width of Dennis Chavez now, these improvements are more of a corridor improvement plan. A typical section should be decided upon for Dennis Chavez from 118<sup>th</sup> St to Coors and that should be typical section for the entire corridor instead of just widening at intersections. This would also require widening of the Hubbell Channel bridge. The report

proposes a phased improvement plan; however this might be difficult due to the existing capacity constraints on Dennis Chavez currently.

CC:

Nancy Perea, NMDOT

Brad Julian, NMDOT

Julie Luna, BC

Bobby Baker, BC

Racquel Michel, COA

Ernest Armijo, COA

Tim Brown, COA

Monday, August 26, 2019

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**  
New Mexico Department of Transportation  
7500 Pan American Freeway NE  
P. O. Box 91750  
Albuquerque, NM 87199

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

Dear Margaret:

I am in receipt of your December 28, 2018 letter of comments regarding the proposed DRAFT Ceja Vista Development Master Plan Traffic Impact Study and have revised the FINAL Traffic Impact Study to address your comments as follows:

**General Comments:**

***Comment:** NMDOT recommends 981h Street and Unser Blvd be realigned through Ceja Vista as a true North-South route with eventual connectivity to Gun Club Rd. Furthermore, connectivity should be planned to Grace Vigil/Karol Street for future access to Gun Club via NM 45.*

**Response:** The alignments of both 98<sup>th</sup> St. and Unser Blvd. are in compliance with the Mid-Region Council of Governments' Futures 2040 Metropolitan Transportation Plan (2040 Long Range Roadway System) map. To deviate from it as you have suggested would require an amendment to the Futures 2040 Map.

***Comment:** 98th Street and Unser roadway alignments shall be defined by coordination with Bernalillo County for connectivity of the future roadway network with adjacent County Roads.*

**Response:** Same as previous response.

***Comment:** It is unclear what methodology is used for calculating queue lengths, use HCM methodology.*

**Response:** HCM6 methodology was used for the Final TIS.

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**

Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*Comment: Provide summary of crashes for most recent 5 years of crash data for all intersections along NM 500.*

**Response:** A crash summary was included in the TIS for the APS Atrisco Heritage Academy High School Access (2018), The results would not have changed.

*Comment: Was existing signal timing used? Include those timing sheets in the appendix.*

**Response:** Existing signal timing was used to the extent possible. When adding a fourth leg to the existing intersections of Dennis Chavez Blvd. / 98<sup>th</sup> St. and Dennis Chavez Blvd. / Unser Blvd., it was attempted to maintain existing signal timing, but the dramatic changes to the intersection required additional phases and modified signal timing. Existing signal timing sheets are included near the back of the Appendix of the Final TIS.

*Comment: At plan development of the 98<sup>th</sup> Street signal, the developer shall initiate the development of the Signal and Lighting Agreement between the NMDOT and COA for all the signals along NM 500 that the COA currently maintains and will continue to maintain.*

**Response:** Acknowledged.

*Comment: NMDOT supports additional partial access to help establish a roadway network and connectivity to NM 500 from Ceja Vista.*

**Response:** The Final Traffic Impact Study has assumed additional connectivity to Karrol St. on the east side of the development.

**Report Comments:**

*Comment: Page 2 - Enlarge site map, unable to read access labels.*

**Response:** The Site Plan has been enlarged as requested.

*Comment: Page 3 - Proposed developments in this area include (1) Residential development - Sunrise Village south of NM 500 on Condershire and (2) Las Estancias Development on Coors and Las Estancias.*

**Response:** The Final Traffic Impact Study acknowledges three developments that need to be added into the background traffic – Sunrise Village, Las Estancias, and the Atrisco Heritage Academy Access Study.



Page 3 of 7

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**  
Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

***Comment:** Page 3 - Either the Study Area Conditions or the Existing Conditions Analysis needs to describe the relation of the signalized intersections in the study area. Are they coordinated? if they are coordinated then the existing conditions analysis needs to identify the green band through the system (if any) as part of the traffic analysis.*

**Response:** Language has been added to the “Analysis of Existing Conditions” section to comply with the request.

***Comment:** Page 4 - This development has identified phasing per the City of Albuquerque's Infrastructure List. Include write-up based on those phases and add to appendix.*

**Response:** Language has been added to the “Description of Proposed Development” section to comply with the request.

***Comment:** Page 12 - For Gun Club/Coors, how does SBL no build yield a metered queue when full build does not during the AM peak? How is this true with Las Estancias being over 2500-feet away? Consider running additional analysis until both no build and build coincide better?*

**Response:** The metered queuing was reported as a result of using the Synchro method of queuing calculation in the DRAFT Traffic Impact Study. The method of calculating the 95<sup>th</sup> Percentile Queue lengths has been changed to the HCM6 method and the metered queuing flag has been eliminated.

***Comment:** Page 13 - The eastbound approach is analyzed as having an exclusive right turn lane, yet the pavement markings show a combination through/right turn lane. There is a channelized right turn lane but it has a very short deceleration length associated with it. A dedicated eastbound right turn lane shall be installed. The full build trips alone warrant a deceleration lane.*

**Response:** The analysis of Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. has been modified to comply with your request. The proposed mitigation of the intersection results in a significant improvement to the operational characteristics without the addition of an eastbound right turn lane. I do not recommend addition of the eastbound right turn lane in that it would not provide sufficient benefit to the operational characteristics of the intersection.

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**

Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*Comment: Page 14 - The eastbound left turn is shown as having a length of 115'. It measures as about 350'.*

**Response:** The queuing analysis has been relocated to Page 42 in the Horizon Year Analysis section. The length of the eastbound left turn lane has been corrected.

*Comment: Page 14 - The traffic analysis shows an exclusive eastbound right turn lane. The queueing chart shows no exclusive lane. As stated above, the eastbound right turn lane needs to be lengthened.*

**Response:** The queuing analysis has been relocated to Page 42 in the Horizon Year Analysis section. This report does not recommend constructing the eastbound right turn lane for reasons stated previously.

*Comment: Page 14 - There are two existing eastbound through lanes but they are only dual lanes for a distance of approximately 500'. The queue for the eastbound through in the AM peak is over 600' length. These two through lanes need to extend for a distance long enough to ensure that they operate as needed.*

**Response:** According to Page 42 of the Final Traffic Impact Study the 95<sup>th</sup> Percentile queue length for the eastbound thru lanes is 899 feet for the 2032 mitigated condition. Queuing will fill the two eastbound lanes for 500 feet and then spill back into the single eastbound lane west of that point. The 500 feet of existing dual eastbound thru lanes will serve to furnish the signalized intersection with the capacity as calculated. Queuing issues 500 feet west of the intersection should not affect the capacity.

*Comment: Page 14 - The mitigated geometry for the westbound through movement is also two lanes. This will require the construction of an exclusive right turn lane as well.*

**Response:** Acknowledged.

*Comment: Page 17 - The northbound left turn at Dennis Chavez & NM 118 is a LOS F in the AM Peak. This is not an acceptable movement. The report states that all movements are acceptable.*

**Response:** Analysis and language of the narrative in the Dennis Chavez Blvd. / NM 118 intersection section have been modified.

*Comment: Page 17 - The WB left turn at Dennis Chavez & NM 118 has a v/c ratio of 1.02 in the AM Peak. This is a LOS F instead of LOS E as shown in the table.*

**Response:** Acknowledged

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**

Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*Comment: Page 18 - There are 497 westbound left turns shown for the 2022 No Build AM peak at Dennis Chavez & NM 118 . There are only 487 westbound left turns shown in the 2022 Build Condition. It seems like they should be the same.*

**Response:** That discrepancy does not appear in my copy of the report, but the entire queuing table has been updated and relocated to the horizon year analysis section of the TIS.

*Comment: Page 20 - Verify proposed geometry with COA infrastructure list. Bike lanes shall be added as described.*

**Response:** The City of Albuquerque Infrastructure List does not entail infrastructure for the entirety of the Ceja Vista Development – just the initial phase. The purpose of this TIS will be to recommend the future required infrastructure for each phase.

*Comment: Page 20 - It should be noted that the additional geometry added to NM 500 & 98th St, NM 500 & Unser, and NM 500 and NM 45 shall require signal improvements for potentially all approaches based on the proposed geometry.*

**Response:** Notation has been added.

*Comment: Page 21 - The Mitigated Build Condition for the northbound right turn at Dennis Chavez & 98th St shows 2 lanes but the queuing chart shows just 1.*

**Response:** Queuing table has been completed revised and relocated to Page 48 in the Horizon Year Analysis section of the TIS. Dual northbound right turn lanes are shown in the LOS Summary Table on Page 47.

*Comment: Page 22 —All auxiliary lanes feeding into a NMDOT facility shall meet NMDOT deceleration and taper lane lengths.*

**Response:** Acknowledged.

*Comment: Page 23 - The Mitigated Build Condition for the northbound right turn at Dennis Chavez & Unser still results in a LOS F. A right in-right out should be considered at appropriate spacing between 98th St and Unser along Dennis Chavez. The internal circulation of the development should be designed to make the right in-right out access attractive to a large portion of the trips. That potential partial access will also require a deceleration lane and a 14' wide median along NM 500 to manage that access.*

**Response:** Due largely to a re-allocation of trip assignments spurred by Bernalillo County comments and consideration of the Meade Rd. and Borrego Dam Connection to Karrol St., the issue with the northbound right turn movement has been resolved.

**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**

Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*Comment: Page 24 - It should be noted that the additional geometry added to NM 500 & Unser shall require signal improvements for northbound and southbound approaches.*

**Response:** So noted.

*Comment: Page 26 - All auxiliary lanes feeding into a NMDOT facility shall meet SAMM requirements.*

**Response:** Acknowledged.

*Comment: Page 27 - It is unclear the extents and financial responsibility of the proposed intersection improvements at NM 500 and Condershire. There are currently no planned projects for this intersection in the STIP.*

**Response:** The narrative for NM 500 / Condershire has been modified.

*Comment: Page 29 - Where is Rio Bravo Sq. Driveway? Provide map of all study intersections in the front end of the report.*

**Response:** The Rio Bravo Square Driveway is located on the west side of Coors Blvd. about 500 feet north of Rio Bravo Blvd. (Dennis Chavez Blvd.). It was determined at the Scoping Meeting for this project that analysis of the Rio Bravo Sq. Driveway would be required as a part of the Study. Rio Bravo Square Driveway is labelled on the maps on Pages A-22 through A-25 of the Appendix.

*Comment: Page 35 - At NM 45 and NM 500 it is noted that by 2032 no build, build and build with proposed mitigation conditions the intersection will be a LOS F in the PM peak hour.*

**Response:** OK.

*Comment: Page 36 - At NM 500 and 118<sup>th</sup> Street it is noted that by 2032 no build and build conditions the intersection will be a LOS F in the AM peak hour.*

**Response:** Analysis of the intersection of NM 500 (Dennis Chavez Blvd.) / 118<sup>th</sup> St. has been significantly revised due to re-assignment of trips based on Bernalillo County comments.

*Comment: Page 37 - At NM 500 and 98th Street it is noted that by 2032 no build and build conditions the intersection will be a LOS F and mitigated condition will be a LOS F for the AM peak hour.*

**Response:** FINAL TIS reports that NM 500 / 98<sup>th</sup> St. will be at LOS D for the 2032 AM Peak Hour and LOS C for the 2032 PM Peak Hour.

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**Margaret Haynes, P.E., Assistant District 3 Traffic Engineer**

Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

**Comment:** *Page 38 - At NM 500 and Unser it is noted that by 2032 no build, build and build with proposed mitigation conditions the intersection will be a LOS F for the AM peak hour.*

**Response:** FINAL TIS reports that NM 500 / Unser Blvd. will be at LOS E for the 2032 AM Peak Hour and LOS E for the 2032 PM Peak Hour.

**Comment:** *Page 42 - The extent of the recommendations is not clear. Provide a typical section of the corridor improvements for each, noting existing and proposed by Ceja Vista.*

**Response:** A new table has been provided to clarify the recommendations. Typical sections will be provide by the Civil Consultant who will be performing the detailed design of the infrastructure.

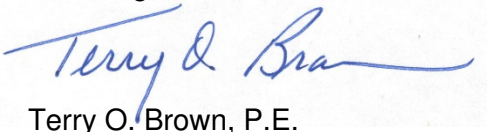
**Comment:** *Page 43 - The report identifies multiple improvements to be made at several intersections; however given the proximity of the intersections and the existence of the Hubbell Channel that is limiting the existing width of Dennis Chavez now, these improvements are more of a corridor improvement plan. A typical section should be decided upon for Dennis Chavez from 118th St to Coors and that should be typical section for the entire corridor instead of just widening at intersections. This would also require widening of the Hubbell Channel bridge. The report proposes a phased improvement plan; however this might be difficult due to the existing capacity constraints on Dennis Chavez currently.*

**Response:** There will be interim infrastructure improvements associated with each critical milestone of the development as construction development progresses. However, the interim improvements will be required to be consistent with an ultimate design of NM 500 and the intersections along NM 500.

I believe that this addresses your issues and concerns.

Please call me if you have questions.

Best Regards,

A handwritten signature in blue ink that reads "Terry O. Brown". The signature is fluid and cursive, with the first and last names being the most prominent.

Terry O. Brown, P.E.

***Bernalillo County Public Works Department***



**County of Bernalillo**  
**State of New Mexico**  
**Public Works Division**

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Date: November 28, 2018

To: Terry Brown, PE

From: Julie Luna, Bernalillo County Transportation Planner

Subject: Bernalillo County Comments on Draft Ceja Vista Traffic Impact Analysis

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## General Comments

1. Prior to addressing comments, I'm requesting another meeting. Bernalillo County comments on this draft involve fundamental issues with the TIA and I want to ensure that future comments are minor.
2. **Connections to Adjacent Development –**

The full-build out scenario needs to include all connections to the surrounding roadway network that are provided on the Ceja Vista Master Plan. See Figure 1 – Community Scale Transportation Map from Ceja Vista Master Plan, 2006 on the following page. The TIA analysis needs to take these connections into account. The site plan should be updated as well.

### **SOUTH –**

Upon completion, this development is expected to connect to Gun Club Rd. through Unser Blvd. and 98<sup>th</sup> St.

### **EAST –**

The Ceja Vista Master Plan provides three connections east. These connections can be made at Meade Rd. and right-of-way at Borrega Rd.

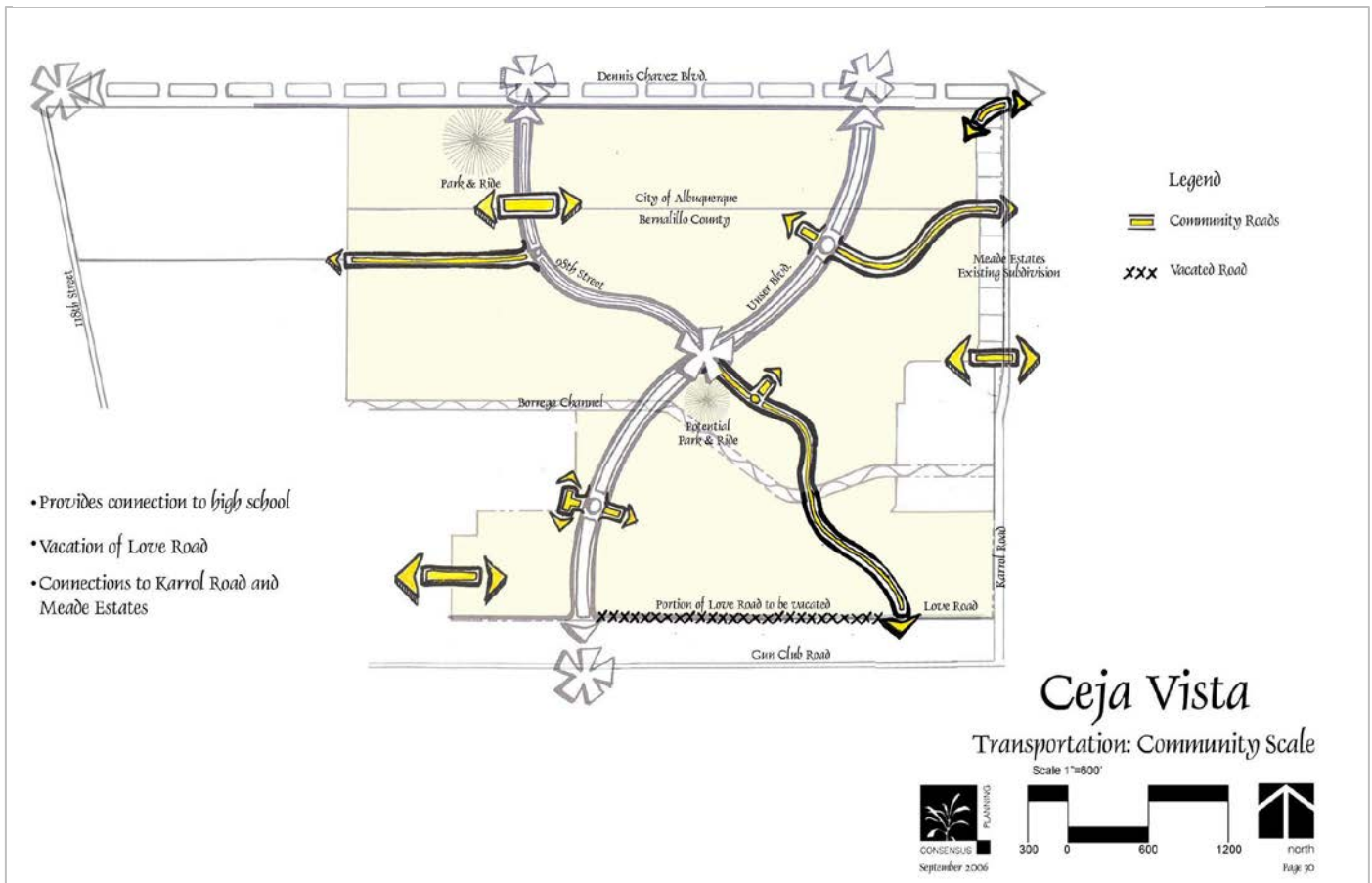
A Ceja Vista Phase I TIA was completed in 2005. There are two supplemental analyses that accompanied this TIA in 2006. The second supplemental analysis involves including the Meade Rd. connection in the analysis and an updated the site plan. The northernmost connection east was not requested or required at this time.

### **WEST –**

It is reasonable that the connections west are not included in the analysis since they more difficult. However, based on the Atrisco Heritage High School Access TIA, at a minimum, a limited form of access is expected.

Bernalillo County is proposing to APS a roadway connection south of the George I. Sanchez Collaborative School (K-8) that would run along the Borrega Channel alignment.

Figure 1: Community Scale Transportation Map from Ceja Vista Master Plan, 2006



### 3. Trips to School –

Given the location and the current network, the distribution of trips needs to take into consideration parents dropping off children at school or high school age children driving to school.

Both the high school and K-8 morning bells fall in the AM peak hour. The afternoon bells fall outside of traditional peak hours.

	AM Bell	PM Bell
Atrisco Heritage High School	7:25 AM	2:25 PM
G.I. Sanchez Bell	8:50 AM	3:50 PM

As the subdivision is currently set up, it supports AM trips to school to travel west on NM 500 to 118<sup>th</sup> St. If the trip is a drop-off, then the trip will return to the 118<sup>th</sup> and NM 500 intersection.

School districts commonly estimate enrollment based on housing. APS has indicated that they are willing to provide their methodology and include anticipated drop-off rates.



#### 4. Phasing –

The expectation that the entire subdivision will be completed in 2022 is problematic concerning when off site improvements will take place. These improvements need to include connections to Gun Club Rd. and the connections to Grace Vigil Rd./Karrol Rd.

The Ceja Vista Master Plan from 2006 includes anticipated phasing. However, given conditions in 2006, later phases were expected to have begun by 2008. This phasing may still provide a general guide.

5. **Site Plan** - The internal connectivity within the site plan is an issue. Although this issue will be addressed with the platting of the subdivision, it is worthwhile to point it out early. The local roadways provide poor connectivity to nearby destinations. For example, several lots are adjacent to commercial areas/open space/soccer complex/schools but people living in these lots would have to travel long, circuitous distances to reach these destinations. The Ceja Vista Master Plan provides a variety of connectivity expectations that are not met in the site plan provided in the TIA.

### Specific Comments

1. Page 4 Posted Speed Limit (Source BC sign inventory) –
  - o Don Felipe east of Coors Blvd is 35 mph. Further east, at the bend, it is reduced to 25 mph.
  - o Speed limit on 118<sup>th</sup> St is 35 mph.
2. Page 19 Atrisco Heritage High School – Further discussion with APS is needed. APS has indicated that they are willing to have a gate that they can control, but that they do not want a public road. Bernalillo County sees the need for a public roadway connection to 118<sup>th</sup> St.
3. Page 27 NM 500 and Condershire Intersection – Some clarification; Bernalillo County’s CIP program includes improvements to this intersection so that the south leg of Condershire meets NM 500 at a right angle. Bernalillo County does not have plans to signalize this intersection.

The trip distribution needs to reflect connections to the east. A signal warrant analysis at Condershire should be included as well.

CC:

Elias Archuleta, Bernalillo County  
Richard Meadows, Bernalillo County  
Kevin Grovet, Bernalillo County  
Margaret Haynes, NMDOT  
Nancy Perea, NMDOT  
Brad Julian, NMDOT  
Ernest Armijo, City of Albuquerque  
Racquel Michel, City of Albuquerque





***County of Bernalillo***  
***State of New Mexico***  
***Public Works Division***

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Date: January 7, 2019

To: Terry Brown, PE

From: Julie Luna, Bernalillo County Transportation Planner

Subject: Bernalillo County Comments (#2) on Draft Ceja Vista Traffic Impact Analysis

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### General Comments

1. Previously comments included a need to understand the phasing of the project. Reviewing the development with staff from Bernalillo County Planning & Zoning, we wanted to share additional information to help inform phasing of the development.

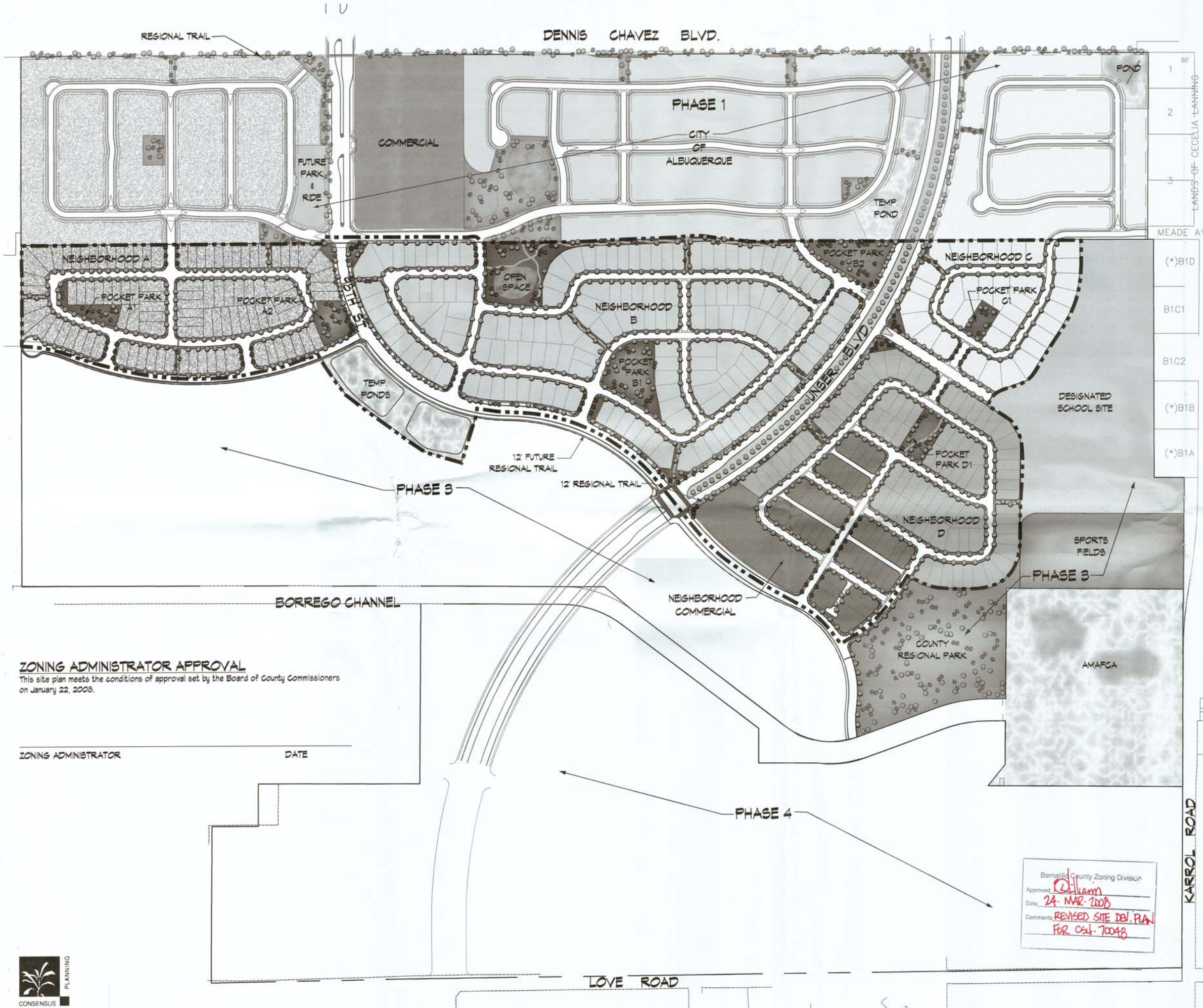
Ceja Vista in Bernalillo County falls under a Special Use Permit (SUP). This SUP identifies phases with Phase 1 in City of Albuquerque. The remaining phases are in Bernalillo County with Phase 2 immediately south and Phase 3 & 4 left open. Phase 3 & 4 will require the developer to work with Bernalillo County Planning & Zoning in order gain appropriate development rights/zoning.

The site plan from the SUP is attached.


2. Trips to school – Please provide the average dwelling unit value for the different areas in the development. APS has agreed to provide the student enrollment and potentially trips to school using this information.

CC:

Elias Archuleta, Bernalillo County  
Richard Meadows, Bernalillo County  
Kevin Grovet, Bernalillo County  
Margaret Haynes, NMDOT  
Nancy Perea, NMDOT  
Brad Julian, NMDOT  
Ernest Armijo, City of Albuquerque  
Racquel Michel, City of Albuquerque



**DEVELOPMENT CHARACTER**

-  LOW DENSITY (NEIGHBORHOOD C)
-  MID / LOW DENSITY (NEIGHBORHOOD B)
-  MID / HIGH DENSITY - DETACHED (NEIGHBORHOOD D)
-  MID / HIGH DENSITY - ALLEY LOTS (NEIGHBORHOOD D)
-  MID / HIGH DENSITY - TOWNHOUSES (NEIGHBORHOOD A)
-  COMMERCIAL
-  INSTITUTIONAL
-  PARKS / OPEN SPACE
-  POND
-  CULTURAL RESOURCE
-  PHASE 2 PLANNED DEVELOPMENT AREA BOUNDARY

# Ceja Vista

## Phase 2

### Illustrative Site Plan

Prepared for:  
**Albuquerque Rio Bravo Partners**  
 6330 Riverside Plaza Lane NW, Suite 220  
 Albuquerque, NM 87120

Prepared by:  
**Consensus Planning, Inc.**  
 302 Eighth Street NW  
 Albuquerque, NM 87102


**Mark Goodwin & Associates, PA**  
 P.O. Box 90606  
 Albuquerque, NM 87199

Bernalillo County Zoning Division  
 Approved: *[Signature]*  
 Date: 24. MAR. 2008  
 Comments: REVISED SITE DEV. PLAN FOR CSD-70048

**ZONING ADMINISTRATOR APPROVAL**  
 This site plan meets the conditions of approval set by the Board of County Commissioners on January 22, 2008.

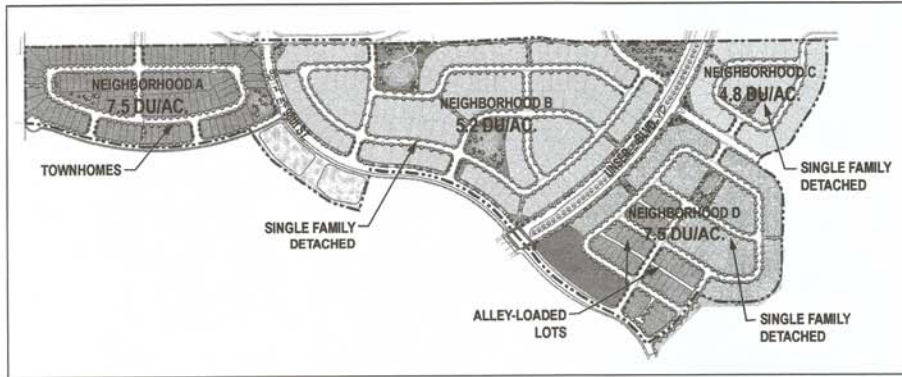
ZONING ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

Scale: 1" = 200'



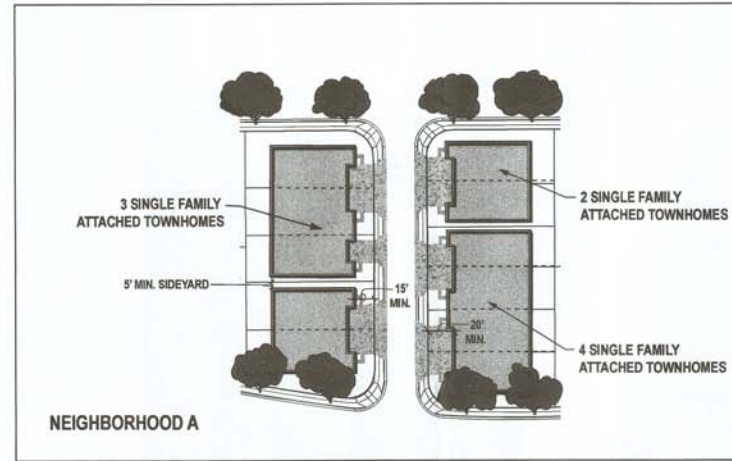
March 17, 2008 SHEET 1 of 7





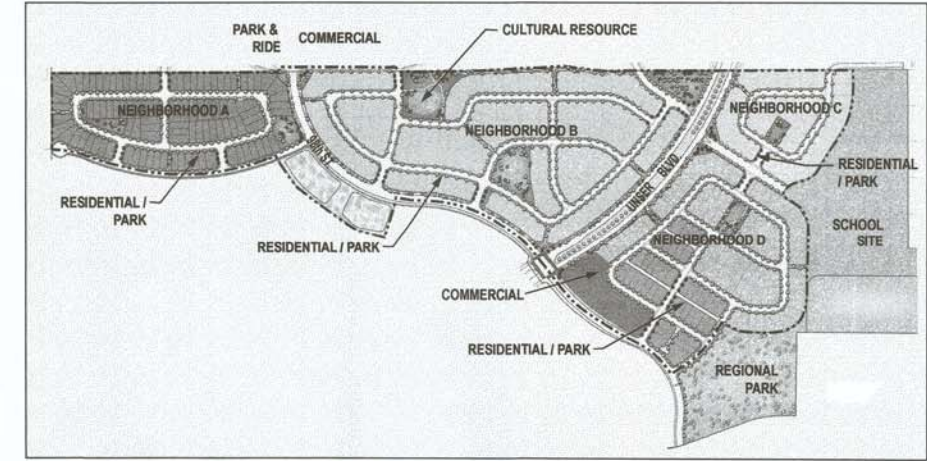
**MASTER PLAN PRINCIPLES**

- Vary Neighborhood Densities; Phase 2 Maintains an Overall Gross Density of 4.2 DU/AC.
- Vary Housing Products



**MASTER PLAN DEVELOPMENT STANDARDS**

- Typical Setbacks for Townhomes in Neighborhood A
- Varied Number of Attached Units



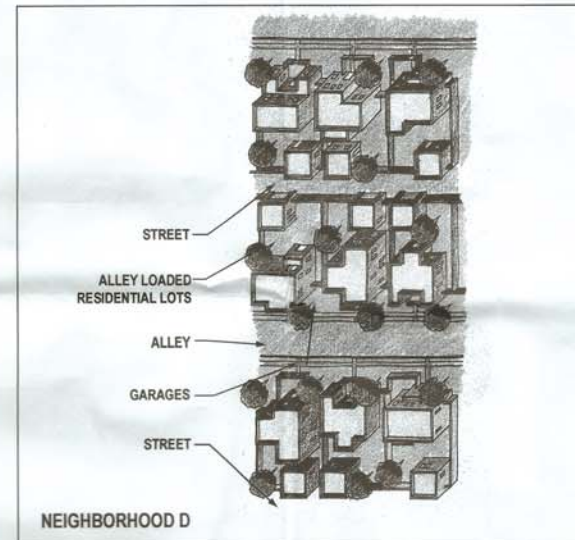
**MASTER PLAN PRINCIPLES**

- Mixed Use
- Conveniently Located Commercial Nodes; Additional Commercial in Phases 1 and 3
- Protection of Cultural Resource
- Park and Ride Facility to North Along 98th Street



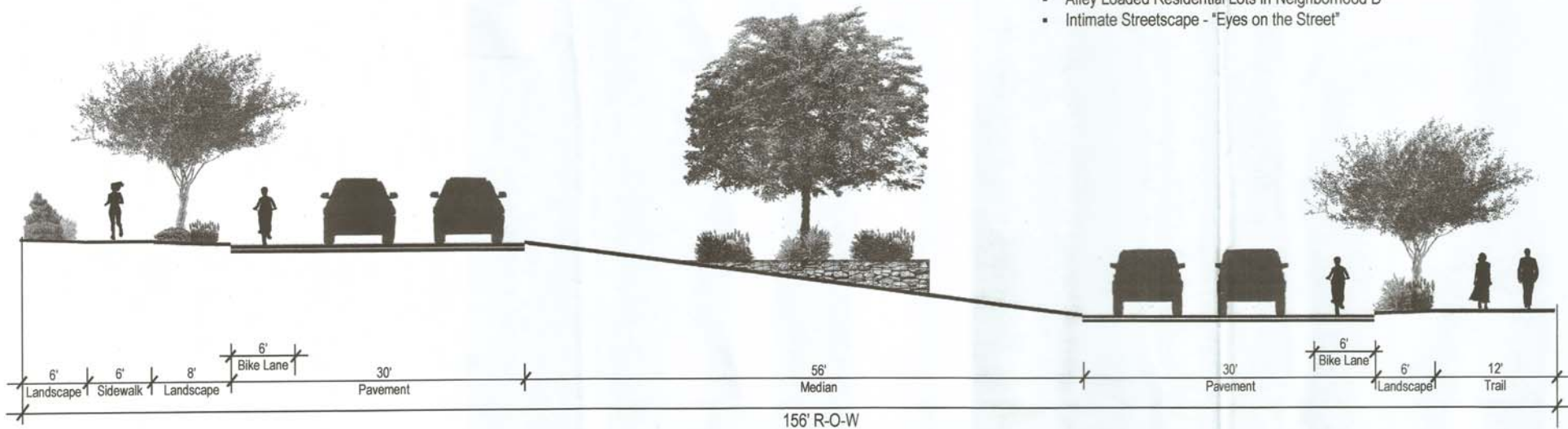
**MASTER PLAN PRINCIPLES**

- Provide Open Space and Parks
- Provide Pedestrian and Bicycle Trails and Pedestrian Connections



**MASTER PLAN DEVELOPMENT STANDARDS**

- Alley Loaded Residential Lots in Neighborhood D
- Intimate Streetscape - "Eyes on the Street"



**UNSER BOULEVARD STREET SECTION**

24 MAR 2008 *PLH*  
 CSU-70048 REVISED SITE DEVELOPMENT PLAN (COND. #11)

# Ceja Vista

## Phase 2

### Master Plan Conformance

Prepared for:  
 Albuquerque Rio Bravo Partners  
 6330 Riverside Plaza Lane NW, Suite 220  
 Albuquerque, NM 87120

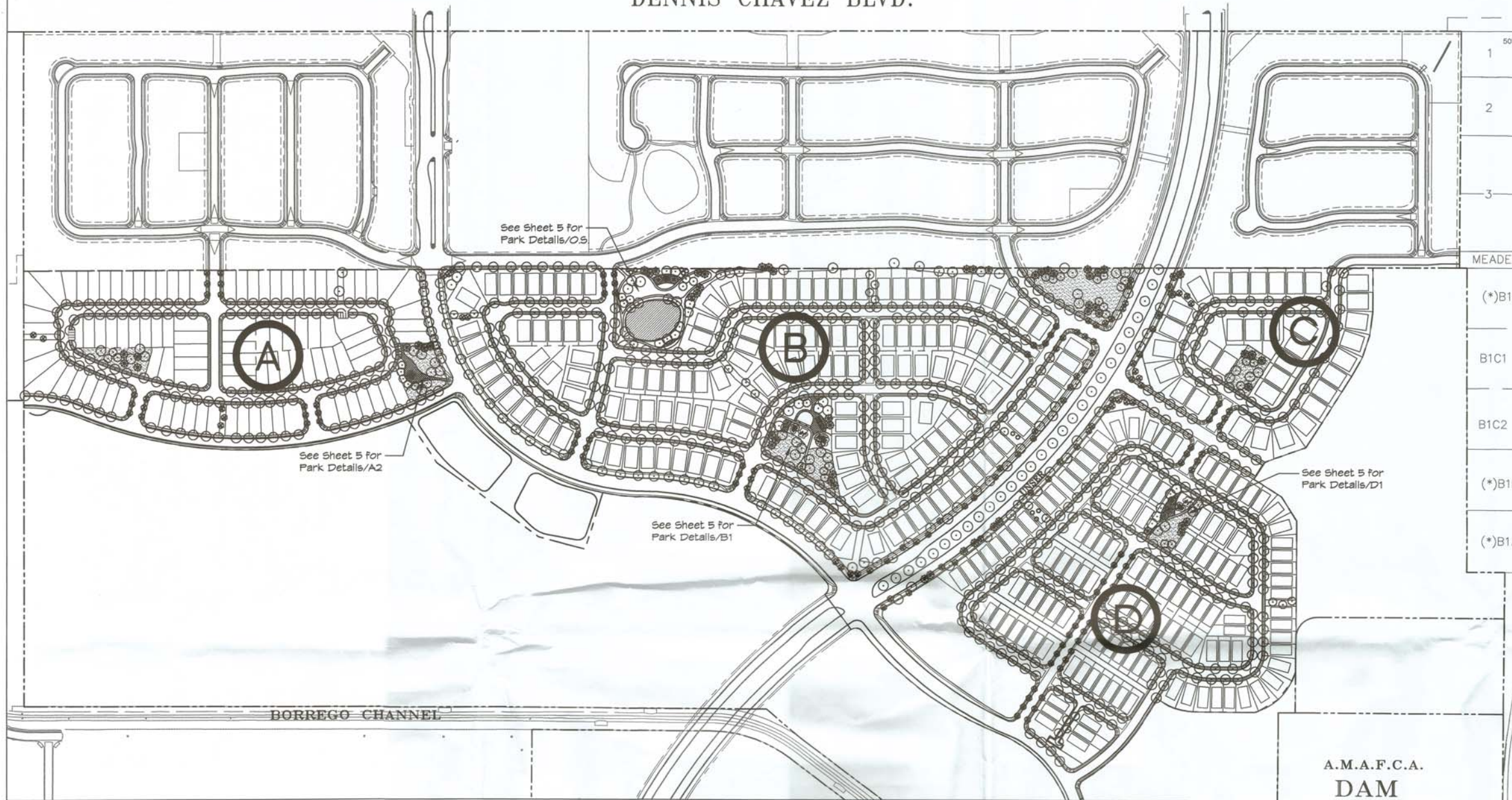
Prepared by:  
 Consensus Planning, Inc.  
 302 Eighth Street NW  
 Albuquerque, NM 87102

Mark Goodwin & Associates, PA  
 P.O. Box 90606  
 Albuquerque, NM 87199





DENNIS CHAVEZ BLVD.



GENERAL LANDSCAPE NOTES:

**MULCHES**  
All shrub planting areas shall be top dressed with a combination of Santa Fe Brown Crusher Fines, 1/8" Santa Fe Brown Rock Mulch, and 2" - 4" Santa Ana Tan Cobble.

**IRRIGATION SYSTEM**  
A fully automated irrigation system will be used to irrigate turf areas and tree, shrub, and groundcover planting areas. Points of connection for the irrigation system shall be field verified. In all cases, adequate backflow prevention assemblies shall be provided.

**MAINTENANCE RESPONSIBILITY**  
Maintenance of the landscaping and irrigation system, including those areas within the public R.O.W., Pocket Parks, and Open Space shall be the responsibility of the Ceja Vista Homeowner's Association.

**LANDSCAPE**

1. Tree locations are schematic and may vary based on actual field conditions. Tree density and location shall comply with applicable Bernalillo County ordinances.
2. All landscape areas, including buffer strips adjacent to major streets, shall contain live vegetative material covering at least 75% of the area.
3. Provision of high water use turf shall be limited to the park areas. All landscaping shall be in compliance with the County's Water Conservation Ordinance and shall meet the standard of less than 35-inches of water per acre of landscape per year.

- (\*)B1D
- B1C1
- B1C2
- (\*)B1B
- (\*)B1A

# Ceja Vista Phase 2

## Landscape Plan

Prepared for:  
**Albuquerque Rio Bravo Partners**  
6330 Riverside Plaza Lane NW, Suite 220  
Albuquerque, NM 87120

Prepared by:  
**Consensus Planning, Inc.**  
302 Eighth Street NW  
Albuquerque, NM 87102  
**Mark Goodwin & Associates, PA**  
P.O. Box 90606  
Albuquerque, NM 87199

24. MAR. 2008 [Signature]  
REVISED SITE DEVELOPMENT PLAN (CSL-70048)

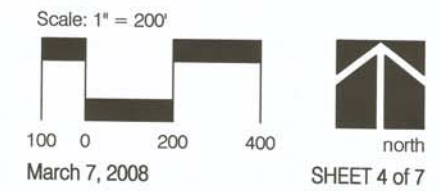
PLANT LEGEND

Symbol	Scientific Name Common Name	Size	Mature Size	Water Use
<b>Trees</b>				
<u>Deciduous Canopy Tree</u>				
○	Gleditsia triacanthos Honey Locust	2 1/2" B4B	40' ht. x 40' spr.	Medium+
○	Pistacia chinensis Chinese Pistache	2 1/2" B4B	40' ht. x 40' spr.	Medium
○	Ulmus parvifolia Lace Bark Elm	2 1/2" B4B	40' ht. x 30' spr.	Medium
<u>Medium Deciduous Tree</u>				
○	Cotinus coggygria Smoketree	2 1/2" B4B	25' ht. x 25' spr.	Medium
○	Koeleruteria paniculata Goldenrain Tree	2 1/2" B4B	25' ht. x 25' spr.	Medium
<u>Ornamental Deciduous Tree</u>				
○	Chilopsis linearis 'Luc. Ham.' Desert Willow	24" Box, 7 ht. min. (Multi-Trunk)	15' ht. x 20' spr.	Low +
○	Chilialpa tashkentensis Chilialpa	2" Cal.	30' ht. x 30' spr.	Medium
○	Vitex agnus-castus Chaste Tree (Vitex)	24" Box, 7 ht. min.	15' ht. x 20' spr.	Medium

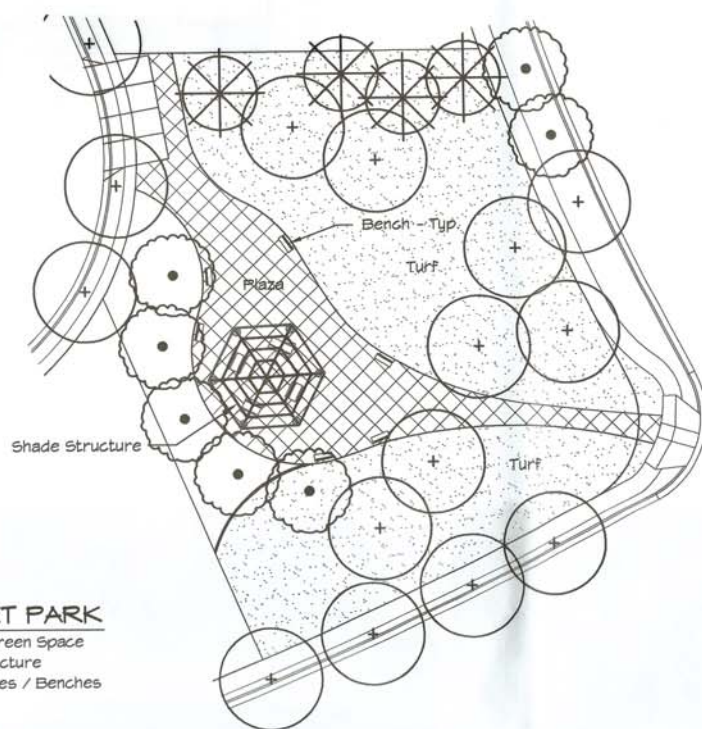
Symbol	Scientific Name Common Name	Size	Mature Size	Water Use
<u>Large Evergreen Tree</u>				
⊗	Pinus nigra Austrian Pine	7 ht. B4B	35' ht. x 25' spr.	Medium
⊗	Quercus emoryi Emory Oak	7 ht. B4B	20' ht. x 25' spr.	Medium
<u>Medium/Small Evergreen Tree</u>				
○	Cercocarpus ledifolius Mountain Mahogany	3 Gal.	12' ht. x 8' spr.	low +
○	Juniperus chinensis 'Blue Point' Blue Point Juniper	3 Gal.	8' ht. x 8' spr.	Low +
○	Juniperus monosperma One Seed Juniper	7 ht. B4B	15' ht. x 15' spr.	Low +
○	Quercus turbinella Turbinella Oak	3 Gal.	6' ht. x 10' spr.	Medium
<u>Shrubs/Groundcovers</u>				
○	Caryopteris clandonensis Blue Mist	5-Gal.	3' ht. x 3' spr.	Medium
○	Chrysothamnus nauseosus Chamisa	1-Gal.	4' ht. x 4' spr.	Low

Scientific Name Common Name	Size	Mature Size	Water Use
Artemisia filifolia Sand Sage	1-Gal.	4' ht. x 4' spr.	Low
Ericameria laricifolia 'Aguirre' Turpentine Bush	1-Gal.	2' ht. x 2' spr.	Low
Fallugia paradoxa Apache Plume	1-Gal.	4' ht. x 4' spr.	Low
Hesperaloe parviflora Red Yucca	1-Gal.	3' ht. x 3' spr.	Medium
Juniperus sabina 'Buffalo' Buffalo Juniper (Female)	5-Gal.	2' ht. x 6' spr.	Low +
Perovskia atriplicifolia Russian Sage	1-Gal.	4' ht. x 5' spr.	Medium
Potentilla fruticosa Shrubby Cinquefoil	1-Gal.	3' ht. x 3' spr.	Low +
Rhus trilobata Three-leaf Sumac	5-Gal.	4' ht. x 4' spr.	Low+
Salvia greggii Cherry Sage	1-Gal.	3' ht. x 3' spr.	Medium

- Crusher Fines Trill
- Turfgrass Seed - Park Blend

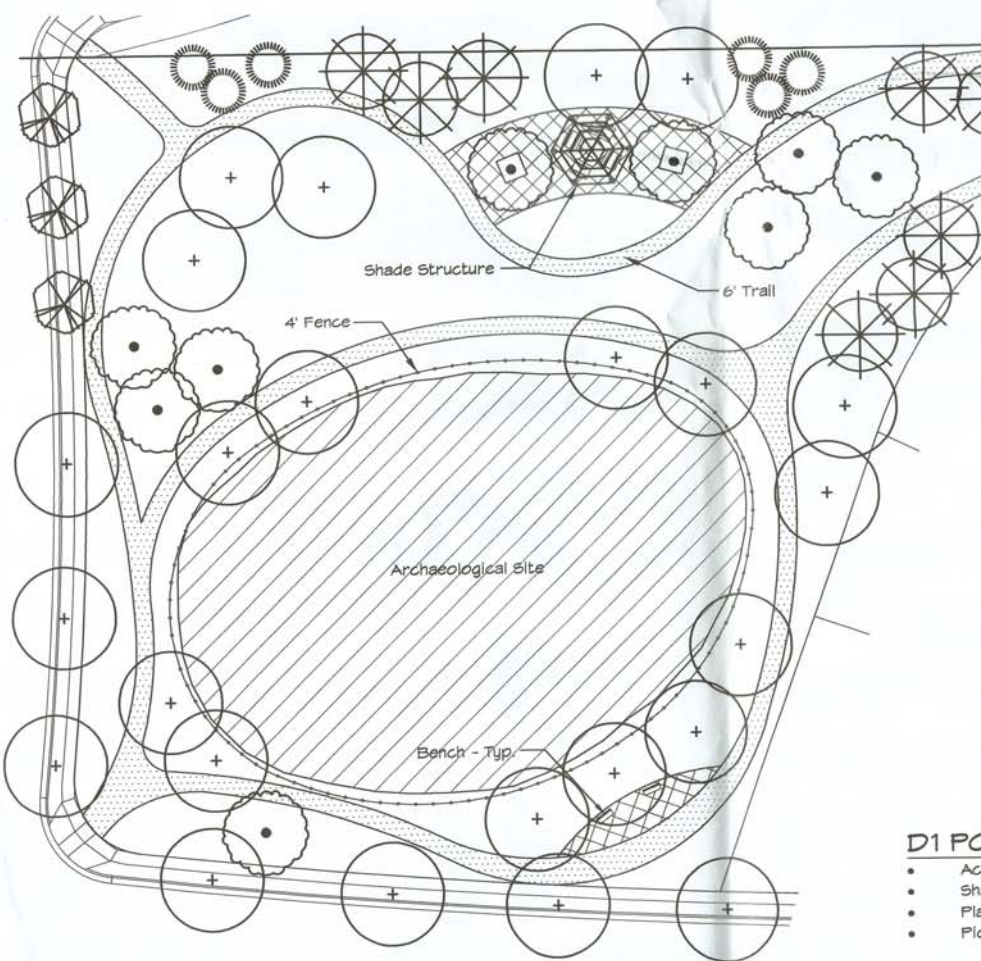


CS-1-7004B



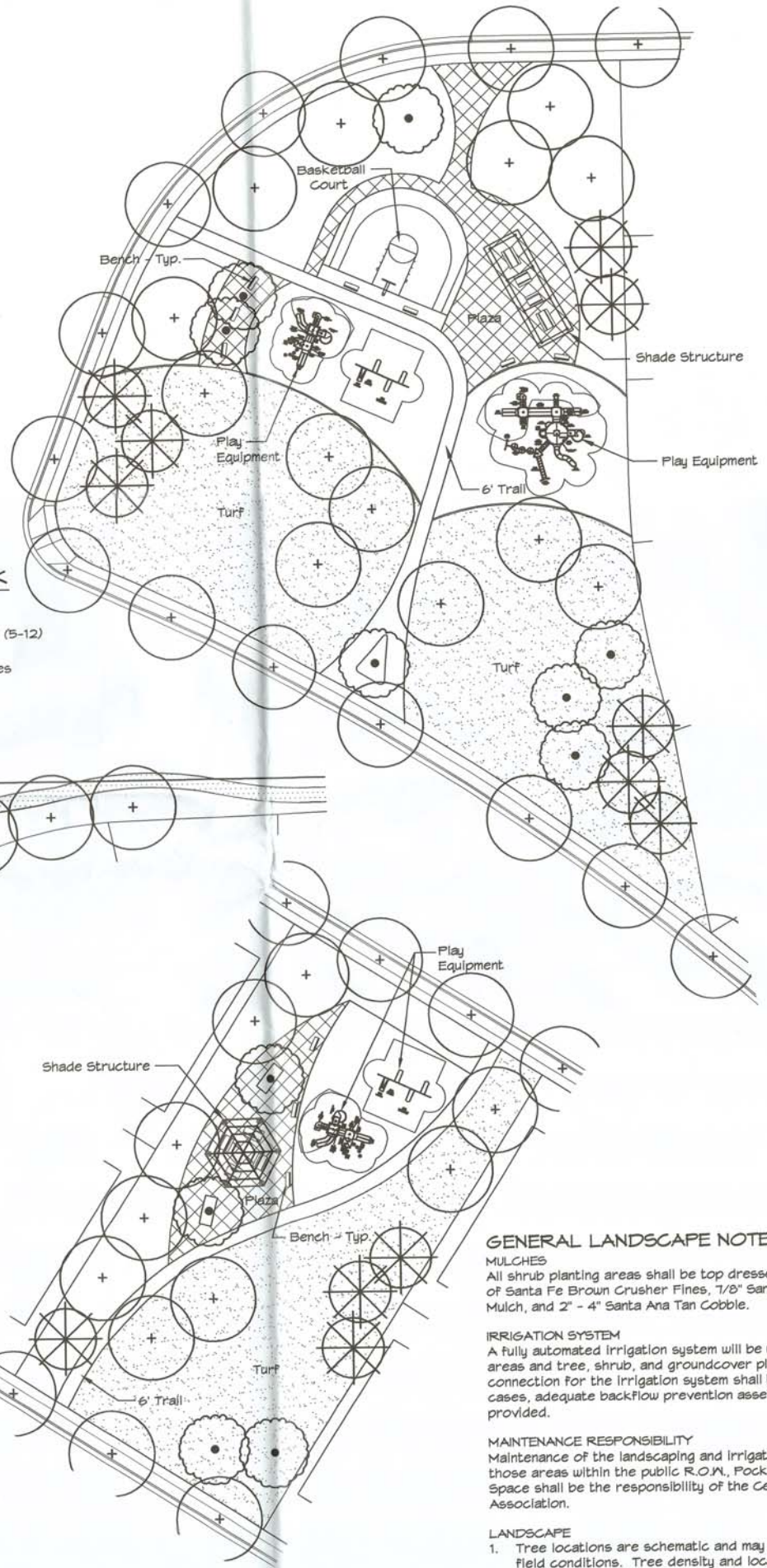
- A2 POCKET PARK**
- Passive, Green Space
  - Shade Structure
  - Picnic Tables / Benches
  - Turf Area

- B1 POCKET PARK**
- Active Recreation
  - Shade Structure
  - Play Equipment (2-5) / (5-12)
  - Half Basketball Court
  - Picnic Tables / Benches
  - Turf Area



- OPEN SPACE - ARCHAEOLOGICAL SITE**
- Passive, Green Space
  - Shade Structure
  - Picnic Tables / Benches
  - Native Turf
  - Trails

- D1 POCKET PARK**
- Active Recreation
  - Shade Structure
  - Play Equipment (2-5) - (5-12)
  - Picnic Tables / Benches



**GENERAL LANDSCAPE NOTES:**

**MULCHES**  
All shrub planting areas shall be top dressed with a combination of Santa Fe Brown Crusher Fines, 1/8" Santa Fe Brown Rock Mulch, and 2" - 4" Santa Ana Tan Cobble.

**IRRIGATION SYSTEM**  
A fully automated irrigation system will be used to irrigate turf areas and tree, shrub, and groundcover planting areas. Points of connection for the irrigation system shall be field verified. In all cases, adequate backflow prevention assemblies shall be provided.

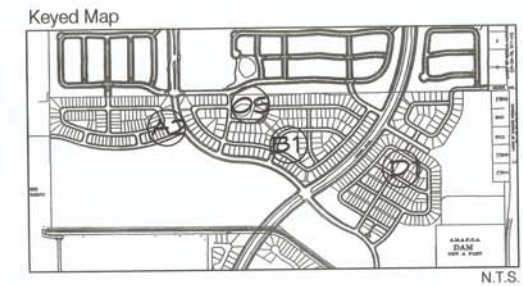
**MAINTENANCE RESPONSIBILITY**  
Maintenance of the landscaping and irrigation system, including those areas within the public R.O.M., Pocket Parks, and Open Space shall be the responsibility of the Ceja Vista Homeowner's Association.

**LANDSCAPE**

1. Tree locations are schematic and may vary based on actual field conditions. Tree density and location shall comply with applicable Bernalillo County ordinances.
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	Ulmus parvifolia Lace Bark Elm	2 1/2" B4B	40' ht. x 30' spr.	Medium
<b>Medium Deciduous Tree</b>				
○	Cotinus coggygria Smoketree	2 1/2" B4B	25' ht. x 25' spr.	Medium
	Koeleruteria paniculata Goldenrain Tree	2 1/2" B4B	25' ht. x 25' spr.	Medium
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⊗	Chilopsis linearis 'Luc. Ham.' Desert Willow	24" Box, T ht. min. (Multi-Trunk)	15' ht. x 20' spr.	Low +
	Chitalpa tashkentensis Chitalpa	2" Cal.	30' ht. x 30' spr.	Medium
	Vitex agnus-castus Chaste Tree (Vitex)	24" Box, T ht. min.	15' ht. x 20' spr.	Medium
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	Juniperus chinensis 'Blue Point' Blue Point Juniper	3 Gal.	8' ht. x 8' spr.	Low +
	Juniperus monosperma One Seed Juniper	7 ht. B4B	15' ht. x 15' spr.	Low +
	Quercus turbinella Turbinella Oak	3 Gal.	6' ht. x 10' spr.	Medium
⊗	Crusher Fines Trail			
⊗	Turfgrass Seed - Park Blend			



# Ceja Vista Phase 2

## Pocket Park Details

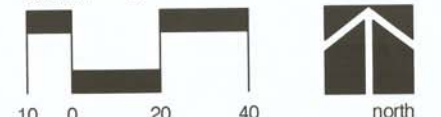
Prepared for:  
**Albuquerque Rio Bravo Partners**  
6330 Riverside Plaza Lane NW, Suite 220  
Albuquerque, NM 87120

Prepared by:  
**Consensus Planning, Inc.**  
302 Eighth Street NW  
Albuquerque, NM 87102

**Mark Goodwin & Associates, PA**  
P.O. Box 90606  
Albuquerque, NM 87199

24 MAR 2008  
CS-1-7004B  
REVISED SITE DEVELOPMENT PLAN (CS-1-7004B)

Scale: 1" = 20'



March 7, 2008

SHEET 5 of 7

Friday, August 23, 2019

**Julie Luna, Transportation Planner**  
Bernalillo County Public Works Department  
2400 Broadway Blvd. SE  
Albuquerque, NM 87102

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

Dear Julie:

I am in receipt of your November 28, 2018 and subsequent January 7, 2019 letters of comments regarding the proposed DRAFT Ceja Vista Development Master Plan Traffic Impact Study and have revised the report to address your comments as follows:

**From November 28, 2018 letter of comments:**

***Comment:*** *Connections to Adjacent Development –*

*The full-build out scenario needs to include all connections to the surrounding roadway network that are provided on the Ceja Vista Master Plan. See Figure 1 – Community Scale Transportation Map from Ceja Vista Master Plan, 2006, on the following page. The TIA analysis needs to take these connections into account. The site plan should be updated as well.*

***SOUTH –***

*Upon completion, this development is expected to connect to Gun Club Rd. through Unser Blvd. and 98<sup>th</sup> St.*

***EAST –***

*The Ceja Vista Master Plan provides three connections east. These connections can be made at Meade Rd. and right-of-way at Borrega Rd.*

*A Ceja Vista Master Phase 1 TIA was completed in 2005. There are two supplemental analyses that accompanied this TIS in 2006. The second supplemental analysis involves including the Meade Rd. connection in the analysis and an updated the site plan. The northernmost connection east was not requested or required at this time.*



**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*WEST –*

*It is reasonable that the connections west are not included in the analysis since they more difficult. However, based on the Atrisco Heritage High School Access TIA, at a minimum, a limited form of access is expected.*

*Bernalillo County is proposing to APS a roadway connection south of the George I. Sanchez Collaborative School (K-8) that would run along the Borrega Channel alignment.*

**Response:** The FINAL Traffic Impact Study incorporates two roadway connections to the east (Meade Ave. and Borrego Dam Connection) and an Unser Blvd. connection to Gun Club Rd.

**Comment:** 3. Trips to School –

*Given the location and the current network, the distribution of trips needs to take into consideration parents dropping off children at school or high school age children driving to school.*

*Both the high school and K-8 morning bells fall in the AM peak hour. The afternoon bells fall outside of traditional peak hours.*

	<i>AM Bell</i>	<i>PM Bell</i>
<i>Atrisco Heritage High School</i>	<i>7:25 AM</i>	<i>2:25 PM</i>
<i>G.I. Sanchez Bell</i>	<i>8:50 AM</i>	<i>3:50 PM</i>

*As the subdivision is currently set up, it supports AM trips to school to travel west on NM 500 to 118th St. If the trip is a drop-off, then the trip will return to the 118th and NM 500 intersection.*

*School districts commonly estimate enrollment based on housing. APS has indicated that they are willing to provide their methodology and include anticipated drop-off rates.*

**Response:** The FINAL Traffic Impact Study school trip diversions into the new trip assignments scenario for both the implementation year and the horizon year analyses based on data supplied by the Albuquerque Public School System.

**Comment:** 4. Phasing –

*The expectation that the entire subdivision will be completed in 2022 is problematic concerning when off site improvements will take place. These improvements need to include connections to Gun Club Rd. and the connections to Grace Vigil Rd./Karrol Rd.*

**Julie Luna, Transportation Planner**

Friday, August 23, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / 98<sup>th</sup> St.)**

*The Ceja Vista Master Plan from 2006 includes anticipated phasing. However, given conditions in 2006, later phases were expected to have begun by 2008. This phasing may still provide a general guide.*

**Response:** The difficulty in addressing this comment lies in the fact that it is impossible to accurately project phasing for projects of this magnitude. It seems that past experience has proven that the more reasonable approach is to assume an aggressive development schedule (such as in this Study) that would yield a conservatively high impact to the adjacent transportation system, and then provide updates to the Traffic Impact Study as development progresses for major phases until development is complete. That is the approach that I still recommend. A schedule associating certain mitigation measure improvements with specific development levels (or phases) can be negotiated early in the entitlements process and adjusted in the future as necessary.

**Comment:** 5. Site Plan –

*The internal connectivity within the site plan is an issue. Although this issue will be addressed with the plating of the subdivision, it is worthwhile to point it out early. The local roadways provide poor connectivity to nearby destinations. For example, several lots are adjacent to commercial areas/open space/soccer complex/schools but people living in these lots would have to travel long, circuitous distances to reach these destinations. The Ceja Vista Master Plan provides a variety of connectivity expectations that are not met in the site plan provided in the TIA.*

**Response:** This project has had a quite long history regarding the entitlements process beginning in 2006. I was not closely involved with the internal layout of the subdivision at the time, but I do recall that the developer worked closely with Bernalillo County Staff to work out the internal layout issues related to internal circulation and other elements of the project. The Bernalillo County Staff approved the internal layout of the Ceja Vista Master Plan in 2008 after numerous revisions.

**From January 7, 2019 letter of comments:**

**Comment:** -

1. *Previously comments included a need to understand the phasing of the project. Reviewing the development with staff from Bernalillo County Planning & Zoning, we wanted to share additional information to help inform phasing of the development.*

*Ceja Vista in Bernalillo County falls under a Special Use Permit (SUP). This SUP identifies phases with Phase 1 in City of Albuquerque. The remaining phases are in Bernalillo County with Phase 2 immediately south and Phase 3 & 4 left open.*

*Phase 3 & 4 will require the developer to work with Bernalillo County Planning & Zoning in order gain appropriate development rights/zoning.*

*The site plan from the SUP is attached.*

**Response:** As described previously, the Traffic Impact Study addresses the overall full development of the project on a conservatively aggressive schedule. It is understood that updates to the Traffic Impact Study will be required at critical development levels as the phase details become apparent.

**Comment:** -

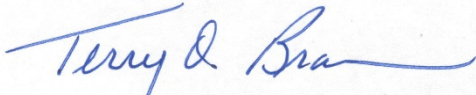
*2. Trips to school – Please provide the average dwelling unit value for the different areas in the development. APS has agreed to provide the student enrollment and potentially trips to school using this information.*

**Response:** Average dwelling unit values were provided to the Albuquerque Public Schools Planning Section so that they could supply trip data from Ceja Vista to the schools along 118<sup>th</sup> St. south of Dennis Chavez Blvd. That data was used to determine a trip assignment scenario for school diverted trips in the FINAL Traffic Impact Study.

I believe that this should address all of your comments to date.

Please call me if you have questions.

Best Regards,

A handwritten signature in blue ink that reads "Terry O. Brown". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Terry O. Brown, P.E.

attachments as noted

cc:

***City of Albuquerque Transportation Development Section***



November 14, 2018

Terry O. Brown P.E.  
PO Box 92051  
Albuquerque, NM 87199

**Re: Ceja Vista Development  
Dennis Chavez Blvd. / Unser Blvd.  
Traffic Impact Study Comments  
Engineer's Stamp dated 10-05-2018**

Dear Mr. Brown,

Based upon the information provided in your submittal received 10-05-2018, Transportation cannot approve the TIS for the above referenced project.

Prior to approval, the following items must be addressed:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. Page *ii*: On your Executive Summary Results table do not show a mitigated LOS rating of A when there was no mitigation done. This is confusing as it appears the intersection improves with no action.
2. Page *iii*: Last paragraph, 3<sup>rd</sup> line - the word *be* is missing in "...City streets to compliant...".
3. Page 9: 1<sup>st</sup> paragraph – reference to appendix pages A-34 thru A-34 should be thru page A-35.
4. Page 15: 2<sup>nd</sup> recommendation lists Duel NB LT lanes at 250' while the existing single lane is 300', why not match the existing length as this movement is at LOS E in the build mitigated and fails in the horizon?
5. Page 19: Bottom paragraph – The assumption of a connection with APS property is outdated. APS is adamant that no through traffic will be allowed. The report should be written with the assumption that this connection will not happen.
6. Page 22: Why are the duel SB LT lanes 300' as the existing lane is 600'?
7. Page 23: Recheck your numbers for the SB movements. Why does the mitigated condition in the AM have a worse LOS than the Build un-mitigated?
8. Page 24: Mitigated recommendations do not show turn lane lengths like previous intersections do. Please keep consistent.



9. Page 27: Bernalillo County has not programmed signalization of this intersection. If this is proposed as mitigation then it should be analyzed with the, also mentioned, widening of Dennis Chavez to four lanes as this does not work by itself.
10. Page 30: The limited capability of HCM6 to properly analyze this intersection is a concern as the analysis shows the SB thru and right movements failing. The statement of "It will probably operate at acceptable levels-of-service and delays" is problematic as the report does not provide any justification for this. We need to discuss how to handle this.
11. Page 31: See previous comment.
12. Page 35:
  - a. Reference the proposed 2022 mitigation.
  - b. You state that level-of-service will be acceptable, but there are multiple failing movements in the PM.
  - c. You state the City of Albuquerque does not require horizon year analysis. There is no such policy or current practice not requiring horizon year analysis, and it was requested in the scoping letter.
13. Page 37: Reference the proposed 2022 mitigation. Why is there no mitigation for failing SB left turn?
14. Page 38: Reference the proposed 2022 mitigation. Why is there no mitigation for failing EB thru and SB left?
15. Page 39: See comments for page 27.
16. Page 40: See comment c for page 35.
17. Page 41: Why is there no mitigation for EB and WB left turns?

Once corrections are complete, along with any comments from Bernalillo County and NMDOT, resubmit along with a completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. For digital submittal please submit to [PLNDRS@cabq.gov](mailto:PLNDRS@cabq.gov). If you have any questions, please contact me at (505) 924-3633.

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

# CITY OF ALBUQUERQUE



Sincerely,

A handwritten signature in black ink, appearing to read 'Ernest Armijo'.

Ernest Armijo P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

via: email  
C: Applicant, File

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

**Project Title:** Ceja Vista **Building Permit #:** \_\_\_\_\_ **City Drainage #:** PO90002F  
**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_  
**Legal Description:** \_\_\_\_\_  
**City Address:** Dennis Chavez Blvd. / Unser Blvd.

**Engineering Firm:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** Westpac New Mexico LLC **Contact:** Bill Allen / Mike Adams  
**Address:** 6200 Riverside Plaza Lane Suite 220, Albuquerque, NM 87120  
**Phone#:** 505-440-7262 **Fax#:** \_\_\_\_\_ **E-mail:** ballen@westpacnm.com

**Architect:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Other Contact:** Terry O. Brown, P.E. **Contact:** Terry Brown  
**Address:** P. O. Box 92051, Albuquerque, NM 87199  
**Phone#:** 505-883-8807 **Fax#:** N/A **E-mail:** tobe@swcp.com

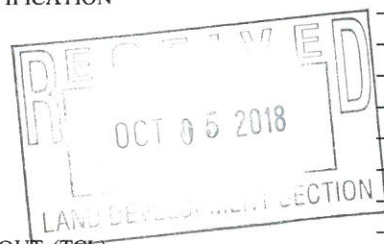
Check all that Apply:

- DEPARTMENT:**  
 HYDROLOGY/ DRAINAGE  
 TRAFFIC/ TRANSPORTATION  
 MS4/ EROSION & SEDIMENT CONTROL

- CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:**  
 BUILDING PERMIT APPROVAL  
 CERTIFICATE OF OCCUPANCY

- TYPE OF SUBMITTAL:**  
 ENGINEER/ ARCHITECT CERTIFICATION  
 CONCEPTUAL G & D PLAN  
 GRADING PLAN  
 DRAINAGE MASTER PLAN  
 DRAINAGE REPORT  
 CLOMR/LOMR  
 TRAFFIC CIRCULATION LAYOUT (TCL)  
 TRAFFIC IMPACT STUDY (TIS)  
 EROSION & SEDIMENT CONTROL PLAN (ESC)  
 OTHER (SPECIFY) \_\_\_\_\_

- PRELIMINARY PLAT APPROVAL  
 SITE PLAN FOR SUB'D APPROVAL  
 SITE PLAN FOR BLDG. PERMIT APPROVAL  
 FINAL PLAT APPROVAL  
 SIA/ RELEASE OF FINANCIAL GUARANTEE  
 FOUNDATION PERMIT APPROVAL  
 GRADING PERMIT APPROVAL  
 SO-19 APPROVAL  
 PAVING PERMIT APPROVAL  
 GRADING/ PAD CERTIFICATION  
 WORK ORDER APPROVAL  
 CLOMR/LOMR  
 PRE-DESIGN MEETING  
 OTHER (SPECIFY) \_\_\_\_\_



IS THIS A RESUBMITTAL?:  Yes  No

DATE SUBMITTED: 10/05/2018 By: Terry O. Brown

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_



Monday, August 26, 2019

**Ernest Armijo, P.E.**, Traffic Engineer  
Transportation Development Section  
Planning Department  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, NM 87102

**Re: Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.)**

Dear Ernest:

I am in receipt of your letter of comments dated November 14, 2019 regarding the Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.). Transmitted herewith is the FINAL Traffic Impact Study for the Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.) for your review and approval. The Traffic Impact Study has been amended to address your comments as follows:

***Comment:*** 1. Page ii: On your Executive Summary Results table do not show a mitigated LOS rating of A when there was no mitigation done. This is confusing as it appears the intersection improves with no action.

**Response:** The Executive Summary Results table has been totally reformatted which I believe resolves your concern.

***Comment:*** 2. Page iii: Last paragraph, 3rd line - the word be is missing in "...City streets to compliant...".

**Response:** Correction made.

***Comment:*** 3. Page 9: 1st paragraph — reference to appendix pages A-34 thru A-34 should be thru page A-35.

**Response:** Appendix has changed significantly. All Appendix page references will be checked and verified.

Page 2 of 4  
Ernest Armijo, P.E., Traffic Engineer  
Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.)**

*Comment: 4. Page 15: 2nd recommendation lists Duel NB LT lanes at 250' while the existing single lane is 300', why not match the existing length as this movement is at LOS E in the build mitigated and fails in the horizon?*

**Response:** Appendix has changed significantly. All Appendix page references will be checked and verified.

*Comment: 5. Page 19: Bottom paragraph — The assumption of a connection with APS property is outdated. APS is adamant that no through traffic will be allowed. The report should be written with the assumption that this connection will not happen.*

**Response:** The FINAL Traffic Impact Study has been revised to address this issue. (See Implementation Year and Horizon Year Analysis Sections for the intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St.).

*Comment: 6. Page 22: Why are the duel SB LT lanes 300' as the existing lane is 600'?*

**Response:** The FINAL Traffic Impact Study has been revised to address this issue. Recommendations have been revised to meet New Mexico Department of Transportation's *State Access Management Manual* criteria.

*Comment: 7. Page 23: Recheck your numbers for the SB movements. Why does the mitigated condition in the AM have a worse LOS than the Build un-mitigated?*

**Response:** The mitigated conditions for the intersections of Dennis Chavez Blvd. / 98<sup>th</sup> St. and Dennis Chavez Blvd. / Unser Blvd. both optimize the signal timing / phasing for their respective signals. This is due to the fact that by adding a south leg to the intersections will require additional phases for northbound and / or southbound left turn movements. An attempt was made for the BUILD Condition to maintain the existing signal timings for the tee intersections. The results were not favorable.

*Comment: 8. Page 24: Mitigated recommendations do not show turn lane lengths like previous intersections do. Please keep consistent.*

**Response:** The FINAL Traffic Impact Study has been revised to address this issue. The FINAL TIS contains a table that summarizes the recommendations for Rio Bravo Blvd. / 98<sup>th</sup> St. and for Rio Bravo / Unser Blvd. that both contain recommended auxiliary lane lengths.

*Comment: 9. Page 27: Bernalillo County has not programmed signalization of this intersection. If this is proposed as mitigation then it should be analyzed with the, also mentioned, widening of Dennis Chavez to four lanes as this does not work by itself.*

**Response:** The FINAL Traffic Impact Study has been corrected to address this issue.

**Re: Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.)**

*Comment: 10. Page 30: The limited capability of HCM6 to properly analyze this intersection is a concern as the analysis shows the SB thru and right movements failing. The statement of "It will probably operate at acceptable levels-of-service and delays" is problematic as the report does not provide any justification for this. We need to discuss how to handle this.*

**Response:** The FINAL Traffic Impact Study applies the 2022 AM and PM Peak Hour NO BUILD and BUILD volume forecasts to the intersection to see if it meets the Signal Warrant based on the MUTCD Peak Hour Warrant. If it does not meet the Peak Hour Warrant, then it probably does not meet the other pertinent signal warrants. The Analysis demonstrated that the Peak Hour Warrant was not met for any condition in 2022 assuming full development of Ceja Vista. It is my opinion that there are no other possible mitigation measures short of signaling the intersection when the warrants are met.

*Comment: 11. Page 31: See previous comment.*

**Response:** See previous response.

*Comment: 12. Page 35:*

- a. Reference the proposed 2022 mitigation.*
- b. You state that level-of-service will be acceptable, but there are multiple failing movements in the PM.*
- c. You state the City of Albuquerque does not require horizon year analysis. There is no such policy or current practice not requiring horizon year analysis, and it was requested in the scoping letter.*

**Response:** In stating that the level-of-service will be acceptable, I mean that the mitigation measures proposed have restored the intersection level-of-service / delay to better than what existed for the 2032 NO BUILD Conditions. Mitigation measures for failing intersections are only required to restore the intersection to equal or better condition than the failing NO BUILD Condition. I have added language to the narrative for that intersection to clarify what is meant by "level-of-service will be acceptable..."

*Comment: 13. Page 37: Reference the proposed 2022 mitigation. Why is there no mitigation for failing SB left turn?*

**Response:** There was no recommendation for the SB left turn lane due to the fact that the Ceja Vista Developer has provided sufficient infrastructure at the intersection to reduce the delays for the SB Left Turn movement from 911 seconds for the NO BUILD Condition to 113 seconds for the BUILD (Mitigated) Condition. The Ceja Vista Developer has significantly improved the conditions for the SB Left Turn movement.

Page 4 of 4  
Ernest Armijo, P.E., Traffic Engineer  
Monday, August 26, 2019

**Re: Ceja Vista Development (Dennis Chavez Blvd. / Unser Blvd.)**

*Comment: 14. Page 38: Reference the proposed 2022 mitigation. Why is there no mitigation for failing EB thru and SB left?*

**Response:** The proposed mitigation at the intersection restore the intersection to better than the 2032 NO BUILD Condition for both the AM Peak Hour and the PM Peak Hour. This is considered to be acceptable mitigation for intersections that fail or partially fail during the NO BUILD Condition.

*Comment: 15. Page 39: See comments for page 27.*

**Response:** See response for page 27.

*Comment: 16. Page 40: See comment c for page 35.*

**Response:** See response for page 35.

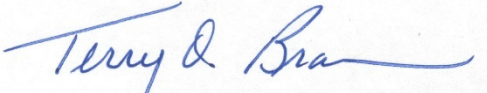
*Comment: 17. Page 41: Why is there no mitigation for EB and WB left turns?*

**Response:** Failing left turns from the side streets are a common problem in the City of Albuquerque due to the fact that it is the largest metropolitan area in the State. Possible mitigation measures include converting the intersection to a roundabout (which is not feasible on this high-speed arterial) or signalization (signal warrant cannot be met for this intersection yet), or significant widening of the main street (which disrupts the linear alignment of the existing arterial). None of these options are desirable, so as with numerous side street and driveway situations in the Albuquerque Metro area, we acknowledge the problem and drivers who reside here learn to live with longer delays in such cases.

I think this should address the concerns and questions that you have raised in your comments.

Please call me if you have questions.

Best Regards,



Terry O. Brown, P.E.

**Ceja Vista Development  
(Dennis Chavez Blvd. / 98th St.)  
Traffic Impact Study**

**Executive Summary**

The purpose of this study is to evaluate the transportation conditions before and after implementation of the proposed Ceja Vista Development, determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared to meet the requirements of the City of Albuquerque, the Bernalillo County Public Works Dept., and the New Mexico Department of Transportation (NMDOT) associated with the review and approval of the Ceja Vista Development.

The proposed development is located south of Dennis Chavez Blvd. in the vicinity of Unser Blvd. & 98th St. The study area includes the intersections of Gun Club Rd. / Coors Blvd., Dennis Chavez Blvd. / Coors Blvd., Blake Rd. / Unser Blvd., Dennis Chavez Blvd. / 118<sup>th</sup> St., Dennis Chavez Blvd. / 98<sup>th</sup> St., Dennis Chavez Blvd. / Unser Blvd., Dennis Chavez Blvd. / Condershire Dr., Rio Bravo Sq. / Coors Blvd., Gibson Blvd. / 98<sup>th</sup> St., Blake Rd. / 98<sup>th</sup> St., Gun Club Rd. / Karrol St., Don Felipe Rd. / Coors Blvd. The fourth leg of Dennis Chavez Blvd. / 98<sup>th</sup> St. and Dennis Chavez Blvd. / Unser Blvd. will constitute the access off of the arterial road system for this project.

The proposed development is to be developed as 1,393 single family residential units, 540 apartment units & 120,000 S.F. of retail commercial uses. In addition, there will be almost 23 acres of park / open space & a park & ride lot w/ 260 spaces. The anticipated implementation year for this site is the year 2022. A horizon year of 2032 will be analyzed as well. According to the Institute of Traffic Engineers' (ITE) trip generation rates, the weekday AM Peak Hour period is anticipated to generate approximately 475 entering trips and 1,018 exiting trips. During the weekday PM Peak Hour period, it is anticipated that it will generate approximately 1,305 entering trips and 959 exiting trips.

The development will be accessed via two proposed public roadways for this parcel of land, the fourth leg of 98<sup>th</sup> St. and Unser Blvd. on Dennis Chavez Blvd. Secondary access will be connections to the south to Gun Club Rd. and connections to the east to Karrol St.

Analysis results by analysis year are included in the following table:

## Executive Summary Results Table

			2022 Conditions		2032 Conditions	
Intersection No. / Name	Signalization	Case	AM Peak	PM Peak	AM Peak	PM Peak
1 - Gun Club Rd. / Coors Blvd.	Signalized	NO BUILD	C - 27.8	C - 20.1	C - 30.5	C - 22.1
		BUILD	C - 28.0	C - 20.8	C - 30.8	C - 22.8
2 - Dennis Chavez Blvd. / Coors Blvd.	Signalized	NO BUILD	D - 37.4	F - 80.6	F - 82.9	F - 96.0
		BUILD	F - 100.3	F - 255.9	F - 173.5	F - 268.5
		MIT.	C - 33.6	E - 59.6	D - 41.6	E - 68.9
3 - Blake Rd. / Unser Blvd.	Signalized	NO BUILD	C - 30.2	C - 23.6	D - 36.2	C - 28.7
		BUILD	C - 29.6	C - 23.6	C - 34.4	C - 29.6
4 - Dennis Chavez Blvd. / 118th St.	Signalized	NO BUILD	D - 46.9	E - 74.9	F - 83.3	D - 48.7
		BUILD	F - 127.4	F - 315.2	F - 162.2	F - 191.6
		MIT.	E - 55.6	F - 200.6	F - 95.2	F - 169.1
5 - Dennis Chavez Blvd. / 98th St.	Signalized	NO BUILD	F - 274.2	D - 35.2	F - 532.5	C - 33.3
		BUILD	F - 322.7	F - 364.6	F - 289.9	F - 80.5
		MIT.	D - 48.1	C - 29.5	D - 54.8	C - 21.4
6 - Dennis Chavez Blvd. / Unser Blvd.	Signalized	NO BUILD	E - 65.9	D - 48.9	F - 182.5	F - 175.8
		BUILD	F - 902.1	F - 367.5	F - 1417	F - 638.6
		MIT.	D - 41.3	C - 28.2	E - 78.6	E - 68.8
7 - Dennis Chavez Blvd. / Condershire	Unsignalized	NO BUILD	F - 942	F - 999	F - 999	F - 999
		BUILD	F - 999	F - 999	F - 999	F - 999
8 - Rio Bravo Sq. Driveway / Coors Blvd.	Unsignalized	NO BUILD	C - 18.1	F - 77.0	C - 19.5	F - 107.0
		BUILD	C - 24.4	F - 277.0	D - 26.5	F - 405.0
9 - Gibson Blvd. / 98th St.	Unsignalized	NO BUILD	B - 14.2	C - 20.2	C - 18.1	C - 20.2
		BUILD	C - 18.0	E - 49.9	C - 22.5	F - 97.8
10. Blake Rd. / 98th St.	Unsignalized	NO BUILD	B - 11.7	C - 20.2	C - 16.1	C - 20.8
		BUILD	B - 14.6	D - 26.3	C - 22.2	F - 58.8
11. Gun Club Rd. / Karrol St.	Unsignalized	NO BUILD	A - 9.3	A - 9.5	A - 9.4	A - 9.8
		BUILD	A - 9.5	B - 10.0	A - 9.6	B - 10.3
12. Don Felipe Rd. / Coors Blvd.	Unsignalized	NO BUILD	C - 17.3	C - 21.8	C - 19.3	C - 24.4
		BUILD	C - 18.6	C - 24.3	C - 20.8	D - 27.3
13. Gun Club Rd. / Unser Blvd.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	A - 8.9	A - 9.1	8.9	9.2
14. Borrego Dam / Karrol St.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	A - 9.4	B - 10.1	9.4	10.1
15. Meade Ave. / Karrol St.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	A - 9.4	B - 10.1	9.4	10.1

## Summary of Deficiencies, Anticipated Impacts, and Recommendations

The 2022 analysis did not determine any significant deficiencies in the adjacent transportation system provided that the following Recommendations are implemented.

### Recommendations:

#### 2022 Implementation Year –

**Gun Club Rd. / Coors Blvd.** – No recommendation.

**Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd.** – Construct Dual EB LT lanes, Dual WB Thru lanes, Dual NB LT Lanes, and a SB RT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Blake Rd. / Unser Blvd.** – No recommendation.

**Dennis Chavez Blvd. / 118<sup>th</sup> St.** – No recommendation.

**Dennis Chavez Blvd. / 98<sup>th</sup> St.** – Construct dual EB / WB Thru lanes and one WB LT Lane. Modify the north leg of the intersection to implement dual SB LT lanes, dual SB Thru lanes, and a SB RT lane. Construct the south leg of the intersection to implement dual NB RT lanes, dual NB Thru lanes, and a NB LT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Dennis Chavez Blvd. / Unser Blvd.** – Construct dual EB / WB Thru lanes, Dual WB LT lanes, and an eastbound right turn lane. Modify the north leg of the intersection to implement dual SB LT lanes, dual SB Thru lanes, and a SB RT lane. Construct the south leg of the intersection to implement dual NB RT lanes, dual NB thru lanes, and a NB LT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Dennis Chavez Blvd. / Condershire Dr.** – No recommendation.

**Rio Bravo Sq. Driveway / Coors Blvd.** – No recommendation.

**Gibson Blvd. / 98<sup>th</sup> St.** – No recommendation.

**Blake Rd. / 98<sup>th</sup> St.** – No recommendation.

**Gun Club Rd. / Karrol St.** – No recommendation.

**Don Felipe Rd. / Coors Blvd.** – No recommendation.

Lengths of left and right turn auxiliary lanes on State Highways to be compliant with the New Mexico Department of Transportation's State Access Management Manual, current edition. Lengths of left and right turn auxiliary lanes on City streets to be compliant with the City of Albuquerque's Development Process Manual, current edition. Lengths of left and right turn auxiliary lanes on County Streets to be compliant with the New Mexico Department of Transportation's State Access Management Manual, current edition. Calculated queue lengths (95<sup>th</sup> Percentile confidence level) are defined on Pages A-263 through A-288 in the Appendix of this report. Specific recommended auxiliary lane lengths at the intersections of Dennis Chavez Blvd. / 98<sup>th</sup> St. and Dennis Chavez Blvd. / Unser Blvd. are defined on Pages 22 and 26 of this

report. Recommended auxiliary lane lengths at the offsite intersection of Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. are defined on Page 15 of this report.

**2032 Horizon Year** – No additional recommendations. Summary of Recommendations for Dennis Chavez Blvd. / Coors Blvd., Dennis Chavez Blvd. / 98<sup>th</sup> St., and Dennis Chavez Blvd. / Unser Blvd. with required lane lengths are summarized in the following tables:

<b>Summary of Recommendations for: Dennis Chavez Blvd. (NM St. Rd. 500) / Coors Blvd.</b>		
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
Add Second Eastbound Left Turn Lane	550	(400' + 150') long including 150 feet transition.
Add Second Westbound Thru Lane	500	plus transition as per MUTCD
Maintain 1 Westbound Right Turn Lane	370	370' including 150 feet transition.
Add Second NB Left Turn Lane	740	(400' + 340') long including 100 feet transition.
Construct new Southbound RT Lane	952	(370' + 582') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.

<b>Summary of Recommendations for: Dennis Chavez Blvd. (NM State Rd. 500) / 98th St.</b>		
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
1 Eastbound Left Turn Lane	525	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	450	(370' + 82') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	635	(370' + 265') long including 150 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	335	(250' + 85') long including 100 feet transition.
2 Southbound LT Lanes	900	(250 + 654') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	870	(250' + 620') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.  
Field Constraints may limit the length of lane that can be constructed.



**Summary of Recommendations for: Dennis Chavez Blvd. (NM St. Rd. 500) / Unser Blvd.**

<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
1 Eastbound Left Turn Lane	670	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	400	(370' + 26') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	1830	(370' + 265') long including 1,463 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	295	(250' + 44') long including 100 feet transition.
2 Southbound LT Lanes	1120	(250 + 870') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	425	(250' + 175') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.  
Field Constraints may limit the length of lane that can be constructed.

In consideration of the fact that this project will progress over the next several years or so with undefinable phases, it is recommended that the recommended mitigation improvements be phased as well. The developer and the appropriate governmental review agency will negotiate a phased improvement construction schedule tied to specific thresholds of the development. Also, it may be beneficial to develop a fiscal responsibility of this developer for recommended infrastructure improvements at Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. based on percentage contribution to the total volumes for each specific recommended improvement.

**Ceja Vista Development  
(Dennis Chavez Blvd. / 98th St.)  
Traffic Impact Study**

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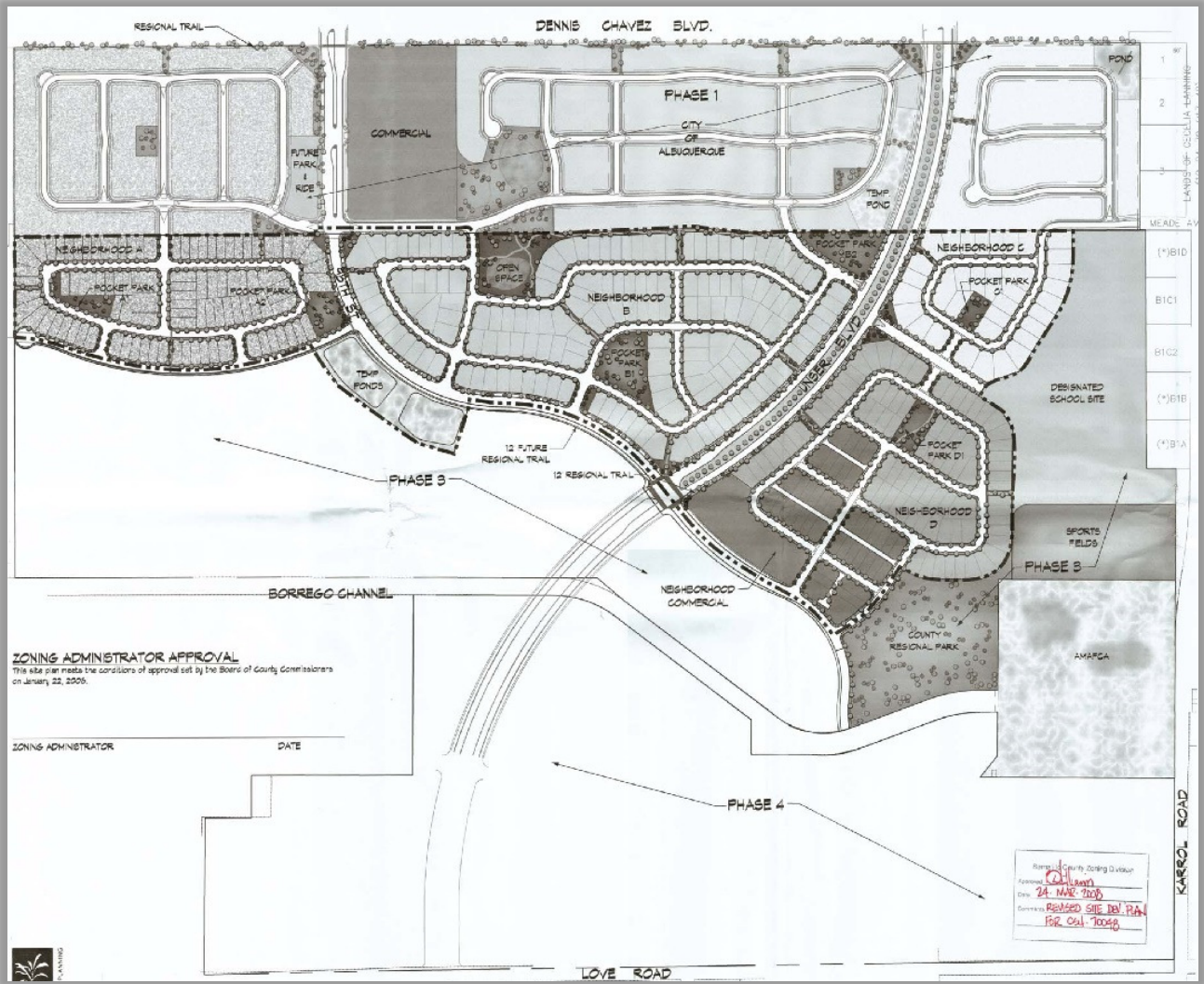
## Description of Proposed Development

The proposed project is described as 1,393 single family residential units, 540 apartment units & 120,000 S.F. of retail commercial uses south of Dennis Chavez Blvd. in the vicinity of Unser Blvd. & 98th St. The project lies partly in the city limits of Albuquerque, NM and partly in Bernalillo County. The project will affect Regional Principal Arterial Roadways (Dennis Chavez Blvd., 98<sup>th</sup> St. & Unser Blvd.) which are maintained by the New Mexico Department of Transportation. Therefore, the project will be required to comply with the requirements of the City of Albuquerque and Bernalillo County with regard to the overall development and with the requirements of the NMDOT with regard to transportation issues along these roadways.

This development will be constructed in undefined phases. This study will analyze an implementation year of 2022 and a horizon year of 2032, both assuming 100% development of the project to provide conservative analyses. In consideration of the impossibility of an accurate prediction of the phasing of this large project, this Study does not attempt to predict the phases. Instead it will evaluate an aggressive development schedule and recommend updates to the Study at critical milestones in the development process.

The development will be primarily accessed via two proposed intersections along Dennis Chavez Blvd. for this parcel of land. They will be the fourth leg of both 98<sup>th</sup> St. and Unser Blvd. Secondary access will be to Karrol St. to the east and Gun Club Rd. to the south. Secondary access is also planned via two roadway connections to Gun Club Rd. to the south (Karrol St. and Unser Blvd. extension) and two roadway connections to Karrol St. (Borrogo Dam Connection and Meade Rd.).

Following is the proposed site development plan depicting driveway (access) locations (also, see Appendix Page A-3 for a more complete version of the proposed site development plan):



## Study Area Conditions

A Traffic Impact Study Scoping Meeting was held with the City of Albuquerque Transportation staff (Racquel Michel and Ernest Armijo), NMDOT (Nancy Perea and Margaret Haynes) & Bernalillo Co. Public Works (Julie Luna). During the meeting, it was determined that the study area would include the following list of intersections to be analyzed in the Traffic Impact Study:

1. Gun Club Rd. / Coors Blvd.
2. Dennis Chavez Blvd. / Coors Blvd.
3. Blake Rd. / Unser Blvd.
4. Dennis Chavez Blvd. / 118<sup>th</sup> St.
5. Dennis Chavez Blvd. / 98<sup>th</sup> St.
6. Dennis Chavez Blvd. / Unser Blvd.
7. Dennis Chavez Blvd. / Condershire Dr.
8. Rio Bravo Sq. / Coors Blvd.
9. Gibson Blvd. / 98<sup>th</sup> St.
10. Blake Rd. / 98<sup>th</sup> St.
11. Gun Club Rd. / Karrol St.
12. Don Felipe Rd. / Coors Blvd.
13. Gun Club Rd. / Unser Blvd. extension
14. Borrego Dam / Karrol St.
15. Meade Rd. / Karrol St.

This scope of study was based on the assumption that the parcel in question would be developed as shown on the proposed site plan (See Scoping Letter on Pages A-322 through A-324 in Appendix of this report.

There are three other known land development projects in the area which need to be incorporated into the background traffic model for this study, namely Sunrise Village Subdivision, a revised driveway for the Atrisco Heritage Academy, and the remainder of Las Estancias. There are no known Transportation Improvement Program projects in the area that need to be considered in the Traffic Impact Study.

This project is served by public transit services in the area; specifically Routes #155, 198 and 222. These routes run along Coors Blvd. (155), 98th St. (198) and Rio Bravo Blvd. north on University & east on Gibson (222). See Appendix page A-282 for bus routes.

Most of the roadways are designated on the Futures 2040 Metropolitan Transportation Plan (2040 Long Range Bikeway System) as either Proposed or Existing Bicycle Routes or Paved Trails.

There are pedestrian facilities in the project area – curb and gutter and sidewalks along the roads, as well as raised medians for pedestrians and bicyclists crossing against traffic.

Blake Rd. and Don Felipe Rd. are classified as Major Collector Roadways on the Mid-Region Council of Government's Futures 2040 Long Range Roadway System Map. Don Felipe Rd. is a two-lane rural-type roadway with no raised median, curb and gutter or sidewalk. The posted speed limit along this section of road is 25 M.P.H. Blake Rd. is a divided highway with curb & gutter with some sidewalks along the developed portions of the roadway. The posted speed limit is 35 M.P.H.

Dennis Chavez Blvd., Unser Blvd. & Coors Blvd. are classified as Regional Principal Arterial Roadways on the Mid-Region Council of Government's Futures 2040 Long Range Roadway System Map. Dennis Chavez Blvd. is a two-lane roadway without curb & gutter or sidewalks west of Coors Blvd. The posted speed limit along this section of Dennis Chavez Blvd. is 45 MPH. Unser Blvd. & Coors Blvd. are four-lane divided highways with curb & gutter and sidewalks. The posted speed limit on Unser Blvd. is 40 M.P.H.

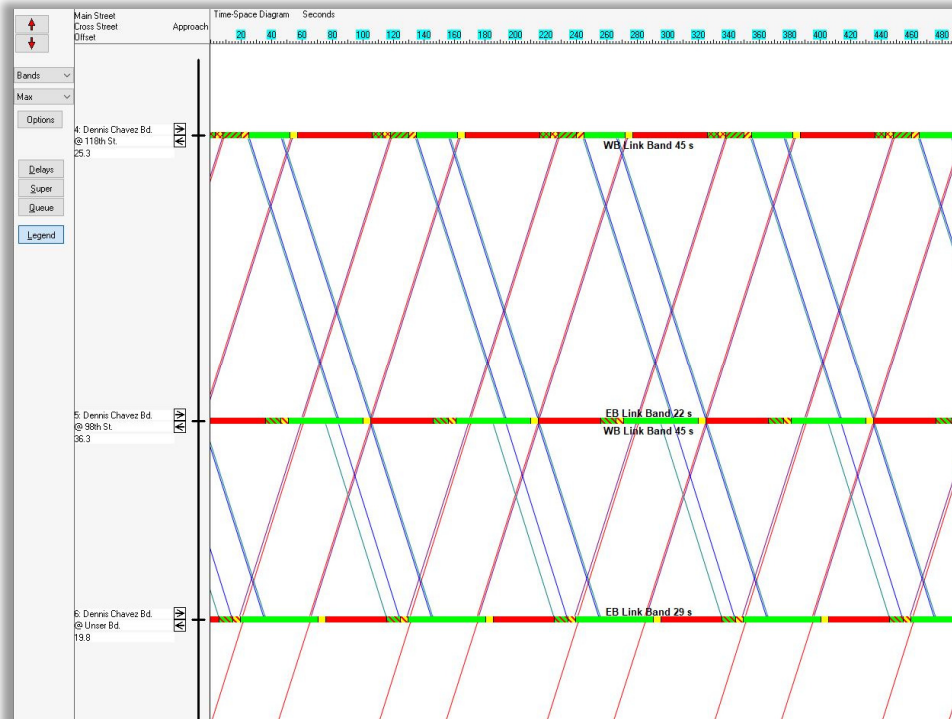
118<sup>th</sup> St., 98<sup>th</sup> St., Gibson Blvd. and Gun Club Rd. are classified as Community Principal Arterial Roadways on the Mid-Region Council of Government's Futures 2040 Long Range Roadway System Map. 118<sup>th</sup> St. & Gun Club Rd. are two-lane roadways with some curb & gutter and sidewalks along the developed portions. 98<sup>th</sup> St. & Gibson Blvd. are four-lane roadways with raised medians and curb & gutter with sidewalks. The posted speed limit along Gibson Blvd. is 40 M.P.H. The posted speed limit along 98<sup>th</sup> St. & Gun Club Rd. is 30 M.P.H.

## **Analysis of Existing Conditions**

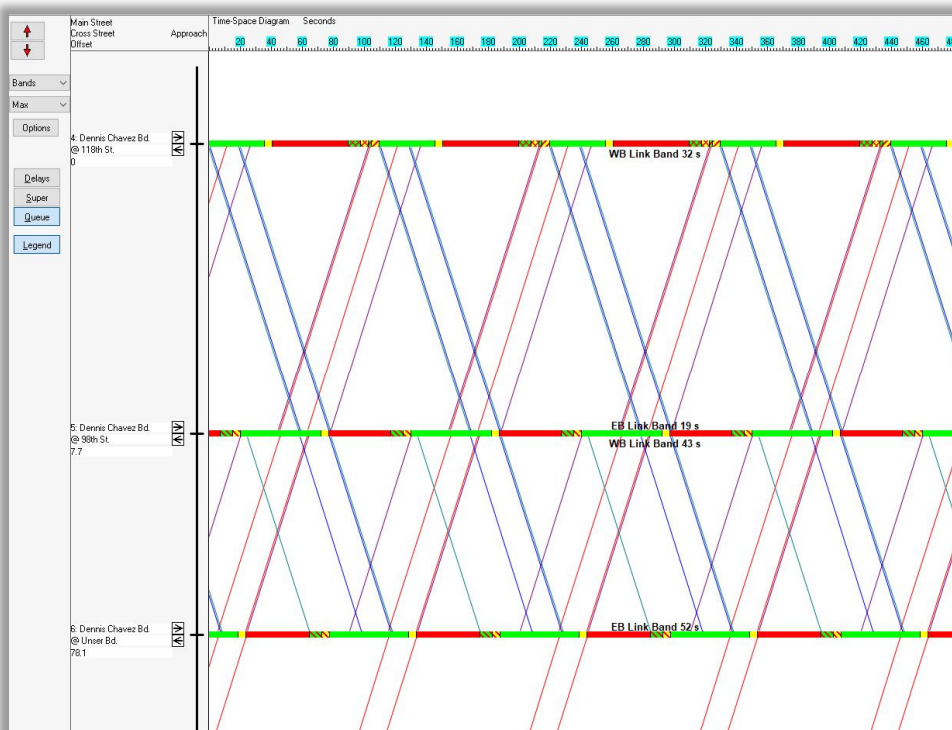
Existing conditions analysis was required by the City of Albuquerque. Existing traffic volumes (turning movement counts) were collected at the intersections targeted for analysis in this study in 2017 & 2018 and are included on Appendix Pages A-283 thru A-297. Some of the traffic counts were from other proposed developments in the area including Sunrise Village Subdivision and Atrisco Heritage Academy Traffic Impact Studies. A graphical summary of the 2018 AM and PM Peak Hour volumes, associated levels-of-service, lane geometry, and average intersection levels-of-service and delays (in seconds) on the LOS / Volumes Analysis Maps located at the end of the front-end text of this Study.

There is an existing coordinated traffic signal system on Dennis Chavez Blvd. from 118<sup>th</sup> St. through Unser Blvd. inclusive. The intersection of Dennis Chavez Blvd. / Coors Blvd. is on the coordinate traffic signal system along Coors Blvd. All are fully actuated traffic signals.

The existing conditions (2018) AM and PM Peak Hour bandwidths for the Dennis Chavez corridor from 118<sup>th</sup> St. through Unser Blvd. are shown in the following two time-space diagrams:



2018 AM Peak Hour Time-Space Diagram (Dennis Chavez Blvd.)



2018 PM Peak Hour Time-Space Diagram (Dennis Chavez Blvd.)



## Analysis

### Traffic Projections

Background traffic counts (turning movements volumes) were taken from recent traffic counts (Appendix A-283 thru A-297) conducted for this project in July 2018. Some of the traffic counts were taken from one of two other previous Traffic Impact Studies – Sunrise Village Traffic Impact Study and APS Atrisco Heritage Academy High School Traffic Impact Analysis. The traffic counts for Sunrise Village were collected in April 2018 and the traffic counts for Atrisco Heritage Academy High School were collected in October 2017.

This study assumes that the development will be implemented in one phase with an implementation year of 2022 and a horizon year of 2032. The project will, however, be developed in several undefined future phases driven by market forces. It is impossible to forecast the phasing of the Ceja Vista Development with any significant accuracy.

Projected trips were calculated based on the Institute of Traffic Engineers (ITE) Trip Generation Manual (10<sup>th</sup> Edition). Trips for the development were determined based on land use defined on the Conceptual Site Development Plan on Page A-3 in the Appendix of this report. The following table summarized the trip generation rate for the project:

### *Ceja Vista Development (Dennis Chavez Blvd. / 98th St.)*

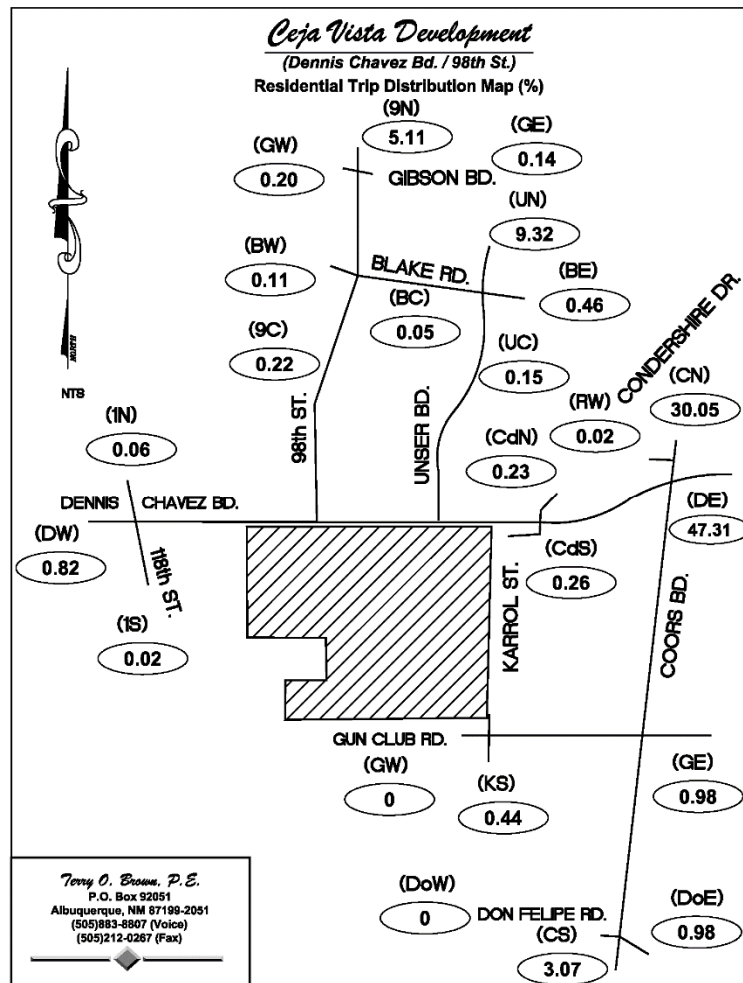
#### Trip Generation Data (ITE Trip Generation Manual - 10th Edition)

USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.		
		GROSS	ENTER	EXIT	ENTER	EXIT
<i>DESCRIPTION</i>						
<b>Summary Sheet</b>	Units					
. Multifamily Housing (Low-Rise)	540	4,042	54	182	174	102
. Single-Family Detached Housing (210)	1,393	11,732	248	745	802	471
. Shopping Center (820)	120.00	6,806	131	80	299	323
. City Park (411)	22.89	103	-	-	13	11
. Park-and-Ride Lot w/Bus Service (090)	100	407	42	11	17	52
<b>Subtotal</b>		<b>23,090</b>	<b>475</b>	<b>1,018</b>	<b>1,305</b>	<b>959</b>
<b>Residential Trips</b>		<b>15,774</b>	<b>302</b>	<b>927</b>	<b>976</b>	<b>573</b>
<b>Commercial / Non-Residential Trips</b>		<b>7,316</b>	<b>173</b>	<b>91</b>	<b>329</b>	<b>386</b>
School Trips Diverted to the West to 118th St.	17.5%		53	162	171	100
Standard Residential Trips (non-School diverted)			249	765	805	473

Pass-by trips were not applied to this project. See Appendix Pages A-6 thru A-11 for more information regarding the trip generation.

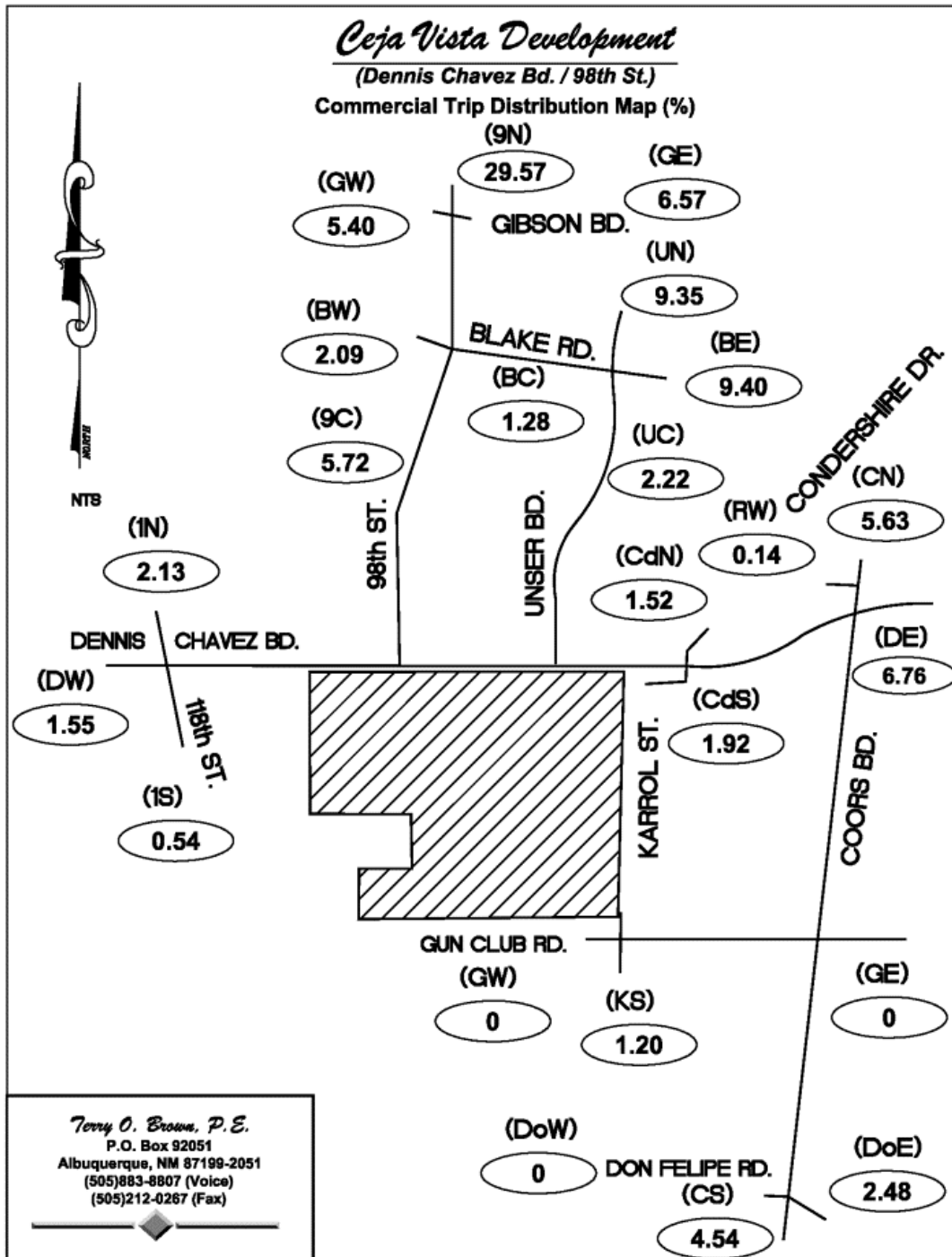
Primary and diverted linked trips for residential development have been distributed proportionally to the 2022 projected employment Socioeconomic Data of Subareas area wide. Employment data for 2012 and 2040 were taken from the 2040 Socioeconomic Forecasts for Subareas for the MRCOG Region, supplied by the Mid-Region Council of Governments (MRCOG). Employment Data was interpolated linearly to obtain 2022 values and adjusted for distance from the proposed new facility. The trip distribution worksheets and associated map of subareas are shown on Appendix Pages A-12 thru A-20. The Trip Distribution Map for residential use can be found below and in the Appendix on Page A-21.

Trip assignments are first made on a percentage basis derived from data established in the trip distribution determination process and logical routing. Those percentages are then applied to the projected trips to determine individual traffic movements. Percentage trip assignments for residential trips are shown below and in the Appendix on Pages A-22 thru A-25.



In addition to the gravity model for distributing residential trips, an adjustment was made to account for residential trips to and from the adjacent schools along 118<sup>th</sup> St. south of Rio Bravo Blvd. Data from Albuquerque Public Schools' Senior Planner and Manager indicates that approximately 17.5% of the Ceja Vista generated traffic would travel to and from the schools along 118<sup>th</sup> St. south of Rio Bravo to drop their students off at school and / or pick them up after school. Therefore, 17.5% of the total trips generated by the residential component of Ceja Vista were diverted to the schools. The residential exiting trips were diverted to the school area before distributing them onto the adjacent transportation system to achieve their destination. The residential entering trips were diverted to the school area before distributing them back to the residential area of Ceja Vista.

The Gravity Model was used to determine trip distribution where primary trips for the commercial land use development were distributed proportionally to the 2022 projected population of Data Analysis Subzones (DASZ) within a 3-mile radius. Population data for the years 2012 and 2040 were taken from the 2040 Socioeconomic Forecasts by Subareas for the Mid-Region of New Mexico supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2012 and 2040 was interpolated linearly to obtain 2022 population data to utilize for this analysis. Population Subzones were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones are shown in the Appendix on Pages A-26 thru A-34. The commercial Trip Distribution map can be found below and in the Appendix on Page A-35.



Trip assignments are first made on a percentage basis derived from data established in the trip distribution determination process and logical routing. Those percentages are then applied to the projected trips to determine individual traffic movements. Percentage trip assignments for commercial trips are shown below and in the Appendix on Pages A-36 thru A-37. No adjustments for pass-by trips on this project were applied. Also, no adjustment was made for internal capture although a small percentage could be taken to account for internal capture in this residential / retail commercial development.

Background traffic growth rates were considered for each individual approach to an intersection that was targeted for analysis based on data from the 2007 through 2016 Traffic Flow maps prepared by the Mid-Region Council of Governments. Most of the Traffic Flow Data for those years taken from the MRCOG Traffic Flow Maps were Standard Data. The data from those years for each approach was plotted on a graph and a linear “regression trend line” calculated using the equation format  $y=mx+b$ . The growth rate was determined by calculating the average volume increase per year during the time period considered and dividing that volume into the most recent AWDT used in the analysis from which future volumes will be calculated. The rate of growth of that trend line was utilized as the annual growth rate for each approach if that calculated rate appeared feasible. However, in every roadway segment considered in this analysis, the rate indicated either an inconsistent or a negative growth trend; therefore, the growth rate was considered to be a generic 0.5%. A maximum growth rate of 5% was also imposed where necessary. Historical Growth Rate Graphs with linear regression trend lines are shown in the Appendix on Pages A-38 thru A-61. The growth rate utilized for each approach to an intersection is printed at the top of the Turning Movement sheets for each intersection (Appendix Pages A-68 thru A-98 and Appendix Pages A-104 thru A-133).

The trip generation, trip distribution and trip assignments were utilized along with the existing 2017 and 2018 background traffic volumes and the historical traffic growth rates to determine the Implementation year NO BUILD and BUILD volumes, see Appendix Pages A-63 thru A-98.

### ***Traffic Analysis (Existing Conditions)***

Existing 2018 traffic volumes were applied to the existing transportation system (utilizing existing signal timing for signalized intersections) to determine the operational characteristics of the current AM and PM Peak Hour Conditions. The following table summarizes the results of the existing transportation network analysis (see Appendix Pages A-134 thru A-157 for detail HCM6 Reports for Existing Conditions):

**Intersection: 1 - Gun Club Rd. / Coors Blvd. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	C - 33.9	D - 37.8	D - 37.8	D - 36.1	D - 39.7	E - 63.1	B - 13.3	B - 19.8	B - 16.2	B - 14.7	B - 17.4	B - 14.7	C - 26.4 Signalized
PM	D - 41.6	D - 48.2	D - 48.2	D - 41.0	D - 44.1	E - 55.9	A - 8.5	B - 12.6	B - 10.1	A - 9.0	B - 11.6	A - 9.6	B - 18.5

**Intersection: 2 - Dennis Chavez Blvd. / Coors Blvd. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	C - 30.6	D - 49.1	A - 0.0	C - 34.7	D - 37.7	A - 0.0	B - 16.0	C - 21.6	B - 19.4	E - 57.9	C - 21.6	C - 21.7	C - 34.4 Signalized
PM	D - 36.2	C - 34.3	A - 0.0	C - 27.5	F - 145	A - 0.0	C - 29.2	C - 27.3	B - 17.5	E - 58.2	D - 37.1	D - 37.2	E - 57.7

**Intersection: 3 - Blake Rd. / Unser Blvd. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	D - 39.9	D - 38.6	D - 38.6	C - 33.9	D - 53.3	D - 53.3	B - 13.2	B - 16.7	B - 12.1	B - 13.3	B - 17.1	B - 10.9	C - 28.6 Signalized
PM	D - 47.3	D - 53.4	D - 53.4	D - 45.4	E - 63.1	E - 63.1	B - 10.8	B - 13.9	B - 10.4	A - 9.5	B - 11.7	A - 8.6	C - 21.9

**Intersection: 4 - Dennis Chavez Blvd. / 118th St. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	D - 51.0	C - 34.6	D - 42.0	E - 69.4	C - 21.8	C - 21.8	D - 51.1	C - 30.6	C - 26.6	C - 30.3	D - 39.8	D - 39.8	D - 42.3 Signalized
PM	E - 57.1	C - 28.2	C - 24.7	E - 56.7	C - 23.5	C - 23.5	C - 29.9	C - 31.3	F - 145	C - 25.0	C - 22.3	C - 22.3	E - 71.9

**Intersection: 5 - Dennis Chavez Blvd. / 98th St. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	C - 27.6	B - 17.6	A - 0.0	A - 0.0	C - 32.3	B - 10.4	A - 0.0	A - 0.0	A - 0.0	F - 149	A - 0.0	B - 18.3	D - 54.0 Signalized
PM	B - 18.5	A - 9.2	A - 0.0	A - 0.0	D - 49.2	D - 47.4	A - 0.0	A - 0.0	A - 0.0	D - 53.7	A - 0.0	B - 13.4	C - 31.7

**Intersection: 6 - Dennis Chavez Blvd. / Unser Blvd. - Signalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	B - 12.8	C - 29.8	A - 0.0	A - 0.0	B - 19.2	B - 18.9	A - 0.0	A - 0.0	A - 0.0	F - 95.2	A - 0.0	C - 23.8	D - 42.2 Signalized
PM	B - 16.6	A - 1.0	A - 0.0	A - 0.0	C - 25.7	C - 30.8	A - 0.0	A - 0.0	A - 0.0	E - 60.5	A - 0.0	C - 24.3	C - 28.6

**Intersection: 7 - Dennis Chavez Blvd. / Condershire Dr. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	A - 8.9	A - 0.0	A - 0.0	B - 12.0	A - 0.0	A - 0.0	F - 144	F - 144	F - 144	F - 105	B - 13.0	B - 13.0	A - 2.7 Unsignalized
PM	B - 12.1	A - 0.0	A - 0.0	A - 9.5	A - 0.0	A - 0.0	F - 825	F - 825	F - 825	F - 138	D - 32.6	D - 32.6	C - 20.2

**Intersection: 8 - Rio Bravo Sq. Driveway / Coors Blvd. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	C - 17.5	A - 0.0	A - 9.8	A - 0.0	A - 0.0	A - 0.0	A - 8.5	A - 0.0	A - 0.0	A - 0.0	A - 0.0	A - 0.0	A - 0.4 Unsignalized
PM	F - 68.7	A - 0.0	B - 12.3	A - 0.0	A - 0.0	A - 0.0	A - 10.0	A - 0.0	A - 0.0	A - 0.0	A - 0.0	A - 0.0	A - 2.7

**Intersection: 9 - Gibson Blvd. / 98th St. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	B - 14.8	B - 11.0	B - 10.4	B - 11.2	B - 10.9	B - 10.5	B - 10.2	C - 15.8	B - 12.5	B - 10.4	B - 13.0	B - 13.0	B - 13.2 Unsignalized
PM	C - 15.4	B - 12.2	B - 11.9	B - 12.7	B - 13.7	B - 12.8	B - 12.2	C - 17.8	B - 13.9	B - 11.4	C - 24.1	C - 24.1	C - 17.5

**Intersection: 10 - Blake Rd. / 98th St. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	B - 10.3	B - 10.2	B - 10.2	B - 10.5	A - 9.7	A - 9.7	A - 9.6	B - 12.1	B - 12.1	A - 9.8	B - 11.4	A - 10.0	B - 10.9 Unsignalized
PM	B - 11.1	B - 10.8	B - 10.8	B - 11.9	B - 10.8	B - 10.8	B - 10.6	B - 13.6	B - 13.6	B - 10.7	B - 14.0	B - 11.3	B - 12.2

**Intersection: 11 - Gun Club Rd. / Karrol St. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	A - 7.3	A - 0.0	A - 0.0	A - 7.3	A - 0.0	A - 0.0	A - 8.8	A - 8.8	A - 8.8	A - 9.2	A - 9.2	A - 9.2	A - 5.9 Unsignalized
PM	A - 7.3	A - 0.0	A - 0.0	A - 7.3	A - 0.0	A - 0.0	A - 9.1	A - 9.1	A - 9.1	A - 9.4	A - 9.4	A - 9.4	A - 5.0

**Intersection: 12 - Don Felipe Rd. / Coors Blvd. - Unsignalized**

Peak Hour	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
AM	C - 24.6	C - 16.9	C - 16.9	D - 25.2	B - 11.3	B - 11.3	A - 8.4	A - 0.0	A - 0.0	A - 9.1	A - 0.0	A - 0.0	A - 1.6 Unsignalized
PM	E - 35.5	C - 16.7	C - 16.7	D - 32.3	C - 17.9	C - 17.9	A - 9.4	A - 0.0	A - 0.0	A - 9.3	A - 0.0	A - 0.0	A - 1.0

## Traffic Analysis (Implementation Year – 2022)

A capacity analysis using existing traffic signal timing (see Appendix Pages A-158 thru A-219) was conducted for the Implementation Year (2022) NO BUILD and BUILD Conditions and are summarized as follows:

### #1 – Gun Club Rd. / Coors Blvd. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Gun Club Rd. / Coors Blvd. are summarized in the following table:

Gun Club Rd. / Coors Blvd. 2022 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1	1	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	174	60	32	69	20	258	17	704	72	150	628	50
V/C Ratio	0.43	0.00	0.23	0.19	0.06	0.91	0.05	0.47	0.11	0.43	0.40	0.07
Level-of-Service	C	A	D	D	D	E	B	C	B	B	B	B
Control Delay (Seconds)	32.1	0.0	36.2	35.5	39.0	63.9	15.3	22.8	18.2	17.0	19.9	16.2
<b>Intersection LOS</b>	<b>C - 27.8</b>											
95th Percentile Queue (veh)	7.5	0.0	4.2	3.1	0.9	14.5	0.4	11.4	2.2	3.9	9.5	1.4
2022 BUILD Condition Volumes	174	60	38	69	20	261	29	716	72	159	668	50
V/C Ratio	0.43	0.00	0.25	0.19	0.06	0.91	0.09	0.48	0.11	0.46	0.42	0.07
Level-of-Service	C	A	D	D	D	E	B	C	B	B	C	B
Control Delay (Seconds)	32.0	0.0	36.2	35.3	38.8	64.1	15.8	23.4	18.6	17.3	20.4	16.3
<b>Intersection LOS</b>	<b>C - 28.0</b>											
95th Percentile Queue (veh)	7.5	0.0	4.5	3.1	0.9	14.7	0.8	11.7	2.3	4.2	10.0	1.4
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	107	37	55	102	43	167	47	827	50	200	888	109
V/C Ratio	0.35	0.00	0.43	0.36	0.18	0.84	0.13	0.45	0.06	0.48	0.46	0.13
Level-of-Service	D	A	D	D	D	E	B	B	B	B	B	B
Control Delay (Seconds)	38.1	0.0	45.2	38.3	42.8	55.3	10.6	15.7	11.8	11.1	13.8	10.9
<b>Intersection LOS</b>	<b>C - 20.1</b>											
95th Percentile Queue (veh)	4.5	0.0	4.4	4.3	1.9	8.7	0.8	9.7	1.1	2.5	6.9	1.7
2022 BUILD Condition Volumes	108	37	82	102	43	177	70	867	50	206	913	109
V/C Ratio	0.35	0.00	0.54	0.39	0.18	0.85	0.20	0.48	0.06	0.52	0.48	0.13
Level-of-Service	D	A	D	D	D	D	B	B	B	B	B	B
Control Delay (Seconds)	37.5	0.0	46.0	37.9	42.2	55.0	11.4	16.7	12.3	11.9	14.4	11.3
<b>Intersection LOS</b>	<b>C - 20.8</b>											
95th Percentile Queue (veh)	4.5	0.0	5.7	4.3	1.9	9.0	1.2	10.5	1.1	2.6	7.3	1.7

The 2022 analysis of the intersection of Gun Club Rd. / Coors Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report. The implementation of the proposed development increases the delay at the intersection by less than one second for both the AM and PM Peak Hours. Therefore, no recommendations are made for the intersection of Gun Club Rd. / Coors Blvd.

#2 – Dennis Chavez Blvd. / Coors Blvd. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Dennis Chavez Blvd. / Coors Blvd. are summarized in the following table:

Dennis Chavez / Coors Blvd. 2022 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	2	2>	0
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	48	940	408	63	225	139	287	657	240	214	265	29
V/C Ratio	0.14	0.93		0.43	0.42		0.49	0.48	0.35	0.76	0.23	0.23
Level-of-Service	C	D		C	C		B	C	C	E	C	C
Control Delay (Seconds)	27.6	54.1	0.0	33.9	34.1	0.0	18.8	27.2	22.8	57.8	26.9	26.9
<b>Intersection LOS</b>	<b>D - 37.4</b>											
95th Percentile Queue (veh)	1.7	21.8	0.0	2.4	9.2	0.0	8.0	11.1	7.9	6.1	5.4	5.6
2022 BUILD Condition Volumes	332	1,385	459	63	380	139	306	657	240	214	265	130
V/C Ratio	1.19	1.33		0.47	0.87		0.59	0.49	0.36	0.76	0.34	0.35
Level-of-Service	F	F		D	E		C	C	C	E	C	C
Control Delay (Seconds)	150.0	195.0	0.0	37.6	55.1	0.0	20.5	28.3	23.6	57.8	30.3	30.7
<b>Intersection LOS</b>	<b>F - 100.3</b>											
95th Percentile Queue (veh)	23.3	57.2	0.0	2.7	18.1	0.0	8.7	11.3	8.0	6.1	8.0	7.9
Mitigated Lane Geometry	2	2>	0	1	2	1	2	2	1	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	332	1,385	455	63	380	139	278	457	240	214	240	130
V/C Ratio	0.34	0.87		0.39	0.24		0.40	0.56	0.56	0.79	0.28	0.34
Level-of-Service	B	C		C	B		C	D	D	E	D	D
Control Delay (Seconds)	17.8	32.8	0.0	26.3	19.1	0.0	31.9	42.3	41.2	60.7	36.5	38.6
<b>Intersection LOS</b>	<b>C - 33.6</b>											
2:24 AM	25.3	0.0	1.7	5.7	0.0	5.6	10.0	10.4	6.3	5.3	6.1	6.1
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	83	313	471	152	689	412	397	987	91	196	885	116
V/C Ratio	0.57	0.33		0.38	1.27		1.13	0.75	0.13	0.75	1.00	1.00
Level-of-Service	D	C		C	F		F	C	B	E	F	F
Control Delay (Seconds)	36.3	34.6	0.0	27.7	175.0	0.0	122.0	34.6	18.0	58.2	80.8	80.6
<b>Intersection LOS</b>	<b>F - 80.6</b>											
95th Percentile Queue (veh)	3.3	6.7	0.0	5.7	54.4	0.0	27.7	18.4	2.7	5.6	27.9	28.1
2022 BUILD Condition Volumes	277	610	510	152	1,173	412	453	987	91	196	885	428
V/C Ratio	1.16	0.54		0.46	2.16		1.29	0.88	0.15	0.75	1.66	1.69
Level-of-Service	F	C		C	F		F	D	C	E	F	F
Control Delay (Seconds)	143.0	32.6	0.0	26.8	569.0	0.0	184.0	45.3	22.2	58.2	352.0	367.0
<b>Intersection LOS</b>	<b>F - 255.9</b>											
95th Percentile Queue (veh)	19.9	11.8	0.0	5.5	157.5	0.0	35.1	20.8	3.1	5.6	74.8	73.4
Mitigated Lane Geometry	2	2>	0	1	2	1	2	2	1	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	277	610	510	152	1,173	412	453	987	91	196	885	428
V/C Ratio	1.02	0.51		0.46	1.03		0.98	0.86	0.15	0.90	0.99	0.82
Level-of-Service	F	C		C	F		F	D	C	F	E	D
Control Delay (Seconds)	76.9	30.2	0.0	25.3	72.1	0.0	84.1	43.9	22.8	89.9	71.2	48.4
<b>Intersection LOS</b>	<b>E - 59.6</b>											
95th Percentile Queue (veh)	6.2	8.3	0.0	5.3	30.5	0.0	13.7	20.5	3.1	7.4	23.5	19.4

The 2022 analysis of the intersection of Dennis Chavez Blvd. / Coors Blvd. demonstrates that the level-of-service will be significantly impacted by Ceja Vista Development for both the AM Peak Hour and PM Peak Hour BUILD conditions analyzed in this report. The impacts can be mitigated



by constructing a second eastbound left turn lane, a second westbound thru lane, and a southbound right turn lane at the intersection. Also, implement the existing second northbound left turn lane.

Based on the preceding table, the modified intersection of Dennis Chavez Blvd. / Coors Blvd. will need to meet the following minimum standards for the auxiliary and mainline lanes:

- Dual EB LT Lanes should be constructed
- A second WB Thru Lane should be constructed (WB RT Lane should be maintained)
- Dual NB LT Lanes should be constructed
- New SB RT Lane should be constructed

Recommended lengths of the new auxiliary lanes will be based on the 95<sup>th</sup> Percentile calculated queue length resulting from horizon year volume forecasts in this report. The lane length recommendations will be clarified in the horizon year analysis section later in this report.

#3 – Blake Rd. / Unser Blvd. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Blake Rd. / Unser Blvd. are summarized in the following tables:

Blake Rd. / Unser Blvd. 2022 Conditions	EB (Blake Rd.)			WB (Blake Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1>	0	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	147	14	85	119	18	298	30	316	74	47	338	31
V/C Ratio	0.68	0.00	0.27	0.30	0.00	0.90	0.07	0.22	0.10	0.10	0.24	0.04
Level-of-Service	D	A	D	C	A	D	B	B	B	B	C	B
Control Delay (Seconds)	40.5	0.0	35.6	30.3	0.0	54.0	15.6	19.9	14.2	15.8	20.1	13.0
<b>Intersection LOS</b>	<b>C - 30.2</b>											
95th Percentile Queue (veh)	7.0	0.0	4.6	5.0	0.0	16.4	0.8	5.3	2.0	1.3	5.7	0.8
2022 BUILD Condition Volumes	147	14	87	136	18	298	31	411	88	47	382	31
V/C Ratio	0.68	0.00	0.27	0.34	0.00	0.90	0.07	0.29	0.12	0.12	0.27	0.04
Level-of-Service	D	A	D	C	A	D	B	C	B	B	C	B
Control Delay (Seconds)	40.5	0.0	35.9	30.6	0.0	54.0	15.7	20.7	14.2	16.0	20.4	13.0
<b>Intersection LOS</b>	<b>C - 29.6</b>											
95th Percentile Queue (veh)	7.0	0.0	4.8	5.8	0.0	16.4	0.9	7.1	2.4	1.3	6.5	0.8

<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	82	49	61	101	25	185	137	394	151	278	387	137
V/C Ratio	0.48	0.00	0.46	0.38	0.00	0.87	0.26	0.23	0.18	0.51	0.21	0.15
Level-of-Service	D	A	D	D	A	E	B	B	B	B	B	B
Control Delay (Seconds)	45.4	0.0	51.1	42.9	0.0	61.1	12.7	16.9	12.4	11.7	14.1	10.5
<b>Intersection LOS</b>	<b>C - 23.6</b>											
95th Percentile Queue (veh)	4.4	0.0	6.5	5.3	0.0	12.3	3.5	6.1	3.9	6.5	5.4	3.2
2022 BUILD Condition Volumes	82	49	65	137	25	185	142	483	189	278	509	137
V/C Ratio	0.48	0.00	0.48	0.53	0.00	0.87	0.31	0.29	0.22	0.56	0.28	0.15
Level-of-Service	D	A	D	D	A	E	B	B	B	B	B	B
Control Delay (Seconds)	45.6	0.0	51.6	45.3	0.0	61.1	12.9	17.5	12.8	12.4	14.9	10.5
<b>Intersection LOS</b>	<b>C - 23.6</b>											
95th Percentile Queue (veh)	4.4	0.0	6.7	7.5	0.0	12.3	3.6	7.7	5.0	6.5	7.4	3.2

The 2022 analysis of the intersection of Blake Rd. / Unser Blvd. demonstrates that the level-of-service will be acceptable for the AM and PM Peak Hour NO BUILD and BUILD conditions. The impact of the proposed development decreases the average weighted delay at the intersection by 0.6 seconds during the AM Peak Hour and increases it by 0.0 seconds during the PM Peak Hour. Therefore, no recommendations are made for the intersection of Blake Rd. / Unser Blvd.

#4 – Dennis Chavez Blvd. / 118th St. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Dennis Chavez Blvd. / 118th St. are summarized in the following table:

Dennis Chavez / 118th St. 2022 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (118th St.)			SB (118th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	6	75	142	497	131	16	38	106	411	149	369	85
V/C Ratio	0.11	0.25	0.56	1.02	0.00	0.30	0.74	0.30	0.79	0.70	0.00	0.97
Level-of-Service	D	C	D	F	A	C	F	C	C	D	A	E
Control Delay (Seconds)	51.0	34.7	42.2	63.9	0.0	21.5	85.6	30.6	27.5	35.5	0.0	59.5
<b>Intersection LOS</b>	<b>D - 46.4</b>											
95th Percentile Queue (veh)	0.4	4.6	9.4	14.6	0.0	5.1	4.0	5.9	19.2	4.3	0.0	30.0
2022 BUILD Condition Volumes	6	80	142	712	138	18	38	106	627	153	369	85
V/C Ratio	0.11	0.27	0.56	1.46	0.00	0.32	0.74	0.30	1.21	0.82	0.00	0.97
Level-of-Service	D	C	D	F	A	C	F	C	F	D	A	E
Control Delay (Seconds)	51.0	35.0	42.2	252.0	0.0	21.5	85.6	30.6	131.0	47.7	0.0	59.5
<b>Intersection LOS</b>	<b>F - 127.4</b>											
95th Percentile Queue (veh)	0.4	5.0	9.4	42.0	0.0	4.9	4.0	5.9	58.8	6.9	0.0	30.0
Mitigated Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
2022 BUILD Cond. [MITIGATED] Volumes	6	80	142	712	138	18	38	106	627	153	369	85
V/C Ratio	0.11	0.43	0.90	0.98	0.00	0.30	0.89	0.31	1.01	0.88	0.00	1.02
Level-of-Service	D	D	F	D	A	C	F	C	F	E	A	F
Control Delay (Seconds)	51.0	46.7	81.9	49.1	0.0	20.6	128.0	31.4	52.4	61.7	0.0	73.5
<b>Intersection LOS</b>	<b>E - 55.6</b>											
95th Percentile Queue (veh)	0.4	5.9	12.7	19.9	0.0	6.0	5.2	6.0	37.8	9.2	0.0	33.1
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	21	97	21	173	73	69	42	98	400	68	79	19
V/C Ratio	0.52	0.30	0.08	0.84	0.00	0.40	0.21	0.36	1.24	0.46	0.00	0.27
Level-of-Service	E	C	C	E	A	C	C	C	F	C	A	C
Control Delay (Seconds)	56.5	27.6	24.6	56.1	0.0	23.5	30.0	31.3	153.0	25.3	0.0	22.4
<b>Intersection LOS</b>	<b>E - 74.9</b>											
95th Percentile Queue (veh)	2.2	6.8	1.4	8.0	0.0	8.1	3.0	7.3	53.9	4.3	0.0	5.9
2022 BUILD Condition Volumes	21	109	22	446	83	77	42	98	673	75	79	19
V/C Ratio	0.52	0.36	0.09	1.91	0.00	0.45	0.21	0.36	2.00	0.61	0.00	0.27
Level-of-Service	E	C	C	F	A	C	C	C	F	C	A	C
Control Delay (Seconds)	56.5	29.9	25.9	457.0	0.0	23.1	30.0	31.3	488.0	28.9	0.0	22.4
<b>Intersection LOS</b>	<b>F - 315.2</b>											
95th Percentile Queue (veh)	2.2	7.9	1.5	45.2	0.0	6.8	3.0	7.3	157.7	5.1	0.0	5.9
Mitigated Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
2022 BUILD Cond. [MITIGATED] Volumes	21	109	22	446	83	77	42	98	673	75	79	19
V/C Ratio	0.52	0.36	0.08	0.88	0.00	0.32	0.36	0.73	1.94	0.93	0.00	0.46
Level-of-Service	E	C	C	D	A	B	D	D	F	F	A	D
Control Delay (Seconds)	56.5	29.5	25.7	38.8	0.0	12.4	44.5	54.3	457.0	95.5	0.0	36.8
<b>Intersection LOS</b>	<b>F - 200.6</b>											
95th Percentile Queue (veh)	2.2	7.9	1.5	15.4	0.0	6.3	3.8	9.5	145.5	7.0	0.0	7.9

The 2022 analysis of the intersection of Dennis Chavez Blvd. / 118th St. demonstrates that the level-of-service will be significantly impacted for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report. The 2022 BUILD Conditions (MITIGATED) in the above table attempt to adjust the signal timing to optimize the signal to improve operation. While signal timing optimization helped, it did not solve the capacity issues at the intersection. The implementation of the proposed development increases the delay significantly for both the 2022 AM and 2022 PM Peak Hour conditions due to the fact that Ceja Vista mostly contributes to the westbound left turn volume and the northbound right turn volume. The impact of Ceja Vista development on this signalized intersection is mostly due to the fact that Ceja Vista traffic is not permitted to access the school area via the internal connection directly to the school that was mandated by the County years ago when the development was being planned. It is not reasonable that the developer was required to provide the internal connection at their expense during the planning phase of the development, but then not permitted to use that connection to accommodate forecast school traffic to and from Ceja Vista. If the internal connection from Ceja Vista directly to the school were permitted to be used, then the impact of Ceja Vista on the signalized intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. would be greatly reduced to a negligible level. Additionally, use of the internal connection would also serve to relieve other traffic at Dennis Chavez Blvd. / 118<sup>th</sup> St. by providing an alternate access to and from the schools. Therefore, no recommendations are made for the intersection of Dennis Chavez Blvd. / 118th St.

It is also noteworthy to consider the Recommendations of the April 26, 2018 Traffic Impact Study for the APS Atrisco Heritage Academy High School Access prepared by High Mesa Consulting Group (Nevin Harwick). The Recommendations of that report read as follows:

## 8.2 RECOMMENDATIONS

The following recommendations are proposed within the study area. It is anticipated that all traffic signing and markings shall be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

1. Do not construct the high school egress to Dennis Chavez Blvd at this time.
2. **Coordinate with the developer to the east of the school to provide an access from an extension of 98th St south of Dennis Chavez Blvd.** It is anticipated that 98th St and Unser Blvd will be the primary accesses to land south of Dennis Chavez Blvd. The discussion should include the type of roadway, which should have minimal or no driveway access west of 98th St and a logical connection to the school property.
3. Examine the westbound left-turn vehicle extension timing at the Dennis Chavez Blvd/118th St intersection. The vehicle extension should be extended to minimize cycle failures and red-light violations. An alternative would be to timeout the eastbound movement mid cycle and recall the left-turn phase when no traffic is served in the eastbound lanes. This will require installation of advance loops on the eastbound approach and this should be investigated by the operating agency.
4. Remove signal coordination at the 118th St/Dennis Chavez Blvd intersection. The intersection is located approximately 0.75 miles west of 98th St, and does not benefit from coordination. The intersection should operate fully actuated during each peak period, not just the PM peak.
5. Increase enforcement of traffic laws at the Dennis Chavez Blvd/118th St intersection, as well as along 118th St.

6. Examine illumination at each intersection and improve the lighting to the minimum standard of one luminaire on each signalized intersection approach or one luminaire at an unsignalized intersection. The school generates traffic during hours of darkness before school and for evening events, and adequate illumination should be provided to enhance safety.

Their own Traffic Study recommends that APS coordinate with the developer of Ceja Vista to provide (allow) the internal access connection which Ceja Vista has provided for them. It is acknowledged that the Albuquerque Public School System has refused to cooperate thus far with the County and the developer of Ceja Vista, but by doing so, they have violated the Recommendations of their own Traffic Impact Study and caused excessive impact to the signalized intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. For these reasons, this Study recommends that the Albuquerque Public Schools comply with the Recommendations of their own Traffic Impact Study and the requirements of Bernalillo County to allow the internal connection to Ceja Vista which has been provided by this developer. No other recommendation is made regarding the intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. It is not reasonable to hold this developer hostage to additional improvements at this intersection because APS has not been responsible to comply with past recommendations and requirements.

#5 – Dennis Chavez Blvd. / 98th St. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Dennis Chavez Blvd. / 98th St. are summarized in the following table:

Dennis Chavez / 98th St. 2022 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1			1	1				1>		0
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	191	452			499	131				552		288
V/C Ratio	1.00	0.64			0.98	0.31				2.33		0.00
Level-of-Service	F	B			C	A				F		A
Control Delay (Seconds)	80.4	17.9			32.9	5.5				641.0		0.0
<b>Intersection LOS</b>	<b>F - 274.2</b>											
95th Percentile Queue (veh)	16.9	16.0			13.2	1.5				170.7		0.0
2022 BUILD Condition Volumes	200	619	49	63	582	131	136	89	118	552	99	291
V/C Ratio	1.47	0.88	0.08	0.68	1.06	0.28	3.19	0.00	0.58	3.48	0.00	1.12
Level-of-Service	F	C	B	D	F	A	F	A	C	F	A	F
Control Delay (Seconds)	259.0	26.5	10.2	41.0	49.0	3.5	999.0	0.0	32.2	999.0	0.0	114.0
<b>Intersection LOS</b>	<b>F - 322.7</b>											
95th Percentile Queue (veh)	23.6	27.3	1.4	5.5	18.0	1.1	36.8	0.0	11.6	136.5	0.0	36.3
Mitigated Lane Geometry	1	2	1	1	2	1	1	2	2	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	200	619	49	63	582	131	136	89	118	552	99	291
V/C Ratio	0.96	0.70	0.12	0.41	0.83	0.42	0.66	0.30	0.38	0.97	0.14	0.94
Level-of-Service	E	C	C	C	D	D	D	D	D	E	C	E
Control Delay (Seconds)	56.0	29.9	21.8	27.8	53.7	42.8	44.2	43.7	40.5	64.6	28.0	63.2
<b>Intersection LOS</b>	<b>D - 48.1</b>											
95th Percentile Queue (veh)	11.5	14.7	2.3	3.3	20.0	9.8	9.4	3.1	4.0	20.3	2.6	21.3
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	189	338			304	240				210		103
V/C Ratio	0.78	0.56			0.86	0.80				0.91		0.27
Level-of-Service	C	B			D	D				E		B
Control Delay (Seconds)	31.3	11.8			47.0	45.2				56.4		17.3
<b>Intersection LOS</b>	<b>D - 35.2</b>											
95th Percentile Queue (veh)	13.5	11.6			21.3	17.0				18.5		14.7
2022 BUILD Condition Volumes	195	473	151	164	489	240	94	217	130	210	209	113
V/C Ratio	2.01	0.86	0.33	2.37	1.11	0.65	2.87	0.00	1.25	6.42	0.00	1.16
Level-of-Service	F	B	B	F	F	C	F	A	F	F	A	F
Control Delay (Seconds)	490.0	19.7	11.5	668.0	82.5	22.2	938.0	0.0	166.0	999.0	0.0	128.0
<b>Intersection LOS</b>	<b>F - 364.6</b>											
95th Percentile Queue (veh)	36.2	20.9	4.5	43.8	41.7	10.7	32.1	0.0	50.3	79.5	0.0	41.0
Mitigated Lane Geometry	1	2	1	1	2	1	1	2	2	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	195	473	151	164	489	240	94	217	130	210	209	113
V/C Ratio	0.92	0.68	0.38	0.84	0.73	0.59	0.62	0.87	0.33	0.88	0.68	0.44
Level-of-Service	C	C	B	C	B	A	D	E	C	E	D	C
Control Delay (Seconds)	22.8	27.6	16.8	26.0	12.4	8.4	38.8	60.8	31.6	62.1	45.4	29.5
<b>Intersection LOS</b>	<b>C - 29.5</b>											
95th Percentile Queue (veh)	7.1	11.7	5.7	7.6	6.4	5.2	8.0	11.1	5.0	10.9	9.4	8.3

NOTE: Preceding table does not report delays longer than 999 seconds.

The intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. will serve as a primary signalized intersection access to the proposed Ceja Vista Development. It is currently a signalized tee intersection with no south leg of the intersection. To comply with the requirements of the New Mexico Department of Transportation regarding Traffic Impact Studies, the 2022 BUILD analysis for this signalized intersection has maintained current signal timing by adding the northbound phase as concurrent with the southbound phase with no left turn phases for either northbound or southbound traffic. The results, as expected, are severely impacting the delays at the intersection. It is not reasonable to add a fourth leg to an existing signalized intersection along with large volumes of traffic generated by this development and expect that the signal timing / phase will not need to be modified. Therefore, the 2022 BUILD Conditions (MITIGATE) in the above analyses assume not only improved lane geometry, but also additional signal phases and modified signal timing.

The 2022 analysis of the intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. demonstrates that the level-of-service will be excessive for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report based on existing plus minimally improved geometry. The impact of the proposed Ceja Vista Development can be mitigated by providing a signalized intersection with the following geometry:

**EB Approach**

- 1 – EB LT Lane
- 2 – EB Thru Lanes
- 1 - EB Right Turn Lane

**WB Approach**

- 1 – WB LT Lane
- 2 – WB Thru Lanes
- 1 - WB Right Turn Lane

**NB Approach**

- 1 – NB LT Lane
- 2 – NB Thru Lanes
- 2 - NB Right Turn Lanes

**SB Approach**

- 2 – SB LT Lane
- 2 – SB Thru Lanes
- 1 - SB Right Turn Lane

All right turn movements at the signalized intersection should be operated as permitted plus overlap phasing. Single left turn movements at the signalized intersection should be operated as permitted plus protected phasing. Dual left turn movements at the signalized intersection should be operated as protected only phasing.

Note that the recommended improvements in the intersection geometry combined with the signal timing / phasing recommendations result in a significant improvement to the signalized

intersection's operational characteristics (i.e., calculated delays and v/c ratios), especially during the AM Peak Hour period.

Recommended lengths of the new auxiliary lanes will be based on the 95<sup>th</sup> Percentile calculated queue length resulting from horizon year volume forecasts in this report. The lane length recommendations will be clarified in the horizon year analysis section later in this report.

Signal improvements for potentially all approaches may be required based on proposed geometry.



#6 – Dennis Chavez Blvd. / Unser Blvd. - Pages A-158 thru A-219

The results of the 2022 analyses of the signalized intersection of Dennis Chavez Blvd. / Unser Blvd. are summarized in the following table:

Dennis Chavez / Unser Blvd. 2022 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1			1	1				1		1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	84	969			461	359				665		102
V/C Ratio	0.27	0.96			0.54	0.50				1.29		0.19
Level-of-Service	B	D			C	C				F		C
Control Delay (Seconds)	14.0	35.0			21.1	20.5				179.0		24.1
<b>Intersection LOS</b>	<b>E - 65.9</b>											
95th Percentile Queue (veh)	1.4	30.8			13.4	10.8				53.6		9.4
2022 BUILD Condition Volumes	111	1,213	14	180	548	359	37	85	513	665	42	128
V/C Ratio	0.40	1.20	0.02	2.99	0.65	0.50	0.12	0.00	1.27	11.05	0.00	0.36
Level-of-Service	B	F	A	F	C	C	C	A	F	F	A	C
Control Delay (Seconds)	16.0	114.0	9.3	992.0	24.3	21.0	33.8	0.0	174.0	999.0	0.0	29.2
<b>Intersection LOS</b>	<b>F - 902.1</b>											
95th Percentile Queue (veh)	1.9	67.4	0.3	33.9	17.6	11.4	1.6	0.0	48.6	138.8	0.0	6.8
Mitigated Lane Geometry	1	2	1	2	2	1	1	2	2	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	111	1,213	14	180	548	359	37	85	513	665	42	128
V/C Ratio	0.33	0.77	0.02	0.49	0.35	0.51	0.15	0.16	0.95	0.97	0.04	0.27
Level-of-Service	B	D	C	C	B	C	D	D	E	E	C	C
Control Delay (Seconds)	14.2	42.0	24.0	22.8	18.2	21.9	40.1	39.6	68.1	62.6	25.2	27.6
<b>Intersection LOS</b>	<b>D - 41.3</b>											
95th Percentile Queue (veh)	2.8	24.4	0.6	2.2	8.3	11.6	1.7	1.9	14.5	10.5	0.7	4.9
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	84	569			773	722				551		50
V/C Ratio	0.56	0.58			0.93	1.03				1.05		0.09
Level-of-Service	C	A			D	F				F		C
Control Delay (Seconds)	25.8	1.5			43.6	67.5				87.0		22.5
<b>Intersection LOS</b>	<b>D - 48.9</b>											
95th Percentile Queue (veh)	2.0	0.8			31.0	35.9				31.4		4.9
2022 BUILD Condition Volumes	141	736	41	561	1,040	722	26	86	347	551	113	107
V/C Ratio	0.85	0.75	0.05	1.68	1.31	1.07	0.09	0.00	0.90	5.55	0.00	0.43
Level-of-Service	C	A	A	F	F	F	C	A	D	F	A	C
Control Delay (Seconds)	28.4	0.4	0.0	351.0	177.0	83.2	34.8	0.0	53.1	999.0	0.0	29.5
<b>Intersection LOS</b>	<b>F - 367.5</b>											
95th Percentile Queue (veh)	2.7	0.2	0.0	69.7	84.1	40.7	1.1	0.0	20.8	109.6	0.0	8.8
Mitigated Lane Geometry	1	2	1	2	2	1	1	2	2	2	2	1
2022 BUILD Cond. [MITIGATED] Volumes	141	736	41	561	1,040	722	26	86	347	551	113	107
V/C Ratio	0.64	0.77	0.10	0.93	0.77	0.82	0.10	0.21	0.42	0.90	0.13	0.21
Level-of-Service	C	C	C	D	B	B	D	D	C	E	C	C
Control Delay (Seconds)	28.4	33.6	24.2	38.8	13.4	11.3	38.1	42.9	29.4	57.4	29.6	25.0
<b>Intersection LOS</b>	<b>C - 28.2</b>											
95th Percentile Queue (veh)	5.2	13.0	1.4	8.5	6.6	7.7	1.2	2.1	7.1	14.3	2.2	3.9

The intersection of Dennis Chavez Blvd. / Unser Blvd. will serve as a primary signalized intersection access to the proposed Ceja Vista Development. It is currently a signalized tee intersection with no south leg of the intersection. Therefore, this study assumed for the 2022 NO BUILD Condition will be for a signalized tee intersection with no south leg. To comply with the requirements of the New Mexico Department of Transportation regarding Traffic Impact Studies, the 2022 BUILD analysis for this signalized intersection has maintained current signal timing by adding the northbound phase as concurrent with the southbound phase with no left turn phases for either northbound or southbound traffic. The results, as expected, are severely impacting the delays at the intersection. It is not reasonable to add a fourth leg to an existing signalized intersection along with large volumes of traffic generated by this development and expect that the signal timing / phase will not need to be modified. Therefore, the 2022 BUILD Conditions (MITIGATE) in the above analyses assume not only improved lane geometry, but also additional signal phases and modified signal timing.

The 2022 analysis of the intersection of Dennis Chavez Blvd. / Unser Blvd. demonstrates that the level-of-service will be excessive for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report based on existing plus minimally improved geometry. The impact of the proposed Ceja Vista Development can be mitigated by providing a signalized intersection with the following geometry:

**EB Approach**

- 1 – EB LT Lane
- 2 – EB Thru Lanes
- 1 - EB Right Turn Lane

**WB Approach**

- 2 – WB LT Lanes
- 2 – WB Thru Lanes
- 1 - WB Right Turn Lane

**NB Approach**

- 1 – NB LT Lane
- 2 – NB Thru Lanes
- 2 - NB Right Turn Lanes

**SB Approach**

- 2 – SB LT Lanes
- 2 – SB Thru Lanes
- 1 - SB Right Turn Lane

All right turn movements at the signalized intersection should be operated as permitted plus overlap phasing. Single left turn movements at the signalized intersection should be operated as permitted plus protected phasing. Dual left turn movements at the signalized intersection should be operated as protected only phasing.

Note that the recommended improvements in the intersection geometry combined with the signal timing / phasing recommendations result in a significant improvement to the signalized intersection's operational characteristics (i.e., calculated delays and v/c ratios) for both the AM and PM Peak Hour periods.

Recommended lengths of the new auxiliary lanes will be based on the 95th Percentile calculated queue length resulting from horizon year volume forecasts in this report. The lane length recommendations will be clarified in the horizon year analysis section later in this report.

Signal improvements for potentially all approaches may be required based on proposed geometry.

#7 – Dennis Chavez Blvd. / Condershire Dr. (Karrol St.) - Pages A-158 thru A-219

The results of the 2022 analyses of the full access unsignalized intersection of Dennis Chavez Blvd. / Condershire Dr. (Karrol St.) are summarized in the following table:

Dennis Chavez / Karrol St. 2022 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Karrol St.)			SB (Karrol St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	0	<1>	0	0	<1>	0	0	<1	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	18	1,549	32	14	756	7	34	1	47	6	1	26
V/C Ratio	0.02			0.04				2.51			0.59	0.07
Level-of-Service	A	A		B	A			F			F	B
Control Delay (Seconds)	9.4	0.0		14.2	0.0			942.0			509.0	14.6
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1			0.1				9.5			1.3	0.2
2022 BUILD Condition Volumes	21	2,296	38	24	1,017	7	34	1	84	6	1	30
V/C Ratio	0.03			0.12				20.03				0.11
Level-of-Service	B	A		C	A			F				C
Control Delay (Seconds)	10.6	0.0		24.8	0.0			999.0				19.3
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1			0.4				16.9				0.4
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	37	906	57	49	1,480	18	48	1	39	4	1	85
V/C Ratio	0.09			0.07				22.68			0.86	0.62
Level-of-Service	B	A		B	A			F			F	F
Control Delay (Seconds)	14.3	0.0		10.6	0.0			999.0			999.0	64.5
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.3			0.2				13.4			1.3	3.3
2022 BUILD Condition Volumes	44	1,409	61	81	2,294	18	48	1	62	4	1	92
V/C Ratio	0.23			0.19								2.16
Level-of-Service	D	A		C	A							F
Control Delay (Seconds)	28.1	0.0		15.1	0.0							730.0
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.8			0.7								9.9

The Traffic Impact Analysis for Sunrise Village Housing Development (Grace Vigil Rd. / Meade Rd.) concludes the following with regard to the unsignalized intersection of Dennis Chavez Blvd. / Condershire Rd. (Karrol St.):

It is noted that in the interim until more permanent mitigations can be constructed, the northbound left turn lane is observed to experience a failing level of service. However, this movement is below capacity with relatively low queue demand and is determined to be acceptable. Regarding this condition, the Highway Capacity Manual states: “At TWSC (two-way-stop-controlled) intersections, the critical movement, often the minor-street left turn, may control the overall performance of the intersection. The lower threshold for LOS F is set at 50 seconds of delay per vehicle. In some cases, the delay equations will predict delays greater than 50 seconds for minor-street movements under very low-volume

conditions on the minor street (fewer than 25 veh/h). On the basis of the first term of the delay equation, the LOS F threshold is reached with a movement capacity of approximately 85 veh/h or less, regardless of the minor street movement volume.” Therefore, considering that signal warrants are not satisfied at build out, as long as this movement is not over capacity and queue demands are not excessive, this LOS F condition during the interim period is considered acceptable.

This Study concurs with those statements and adds that the proposed Ceja Vista Development should not add any traffic to the problem turning movements at the unsignalized intersection of Dennis Chavez Blvd. / Condershire Rd. (Karrol St.). With the new connection of Unser Blvd. south of Dennis Chavez Blvd. and the Meade Rd. connection to Karrol St., it may be considered as a valid option to prohibit the northbound left turn movement on Condershire Rd. (Karrol St.) at Dennis Chavez Blvd. since traffic along Karrol St. can use the signalized intersection of Dennis Chavez Blvd. / Unser Blvd. to turn westbound onto Dennis Chavez Blvd. once the Meade Rd. connection is implemented.

#8 –Rio Bravo Square / Coors Blvd. – Pages A-158 thru A-219

The results of the analysis of the unsignalized intersection of Rio Bravo Square / Coors Blvd. are summarized in the following table:

Rio Bravo Sq. / Coors Blvd. 2022 Conditions	EB (Rio Bravo Sq.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1		1	1	2			2	1
<b>AM Peak Hour</b>									
2022 NO BUILD Condition Volumes	5		9	28	616			474	23
V/C Ratio	0.02		0.01	0.03					
Level-of-Service	C		A	A					
Control Delay (Seconds)	18.1		9.9	8.6					
<b>Intersection LOS</b>	<b>TWSC</b>								
2022 BUILD Condition Volumes	5		9	28	900			575	23
V/C Ratio	0.03		0.01	0.03					
Level-of-Service	C		B	A					
Control Delay (Seconds)	24.4		10.3	8.9					
<b>Intersection LOS</b>	<b>TWSC</b>								
<b>PM Peak Hour</b>									
2022 NO BUILD Condition Volumes	46		110	80	1,052			767	37
V/C Ratio	0.51		0.20	0.11					
Level-of-Service	F		B	B					
Control Delay (Seconds)	77.0		12.5	10.2					
<b>Intersection LOS</b>	<b>TWSC</b>								
2022 BUILD Condition Volumes	46		110	81	1,246			1,079	37
V/C Ratio	1.03		0.25	0.15					
Level-of-Service	F		C	B					
Control Delay (Seconds)	277.0		15.3	12.2					
<b>Intersection LOS</b>	<b>TWSC</b>								

The Rio Bravo Square Driveway / Coors Blvd. was signalized until 2009 when the Bernalillo County Public Works Department and the New Mexico Department of Transportation decided to relocate the signal to Barcelona Rd. The Rio Bravo Square Driveway is the sole access to the Rio Bravo Square Shopping Center. The AM Peak Hour volumes exiting the driveway are minor, but the PM Peak Hour volumes exiting the driveway are about 50 eastbound left turn movements and over 100 eastbound right turn movements.

The 2022 analysis of the intersection of Rio Bravo Square / Coors Blvd. demonstrates that the delays will be acceptable for the AM Peak Hour conditions analyzed in this report, but there are long delays anticipated for the eastbound left turn movements during the PM Peak Hour NO BUILD and BUILD Conditions. No recommendations are made for the intersection of Rio Bravo Square / Coors Blvd.

#9 – Gibson Blvd. / 98th St. – Pages A-158 thru A-219

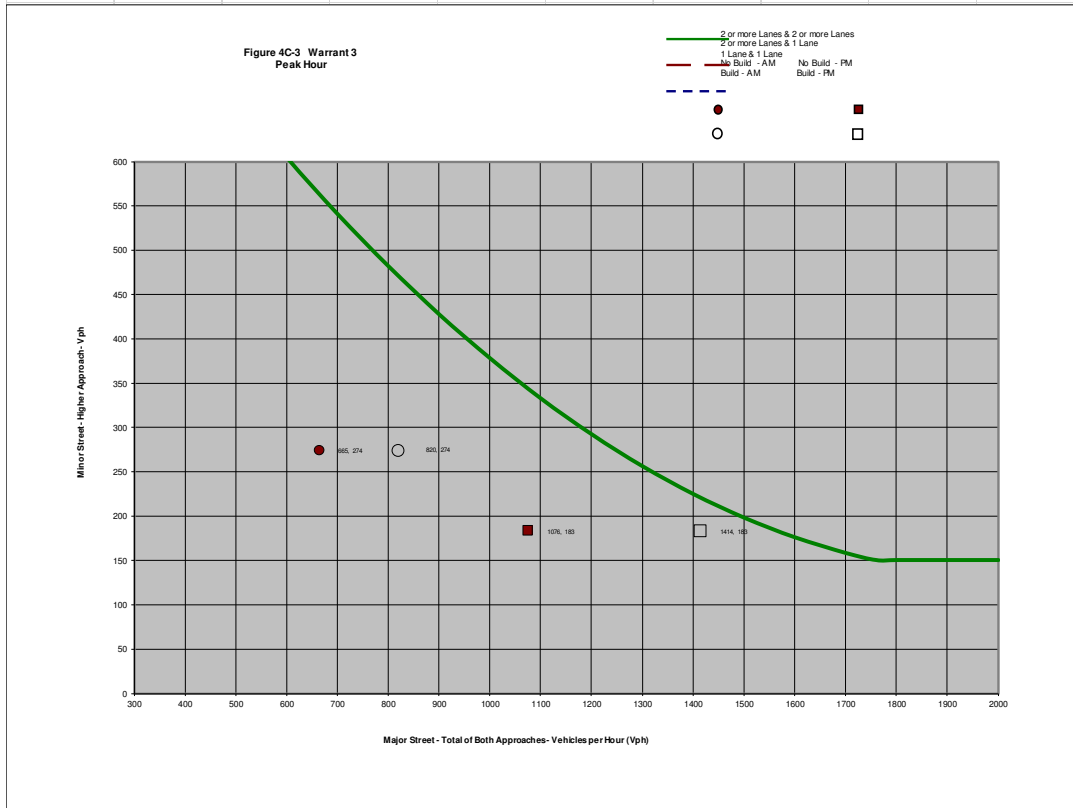
The results of the analysis of the all-way stop controlled unsignalized intersection of Gibson Blvd. / 98th St. are summarized in the following table:

Gibson Blvd. / 98th St. 2022 Conditions	EB (Gibson Blvd.)			WB (Gibson Blvd.)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>		1	2	1	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	166	108	20	11	38	10	18	354	50	8	215	20
V/C Ratio	0.43	0.18	0.13	0.03	0.07	0.06	0.05	0.55	0.38	0.02	0.35	
Level-of-Service	C	B	B	B	B	B	B	C	B	B	B	
Control Delay (Seconds)	16.2	11.5	10.8	11.5	11.3	10.9	10.4	17.5	13.3	10.7	14.0	
<b>Intersection LOS</b>	<b>AWSC (B - 14.2)</b>											
95th Percentile Queue (veh)	2.1	0.6	0.4	0.1	0.2	0.2	0.1	3.2	1.7	0.1	1.6	
2022 BUILD Condition Volumes	166	108	20	11	38	10	18	354	50	8	215	20
V/C Ratio	0.47	0.19	0.17	0.07	0.08	0.07	0.07	0.70	0.48	0.02	0.50	
Level-of-Service	C	B	B	B	B	B	B	D	C	B	C	
Control Delay (Seconds)	18.4	12.5	11.8	12.7	12.2	11.8	11.1	25.8	16.3	11.2	18.0	
<b>Intersection LOS</b>	<b>AWSC (C - 18.0)</b>											
95th Percentile Queue (veh)	2.5	0.7	0.6	0.2	0.2	0.2	0.2	5.5	2.6	0.1	2.7	
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	119	64	32	38	139	32	50	331	36	38	495	126
V/C Ratio	0.33	0.11	0.13	0.11	0.25	0.20	0.13	0.54	0.35	0.09	0.75	
Level-of-Service	C	B	B	B	B	B	A	C	B	B	D	
Control Delay (Seconds)	16.6	12.7	12.5	13.2	14.5	13.5	12.7	20.0	15.0	11.8	30.5	
<b>Intersection LOS</b>	<b>AWSC (C - 20.2)</b>											
95th Percentile Queue (veh)	1.4	0.4	0.5	0.4	0.9	0.7	0.4	3.1	1.5	0.3	6.4	
2022 BUILD Condition Volumes	119	64	52	61	139	32	72	474	62	38	642	126
V/C Ratio	0.39	0.13	0.22	0.20	0.29	0.24	0.21	0.86	0.59	0.11	1.11	
Level-of-Service	C	B	C	C	C	C	B	E	C	B	F	
Control Delay (Seconds)	20.3	14.7	15.4	16.4	17.3	16.0	15.0	48.6	23.9	13.1	111.9	
<b>Intersection LOS</b>	<b>AWSC (E - 49.9)</b>											
95th Percentile Queue (veh)	1.7	0.4	0.8	0.7	1.2	0.9	0.8	8.4	3.6	0.3	16.6	

The 2022 analysis of the intersection of Gibson Blvd. / 98th St. demonstrates that the delays will be acceptable for all conditions analyzed in this report except for the southbound thru / right turn movements during the PM Peak Hour. It should be considered that the HCM6 method for analyzing an all-way stop condition is limited to three lanes for each approach. There are four-lane approaches on all four legs of the intersection of Gibson Blvd. / 98th St. It is likely that the analysis results summarized in the above table are too conservative since only three approach lanes were analyzed. Therefore, no recommendations are made for the intersection of Gibson Blvd. / 98th St. It will probably operate at acceptable levels-of-service and delays.

A traffic signal Peak Hour Warrant test was applied to the 2022 NO BUILD and BUILD volumes to determine if a signal might be warranted at this intersection. It was determined that the Peak Hour Warrant for a new traffic signal was not met. Therefore, no recommendation is made for Gibson Blvd. / 98th St. based on 2022 Conditions. Following is the Peak Hour Warrant graph:

Project Name Ceja Vista Development (Dennis Chavez / 98th St.)		Analysis Year Traffic Volumes							
		AM		PM		Major		Minor	
Intersection Gibson Blvd. / 98th St.		No Build	665	274	No Build	1076	183		
Analysis Year 2022									
Number of Lanes									
Major St.	4	Build	820	274	Build	1414	183		
Minor St.	4								



Comments - Intersection does not meet the signal warrant based on 2022 PM Peak Hour BUILD Conditions. Eastbound / Westbound right turns were not counted.



#10 – Blake Rd. / 98th St. - Pages A-158 thru A-219

The results of the 2022 analyses of the all-way stop controlled unsignalized intersection of Blake Rd. / 98th St. are summarized in the following table:

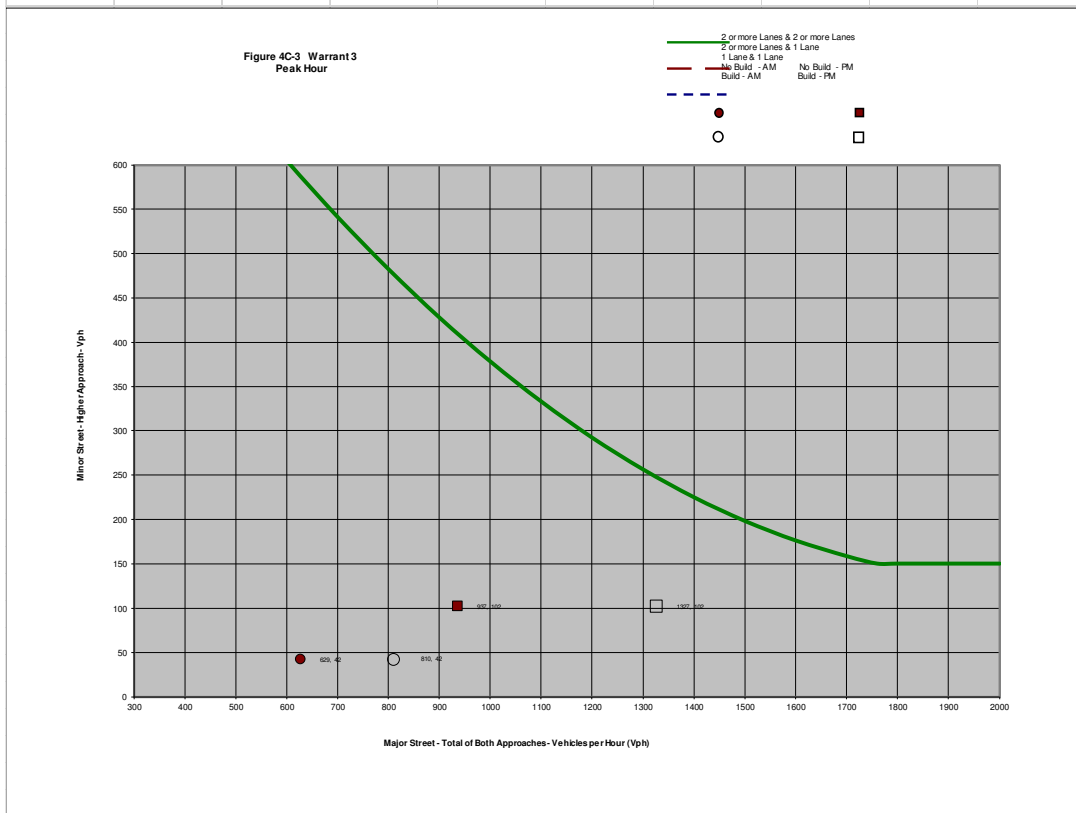
Blake Rd. / 98th St. 2022 Conditions	EB (Blake Rd.)			WB (Blake Rd.)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>		1	1>		1	2	1	1	2>	
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	22	20	67	29	19	30	27	328	31	23	217	3
V/C Ratio	0.06	0.19		0.07	0.11		0.06	0.45		0.05	0.31	
Level-of-Service	B	B		B	B		A	B		B	B	
Control Delay (Seconds)	10.7	10.7		10.9	10.2		9.8	13.8		10.1	12.1	
<b>Intersection LOS</b>	<b>AWSC (B - 11.7)</b>											
95th Percentile Queue (veh)	0.2	0.7		0.2	0.4		0.2	2.3		0.2	1.3	
2022 BUILD Condition Volumes	22	20	71	29	19	30	30	417	31	23	306	3
V/C Ratio	0.06	0.22		0.08	0.12		0.07	0.61		0.06	0.47	
Level-of-Service	B	B		B	B		A	C		B	C	
Control Delay (Seconds)	11.5	11.9		11.8	11.2		10.3	18.8		10.6	15.6	
<b>Intersection LOS</b>	<b>AWSC (B - 14.6)</b>											
95th Percentile Queue (veh)	0.2	0.8		0.3	0.4		0.2	4.0		0.2	2.5	
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	18	21	42	74	28	60	60	381	26	69	369	32
V/C Ratio	0.05	0.14		0.18	0.19		0.13	0.50		0.15	0.49	
Level-of-Service	C	B		B	B		A	C		B	D	
Control Delay (Seconds)	16.6	12.7		13.2	14.5		12.7	20.0		11.8	30.5	
<b>Intersection LOS</b>	<b>AWSC (C - 20.2)</b>											
95th Percentile Queue (veh)	0.1	0.5		0.6	0.7		0.4	2.8		0.5	2.6	
2022 BUILD Condition Volumes	18	21	50	74	28	60	69	572	26	559	369	32
V/C Ratio	0.05	0.18		0.21	0.22		0.16	0.84		0.16	0.82	
Level-of-Service	B	B		B	B		B	E		B	E	
Control Delay (Seconds)	13.3	13.7		14.8	13.8		12.5	39.3		12.5	37.2	
<b>Intersection LOS</b>	<b>AWSC (D - 26.3)</b>											
95th Percentile Queue (veh)	0.2	0.7		0.8	0.8		0.6	8.4		0.6	7.9	

The 2022 analysis of the intersection of Blake Rd. / 98th St. demonstrates that the delays will be acceptable for all conditions analyzed in this report except for the northbound and southbound thru / right turn movements during the PM Peak Hour. It should be considered that the HCM6 method for analyzing an all-way stop condition is limited to three lanes for each approach. There is four-lane approach on the south leg of the intersection of Blake Rd. / 98th St. It is likely that the analysis results summarized in the above table are too conservative since only three approach lanes were analyzed for the south leg. Therefore, no recommendations are made for the intersection of Gibson Blvd. / 98th St. It will probably operate at acceptable levels-of-service and delays.

A traffic signal Peak Hour Warrant test was applied to the 2022 NO BUILD and BUILD volumes to determine if a signal might be warranted at this intersection. It was determined that the Peak

Hour Warrant for a new traffic signal was not met. Therefore, no recommendation is made for Gibson Blvd. / 98<sup>th</sup> St. based on 2022 Conditions. Following is the Peak Hour Warrant graph:

Project Name Ceja Vista Development (Dennis Chavez / 98 <sup>th</sup> St.)	Analysis Year Traffic Volumes					
	AM	Major	Minor	PM	Major	Minor
Intersection Blake Rd. / 98th St.	No Build	629	42	No Build	937	102
Analysis Year 2022						
	Build	810	42	Build	1327	102
<b>Number of Lanes</b>						
Major St.	4					
Minor St.	4					



Comments - Intersection does not meet the signal warrant based on 2022 PM Peak Hour BUILD Conditions. Eastbound / Westbound right turns were not counted.

#11 – Gun Club Rd. / Karrol St. - Pages A-158 thru A-219

The results of the 2022 analyses of the unsignalized intersection of Gun Club Rd. / Karrol St. are summarized in the following table:

Gun Club Rd. / Karrol St. 2022 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			NB (Karrol St.)			SB (Karrol St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	0	<1>	0	0	<1>	0	0	<1>	0
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	3	15	1	7	4	13	1	7	23	16	8	1
V/C Ratio	0.00			0.01				0.04			0.04	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.3	0.0		7.3	0.0			8.8			9.3	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.0				0.1			0.1	
2022 BUILD Condition Volumes	3	21	1	7	16	13	2	8	23	16	12	1
V/C Ratio	0.00			0.01				0.04			0.04	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.3	0.0		7.3	0.0			8.9			9.5	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.0				0.1			0.1	
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	2	9	1	28	12	42	1	9	11	19	7	5
V/C Ratio	0.00			0.02				0.03			0.04	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.3	0.0		7.3	0.0			9.2			9.5	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.1				0.1			0.1	
2022 BUILD Condition Volumes	2	36	5	28	35	42	4	14	11	19	9	5
V/C Ratio	0.00			0.02				0.04			0.05	
Level-of-Service	A	A		A	A			A			B	
Control Delay (Seconds)	7.4	0.0		7.4	0.0			9.7			10.0	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.1				0.1			0.2	

The 2022 analysis of the intersection of Gun Club Rd. / Karrol St. demonstrates that the delays and queues will be acceptable for all conditions analyzed in this report. Therefore, no recommendations are made for the intersection of Gun Club Rd. / Karrol St.

#12 –Don Felipe Rd. / Coors Blvd. – Pages A-158 thru A-219

The results of the analysis of the unsignalized intersection of Don Felipe Rd. / Coors Blvd. are summarized in the following table:

Don Felipe Rd / Coors Blvd. 2022 Conditions	EB (Don Felipe Rd)			WB (Don Felipe Rd)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1>	0	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	17	2	3	13	1	71	1	577	16	44	471	6
V/C Ratio	0.03	0.01		0.05	0.12		0.00			0.05		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	17.3	13.5		17.3	11.2		8.5			9.1		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1	0.0		0.1	0.4		0.0			0.2		
2022 BUILD Condition Volumes	17	2	3	13	1	78	1	595	16	55	503	6
V/C Ratio	0.03	0.01		0.05	0.14		0.00			0.07		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	18.6	14.0		18.2	11.4		8.6			9.3		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1	0.0		0.2	0.5		0.0			0.2		
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	9	1	4	8	6	24	6	630	6	36	706	30
V/C Ratio	0.05	0.01		0.04	0.07		0.01			0.05		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	21.8	13.3		19.6	13.5		9.6			9.3		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1	0.0		0.1	0.2		0.0			0.1		
2022 BUILD Condition Volumes	9	1	4	8	6	42	6	675	6	52	742	30
V/C Ratio	0.05	0.01		0.04	0.11		0.01			0.07		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	24.3	14.0		21.4	13.4		9.7			9.6		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.2	0.0		0.1	0.4		0.0			0.2		

The 2022 analysis of the intersection of Don Felipe Rd. / Coors Blvd. demonstrates that the delays and queues will be acceptable for all conditions analyzed in this report. Therefore, no recommendations are made for the intersection of Don Felipe Rd. / Coors Blvd.

#13 –Gun Club Rd. / Unser Blvd. Extension – Pages A-158 thru A-219

The results of the analysis of the unsignalized intersection of Gun Club Rd. / Unser Blvd. extension. are summarized in the following table:

Gun Club Rd. / Unser Blvd. 2022 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry		<1			1>			<1>	
<b>AM Peak Hour</b>									
2022 BUILD Condition Volumes	1	18			20	20	25		1
V/C Ratio	0.00						0.03		
Level-of-Service	A	A					A		
Control Delay (Seconds)	7.3	0.0					8.9		
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0						0.1		
<b>PM Peak Hour</b>									
2022 BUILD Condition Volumes	1	11			31	46	43		1
V/C Ratio	0.00						0.06		
Level-of-Service	A	A					A		
Control Delay (Seconds)	7.4	0.0					9.1		
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0						0.2		

The 2022 analysis of the unsignalized intersection of Gun Club Rd. / Unser Blvd. extension demonstrates that the delays and queues will be acceptable for all conditions analyzed in this report. Therefore, no recommendations are made for the intersection of Gun Club Rd. / Unser Blvd. extension.

#14 –Borrego Dam Connection / Karrol St. – Pages A-158 thru A-219

The results of the analysis of the unsignalized intersection of the Borrego Dam Connection / Karrol St. extension are summarized in the following table:

<b>Borrego Conn. / Karril St. 2022 Conditions</b>	<b>EB (Borrego Conn.)</b>			<b>NB (Karril St.)</b>			<b>SB (Karril St.)</b>		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry		<1>			<1			1>	
<b>AM Peak Hour</b>									
2022 BUILD Condition Volumes	8		1	5	90			50	1
V/C Ratio	0.01			0.00					
Level-of-Service	A			A	A				
Control Delay (Seconds)	9.4			7.4	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0			0.0					
<b>PM Peak Hour</b>									
2022 BUILD Condition Volumes	11		1	13	100			100	1
V/C Ratio	0.02			0.01					
Level-of-Service	B			A	A				
Control Delay (Seconds)	10.1			7.5	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.1			0.0					

The 2022 analysis of the unsignalized intersection of the Borrego Dam Connection / Karrol St. demonstrates that the delays and queues will be acceptable for all conditions analyzed in this report. Therefore, no recommendations are made for the intersection of the Borrego Dam Connection / Karrol St.

#15 –Meade Rd. / Karrol St. – Pages A-158 thru A-219

The results of the analysis of the unsignalized intersection of Meade Rd. / Karrol St. extension. are summarized in the following table:

Meade Ave. / Karrol St. 2022 Conditions	EB (Meade Ave.)			NB (Karrol St.)			SB (Karrol St.)		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry		<1>			<1			1>	
<b>AM Peak Hour</b>									
2022 BUILD Condition Volumes	8		1	5	90			50	1
V/C Ratio	0.01			0.00					
Level-of-Service	A			A	A				
Control Delay (Seconds)	9.4			7.4	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0			0.0					
<b>PM Peak Hour</b>									
2022 BUILD Condition Volumes	11		1	13	100			110	1
V/C Ratio	0.02			0.01					
Level-of-Service	B			A	A				
Control Delay (Seconds)	10.1			7.5	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.1			0.0					

The 2022 analysis of the unsignalized intersection of Meade Rd. / Karrol St. demonstrates that the delays and queues will be acceptable for all conditions analyzed in this report. Therefore, no recommendations are made for the intersection of Meade Rd. / Karrol St.

## Traffic Analysis (Horizon Year – 2032)

### #1 – Gun Club Rd. / Coors Blvd. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Gun Club Rd. / Coors Blvd. are summarized in the following table:

Gun Club Rd. / Coors Blvd. 2032 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1	1	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	244	85	44	73	21	270	19	782	81	167	691	54
V/C Ratio	0.55	0.00	0.29	0.20	0.06	0.91	0.06	0.57	0.13	0.55	0.47	0.08
Level-of-Service	C	A	C	C	D	E	B	C	C	C	C	B
Control Delay (Seconds)	31.3	0.0	34.1	34.7	38.2	64.7	18.1	27.8	21.4	20.7	23.3	18.5
<b>Intersection LOS</b>	<b>C - 30.5</b>											
95th Percentile Queue (veh)	9.9	0.0	5.7	3.2	1.0	15.2	0.5	13.8	2.8	4.8	11.2	1.7
2032 BUILD Conditions Volumes	244	85	50	73	21	273	31	794	81	176	731	44
V/C Ratio	0.55	0.00	0.30	0.20	0.06	0.91	0.10	0.59	0.13	0.58	0.50	0.07
Level-of-Service	C	A	C	C	D	E	B	C	C	C	C	B
Control Delay (Seconds)	31.1	0.0	34.1	34.5	38.0	64.9	18.8	28.5	21.8	21.2	23.9	18.4
<b>Intersection LOS</b>	<b>C - 30.8</b>											
95th Percentile Queue (veh)	9.8	0.0	6.0	3.2	1.0	15.4	0.9	14.2	2.8	5.0	11.8	1.4
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	145	53	76	107	45	174	52	911	56	223	977	121
V/C Ratio	0.43	0.00	0.51	0.38	0.19	0.84	0.17	0.52	0.07	0.60	0.53	0.15
Level-of-Service	D	A	D	D	D	E	B	B	B	B	B	B
Control Delay (Seconds)	36.8	0.0	44.2	37.8	42.4	55.0	12.5	18.5	13.4	13.8	16.0	12.4
<b>Intersection LOS</b>	<b>C - 22.1</b>											
95th Percentile Queue (veh)	6.1	0.0	6.0	4.5	2.0	8.9	1.0	11.6	1.3	3.0	8.4	2.0
2032 BUILD Conditions Volumes	146	53	103	107	45	184	75	951	56	229	1,002	121
V/C Ratio	0.42	0.00	0.60	0.40	0.18	0.85	0.25	0.55	0.07	0.65	0.55	0.15
Level-of-Service	D	A	D	D	D	D	B	B	B	B	B	B
Control Delay (Seconds)	36.2	0.0	44.9	37.5	41.7	54.7	13.5	19.4	13.8	15.0	16.7	12.7
<b>Intersection LOS</b>	<b>C - 22.8</b>											
95th Percentile Queue (veh)	6.1	0.0	7.4	4.5	2.0	9.3	1.5	12.4	1.3	3.2	8.8	2.0

The 2032 analysis of the intersection of Gun Club Rd. / Coors Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report. The implementation of the proposed development increases the delay at the intersection by 0.3 seconds during the AM Peak Hour and by 0.7 seconds during the PM Peak Hour. Therefore, no recommendations are made for the intersection of Gun Club Rd. / Coors Blvd.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:



**Queuing Summary**

	EB (Gun Club Rd.)			WB (Gun Club Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
2032 NO BUILD Conditions (Max Queue)	9.9	0.0	6.0	4.5	2.0	15.2	1.0	13.8	2.8	4.8	11.2	2.0
2032 BUILD Conditions (Max Queue)	9.8	0.0	7.4	4.5	2.0	15.4	1.5	14.2	2.8	5.0	11.8	2.0
Percent Heavy Commercial Traffic	3%											
2032 NO BUILD Conditions (Max Queue) - Ft.	255	0	155	116	52	391	26	355	72	124	288	52
2032 BUILD Conditions (Max Queue) - Ft.	252	0	191	116	52	397	39	366	72	129	304	52
Length of Existing Lane	115			115			150	300	175	250	100	

There is deficit storage available for the eastbound left turn lane, but this project does not contribute significantly to the calculated queuing. There is also deficient queuing for the westbound right turn movement, but the westbound thru movement queue is so low that the westbound right turn movement can queue into the main lane. Also, the Ceja Vista Development does not contribute significantly to the westbound right turn queue length. Therefore, no recommendation is made regarding queuing at the intersection.

#2 –Dennis Chavez Blvd. / Coors Blvd. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Dennis Chavez Blvd. / Coors Blvd. are summarized in the following table:

Dennis Chavez / Coors Blvd. 2032 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	2	2>	0
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	66	1,323	574	67	238	147	316	709	267	225	276	30
V/C Ratio	0.19	1.27		0.51	0.43		0.55	0.53	0.41	0.77	0.26	0.26
Level-of-Service	C	F		C	C		B	C	C	E	C	C
Control Delay (Seconds)	27.2	169.0	0.0	34.8	33.6	0.0	19.8	29.1	24.5	57.6	29.2	29.3
<b>Intersection LOS</b>	<b>F - 82.9</b>											
95th Percentile Queue (veh)	2.4	50.8	0.0	2.6	9.6	0.0	8.7	12.1	8.7	6.4	6.0	6.2
2032 BUILD Conditions Volumes	350	1,768	625	67	393	147	335	709	267	225	276	131
V/C Ratio	1.29	1.69		0.49	0.89		0.64	0.54	0.41	0.77	0.36	0.38
Level-of-Service	F	F		D	E		C	C	C	E	C	C
Control Delay (Seconds)	187.0	358.0	0.0	37.5	57.9	0.0	21.8	29.4	24.5	57.6	32.0	32.4
<b>Intersection LOS</b>	<b>F - 173.5</b>											
95th Percentile Queue (veh)	27.4	97.8	0.0	2.8	19.1	0.0	9.5	12.1	8.7	6.4	8.4	8.3
Mitigated Lane Geometry	2	2>	0	1	2	1	2	2	1	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	350	1,768	625	67	393	147	335	709	267	225	276	131
V/C Ratio	0.31	0.97		0.49	0.22		0.60	1.13	0.78	1.02	0.48	0.51
Level-of-Service	B	D		C	B		D	F	E	F	D	D
Control Delay (Seconds)	12.2	40.7	0.0	30.7	15.0	0.0	39.1	121.0	55.2	122.0	47.9	52.2
<b>Intersection LOS</b>	<b>D - 41.6</b>											
95th Percentile Queue (veh)	3.9	34.9	0.0	2.0	5.1	0.0	7.2	23.1	12.8	9.4	7.2	7.4
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	117	437	645	160	728	436	436	1,060	102	205	913	121
V/C Ratio	0.70	0.45		0.44	1.34		1.24	0.84	0.15	0.76	1.08	1.08
Level-of-Service	D	D		C	F		F	D	B	E	F	F
Control Delay (Seconds)	36.7	35.0	0.0	27.6	206.0	0.0	164.0	39.4	19.1	58.0	106.0	106.0
<b>Intersection LOS</b>	<b>F - 96.0</b>											
95th Percentile Queue (veh)	4.7	9.1	0.0	5.9	62.3	0.0	34.1	20.6	3.1	5.9	32.4	32.7
2032 BUILD Conditions Volumes	311	734	684	160	1,212	436	492	1,060	102	205	913	433
V/C Ratio	1.30	0.65		0.55	2.23		1.40	0.95	0.16	0.76	1.69	1.73
Level-of-Service	F	D		C	F		F	D	C	E	F	F
Control Delay (Seconds)	197.0	35.3	0.0	28.2	601.0	0.0	230.0	52.2	22.4	58.0	368.0	386.0
<b>Intersection LOS</b>	<b>F - 268.5</b>											
95th Percentile Queue (veh)	25.7	14.5	0.0	5.8	165.8	0.0	41.9	23.2	3.4	5.9	78.0	77.0
Mitigated Lane Geometry	2	2>	0	1	2	1	2	2	1	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	311	734	684	160	1,212	436	492	1,060	102	205	913	433
V/C Ratio	1.04	0.60		0.57	1.09		1.13	0.93	0.17	0.95	0.99	0.79
Level-of-Service	F	C		C	F		F	D	C	F	E	D
Control Delay (Seconds)	81.6	30.9	0.0	30.1	92.8	0.0	131.0	48.5	23.6	100.0	70.2	44.5
<b>Intersection LOS</b>	<b>E - 68.9</b>											
95th Percentile Queue (veh)	7.1	10.1	0.0	6.0	35.1	0.0	17.4	22.5	3.5	8.1	24.0	18.9

The 2032 analysis of the intersection of Dennis Chavez Blvd. / Coors Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report provided that the recommendations to mitigate the

intersection in the 2022 analysis are implemented. That is, the mitigation measures recommended restore the intersection to an improved level-of-service / delay than exists for the 2032 NO BUILD Condition. The implementation of the proposed development when mitigated decreases the delay at the intersection by 41 seconds during the AM Peak Hour and reduces the delay by 27 seconds during the PM Peak Hour. In both cases, the overall intersection delay is significant. The northbound left turn movement will marginally encroach into LOS F (80.6 seconds delay) during the PM Peak Hour period. Therefore, no additional recommendations are made for the intersection of Dennis Chavez Blvd. / Coors Blvd.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:

<b>Queuing Summary</b>	<b>EB (Dennis Chavez)</b>			<b>WB (Dennis Chavez)</b>			<b>NB (Coors Blvd.)</b>			<b>SB (Coors Blvd.)</b>								
	L	T	R	L	T	R	L	T	R	L	T	R						
2032 NO BUILD Conditions (Max Queue)	4.7	50.8	0.0	5.9	62.3	0.0	34.1	20.6	8.7	6.4	32.4	32.7						
2032 MIT. BUILD Conditions (Max Queue)	7.1	34.9	0.0	6.0	35.1	0.0	17.4	23.1	12.8	9.4	24.0	18.9						
Percent Heavy Commercial Traffic	3%																	
2032 NO BUILD Conditions (Max Queue) - Ft.	121	1,308	0	152	1,604	0	878	530	224	165	834	842						
2032 MIT BUILD Conditions (Max Queue) - Ft.	183	899	0	155	904	0	448	595	330	242	618	487						
Length of Existing Lane	375			510			999			275			220			160		

Recommended auxiliary lane lengths are based on a posted 45 MPH speed limit on both Dennis Chavez Blvd. (Rio Bravo Blvd.) and Coors Blvd. in compliance with Table 18.K-1 (Deceleration and Acceleration Lengths – feet) in the New Mexico Department of Transportation State Access Management Manual. Design of improvements to the mitigated intersection of Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. should provide sufficient auxiliary lane storage to accommodate the 95<sup>th</sup> percentile queues summarized as follows:

<b>Summary of Recommendations for: Dennis Chavez Blvd. (NM St. Rd. 500) / Coors Blvd.</b>		
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
Add Second Eastbound Left Turn Lane	550	(400' + 150') long including 150 feet transition.
Add Second Westbound Thru Lane	500	plus transition as per MUTCD
Maintain 1 Westbound Right Turn Lane	370	370' including 150 feet transition.
Add Second NB Left Turn Lane	740	(400' + 340') long including 100 feet transition.
Construct new Southbound RT Lane	952	(370' + 582') long including 100 feet long transition.
Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.		
Field Constraints may limit the length of lane that can be constructed.		

#3 –Blake Rd. / Unser Blvd. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Blake Rd. / Unser Blvd. are summarized in the following table:

Blake Rd. / Unser Blvd. 2032 Conditions	EB (Blake Rd.)			WB (Blake Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1>	0	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	181	18	105	168	26	422	43	447	105	52	374	35
V/C Ratio	0.86	0.00	0.25	0.34	0.00	0.93	0.12	0.39	0.17	0.17	0.32	0.05
Level-of-Service	D	A	C	C	A	E	C	C	C	C	C	B
Control Delay (Seconds)	54.4	0.0	28.1	23.6	0.0	57.9	22.1	28.8	20.6	22.5	27.8	18.6
<b>Intersection LOS</b>	<b>D - 36.2</b>											
95th Percentile Queue (veh)	9.0	0.0	5.0	6.2	0.0	23.2	1.5	9.0	3.6	1.8	7.7	1.1
2032 BUILD Conditions Volumes	181	18	107	185	26	422	44	542	119	52	418	35
V/C Ratio	0.86	0.00	0.25	0.38	0.00	0.93	0.13	0.47	0.19	0.19	0.36	0.05
Level-of-Service	D	A	C	C	A	E	C	C	B	C	C	B
Control Delay (Seconds)	54.4	0.0	28.1	24.1	0.0	57.9	22.2	30.2	20.9	23.0	28.4	18.6
<b>Intersection LOS</b>	<b>D - 36.0</b>											
95th Percentile Queue (veh)	9.0	0.0	5.1	6.9	0.0	23.2	1.5	10.9	4.2	1.8	8.5	1.1
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	101	60	75	143	36	262	194	558	214	307	428	151
V/C Ratio	0.56	0.00	0.39	0.44	0.00	0.89	0.42	0.40	0.30	0.72	0.28	0.20
Level-of-Service	D	A	D	D	A	E	B	C	B	C	C	B
Control Delay (Seconds)	40.9	0.0	43.7	37.0	0.0	56.2	18.1	26.1	19.9	21.2	21.4	16.2
<b>Intersection LOS</b>	<b>C - 28.7</b>											
95th Percentile Queue (veh)	5.0	0.0	7.3	7.0	0.0	16.2	6.2	10.6	7.6	9.3	7.7	4.6
2032 BUILD Conditions Volumes	101	60	79	179	36	262	199	647	252	307	550	151
V/C Ratio	0.56	0.00	0.41	0.55	0.00	0.89	0.48	0.47	0.35	0.78	0.36	0.20
Level-of-Service	D	A	D	D	A	E	B	C	C	C	C	B
Control Delay (Seconds)	40.9	0.0	43.8	40.9	0.0	56.2	18.6	27.2	20.8	25.6	22.7	16.4
<b>Intersection LOS</b>	<b>C - 29.6</b>											
95th Percentile Queue (veh)	5.0	0.0	7.6	2.4	0.0	16.2	6.4	12.3	8.8	9.7	9.8	4.7

The 2032 analysis of the intersection of Blake Rd. / Unser Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report. The implementation of the proposed development decreases the average delay at the intersection by 0.2 seconds during the AM Peak Hour and increases the average delay at the intersection by 1.1 seconds during the PM Peak Hour. Therefore, no recommendations are made for the intersection of Blake Rd. / Unser Blvd.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:

**Queuing Summary**

	EB (Blake Rd.)			WB (Blake Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)								
	L	T	R	L	T	R	L	T	R	L	T	R						
2032 NO BUILD Conditions (Max Queue)	9.0	0.0	7.3	7.0	0.0	23.2	6.2	10.6	7.6	9.3	7.7	4.6						
2032 BUILD Conditions (Max Queue)	9.0	0.0	7.6	6.9	0.0	23.2	6.4	12.3	8.8	9.7	9.8	4.7						
Percent Heavy Commercial Traffic	3%																	
2032 NO BUILD Conditions (Max Queue) - Ft.	232	0	188	180	0	597	160	273	196	239	198	118						
2032 BUILD Conditions (Max Queue) - Ft.	232	0	196	178	0	597	165	317	227	250	252	121						
Length of Existing Lane	110			250			375			280			450			290		

There are existing deficiencies in the lengths of the eastbound left turn lane. The Ceja Vista Development does not contribute any traffic to that particular turning movement. Therefore, no recommendation is made related to queuing issues at the intersection of Blake Rd. / Unser Blvd.

#4 –Dennis Chavez Blvd. / 118<sup>th</sup> St. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. are summarized in the following table:

Dennis Chavez / 118th St. 2032 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (118th St.)			SB (118th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	6	78	149	521	138	17	40	111	431	196	484	112
V/C Ratio	0.11	0.26	0.59	1.07	0.00	0.31	0.95	0.32	0.83	0.94	0.00	1.28
Level-of-Service	D	C	D	F	A	C	F	C	C	E	A	F
Control Delay (Seconds)	51.0	34.9	43.2	78.4	0.0	21.5	148.0	30.8	30.2	70.4	0.0	168.0
<b>Intersection LOS</b>	<b>F - 83.3</b>											
95th Percentile Queue (veh)	0.4	4.8	9.9	15.9	0.0	4.9	6.0	6.2	21.0	12.4	0.0	65.1
2032 BUILD Conditions Volumes	6	83	149	736	145	19	40	111	647	200	484	112
V/C Ratio	0.11	0.28	0.59	1.51	0.00	0.33	0.95	0.32	1.24	1.09	0.00	1.28
Level-of-Service	D	D	D	F	A	C	F	C	F	F	A	F
Control Delay (Seconds)	51.0	35.2	43.2	275.0	0.0	21.7	148.0	30.8	147.0	115.0	0.0	168.0
<b>Intersection LOS</b>	<b>F - 162.2</b>											
95th Percentile Queue (veh)	0.4	5.2	9.9	45.5	0.0	5.2	6.0	6.2	64.2	16.2	0.0	65.1
Mitigated Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
2032 BUILD Cond. [MITIGATED] Volumes	6	83	149	736	145	19	40	111	647	200	484	112
V/C Ratio	0.11	0.45	0.94	1.01	0.00	0.32	0.95	0.33	1.04	1.18	0.00	1.34
Level-of-Service	D	D	F	F	A	C	F	C	F	F	A	F
Control Delay (Seconds)	51.0	47.2	90.6	58.9	0.0	20.9	148.0	31.6	61.1	150.0	0.0	196.0
<b>Intersection LOS</b>	<b>F - 95.2</b>											
95th Percentile Queue (veh)	0.4	6.2	13.9	22.8	0.0	6.6	6.0	6.3	41.3	19.0	0.0	70.7
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	22	102	22	182	76	72	44	103	419	89	104	25
V/C Ratio	0.42	0.23	0.06	0.81	0.00	0.32	0.17	0.29	1.05	0.42	0.00	0.28
Level-of-Service	D	C	C	D	A	C	C	C	F	C	A	C
Control Delay (Seconds)	54.6	25.3	23.1	53.9	0.0	22.4	29.5	30.5	82.1	24.8	0.0	22.5
<b>Intersection LOS</b>	<b>D - 48.7</b>											
95th Percentile Queue (veh)	1.7	5.2	1.1	6.7	0.0	6.7	2.4	5.7	32.5	4.3	0.0	6.0
2032 BUILD Conditions Volumes	22	114	23	455	86	80	44	103	692	96	104	25
V/C Ratio	0.42	0.29	0.07	1.50	0.00	0.36	0.17	0.29	1.59	0.53	0.00	0.28
Level-of-Service	D	C	C	F	A	C	C	C	F	C	A	C
Control Delay (Seconds)	54.6	28.7	25.7	276.0	0.0	22.5	29.5	30.5	302.0	26.1	0.0	22.5
<b>Intersection LOS</b>	<b>F - 191.6</b>											
95th Percentile Queue (veh)	1.7	6.3	1.2	30.5	0.0	6.6	2.4	5.7	100.9	4.8	0.0	6.0
Mitigated Lane Geometry	1	1	1	2	1>	0	1	1	1	1	1>	0
2032 BUILD Cond. [MITIGATED] Volumes	22	114	23	455	86	80	44	103	692	96	104	25
V/C Ratio	0.42	0.24	0.06	0.86	0.00	0.26	0.29	0.59	1.77	0.84	0.00	0.47
Level-of-Service	D	C	C	D	A	B	D	D	F	E	A	D
Control Delay (Seconds)	54.6	23.4	21.1	42.7	0.0	11.9	43.7	47.1	386.0	72.4	0.0	36.9
<b>Intersection LOS</b>	<b>F - 169.1</b>											

The 2032 analysis of the intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. demonstrates that the level-of-service will be significantly impacted by the development of the Ceja Vista project. As with the implementation year analysis, the source of the problems at this signalized intersection

is the Albuquerque Public Schools Systems refusal to cooperate with the other public agencies desiring the internal vehicular connection between the school and Ceja Vista Development. Therefore, no additional recommendations are made for the intersection of Dennis Chavez Blvd. / 118<sup>th</sup> St. Please see the detailed argument presented in the Implementation Year Analysis section for this intersection.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:

<b>Queuing Summary</b>	<b>EB (Dennis Chavez)</b>			<b>WB (Dennis Chavez)</b>			<b>NB (118th St.)</b>			<b>SB (118th St.)</b>		
	L	T	R	L	T	R	L	T	R	L	T	R
2032 NO BUILD Conditions (Max Queue)	1.7	5.2	9.9	15.9	0.0	6.7	6.0	6.2	32.5	12.4	0.0	65.1
2032 BUILD Conditions (Max Queue)	1.7	6.3	9.9	45.5	0.0	6.6	6.0	6.2	100.9	16.2	0.0	65.1
Percent Heavy Commercial Traffic	3%											
2032 NO BUILD Conditions (Max Queue) - Ft.	44	134	255	409	0	173	155	160	837	319	0	1,676
2032 BUILD Conditions (Max Queue) - Ft.	44	162	255	1,172	0	170	155	160	2,598	417	0	1,676
Length of Existing Lane	250		350		615		200		550		200	

Queuing deficiencies exist for the westbound left turn movement, the northbound right turn movement, and the southbound left turn movement.

For similar reasons that were presented in the Implementation Year Analysis section for this intersection, no recommendation is made regarding the queuing issues.

#5 –Dennis Chavez Blvd. / 98<sup>th</sup> St. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. are summarized in the following table:

Dennis Chavez / 98th St. 2032 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1			1	1				1>		0
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	200	474			698	184				790		412
V/C Ratio	1.36	0.68			1.30	0.40				3.33		0.00
Level-of-Service	F	B			F	A				F		A
Control Delay (Seconds)	219.0	18.6			147.0	3.8				999.0		0.0
<b>Intersection LOS</b>	<b>F - 532.5</b>											
95th Percentile Queue (veh)	22.0	17.0			50.4	1.5				280.2		0.0
2032 BUILD Conditions Volumes	209	641	49	63	781	184	136	89	118	790	99	415
V/C Ratio	1.17	0.70	0.06	0.28	1.09	0.30	2.44	0.00	0.44	3.04	0.00	1.14
Level-of-Service	F	B	B	C	F	B	F	A	C	F	A	F
Control Delay (Seconds)	136.0	18.3	10.1	24.1	69.1	13.7	749.0	0.0	29.7	972.0	0.0	121.0
<b>Intersection LOS</b>	<b>F - 289.9</b>											
95th Percentile Queue (veh)	12.8	17.6	1.1	2.4	36.1	3.9	26.0	0.0	8.8	142.4	0.0	37.6
Mitigated Lane Geometry	1	2	1	1	2	1	1	2	2	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	209	641	49	63	781	184	136	89	118	790	99	415
V/C Ratio	0.86	0.57	0.10	0.26	0.85	0.45	0.49	0.20	0.26	1.06	0.10	0.98
Level-of-Service	D	C	C	C	D	D	D	D	D	F	C	E
Control Delay (Seconds)	36.6	28.4	22.6	26.0	54.5	43.3	37.2	41.6	38.2	90.2	26.5	70.9
<b>Intersection LOS</b>	<b>D - 54.8</b>											
95th Percentile Queue (veh)	7.5	11.2	1.8	2.5	20.5	10.3	6.7	2.3	2.9	25.4	1.9	24.2
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	198	355			425	336				301		148
V/C Ratio	0.35	0.33			0.84	0.78				0.89		0.20
Level-of-Service	B	A			D	D				D		B
Control Delay (Seconds)	13.6	7.6			46.8	45.7				53.9		13.1
<b>Intersection LOS</b>	<b>C - 33.3</b>											
95th Percentile Queue (veh)	3.4	6.1			16.3	13.0				15.6		12.3
2032 BUILD Conditions Volumes	204	490	151	164	610	336	94	217	130	301	209	158
V/C Ratio	0.79	0.53	0.19	0.55	0.90	0.58	0.74	0.00	0.74	2.07	0.00	0.79
Level-of-Service	C	B	B	C	C	C	E	A	D	F	A	D
Control Delay (Seconds)	30.1	14.1	10.6	26.8	30.4	24.0	68.3	0.0	38.6	551.0	0.0	41.7
<b>Intersection LOS</b>	<b>F - 80.5</b>											
95th Percentile Queue (veh)	5.7	11.3	3.5	5.1	19.4	9.1	6.8	0.0	15.6	48.9	0.0	17.1
Mitigated Lane Geometry	1	2	1	1	2	1	1	2	2	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	204	490	151	164	610	336	94	217	130	301	209	158
V/C Ratio	0.51	0.31	0.19	0.39	0.40	0.40	0.40	0.73	0.32	0.84	0.47	0.51
Level-of-Service	B	B	B	B	A	A	D	D	D	E	D	D
Control Delay (Seconds)	10.6	15.2	10.3	10.4	0.1	0.2	41.1	51.1	40.1	58.0	43.7	37.7
<b>Intersection LOS</b>	<b>C - 21.4</b>											
95th Percentile Queue (veh)	4.2	6.0	3.2	2.8	0.0	0.1	4.9	6.4	3.3	9.1	5.6	7.9

The 2032 analysis of the intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report provided that the recommendations to mitigate the



intersection in the 2022 analysis are implemented. The implementation of the proposed development when mitigated decreases the delay at the intersection by 477 seconds during the AM Peak Hour and reduces the delay by 11.9 seconds during the PM Peak Hour. Therefore, no additional recommendations are made for the intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:

Queuing Summary	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
2032 NO BUILD Conditions (Max Queue)	22.0	17.0	0.0	0.0	50.4	13.0	0.0	0.0	0.0	280.2	0.0	12.3
2032 MIT. BUILD Conditions (Max Queue)	7.5	11.2	3.2	2.8	20.5	10.3	6.7	6.4	3.3	25.4	5.6	24.2
Percent Heavy Commercial Traffic	3%											
2032 NO BUILD Conditions (Max Queue) - Ft.	567	438	0	0	1,298	335	0	0	0	7,215	0	317
2032 MIT BUILD Conditions (Max Queue) - Ft.	193	288	82	72	528	265	173	165	85	654	144	623
Length of Existing Lane	125			500			600			600		

The signalized intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. will need to be significantly modified to accommodate the new Ceja Vista Development. Modifications included additional signal phasing and signal timing as a result of the addition of the south leg of the intersection. The signalized intersection of Dennis Chavez Blvd. / 98<sup>th</sup> St. will need to be designed and constructed with the following geometry:

Summary of Recommendations for:		Dennis Chavez Blvd. (NM State Rd. 500) / 98th St.
Recommended Improvement	Required Length (Ft)	Comment
1 Eastbound Left Turn Lane	525	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	450	(370' + 82') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	635	(370' + 265') long including 150 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	335	(250' + 85') long including 100 feet transition.
2 Southbound LT Lanes	900	(250 + 654') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	870	(250' + 620') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.  
Field Constraints may limit the length of lane that can be constructed.

Lane lengths are based on New Mexico Department of Transportation's State Access Management Manual, Table 18.K-1 (Deceleration and Acceleration Lengths – Feet) based on a 45 MPH posted speed limit on Dennis Chavez Blvd. and a 35 MPH posted speed limit on 98<sup>th</sup> St.

#6 –Dennis Chavez Blvd. / Unser Blvd. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Dennis Chavez Blvd. / Unser Blvd. are summarized in the following table:

Dennis Chavez / Unser Blvd. 2032 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1			1	1				1		1
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	119	1,372			650	507				941		145
V/C Ratio	0.54	1.36			0.77	0.71				1.82		0.27
Level-of-Service	C	F			C	C				F		C
Control Delay (Seconds)	20.0	185.0			29.3	27.3				413.0		24.4
<b>Intersection LOS</b>	<b>F - 182.5</b>											
95th Percentile Queue (veh)	1.9	99.0			21.7	16.9				114.1		12.5
2032 BUILD Conditions Volumes	146	1,616	14	180	737	507	37	85	513	941	42	171
V/C Ratio	0.75	1.60	0.02	2.99	0.89	0.73	0.13	0.00	1.27	15.63	0.00	0.45
Level-of-Service	C	F	A	F	D	C	D	A	F	F	A	C
Control Delay (Seconds)	24.7	283.0	4.8	992.0	39.1	28.6	36.3	0.0	174.0	999.0	0.0	30.5
<b>Intersection LOS</b>	<b>F - 1417.0</b>											
95th Percentile Queue (veh)	2.7	139.7	0.1	33.9	29.1	17.9	1.6	0.0	48.6	196.7	0.0	8.6
Mitigated Lane Geometry	1	2	1	2	2	1	1	2	2	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	146	1,616	14	180	737	507	37	85	513	941	42	171
V/C Ratio	0.54	1.02	0.02	0.66	0.47	0.73	0.16	0.16	0.95	1.37	0.04	0.36
Level-of-Service	B	F	C	C	C	C	D	D	E	F	C	C
Control Delay (Seconds)	16.8	68.0	24.0	28.1	20.1	28.8	40.2	39.6	68.0	212.0	25.2	28.7
<b>Intersection LOS</b>	<b>E - 78.6</b>											
95th Percentile Queue (veh)	3.8	38.0	0.6	2.3	11.3	18.0	1.7	1.9	14.5	33.8	0.7	6.8
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	119	803			1,094	1,021				779		71
V/C Ratio	0.80	0.82			1.35	1.48				1.48		0.13
Level-of-Service	D	A			F	F				F		C
Control Delay (Seconds)	39.4	5.6			192.0	253.0				262.0		22.2
<b>Intersection LOS</b>	<b>F - 175.8</b>											
95th Percentile Queue (veh)	3.8	3.0			90.8	99.7				77.1		7.0
2032 BUILD Conditions Volumes	176	970	41	561	1,361	1,021	26	86	347	779	113	128
V/C Ratio	0.99	0.99	0.05	2.06	1.74	1.54	0.10	0.00	0.90	7.85	0.00	0.48
Level-of-Service	D	A	A	F	F	F	D	A	D	F	A	C
Control Delay (Seconds)	47.2	5.8	0.0	524.0	367.0	279.0	36.1	0.0	53.1	999.0	0.0	30.2
<b>Intersection LOS</b>	<b>F - 638.6</b>											
95th Percentile Queue (veh)	4.0	2.4	0.0	82.9	160.2	106.3	1.2	0.0	20.8	158.4	0.0	9.5
Mitigated Lane Geometry	1	2	1	2	2	1	1	2	2	2	2	1
2032 BUILD Cond. [MITIGATED] Volumes	176	970	41	561	1,361	1,021	26	86	347	779	113	128
V/C Ratio	0.99	1.06	0.10	0.93	1.05	1.16	0.10	0.21	0.42	1.19	0.12	0.24
Level-of-Service	F	F	B	D	F	F	D	D	C	F	C	C
Control Delay (Seconds)	89.4	69.0	17.7	38.8	40.6	90.1	38.1	42.9	29.4	144.0	28.4	24.4
<b>Intersection LOS</b>	<b>E - 68.8</b>											
95th Percentile Queue (veh)	10.5	21.7	1.0	8.5	18.3	56.8	1.2	2.1	7.1	29.5	2.2	4.6

The 2032 analysis of the intersection of Dennis Chavez Blvd. / Unser Blvd. demonstrates that the level-of-service will be marginally acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions analyzed in this report provided that the recommendations to

mitigate the intersection in the 2022 analysis are implemented. The implementation of the proposed development when mitigated decreases the delay at the intersection by 103 seconds during the AM Peak Hour and reduces the delay by 107 seconds during the PM Peak Hour. In both cases, there is a substantial improvement in the operational characteristics of the intersection as a result of the mitigation measures recommended. Therefore, no additional recommendations are made for the intersection of Dennis Chavez Blvd. / Unser Blvd.

The 95<sup>th</sup> Percentile queue lengths for each lane group are summarized in the following table:

<b>Queuing Summary</b>	<b>EB (Dennis Chavez)</b>			<b>WB (Dennis Chavez)</b>			<b>NB (Unser Blvd.)</b>			<b>SB (Unser Blvd.)</b>		
	L	T	R	L	T	R	L	T	R	L	T	R
2032 NO BUILD Conditions (Max Queue)	3.8	99.0	0.0	0.0	90.8	99.7	0.0	0.0	0.0	114.1	0.0	12.5
2032 MIT. BUILD Conditions (Max Queue)	10.5	38.0	1.0	8.5	18.3	56.8	1.7	2.1	14.5	33.8	2.2	6.8
Percent Heavy Commercial Traffic	3%											
2032 NO BUILD Conditions (Max Queue) - Ft.	98	2,549	0	0	2,338	2,567	0	0	0	2,938	0	322
2032 MIT BUILD Conditions (Max Queue) - Ft.	270	979	26	219	471	1,463	44	54	373	870	57	175
Length of Existing Lane	125			375			999			999		

The signalized intersection of Dennis Chavez Blvd. / Unser Blvd. will need to be significantly modified to accommodate the new Ceja Vista Development. Modifications included additional signal phasing and signal timing as a result of the addition of the south leg of the intersection. The signalized intersection of Dennis Chavez Blvd. / Unser Blvd. will need to be designed and constructed with the following geometry:

<b>Summary of Recommendations for:</b>		<b>Dennis Chavez Blvd. (NM St. Rd. 500) / Unser Blvd.</b>
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
1 Eastbound Left Turn Lane	670	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	400	(370' + 26') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	1830	(370' + 265') long including 1,463 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	295	(250' + 44') long including 100 feet transition.
2 Southbound LT Lanes	1120	(250 + 870') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	425	(250' + 175') long including 100 feet long transition.
Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.		
Field Constraints may limit the length of lane that can be constructed.		

Lane length requirements are based on NM DOT's State Access Management Manual, Table 18.K-1 (Deceleration and Acceleration Lengths – Feet) based on a 45 MPH posted speed limit on Dennis Chavez Blvd. and a 35 MPH posted speed limit on Unser Blvd.

#7 –Dennis Chavez Blvd. / Condershire Dr. – Pages A-220 thru A-281

The results of the 2032 analyses of the signalized intersection of Dennis Chavez Blvd. / Condershire Dr. are summarized in the following table:

Dennis Chavez / Karrol St. 2032 Conditions	EB (Dennis Chavez)			WB (Dennis Chavez)			NB (Karrol St.)			SB (Karrol St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	0	<1>	0	0	<1>	0	0	<1	1
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	26	2,195	44	15	1,071	10	44	2	52	9	2	37
V/C Ratio	0.04			0.07				24.75			1.85	0.14
Level-of-Service	B	A		C	A			F			F	C
Control Delay (Seconds)	10.9	0.0		22.2	0.0			999.0			999.0	21.1
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.1			0.2				14.4			2.4	0.5
2032 BUILD Conditions Volumes	29	2,942	50	25	1,332	10	44	2	89	9	2	41
V/C Ratio	0.06			0.23				7.58				0.23
Level-of-Service	B	A		E	A			F				D
Control Delay (Seconds)	12.6	0.0		46.7	0.0			999.0				30.3
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.2			0.8				17.7				0.8
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	53	1,284	76	53	2,096	26	66	1	46	5	1	121
V/C Ratio	0.23			0.11								2.15
Level-of-Service	C	A		B	A							F
Control Delay (Seconds)	24.4	0.0		13.4	0.0							683.0
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.9			0.4								12.2
2032 BUILD Conditions Volumes	60	1,787	80	85	2,910	26	66	1	69	5	1	128
V/C Ratio	0.56			0.29								7.76
Level-of-Service	F	A		C	A							F
Control Delay (Seconds)	72.2	0.0		21.6	0.0							999.0
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	2.6			1.2								17.2

The 2032 analysis of the intersection of Dennis Chavez Blvd. / Condershire Dr. reinforces the findings and recommendations in the 2022 Implementation Year analysis. The calculated delays for the northbound movement during the PM Peak Hour are so high that Synchro did not even report it. Therefore, no additional recommendations are made for the intersection of Dennis Chavez Blvd. / Condershire Dr. The Findings and Conclusions for this intersection based on the implementation year analysis still hold true.

#8 –Rio Bravo Square / Coors Blvd. – Pages Pages A-220 thru A-281

The results of the 2032 analysis of the unsignalized intersection of Rio Bravo Square / Coors Blvd. are summarized in the following table:

Rio Bravo Sq. / Coors Blvd. 2032 Conditions	EB (Rio Bravo Sq.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1		1	1	2			2	1
<b>AM Peak Hour</b>									
2032 NO BUILD Conditions Volumes	5		10	29	693			496	25
V/C Ratio	0.02		0.01	0.03					
Level-of-Service	C		B	A					
Control Delay (Seconds)	19.5		10.0	8.7					
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.1		0.0	0.1					
2032 BUILD Conditions Volumes	5		10	29	977			597	25
V/C Ratio	0.03		0.02	0.03					
Level-of-Service	D		B	A					
Control Delay (Seconds)	26.5		10.4	9.0					
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.1		0.0	0.1					

<b>PM Peak Hour</b>									
2032 NO BUILD Conditions Volumes	48		116	83	1,180			803	39
V/C Ratio	0.63		0.21	0.12					
Level-of-Service	F		B	B					
Control Delay (Seconds)	107.0		12.9	10.4					
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	2.9		0.8	0.4					
2032 BUILD Conditions Volumes	48		116	84	1,374			1,115	39
V/C Ratio	1.30		0.27	0.16					
Level-of-Service	F		C	B					
Control Delay (Seconds)	405.0		16.0	12.6					
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	5.1		1.1	0.6					

The 2032 analysis of the intersection of Rio Bravo Square / Coors Blvd. demonstrates that the delays will be acceptable for the AM Peak Hour conditions analyzed in this report, but there are long delays anticipated for the eastbound left turn movements during the PM Peak Hour. No recommendations are made for the intersection of Rio Bravo Square / Coors Blvd.

#9 –Gibson Blvd. / 98<sup>th</sup> St. – Pages A-220 thru A-281

The results of the 2032 analysis of the unsignalized intersection of Gibson Blvd. / 98<sup>th</sup> St. are summarized in the following table:

Gibson Blvd. / 98th St. 2032 Conditions	EB (Gibson Blvd.)			WB (Gibson Blvd.)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>		1	2	1	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	205	134	25	13	42	11	21	404	57	9	256	23
V/C Ratio	0.57	0.24	0.18	0.04	0.08	0.07	0.06	0.68	0.47	0.03	0.46	
Level-of-Service	C	B	B	B	B	B	B	C	C	B	C	
Control Delay (Seconds)	21.6	12.9	11.9	12.5	12.4	11.9	11.2	24.6	16.3	11.4	17.2	
<b>Intersection LOS</b>	<b>AWSC (C - 18.1)</b>											
95th Percentile Queue (veh)	3.5	0.9	0.6	0.1	0.3	0.2	0.2	5.0	2.5	0.1	2.4	
2022 BUILD Condition Volumes	205	134	34	24	42	11	28	478	64	9	323	23
V/C Ratio	0.59	0.24	0.21	0.08	0.09	0.07	0.08	0.81	0.55	0.03	0.06	
Level-of-Service	C	B	B	B	B	B	B	E	C	B	C	
Control Delay (Seconds)	23.3	13.7	12.8	13.4	13.0	12.5	11.7	36.0	19.3	11.8	21.9	
<b>Intersection LOS</b>	<b>AWSC (C - 22.5)</b>											
95th Percentile Queue (veh)	3.6	0.9	0.8	0.2	0.3	0.2	0.2	7.5	3.3	0.1	3.6	
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	147	79	40	42	153	35	57	378	41	45	591	150
V/C Ratio	0.45	0.16	0.19	0.13	0.31	0.25	0.16	0.68	0.45	0.12	0.99	
Level-of-Service	C	B	B	B	C	C	B	D	C	B	F	
Control Delay (Seconds)	21.4	14.4	14.3	14.8	17.0	15.6	14.2	29.6	18.7	13.0	72.4	
<b>Intersection LOS</b>	<b>AWSC (C - 20.2)</b>											
95th Percentile Queue (veh)	2.3	0.5	0.7	0.4	1.3	1.0	0.6	4.9	2.2	0.4	12.5	
2022 BUILD Condition Volumes	147	79	60	65	153	35	79	521	67	45	738	150
V/C Ratio	0.53	0.18	0.29	0.24	0.36	0.29	0.25	10.04	0.72	0.14	1.39	
Level-of-Service	D	C	C	C	C	C	C	F	D	B	F	
Control Delay (Seconds)	27.1	16.8	18.1	18.6	20.6	18.7	16.9	89.8	33.3	14.5	229.5	
<b>Intersection LOS</b>	<b>AWSC (F - 97.8)</b>											
95th Percentile Queue (veh)	2.8	0.6	1.1	0.9	1.5	1.2	1.0	12.4	5.1	0.5	26.6	

The 2032 analysis of the intersection of Gibson Blvd. / 98th St. demonstrates that the delays will be acceptable for all conditions analyzed in this report except for the southbound thru / right turn and the northbound thru movements during the PM Peak Hour. It should be considered that the HCM6 method for analyzing an all-way stop condition is limited to three lanes for each approach. There are four-lane approaches on all four legs of the intersection of Gibson Blvd. / 98<sup>th</sup> St. It is likely that the analysis results summarized in the above table are too conservative since only three approach lanes were analyzed. Therefore, no recommendations are made for the intersection of Gibson Blvd. / 98th St. It will probably operate at acceptable levels-of-service and delays.

A Peak Hour Warrant Analysis of Gibson Blvd. / 98<sup>th</sup> St. was conducted for the implementation year volumes and the intersection fell slightly short of meeting the warrant. It is likely that the horizon year volume will meet the Peak Hour Signal Warrant since the volumes are grown. The Ceja Vista Development is projected to generate 17.8% of the total 2032 PM Peak Hour traffic at

this intersection. But it is expected that the intersection will not meet the Peak Hour Warrant for a traffic signal until near the horizon year, and the City normally resists allowing a traffic signal to be constructed based on the Peak Hour Warrant alone. Therefore, no recommendation is made for this intersection.

#10 –Blake Rd. / 98<sup>th</sup> St. – Pages A-220 thru A-281

The results of the 2032 analysis of the unsignalized intersection of Blake Rd. / 98<sup>th</sup> St. are summarized in the following table:

Blake Rd. / 98th St. 2032 Conditions	EB (Blake Rd.)			WB (Blake Rd.)			NB (98th St.)			SB (98th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>		1	1>		1	2	1	1	2>	
<b>AM Peak Hour</b>												
2022 NO BUILD Condition Volumes	24	21	71	35	23	37	39	476	44	27	248	4
V/C Ratio	0.07	0.23		0.10	0.15		0.09	0.69		0.40	0.21	
Level-of-Service	B	B		B	B		B	C		B	B	
Control Delay (Seconds)	11.7	12.2		12.1	11.6		10.5	23.2		14.6	11.8	
<b>Intersection LOS</b>	<b>AWSC (C - 16.1)</b>											
95th Percentile Queue (veh)	0.2	0.9		0.3	0.5		0.3	5.5		1.9	0.8	
2022 BUILD Condition Volumes	24	21	75	35	23	37	42	565	44	27	337	4
V/C Ratio	0.07	0.25		0.10	0.16		0.10	0.85		0.07	0.55	
Level-of-Service	B	B		B	B		B	E		C	B	
Control Delay (Seconds)	12.4	13.3		12.9	12.4		11.0	37.7		19.1	13.2	
<b>Intersection LOS</b>	<b>AWSC (C - 22.2)</b>											
95th Percentile Queue (veh)	0.2	1.0		0.3	0.6		0.3	8.9		3.3	1.2	
<b>PM Peak Hour</b>												
2022 NO BUILD Condition Volumes	19	22	44	91	34	74	87	552	37	79	421	36
V/C Ratio	0.05	0.17		0.24	0.26		0.20	0.79		0.19	0.62	
Level-of-Service	B	B		B	B		A	D		C	C	
Control Delay (Seconds)	13.0	13.2		15.0	13.9		12.7	33.3		12.9	22.7	
<b>Intersection LOS</b>	<b>AWSC (C - 20.8)</b>											
95th Percentile Queue (veh)	0.2	0.6		0.9	1.0		0.7	7.3		0.7	4.2	
2022 BUILD Condition Volumes	19	22	52	91	34	74	96	743	37	79	611	36
V/C Ratio	0.06	0.22		0.28	0.31		0.24	1.16		0.21	1.00	
Level-of-Service	B	C		C	C		B	F		B	F	
Control Delay (Seconds)	14.7	15.8		17.5	16.6		14.3	128.9		14.1	67.7	
<b>Intersection LOS</b>	<b>AWSC (F - 58.8)</b>											
95th Percentile Queue (veh)	0.2	0.8		1.1	1.2		0.9	19.5		0.7	11.8	

The 2032 analysis of the intersection of Blake Rd. / 98th St. demonstrates that the delays will be marginally acceptable for all conditions analyzed in this report except for the northbound and southbound thru / right turn movements during the PM Peak Hour. It should be considered that the HCM6 method for analyzing an all-way stop condition is limited to three lanes for each approach. There is four-lane approach on the south leg of the intersection of Blake Rd. / 98<sup>th</sup> St. It is likely that the analysis results summarized in the above table are too conservative since only three approach lanes were analyzed for the south leg. It is likely that the analysis results

summarized in the above table are too conservative since only three approach lanes were analyzed. Therefore, no recommendations are made for the intersection of Blake Rd. / 98th St. It will probably operate at acceptable levels-of-service and delays.

A Peak Hour Warrant Analysis of Blake Rd. / 98<sup>th</sup> St. was conducted for the implementation year volumes and the intersection fell significantly short of meeting the warrant. It is likely that the horizon year volume will not meet the Peak Hour Signal Warrant since the volumes are not increased much. The Ceja Vista Development is projected to generate 21.0% of the total 2032 PM Peak Hour traffic at this intersection. But it is expected that the intersection will not meet the Peak Hour Warrant for a traffic signal until well after the horizon year, and the City normally resists allowing a traffic signal to be constructed based on the Peak Hour Warrant alone. Therefore, no recommendation is made for this intersection.



#11 – Gun Club Rd. / Karrol St. – Pages A-220 thru A-281

The results of the 2032 analysis of the unsignalized intersection of Gun Club Rd. / Karrol St. are summarized in the following table.

Gun Club Rd. / Karrol St. 2032 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			NB (Karrol St.)			SB (Karrol St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	0	<1>	0	0	<1>	0	0	<1>	0
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	3	16	0	10	5	17	1	7	25	17	9	1
V/C Ratio	0.00			0.01				0.04			0.04	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.3	0.0		7.3	0.0			8.8			9.4	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.0				0.1			0.1	
2032 BUILD Conditions Volumes	3	22	1	10	17	17	2	8	25	17	13	1
V/C Ratio	0.00			0.01				0.04			0.05	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.3	0.0		7.3	0.0			8.9			9.6	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.0				0.1			0.1	
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	2	10	1	39	17	58	1	10	12	20	7	5
V/C Ratio	0.00			0.03				0.03			0.05	
Level-of-Service	A	A		A	A			A			A	
Control Delay (Seconds)	7.4	0.0		7.3	0.0			9.4			9.8	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.1				0.1			0.1	
2032 BUILD Conditions Volumes	2	37	5	39	40	58	4	15	12	20	9	5
V/C Ratio	0.00			0.03				0.05			0.05	
Level-of-Service	A	A		A	A			B			B	
Control Delay (Seconds)	7.4	0.0		7.4	0.0			10.0			10.3	
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.0			0.1				0.1			0.2	

The 2032 analysis of the intersection of Gun Club Rd. / Karrol St. demonstrates that the delays will be acceptable for all conditions analyzed in this report. It is concluded that the calculated levels-of-service, delays, and 95<sup>th</sup> Percentile Queuing are all acceptable. Therefore, no recommendation is made with regard to the unsignalized intersection of Gun Club Rd. / Karrol St. based on the horizon year (2032) forecast volumes.

#12 –Don Felipe Rd. / Coors Blvd. – Pages A-220 thru A-281

The results of the analysis of the unsignalized intersection of Don Felipe Rd. / Coors Blvd. are summarized in the following table:

Don Felipe Rd / Coors Blvd. 2032 Conditions	EB (Don Felipe Rd)			WB (Don Felipe Rd)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1>	0	1	1>	0	1	2	1	1	2	1
<b>AM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	18	2	3	14	1	75	1	606	17	49	524	7
V/C Ratio	0.07	0.01		0.05	0.13		0.00			0.06		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	19.3	14.1		18.3	11.5		8.7			9.3		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.2	0.0		0.2	0.5		0.0			0.2		
2032 BUILD Conditions Volumes	18	2	3	14	1	82	1	624	17	60	556	7
V/C Ratio	0.08	0.02		0.06	0.15		0.00			0.08		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	20.8	14.8		19.3	11.7		8.8			9.4		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.3	0.0		0.2	0.5		0.0			0.2		
<b>PM Peak Hour</b>												
2032 NO BUILD Conditions Volumes	10	1	4	9	6	26	6	661	6	40	787	37
V/C Ratio	0.06	0.01		0.04	0.08		0.01			0.05		
Level-of-Service	C	B		C	B		A			A		
Control Delay (Seconds)	24.4	14.1		21.1	14.1		10.0			9.5		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.2	0.0		0.1	0.3		0.0			0.2		
2032 BUILD Conditions Volumes	10	1	4	9	6	44	6	706	6	56	823	34
V/C Ratio	0.07	0.02		0.05	0.12		0.01			0.08		
Level-of-Service	D	B		C	B		B			A		
Control Delay (Seconds)	27.3	14.8		23.0	13.9		10.2			9.8		
<b>Intersection LOS</b>	<b>TWSC</b>											
95th Percentile Queue (veh)	0.2	0.0		0.2	0.4		0.0			0.3		

The 2032 analysis of the intersection of Don Felipe Rd. / Coors Blvd. demonstrates that the delays will be acceptable for the AM Peak Hour and PM Peak Hour conditions analyzed in this report. It is concluded that the calculated levels-of-service, delays, and 95<sup>th</sup> Percentile Queuing are all acceptable. No recommendations are made for the intersection of Don Felipe Rd. / Coors Blvd.

#13 –Gun Club Rd. / Unser Connection. – Pages A-220 thru A-281

The results of the analysis of the unsignalized intersection of Gun Club Rd. / Unser Connection are summarized in the following table:

Gun Club Rd. / Unser Blvd. 2032 Conditions	EB (Gun Club Rd.)			WB (Gun Club Rd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry		<1			1>			<1>	
<b>AM Peak Hour</b>									
2032 BUILD Conditions Volumes	1	19			22	20	25		1
V/C Ratio	0.00						0.03		
Level-of-Service	A	A					A		
Control Delay (Seconds)	7.3	0.0					8.9		
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0						0.1		

<b>PM Peak Hour</b>									
2032 BUILD Conditions Volumes	1	12			37	46	43		1
V/C Ratio	0.00						0.06		
Level-of-Service	A	A					A		
Control Delay (Seconds)	7.4	0.0					9.2		
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0						0.2		

The 2032 analysis of the intersection of Gun Club Rd. / Unser Connection demonstrates that the delays will be acceptable for the AM Peak Hour and PM Peak Hour conditions analyzed in this report. The intersection does not exist for the NO BUILD Condition. It is concluded that the calculated levels-of-service, delays, and 95<sup>th</sup> Percentile Queuing are all acceptable. No recommendations are made for the intersection of Gun Club Rd. / Unser Connection.

#14 –Borrego Dam Connection / Karrol St. – Pages A-220 thru A-281

The results of the analysis of the unsignalized intersection of Borrego Dam Connection / Karrol St. are summarized in the following table:

<b>Borrego Conn. / Karrol St.</b> <b>2032 Conditions</b>	<b>EB (Borrego Conn.)</b>			<b>NB (Karrol St.)</b>			<b>SB (Karrol St.)</b>		
	L	T	R	L	T	R	L	T	R
Existing Lane Geometry		<1>			<1			1>	
<b>AM Peak Hour</b>									
2032 BUILD Conditions Volumes	8		1	5	90			50	1
V/C Ratio	0.01			0.00					
Level-of-Service	A			A	A				
Control Delay (Seconds)	9.4			7.4	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.0			0.0					

<b>PM Peak Hour</b>									
2032 BUILD Conditions Volumes	11		1	13	100			110	1
V/C Ratio	0.02			0.01					
Level-of-Service	B			A	A				
Control Delay (Seconds)	10.1			7.5	0.0				
<b>Intersection LOS</b>	<b>TWSC</b>								
95th Percentile Queue (veh)	0.1			0.0					

The 2032 analysis of the intersection of the Borrego Dam Connection / Karrol St. demonstrates that the delays will be acceptable for the AM Peak Hour and PM Peak Hour conditions analyzed in this report. The intersection does not exist for the NO BUILD Condition. It is concluded that the calculated levels-of-service, delays, and 95<sup>th</sup> Percentile Queuing are all acceptable. No recommendations are made for the intersection of the Borrego Dam Connection / Karrol St.



Most of the roadways analyzed in this traffic study are designated on the Futures 2040 Metropolitan Transportation Plan (2040 Long Range Bikeway System) as Existing or Proposed Bicycle Routes or Paved Trails (see Futures 2040 Long Range Bike System Map on Page A-4 in the Appendix of this report.)

Roadway capacity issues discovered in this report are at the signalized intersections of Dennis Chavez Blvd. / 98<sup>th</sup> St., Dennis Chavez Blvd. / Unser Blvd., and Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. The existing signalized intersections of 98<sup>th</sup> St. and Unser Blvd. along Dennis Chavez Blvd. are considered primary access points into and out of the proposed Ceja Vista Development. The existing signalized intersection of Dennis Chavez Blvd. / Coors Blvd. is considered an offsite intersection and, therefore, an offsite improvement to mitigate any capacity issues. The design and construction of proposed mitigation recommendations will be required to meet the minimum standards of the New Mexico Department of Transportation's *State Access Management Manual* along Dennis Chavez Blvd. and the City of Albuquerque's Development Process Manual standards on the non-State controlled side streets.

## Summary of Deficiencies, Anticipated Impacts, and Recommendations

The 2022 analysis did not determine any significant deficiencies in the adjacent transportation system provided that the following Recommendations are implemented.

### Recommendations:

#### **2022 Implementation Year –**

**Gun Club Rd. / Coors Blvd.** – No recommendation.

**Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd.** – Construct Dual EB LT lanes, Dual WB Thru lanes, Dual NB LT Lanes, and a SB RT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Blake Rd. / Unser Blvd.** – No recommendation.

**Dennis Chavez Blvd. / 118<sup>th</sup> St.** – No recommendation.

**Dennis Chavez Blvd. / 98<sup>th</sup> St.** – Construct dual EB / WB Thru lanes and one WB LT Lane. Modify the north leg of the intersection to implement dual SB LT lanes, dual SB Thru lanes, and a SB RT lane. Construct the south leg of the intersection to implement dual NB RT lanes, dual NB Thru lanes, and a NB LT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Dennis Chavez Blvd. / Unser Blvd.** – Construct dual EB / WB Thru lanes, Dual WB LT lanes, and an eastbound right turn lane. Modify the north leg of the intersection to implement dual SB LT lanes, dual SB Thru lanes, and a SB RT lane. Construct the south leg of the intersection to implement dual NB RT lanes, dual NB thru lanes, and a NB LT lane. Lane length requirements are in the 2032 Horizon Year Section below.

**Dennis Chavez Blvd. / Condershire Dr.** – No recommendation.

**Rio Bravo Sq. Driveway / Coors Blvd.** – No recommendation.

**Gibson Blvd. / 98<sup>th</sup> St.** – No recommendation.

**Blake Rd. / 98<sup>th</sup> St.** – No recommendation.

**Gun Club Rd. / Karrol St.** – No recommendation.

**Don Felipe Rd. / Coors Blvd.** – No recommendation.

Lengths of left and right turn auxiliary lanes on State Highways to be compliant with the New Mexico Department of Transportation's State Access Management Manual, current edition. Lengths of left and right turn auxiliary lanes on City streets to be compliant with the City of Albuquerque's Development Process Manual, current edition. Lengths of left and right turn auxiliary lanes on County Streets to be compliant with the New Mexico Department of Transportation's State Access Management Manual, current edition. Calculated queue lengths (95<sup>th</sup> Percentile confidence level) are defined on Pages A-263 through A-288 in the Appendix of this report. Specific recommended auxiliary lane lengths at the intersections of Dennis Chavez Blvd. / 98<sup>th</sup> St. and Dennis Chavez Blvd. / Unser Blvd. are defined on Pages 22 and 26 of this report. Recommended auxiliary lane lengths at the offsite intersection of Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. are defined on Page 15 of this report.

**2032 Horizon Year** – No additional recommendations. Summary of Recommendations for Dennis Chavez Blvd. / Coors Blvd., Dennis Chavez Blvd. / 98<sup>th</sup> St., and Dennis Chavez Blvd. / Unser Blvd. with required lane lengths are summarized in the following tables:

<b>Summary of Recommendations for: Dennis Chavez Blvd. (NM St. Rd. 500) / Coors Blvd.</b>		
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
Add Second Eastbound Left Turn Lane	550	(400' + 150') long including 150 feet transition.
Add Second Westbound Thru Lane	500	plus transition as per MUTCD
Maintain 1 Westbound Right Turn Lane	370	370' including 150 feet transition.
Add Second NB Left Turn Lane	740	(400' + 340') long including 100 feet transition.
Construct new Southbound RT Lane	952	(370' + 582') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.

**Summary of Recommendations for: Dennis Chavez Blvd. (NM State Rd. 500) / 98th St.**

<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
1 Eastbound Left Turn Lane	525	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	450	(370' + 82') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	635	(370' + 265') long including 150 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	335	(250' + 85') long including 100 feet transition.
2 Southbound LT Lanes	900	(250 + 654') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	870	(250' + 620') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.  
Field Constraints may limit the length of lane that can be constructed.

**Summary of Recommendations for: Dennis Chavez Blvd. (NM St. Rd. 500) / Unser Blvd.**

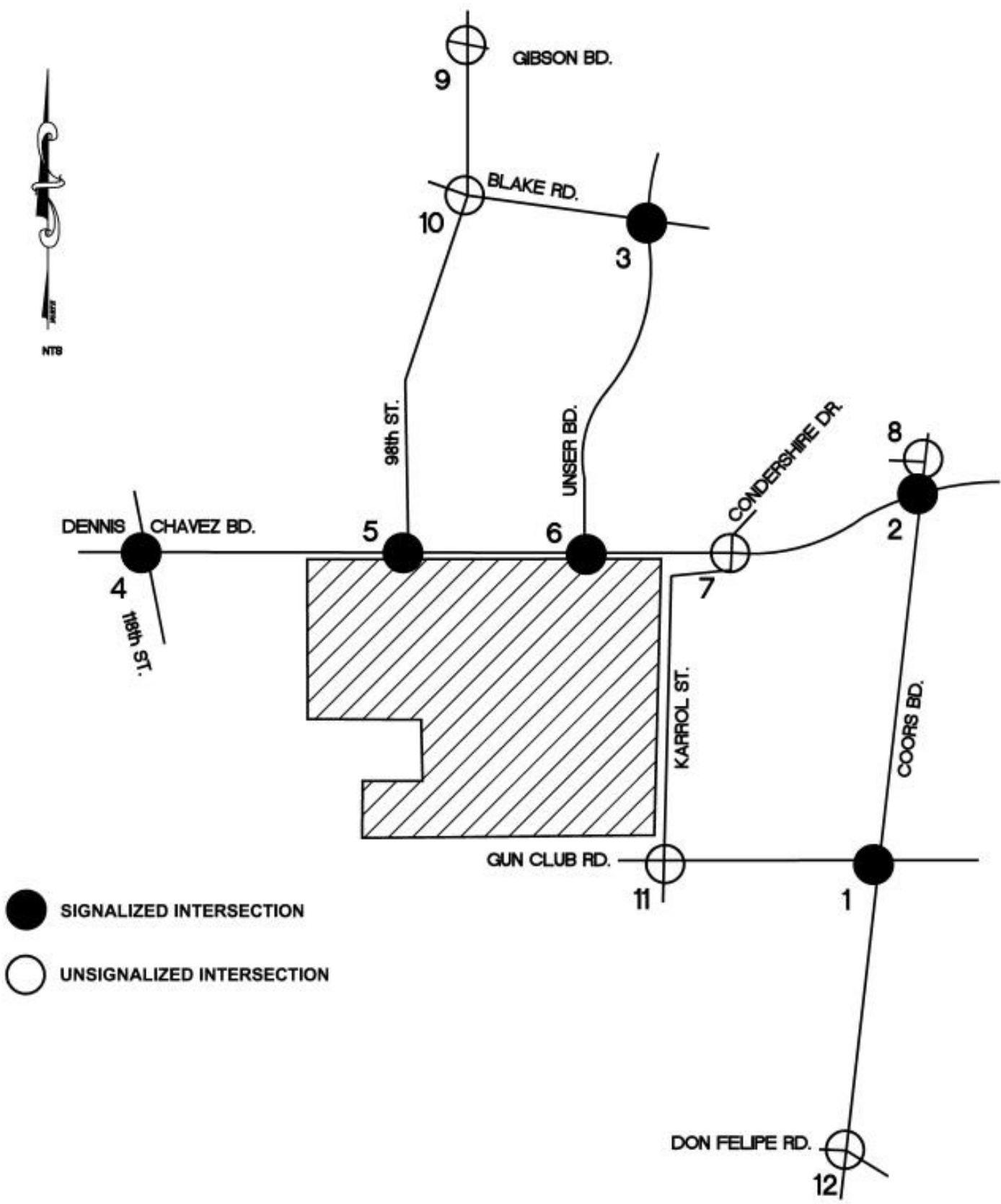
<b>Recommended Improvement</b>	<b>Required Length (Ft)</b>	<b>Comment</b>
1 Eastbound Left Turn Lane	670	(400' + 125') long including 150 feet transition.
2 Eastbound Thru Lanes	500	plus transition as per MUTCD
1 Eastbound Right Turn Lane	400	(370' + 26') long including 150 feet transition.
1 Westbound Left Turn Lane	470	(400' + 70') long including 150 feet transition.
2 Westbound Thru Lanes	500	plus transition as per MUTCD
1 Westbound RT Lane	1830	(370' + 265') long including 1,463 feet transition.
1 Northbound LT Lane	420	(250' + 170') long including 100 feet transition.
2 Northbound Thru Lanes	500	plus transition as per MUTCD
2 Northbound RT Lanes	295	(250' + 44') long including 100 feet transition.
2 Southbound LT Lanes	1120	(250 + 870') long including 100 feet transition.
2 Southbound Thru Lanes	500	plus transition as per MUTCD
1 Southbound RT Lane	425	(250' + 175') long including 100 feet long transition.

Note: Required Length (Ft) is based on Table 18.K-1 (Deceleration and Acceleration Lengths) in the NM DOT's State Access Management Manual.  
Field Constraints may limit the length of lane that can be constructed.

In consideration of the fact that this project will progress over the next several years or so with undefinable phases, it is recommended that the recommended mitigation improvements be phased as well. The developer and the appropriate governmental review agency will negotiate a phased improvement construction schedule tied to specific thresholds of the development. Also, it may be beneficial to develop a fiscal responsibility of this developer for recommended infrastructure improvements at Dennis Chavez Blvd. (Rio Bravo Blvd.) / Coors Blvd. based on percentage contribution to the total volumes for each specific recommended improvement.



(See LOS / Volume / Geometry Analysis Summary Maps on following pages)



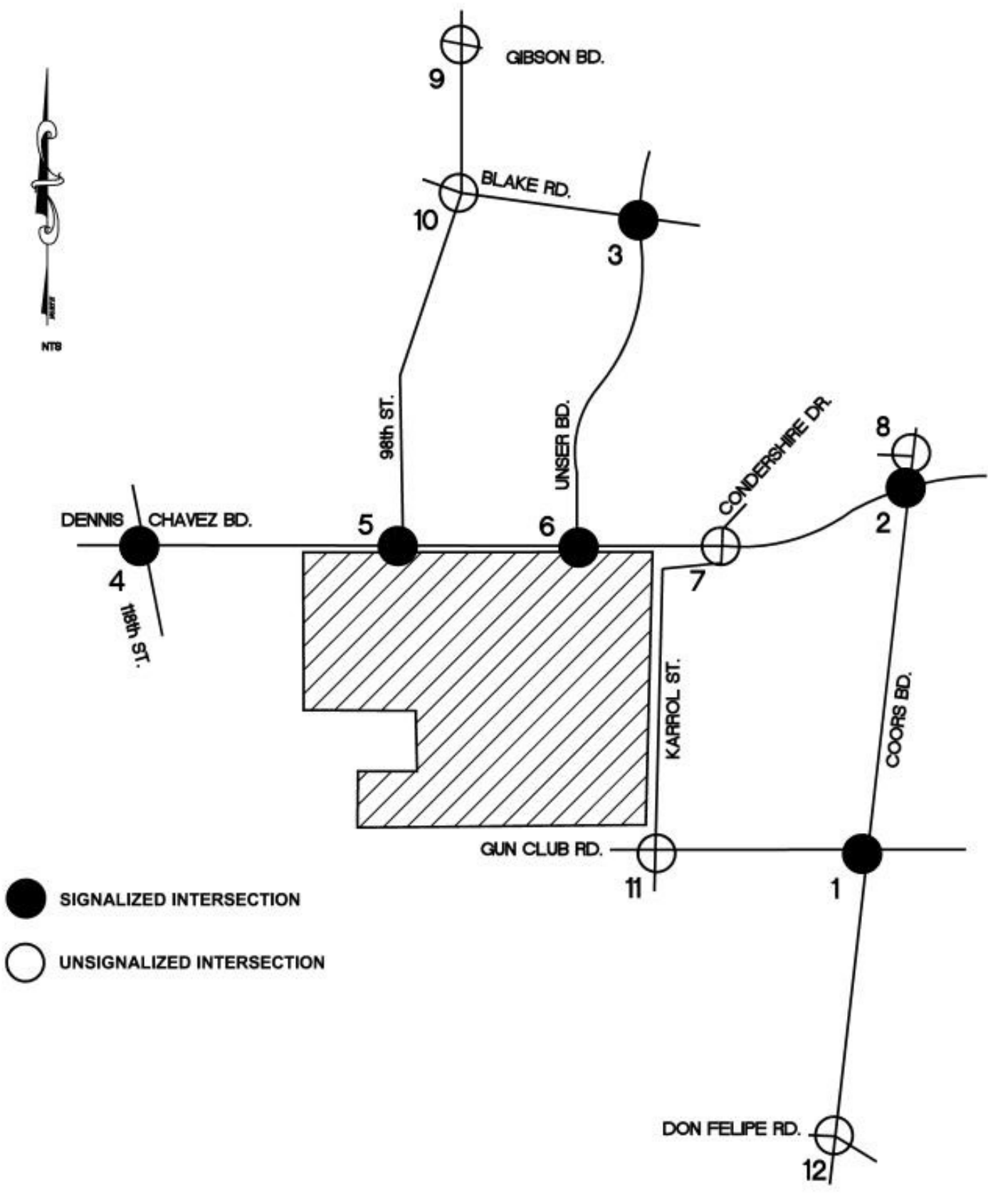
● SIGNALIZED INTERSECTION  
○ UNSIGNALIZED INTERSECTION

2022 NO BUILD Condition      2022 BUILD Condition      2022 BUILD Condition [MITIGATED]

 C(C) 27.8(20.1)	 C(C) 28.0(20.8)	<b>NO RECOMMENDATIONS</b>
 D(F) 37.4(80.6)	 F(F) 100.3(255.9)	
 C(C) 30.2(23.6)	 C(C) 29.6(23.6)	<b>NO RECOMMENDATIONS</b>
 D(E) 46.4(74.9)	 F(F) 127.4(315.2)	

**Ceja Vista Development**  
(Dennis Chavez Blvd. / 98th St)  
LOS / Volume Analysis Map

AM(PM)

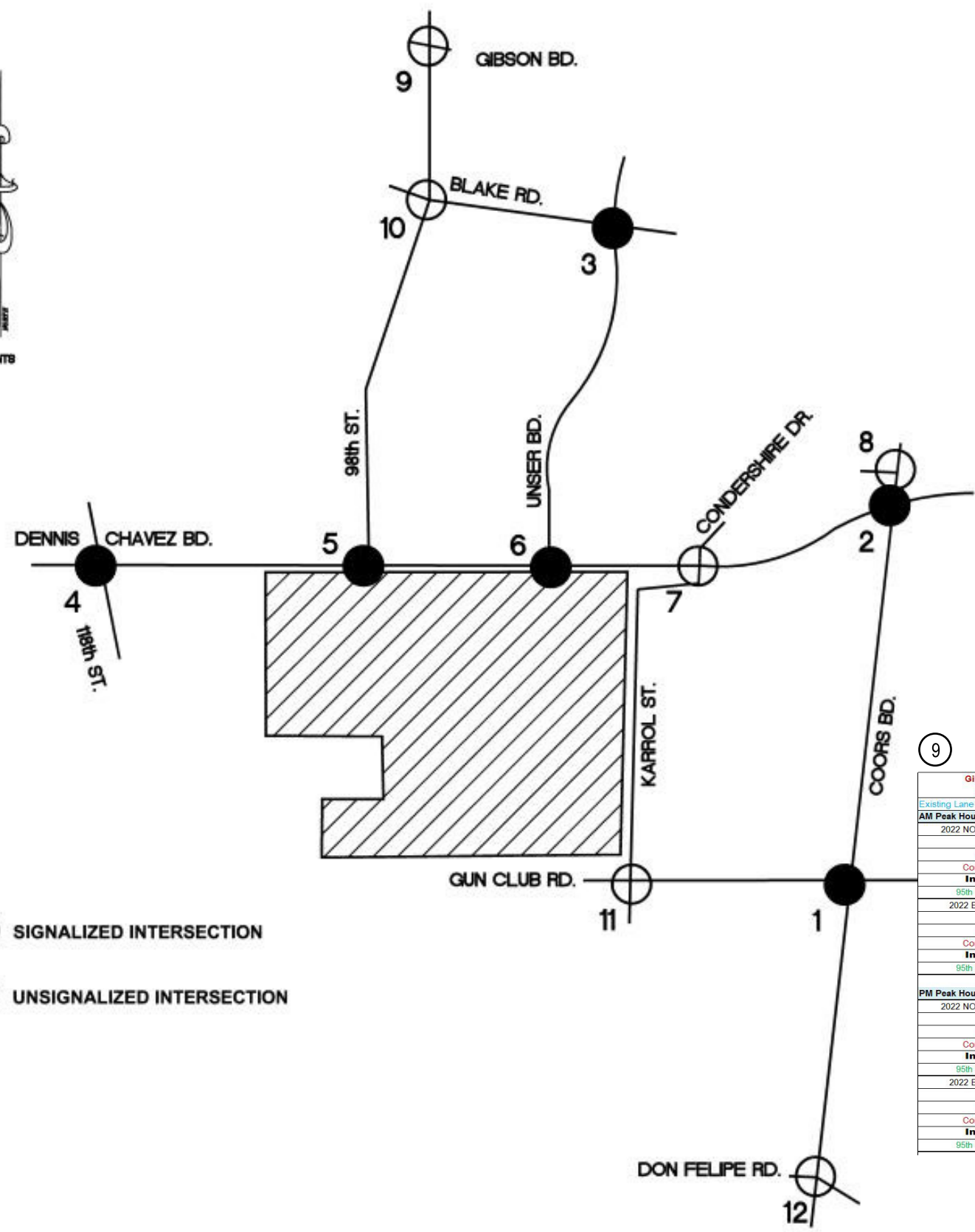


● SIGNALIZED INTERSECTION  
○ UNSIGNALIZED INTERSECTION

2022 NO BUILD Condition      2022 BUILD Condition      2022 BUILD Condition [MITIGATED]

<p>5: Dennis Chavez Bd. &amp; 98th St.</p>	<p>5: Dennis Chavez Bd. &amp; 98th St.</p>	<p>5: Dennis Chavez Bd. &amp; 98th St.</p>
<p>6: Dennis Chavez Bd. &amp; Unser Bd.</p>	<p>6: Dennis Chavez Bd. &amp; Unser Bd.</p>	<p>6: Dennis Chavez Bd. &amp; Unser Bd.</p>
<p>7: Karrol St./Condershire Dr. &amp; Dennis Chavez Bd./Dennis Chavez Rd.</p>	<p>7: Karrol St./Condershire Dr. &amp; Dennis Chavez Bd./Dennis Chavez Rd.</p>	<p>NO RECOMMENDATIONS</p>
<p>8: Coors Bd. &amp; Rio Bravo Sq.</p>	<p>8: Coors Bd. &amp; Rio Bravo Sq.</p>	<p>NO RECOMMENDATIONS</p>

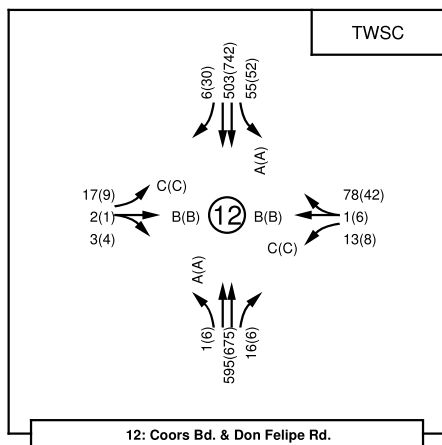
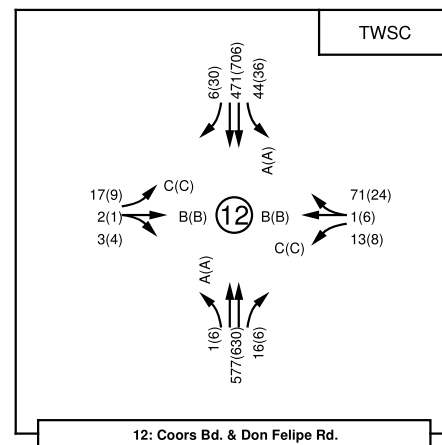
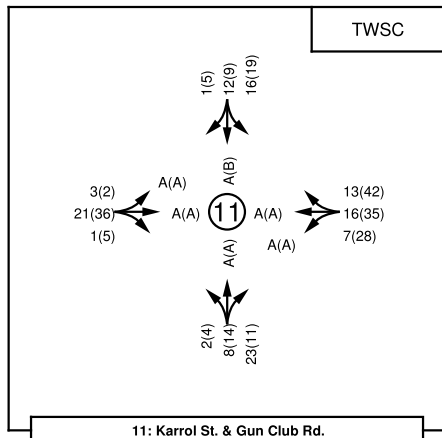
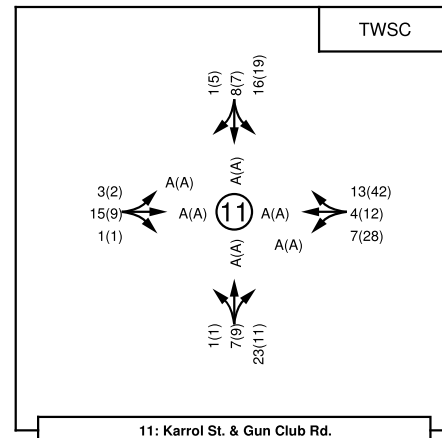
**Ceja Vista Development**  
(Dennis Chavez Blvd. / 98th St)  
LOS / Volume Analysis Map



2022 NO BUILD Condition

2022 BUILD Condition

2022 BUILD Condition [MITIGATED]



NO RECOMMENDATIONS

NO RECOMMENDATIONS

● SIGNALIZED INTERSECTION  
○ UNSIGNALIZED INTERSECTION

Gibson Blvd. / 98th St.		EB (Gibson Blvd.)		WB (Gibson Blvd.)		NB (98th St.)		SB (98th St.)		
2022 Conditions		L	T	R	L	T	R	L	T	R
Existing Lane Geometry										
AM Peak Hour										
2022 NO BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
2022 BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
PM Peak Hour										
2022 NO BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
2022 BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										

Blake Rd. / 98th St.		EB (Blake Rd.)		WB (Blake Rd.)		NB (98th St.)		SB (98th St.)		
2022 Conditions		L	T	R	L	T	R	L	T	R
Existing Lane Geometry										
AM Peak Hour										
2022 NO BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
2022 BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
PM Peak Hour										
2022 NO BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										
2022 BUILD Condition Volumes										
V/C Ratio										
Level-of-Service										
Control Delay (Seconds)										
Intersection LOS										
95th Percentile Queue (veh)										

NO RECOMMENDATIONS

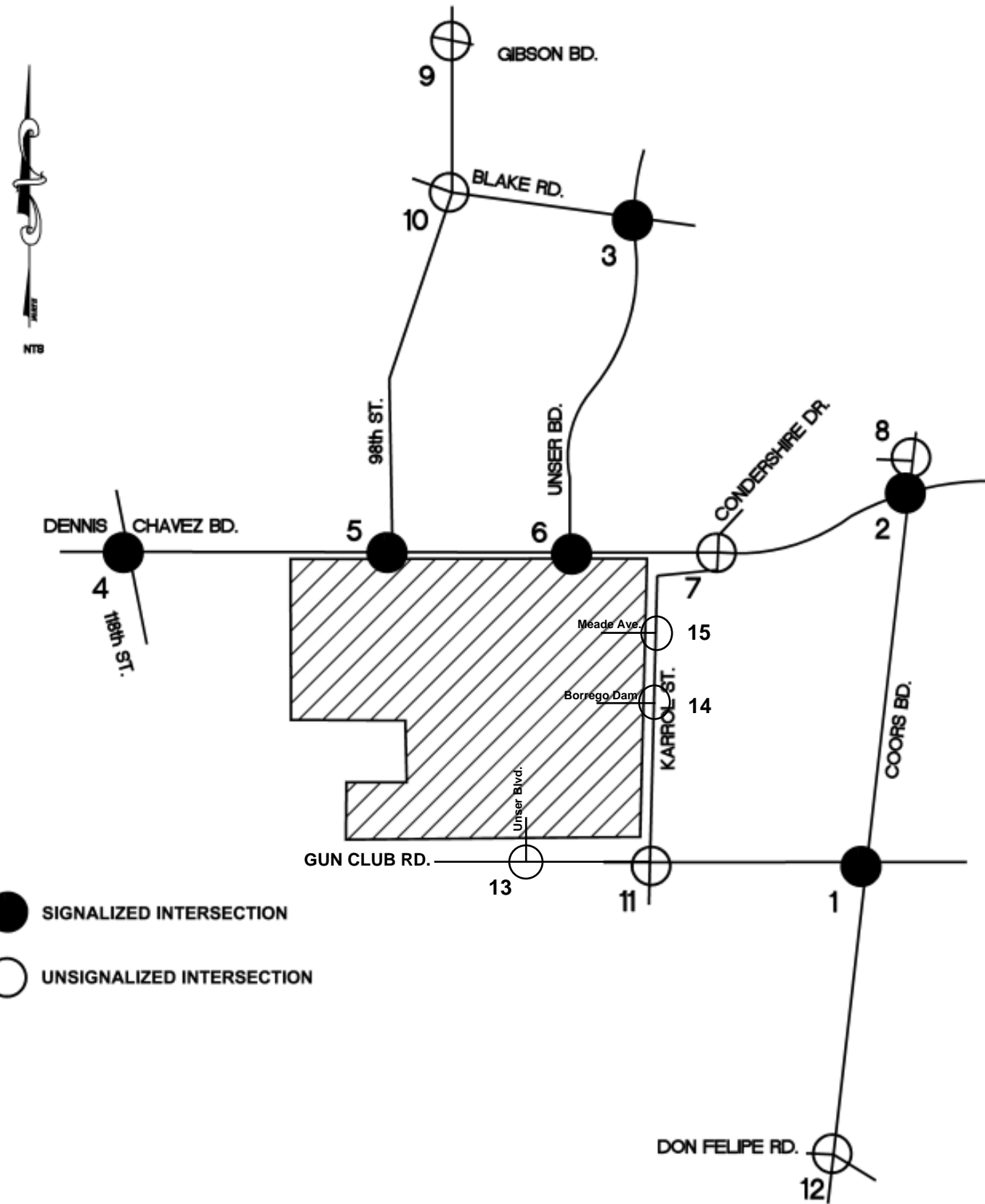
NO RECOMMENDATIONS

Ceja Vista Development  
 (Dennis Chavez Blvd. / 98th St)  
 LOS / Volume Analysis Map

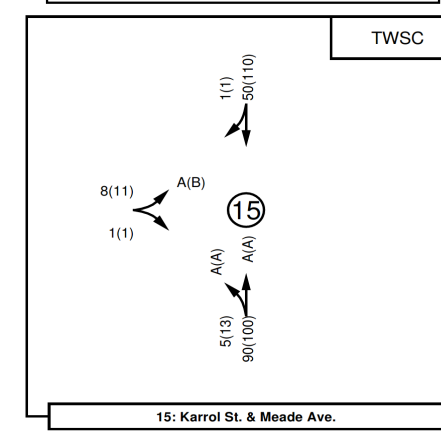
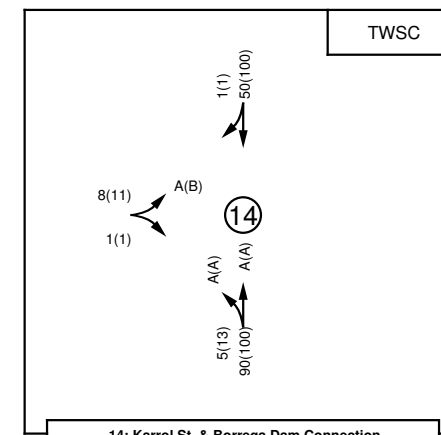
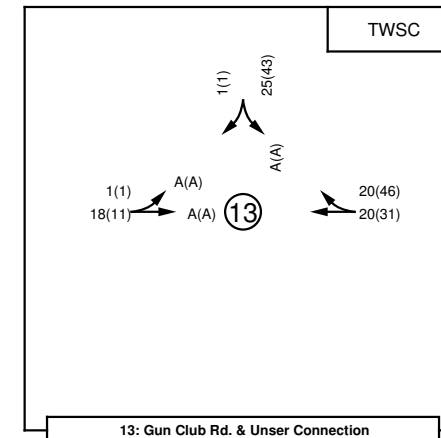
2022 NO BUILD Conditions

2022 BUILD Conditions

2022 BUILD Conditions [Mitigated]



(Driveways Do Not Exist in the NO BUILD Condition)

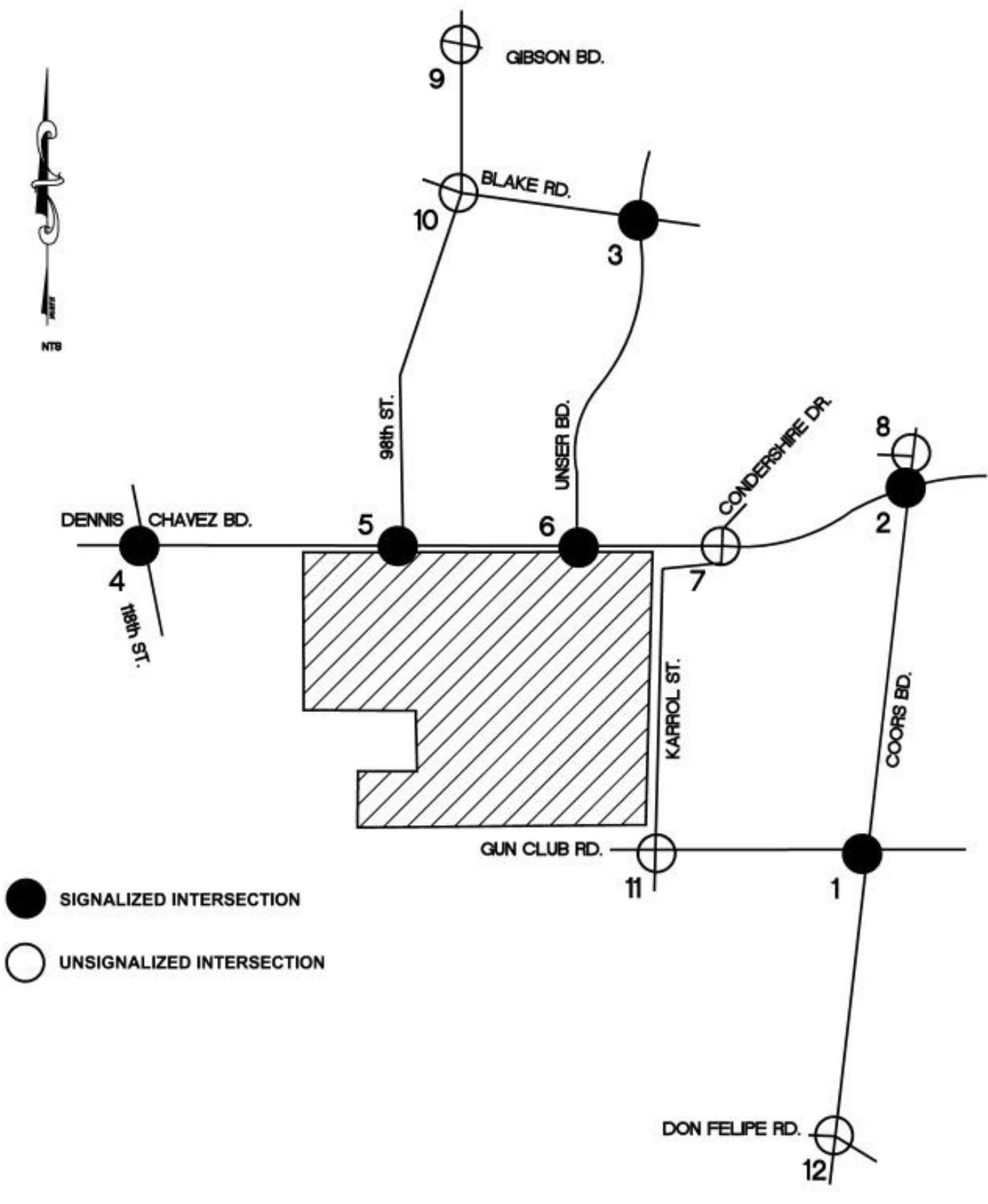


NO RECOMMENDATIONS

NO RECOMMENDATIONS

NO RECOMMENDATIONS

**Ceja Vista Access**  
Dennis Chavez Blvd. / Unser Blvd.  
LOS / Volume Analysis Map



● SIGNALIZED INTERSECTION  
○ UNSIGNALIZED INTERSECTION

2032 NO BUILD Conditions      2032 BUILD Conditions      2032 BUILD Conditions [MITIGATED]

 C(C) 30.5(22.1)	 C(C) 30.8(22.8)	<p><b>NO RECOMMENDATIONS</b></p>
 F(F) 82.9(96.0)	 F(F) 173.5(268.5)	 D(E) 54.2(68.9) Add WB Thru, EB LT, NBLT, & SB RT Lanes
 D(C) 36.2(28.7)	 D(C) 36.0(29.6)	<p><b>NO RECOMMENDATIONS</b></p>
 F(D) 83.3(48.7)	 F(F) 162.2(191.6)	 F(F) 95.2(169.1) Optimize Signal Timing

**Ceja Vista Development**  
Dennis Chavez Blvd. / Unser Blvd.  
LOS / Volume Analysis Map

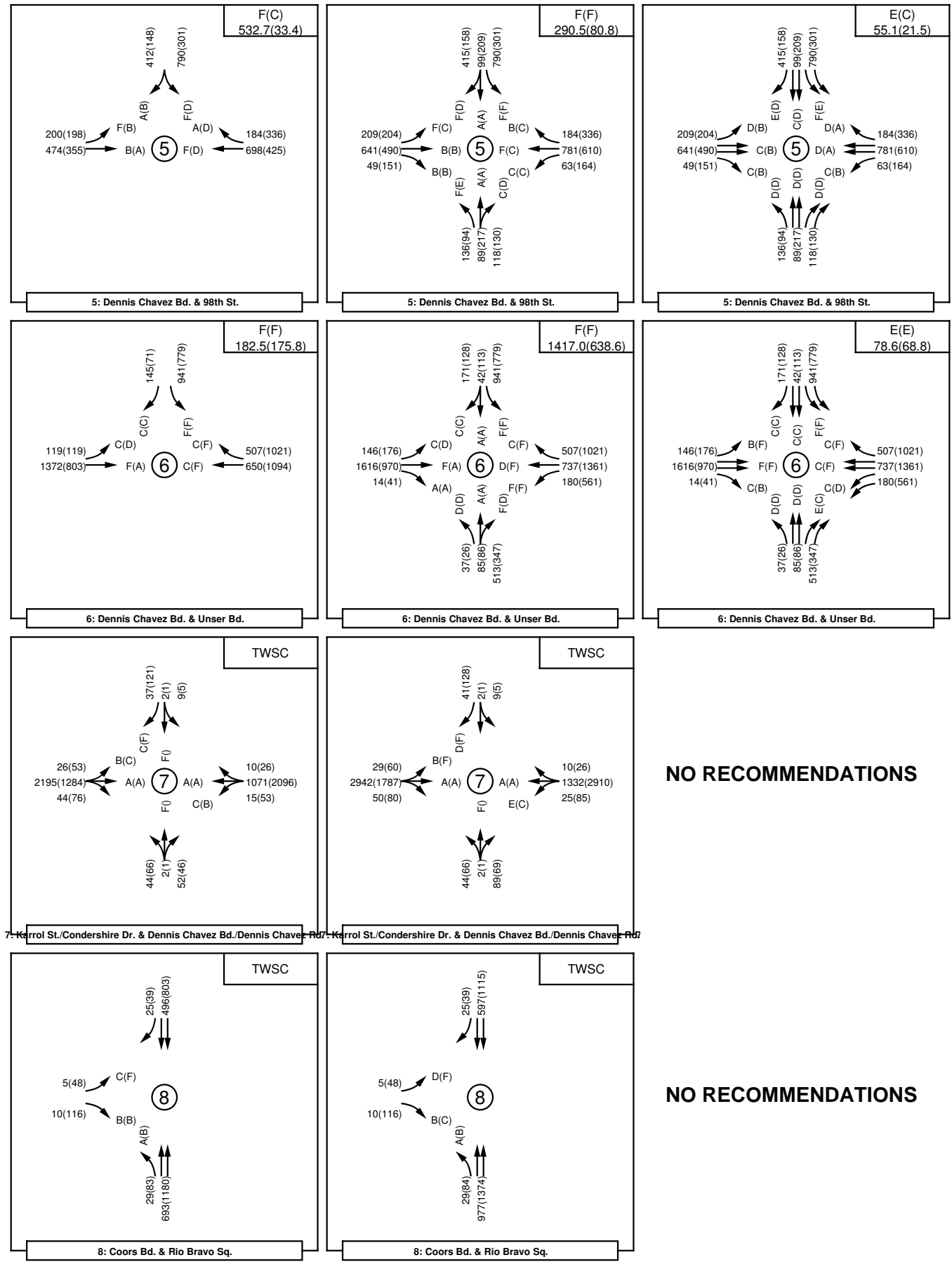
AM(PM)



2032 NO BUILD Conditions

2032 BUILD Conditions

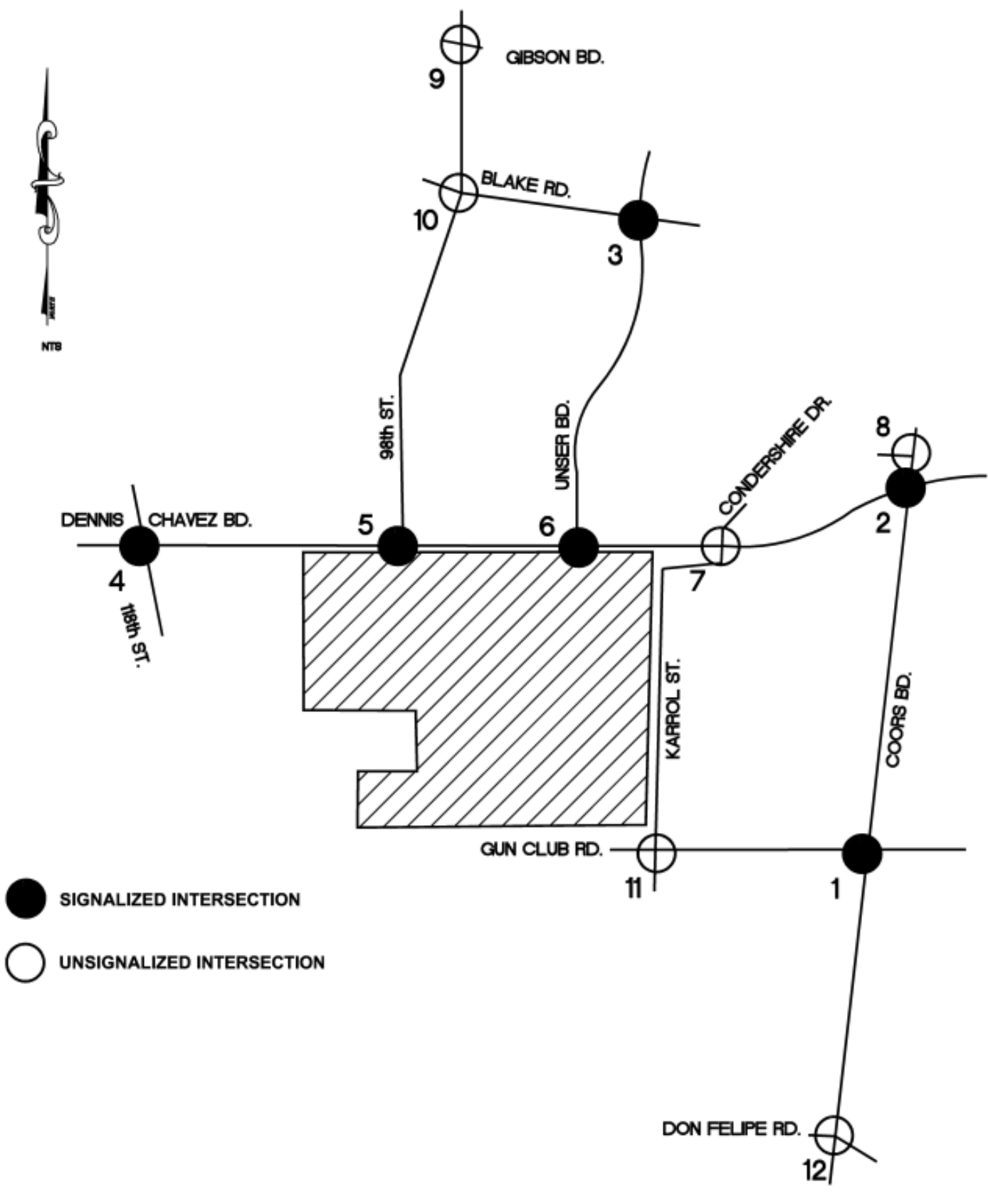
2032 BUILD Conditions (MITIGATED)



NO RECOMMENDATIONS

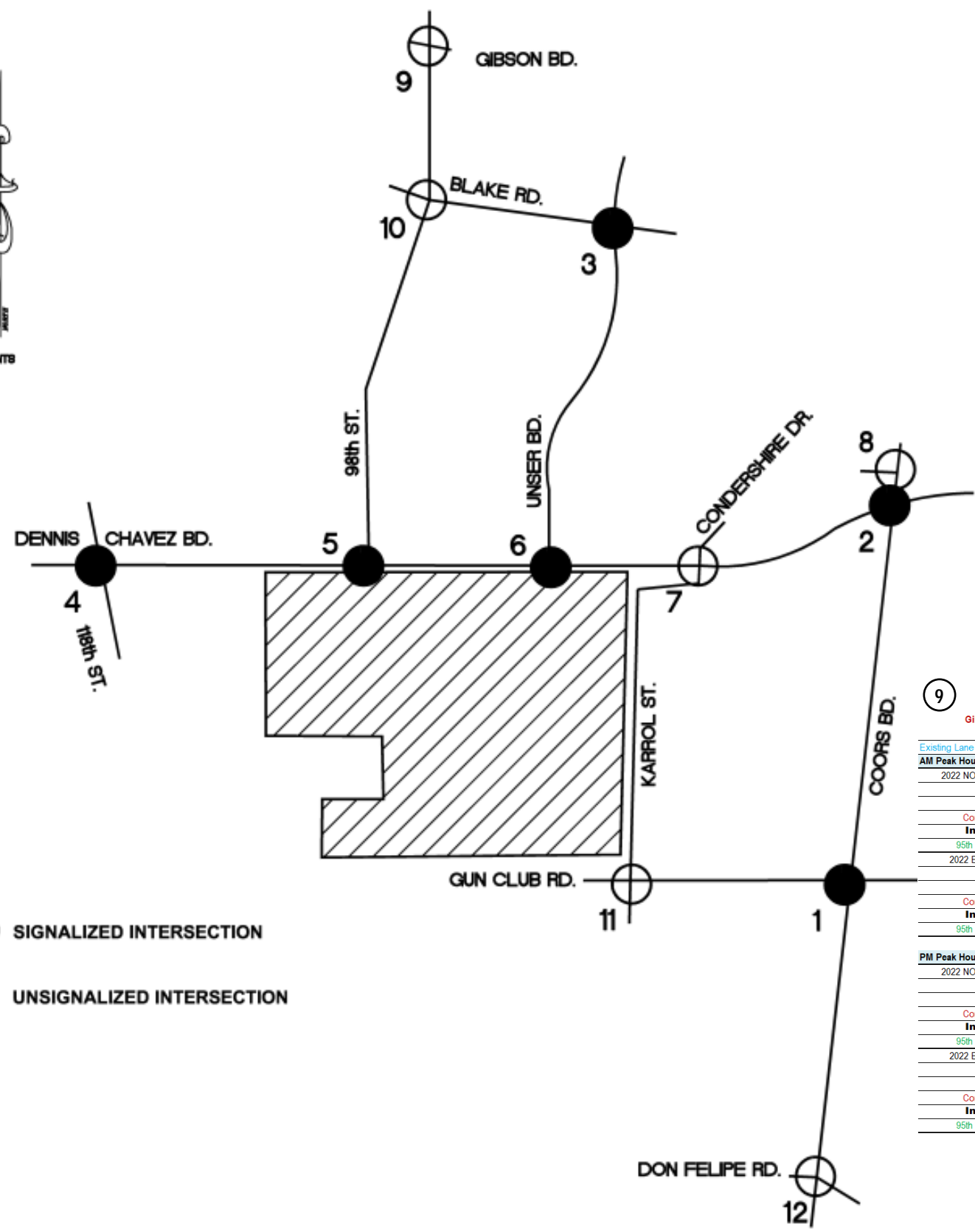
NO RECOMMENDATIONS

**Ceja Vista Development**  
 Dennis Chavez Blvd. / Unser Blvd.  
 LOS / Volume Analysis Map

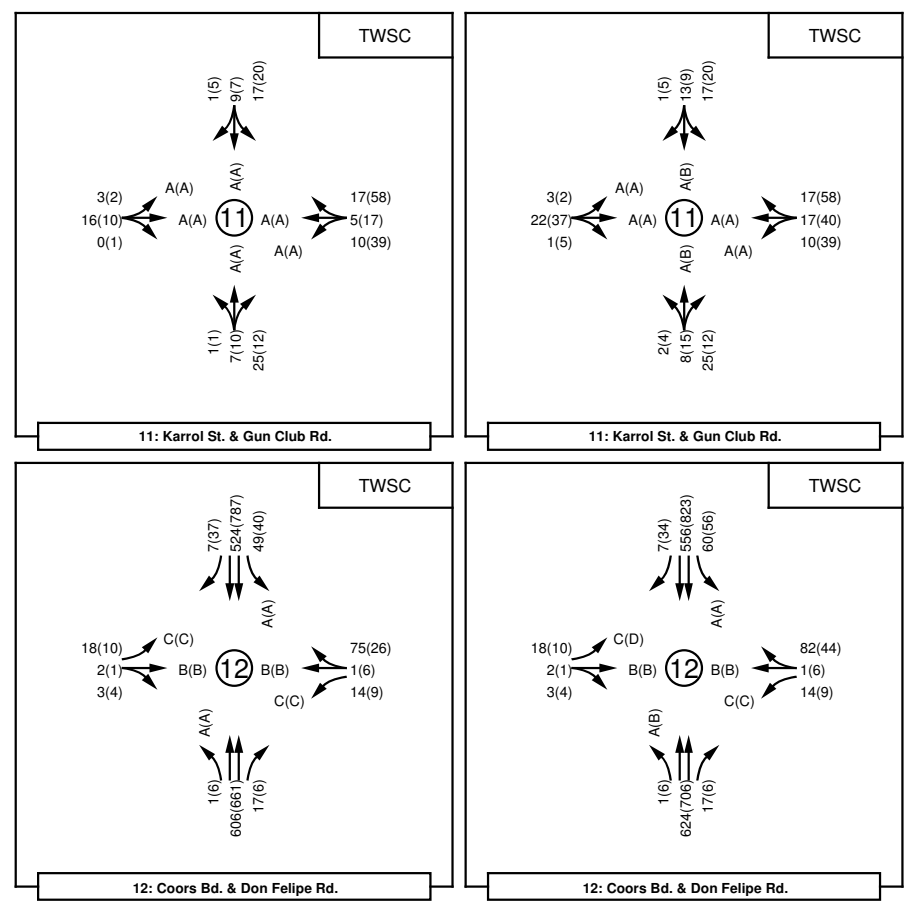


● SIGNALIZED INTERSECTION  
 ○ UNSIGNALIZED INTERSECTION

AM(PM)



2032 NO BUILD Conditions      2032 BUILD Conditions      2032 BUILD Conditions [MITIGATED]



9

Gibson Blvd. / 98th St.		EB (Gibson Blvd.)		WB (Gibson Blvd.)		NB (98th St.)		SB (98th St.)				
2032 Conditions		L	T	R	L	T	R	L	T	R		
Existing Lane Geometry												
AM Peak Hour												
2022 NO BUILD Condition Volumes	205	134	25	13	42	11	21	404	57	9	256	23
V/C Ratio	0.57	0.24	0.18	0.04	0.08	0.07	0.06	0.68	0.47	0.03	0.46	
Level-of-Service	C	B	B	B	B	B	B	C	C	B	C	
Control Delay (Seconds)	21.6	12.9	11.9	12.5	12.4	11.9	11.2	24.6	16.3	11.4	17.2	
Intersection LOS <b>AWSC (C - 18.1)</b>												
95th Percentile Queue (veh)	3.5	0.9	0.6	0.1	0.3	0.2	0.2	5.0	2.5	0.1	2.4	
2022 BUILD Condition Volumes												
V/C Ratio	0.59	0.24	0.21	0.08	0.09	0.07	0.08	0.81	0.55	0.03	0.06	
Level-of-Service	C	B	B	B	B	B	B	E	C	B	C	
Control Delay (Seconds)	23.3	13.7	12.8	13.4	13.0	12.5	11.7	36.0	19.3	11.8	21.9	
Intersection LOS <b>AWSC (C - 22.5)</b>												
95th Percentile Queue (veh)	3.6	0.9	0.8	0.2	0.3	0.2	0.2	7.5	3.3	0.1	3.6	
PM Peak Hour												
2022 NO BUILD Condition Volumes	147	79	40	42	153	35	57	378	41	45	591	150
V/C Ratio	0.45	0.16	0.19	0.13	0.31	0.25	0.16	0.68	0.45	0.12	0.99	
Level-of-Service	C	B	B	B	C	C	B	D	C	B	F	
Control Delay (Seconds)	21.4	14.4	14.3	14.8	17.0	15.6	14.2	29.6	18.7	13.0	72.4	
Intersection LOS <b>AWSC (C - 20.2)</b>												
95th Percentile Queue (veh)	2.3	0.5	0.7	0.4	1.3	1.0	0.6	4.9	2.2	0.4	12.5	
2022 BUILD Condition Volumes												
V/C Ratio	0.53	0.18	0.29	0.24	0.36	0.29	0.25	10.04	0.72	0.14	1.39	
Level-of-Service	D	C	C	C	C	C	C	F	D	B	F	
Control Delay (Seconds)	27.1	16.8	18.1	18.6	20.6	18.7	16.9	89.8	33.3	14.5	229.5	
Intersection LOS <b>AWSC (F - 97.8)</b>												
95th Percentile Queue (veh)	2.8	0.6	1.1	0.9	1.5	1.2	1.0	12.4	5.1	0.5	26.6	

NO RECOMMENDATIONS

10

Blake Rd. / 98th St.		EB (Blake Rd.)		WB (Blake Rd.)		NB (98th St.)		SB (98th St.)				
2032 Conditions		L	T	R	L	T	R	L	T	R		
Existing Lane Geometry												
AM Peak Hour												
2022 NO BUILD Condition Volumes	24	21	71	35	23	37	39	476	44	27	248	4
V/C Ratio	0.07	0.23	0.10	0.15	0.09	0.69	0.09	0.40	0.21			
Level-of-Service	B	B	B	B	B	C	B	C	B	B		
Control Delay (Seconds)	11.7	12.2	12.1	11.6	10.5	23.2	14.6	11.8				
Intersection LOS <b>AWSC (C - 16.1)</b>												
95th Percentile Queue (veh)	0.2	0.9	0.3	0.5	0.3	5.5	1.9	0.8				
2022 BUILD Condition Volumes												
V/C Ratio	0.07	0.25	0.10	0.16	0.10	0.85	0.07	0.55				
Level-of-Service	B	B	B	B	B	E	C	B				
Control Delay (Seconds)	12.4	13.3	12.9	12.4	11.0	37.7	19.1	13.2				
Intersection LOS <b>AWSC (C - 22.2)</b>												
95th Percentile Queue (veh)	0.2	1.0	0.3	0.6	0.3	8.9	3.3	1.2				
PM Peak Hour												
2022 NO BUILD Condition Volumes	19	22	44	91	34	74	87	552	37	79	421	36
V/C Ratio	0.05	0.17	0.24	0.26	0.20	0.79	0.19	0.62				
Level-of-Service	B	B	B	B	A	D	C	C				
Control Delay (Seconds)	13.0	13.2	15.0	13.9	12.7	33.3	12.9	22.7				
Intersection LOS <b>AWSC (C - 20.8)</b>												
95th Percentile Queue (veh)	0.2	0.6	0.9	1.0	0.7	7.3	0.7	4.2				
2022 BUILD Condition Volumes												
V/C Ratio	0.06	0.22	0.28	0.31	0.24	1.16	0.21	1.00				
Level-of-Service	B	C	C	C	B	F	B	F				
Control Delay (Seconds)	14.7	15.8	17.5	16.6	14.3	128.9	14.1	67.7				
Intersection LOS <b>AWSC (F - 58.8)</b>												
95th Percentile Queue (veh)	0.2	0.8	1.1	1.2	0.9	19.5	0.7	11.8				

NO RECOMMENDATIONS

**Ceja Vista Development**  
 Dennis Chavez Blvd. / Unser Blvd.  
 LOS / Volume Analysis Map

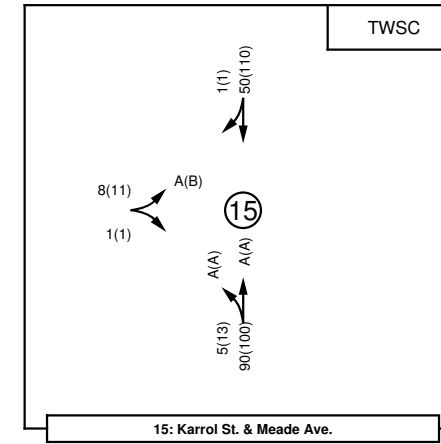
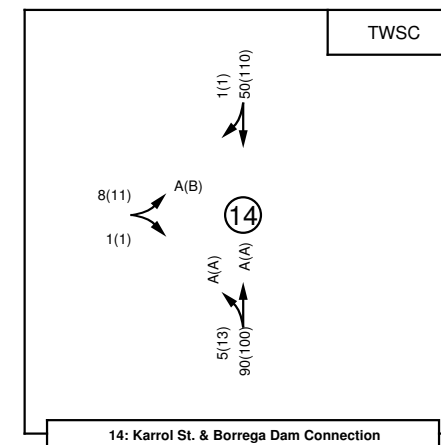
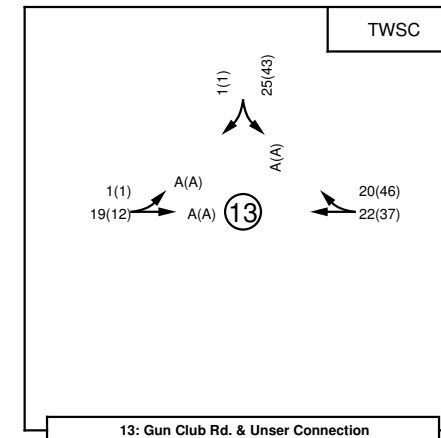
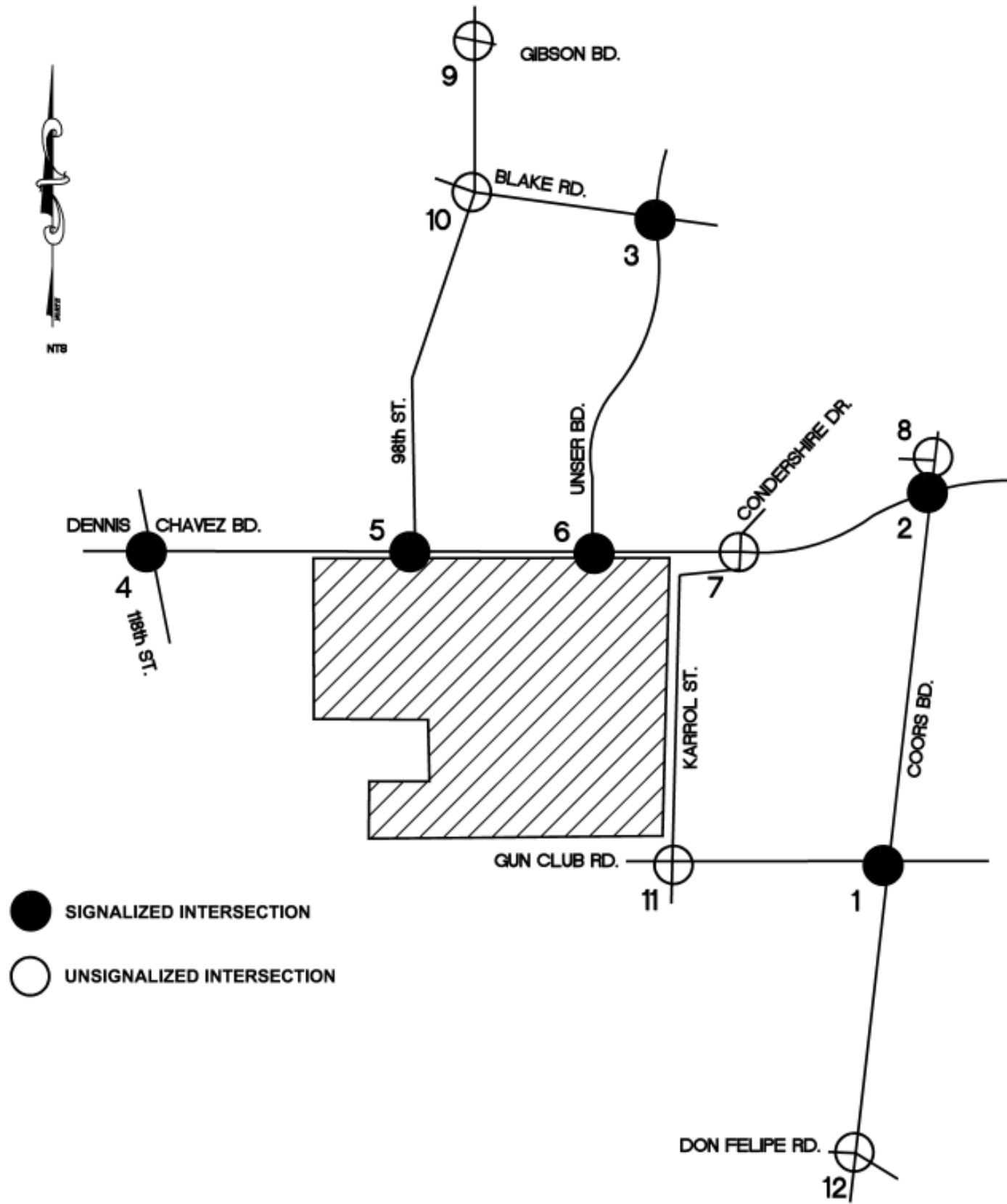


2032 NO BUILD Conditions

2032 BUILD Conditions

2032 BUILD Conditions [MITIGATED]

(Driveways Do Not Exist in the NO BUILD Condition)



**Ceja Vista Development**  
 Dennis Chavez Blvd. / Unser Blvd.  
 LOS / Volume Analysis Map

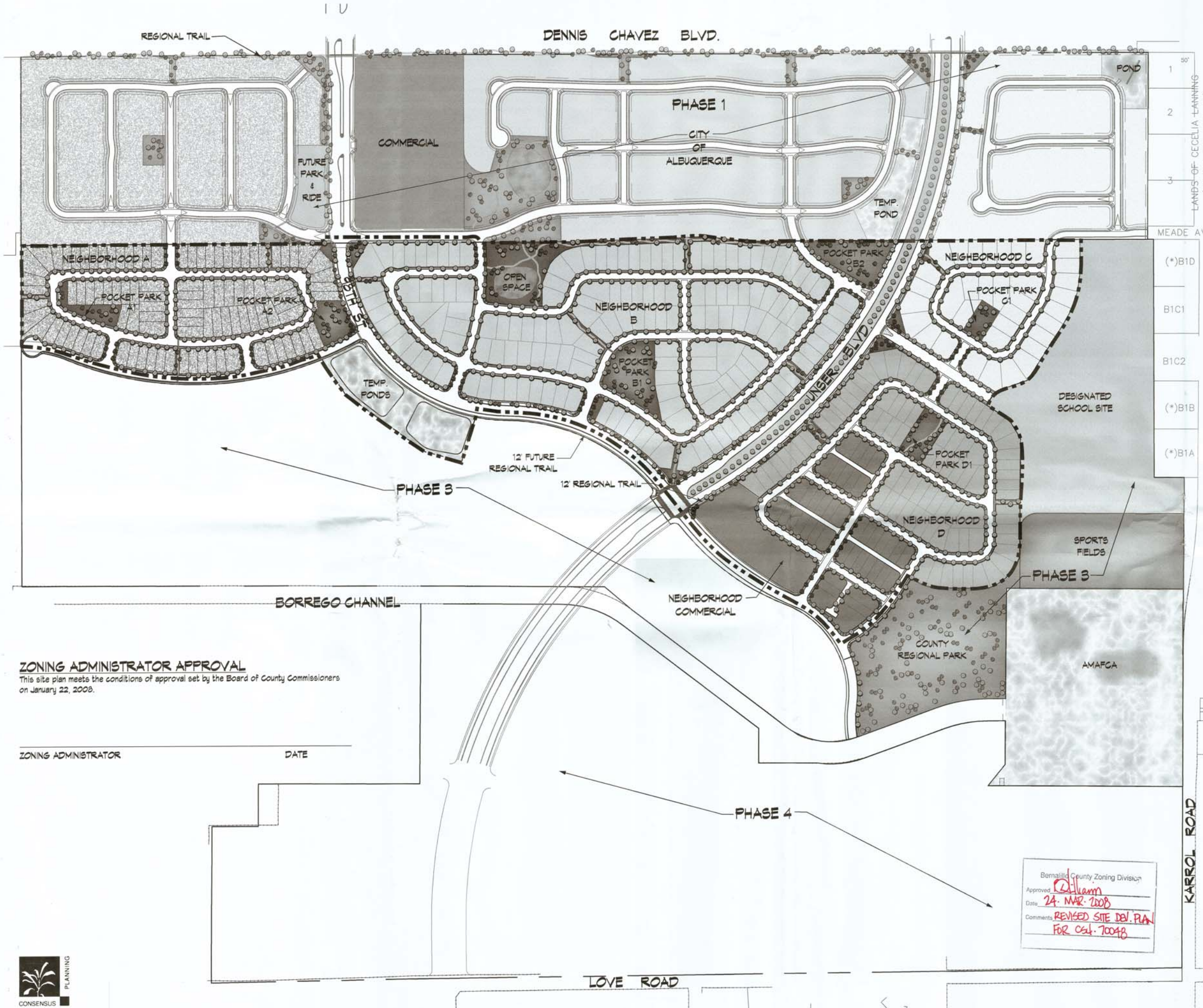
## Appendix

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## APPENDIX







**DEVELOPMENT CHARACTER**

-  LOW DENSITY (NEIGHBORHOOD C)
-  MID / LOW DENSITY (NEIGHBORHOOD B)
-  MID / HIGH DENSITY - DETACHED (NEIGHBORHOOD D)
-  MID / HIGH DENSITY - ALLEY LOTS (NEIGHBORHOOD D)
-  MID / HIGH DENSITY - TOWNHOUSES (NEIGHBORHOOD A)
-  COMMERCIAL
-  INSTITUTIONAL
-  PARKS / OPEN SPACE
-  POND
-  CULTURAL RESOURCE
-  PHASE 2 PLANNED DEVELOPMENT AREA BOUNDARY

# Ceja Vista

## Phase 2

### Illustrative Site Plan

Prepared for:  
**Albuquerque Rio Bravo Partners**  
 6330 Riverside Plaza Lane NW, Suite 220  
 Albuquerque, NM 87120

Prepared by:  
**Consensus Planning, Inc.**  
 302 Eighth Street NW  
 Albuquerque, NM 87102

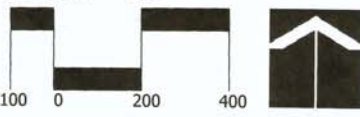
**Mark Goodwin & Associates, PA**  
 P.O. Box 90606  
 Albuquerque, NM 87199

Bernalillo County Zoning Division  
 Approved: *[Signature]*  
 Date: 24. MAR. 2008  
 Comments: REVISED SITE DEV. PLAN FOR CSD-70048

**ZONING ADMINISTRATOR APPROVAL**  
 This site plan meets the conditions of approval set by the Board of County Commissioners on January 22, 2008.

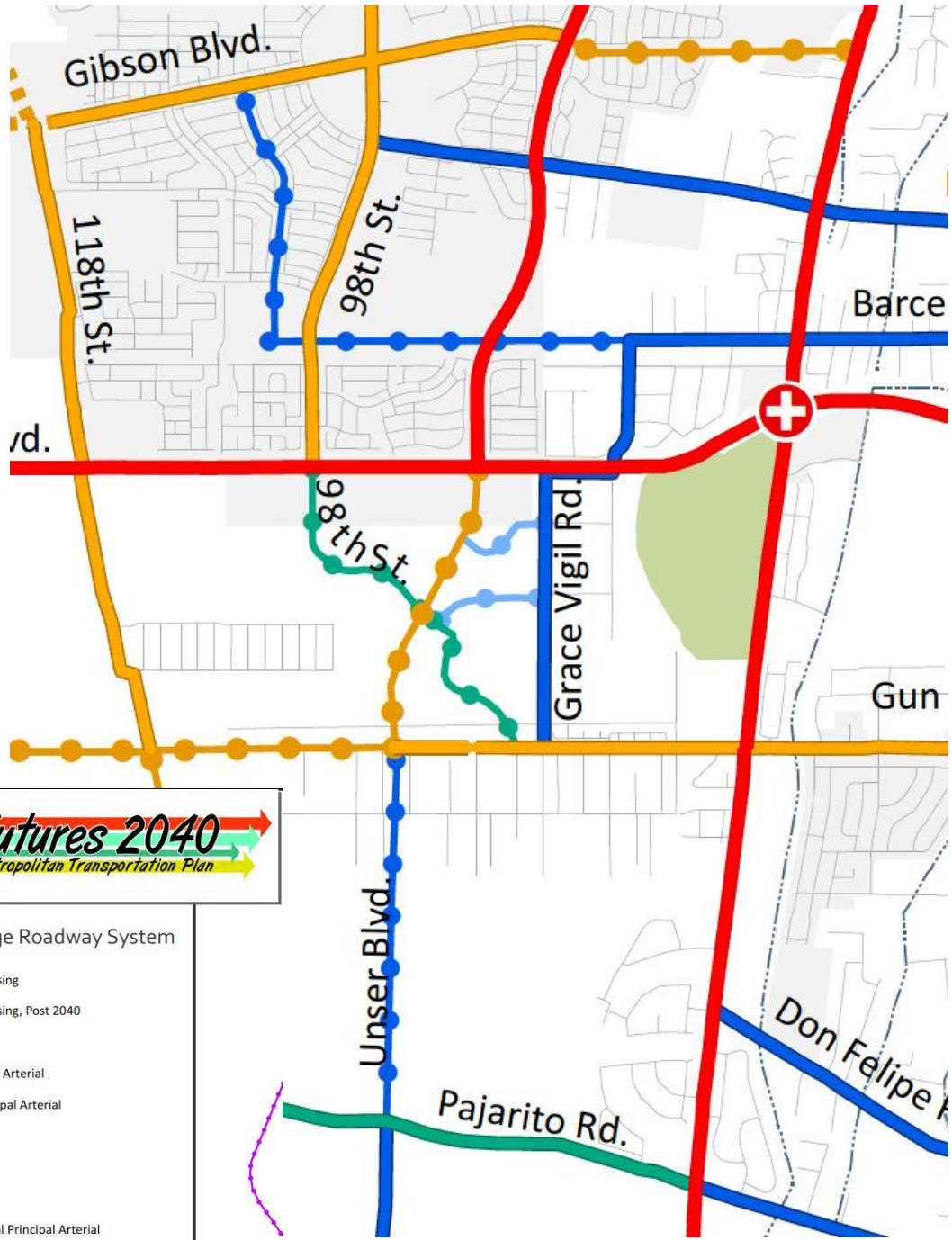
ZONING ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

Scale: 1" = 200'



March 17, 2008 SHEET 1 of 7

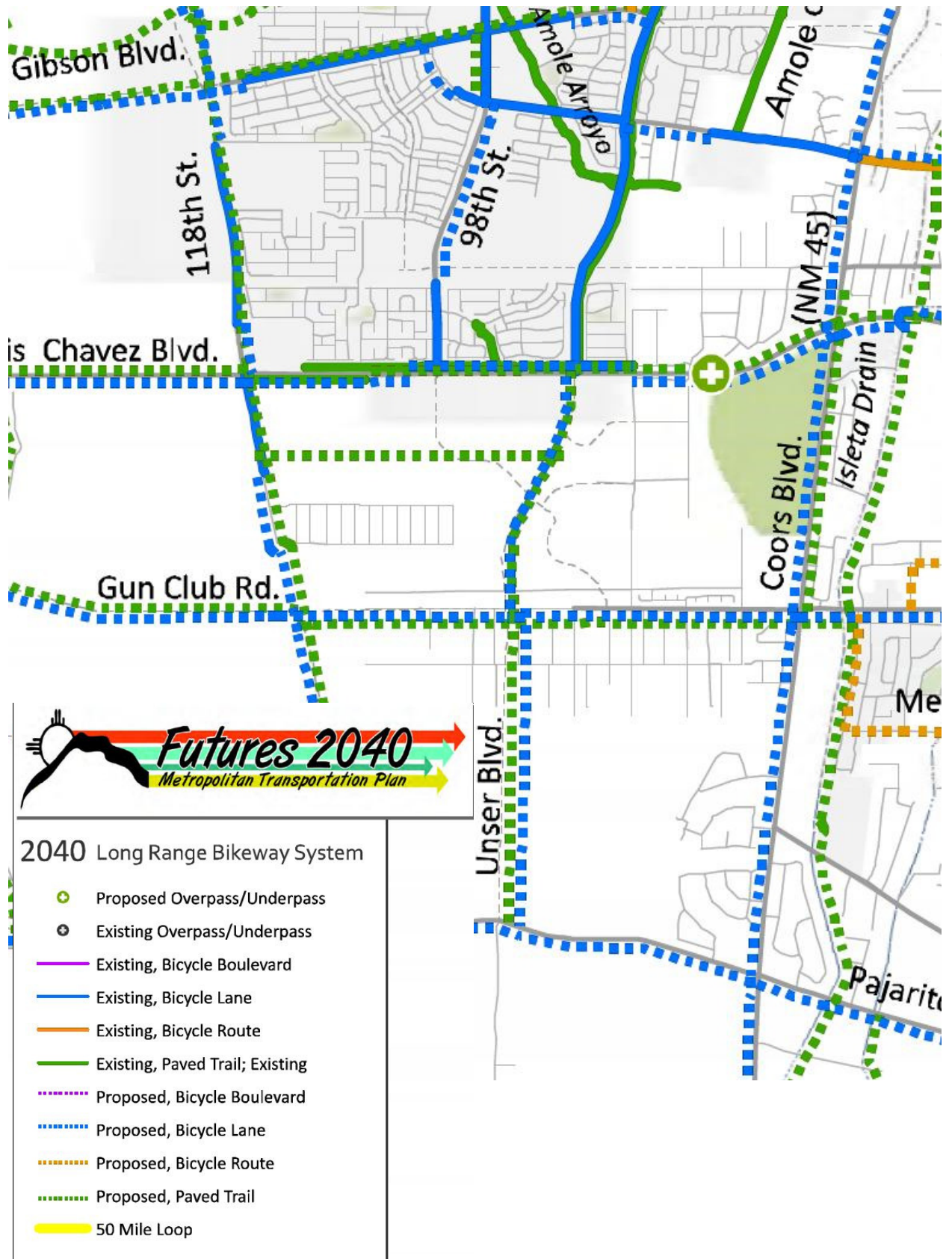




**2040 Long Range Roadway System**

- Interchange/Crossing
- Interchange/Crossing, Post 2040
- Freeways
- Regional Principal Arterial
- Community Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Proposed Regional Principal Arterial
- Proposed Community Principal Arterial
- Proposed Minor Arterial
- Proposed Major Collector
- Proposed Minor Collector
- Proposed Regional Principal Arterial, Post 2040
- Proposed Community Principal Arterial, Post 2040
- Proposed Minor Arterial, Post 2040
- Proposed Major Collector, Post 2040
- Proposed Minor Collector, Post 2040
- Classification TBD, Post 2040

**Portion of Futures 2020 Long Range Roadway Map**



Portion of Futures 2040 Long Range Bikeway System





*Ceja Vista Development (Dennis Chavez Bd. / 98th St.)  
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	ENTER	EXIT	ENTER	EXIT
	4,042	54	182	174	102	

Units

**540**

**Multifamily Housing (Low-Rise)**

Dwelling Units

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$T = 7.56 (X) + -40.86$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$\ln(T) = 0.95 \ln(X) + -0.51$$

23% Enter, 77% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\ln(T) = 0.89 \ln(X) + 0.02$$

63% Enter, 37% Exit

Comments:

.

Based on ITE Trip Generation Manual - 10th Edition

*Ceja Vista Development (Dennis Chavez Bd. / 98th St.)  
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	ENTER	EXIT	ENTER	EXIT
	11,732	248	745	802	471	

Units

**1,393**

**Single-Family Detached Housing (210)**

Dwelling Units

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$\text{Ln}(T) = 0.92 \text{ Ln}(X) + 2.71$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 0.71 (X) + 4.8$$

25% Enter, 75% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\text{Ln}(T) = 0.96 \text{ Ln}(X) + 0.2$$

63% Enter, 37% Exit

Comments:

.

Based on ITE Trip Generation Manual - 10th Edition

*Ceja Vista Development (Dennis Chavez Bd. / 98th St.)  
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	ENTER	EXIT	ENTER	EXIT
<b>Shopping Center (820)</b>	6,806	131	80	299	323	

Units

**120.00**

1,000 S.F.

**ITE Trip Generation Equations:**

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$\text{Ln}(T) = 0.68 \text{ Ln}(X) + 5.57$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 0.5 (X) + 151.78$$

62% Enter, 38% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\text{Ln}(T) = 0.74 \text{ Ln}(X) + 2.89$$

48% Enter, 52% Exit

Comments:

.

Based on ITE Trip Generation Manual - 10th Edition

*Ceja Vista Development (Dennis Chavez Bd. / 98th St.)  
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	ENTER	EXIT	ENTER	EXIT
City Park (411)	103	-	-	-	13	11

Units

**22.89**

Acres

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$T = 50\% \text{ Enter, } 0.64 (X) + 50\% \text{ Exit, } 88.46$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 59\% \text{ Enter, } 0.02 (X) + 41\% \text{ Exit, } 0$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = 55\% \text{ Enter, } 0.06 (X) + 45\% \text{ Exit, } 22.6$$

Comments:

.

Based on ITE Trip Generation Manual - 10th Edition

*Ceja Vista Development (Dennis Chavez Bd. / 98th St.)  
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	ENTER	EXIT	ENTER	EXIT
	407	42	11	17	17	52

Units

**100**

**Park-and-Ride Lot w/Bus Service (090)**

**Parking Spaces**

**ITE Trip Generation Equations:**

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$\text{Ln}(T) = 0.74 \text{ Ln}(X) + 2.6$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$\text{Ln}(T) = 0.85 \text{ Ln}(X) + 0.07$$

79% Enter, 21% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

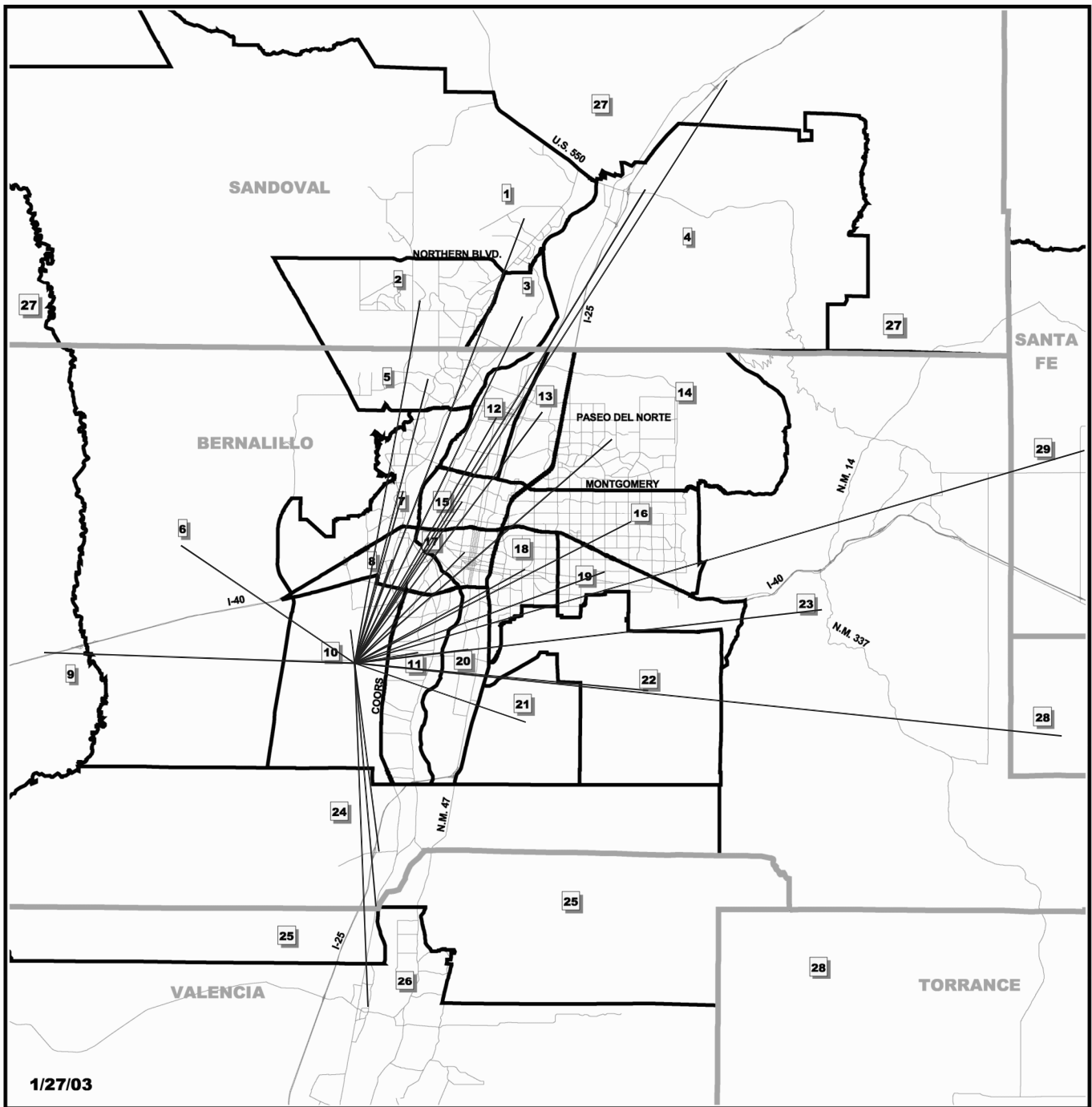
$$T = 0.37 (X) + 31.82$$

25% Enter, 75% Exit

Comments:



Based on ITE Trip Generation Manual - 10th Edition



**Figure 6**

**22** Subarea Identification Number

**Subareas of the MRCOG Region**



**Mid-Region  
Council of Governments**  
317 Commercial NE, Suite 104  
Albuquerque, NM 87102  
505-247-1750

Subarea boundaries extend to county boundary where full extent of subarea not shown except for Subarea 29 which only includes southern Santa Fe County.

**Ceja Vista Development  
(Dennis Chavez Bd. / 98th St.)  
Trip Distribution Subarea Map**

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(9N) 98th St. North			(GE) Gibson Bd. East			(UN) Unser Bd. North			
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	
		2012	2040	2020														
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	100%	1.26%	599	
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	100%	2.96%	1,406	
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	50%	1.31%	621	
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	30%	0.90%	429	0%	0.00%	0	30%	0.90%	429	
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	25%	1.25%	595	0%	0.00%	0	25%	1.25%	595	
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	39%	2.96%	1,406	2%	0.14%	68	21%	1.63%	776	
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
		394,468	581,094	447,790	447,790		47,509	100.00%		5.12%	2,430		0.14%	68	9.32%	4,426		
										5.12%			0.14%					



### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(BE) Blake Rd. East			(CdN) Condershire Dr. North			(RW) Rio Bravo Sq. West		
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2012	2040	2020													
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	6%	0.46%	219	3%	0.23%	107	0%	0.02%	10
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.46%	219		0.23%	107		0.02%	10
											0.46%			0.23%			0.02%

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(CN) Coors Bd. North			(DE) Dennis Chavez Bd. East			(CdS) Candershire Dr. South		
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2012	2040	2020													
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	100%	0.22%	103	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	100%	0.39%	183	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	50%	1.31%	621	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	40%	1.20%	572	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	50%	2.50%	1,190	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	6%	0.43%	205	0%	0.00%	0	3%	0.26%	125
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	20%	0.98%	465	20%	0.98%	465	0%	0.00%	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	50%	0.67%	316	50%	0.67%	316	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	50%	2.88%	1,367	50%	2.88%	1,367	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	50%	2.86%	1,358	50%	2.86%	1,358	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	50%	2.34%	1,113	50%	2.34%	1,113	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	50%	4.70%	2,231	50%	4.70%	2,231	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	50%	6.54%	3,108	50%	6.54%	3,108	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	25%	3.29%	1,565	75%	9.88%	4,695	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	100%	5.17%	2,456	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	100%	3.33%	1,581	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	100%	0.89%	422	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	100%	4.52%	2,146	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	50%	0.15%	69	50%	0.15%	69	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	50%	0.01%	5	0%	0.00%	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	50%	1.33%	632	0%	0.00%	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	100%	0.44%	208	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	50%	0.15%	72	0%	0.00%	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	100%	0.12%	57	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%			30.06%	14,283	47.32%	22,483	0.26%	125	
											30.06%		47.32%		0.26%		

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(GuE) Gun Club Rd. East			(DoE) Don Felipe Rd. East			(CS) Coors Bd. South		
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2012	2040	2020													
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	0%	0.00%	0	0%	0.00%	0	3%	0.25%	120
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	20%	0.98%	465	20%	0.98%	465	20%	0.98%	465
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	100%	0.35%	168
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	50%	0.01%	5
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	50%	1.33%	632
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	50%	0.15%	72
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.98%	465		0.98%	465		3.08%	1,461
											0.98%			0.98%			3.08%

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(DoW) Don Felipe Rd. West			(KS) Karrol St. South			(GuW) Gun Club Rd. West		
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2012	2040	2020													
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	0%	0.00%	0	6%	0.44%	208	0%	0.00%	0
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.00%	0		0.44%	208		0.00%	0
											0.00%			0.44%			0.00%

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(1S) 118th St. South			(DW) Dennis Chavez Bd. West			(1N) 118th St. North			
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	
		<b>2012</b>	<b>2040</b>	<b>2020</b>														
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	100%	0.58%	278	0%	0.00%	0	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	100%	0.20%	94	0%	0.00%	0	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	0%	0.02%	8	1%	0.04%	20	1%	0.06%	29	29
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.02%	8		0.82%	391		0.06%	29	29
											0.02%			0.82%			0.06%	0.06%

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(BW) Blake Rd. West			(GW) Gibson Bd. West			(BC) Blake Rd. Central		
									% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2012	2040	2020													
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	1%	0.11%	52	3%	0.20%	94	1%	0.05%	22
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.11%	52		0.20%	94		0.05%	22
											0.11%			0.20%			0.05%

### Trip Distribution Table

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

**Sub Area Employment Data:**

For determination of Trip Distribution for Proposed **Residential Development Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments' 2040*

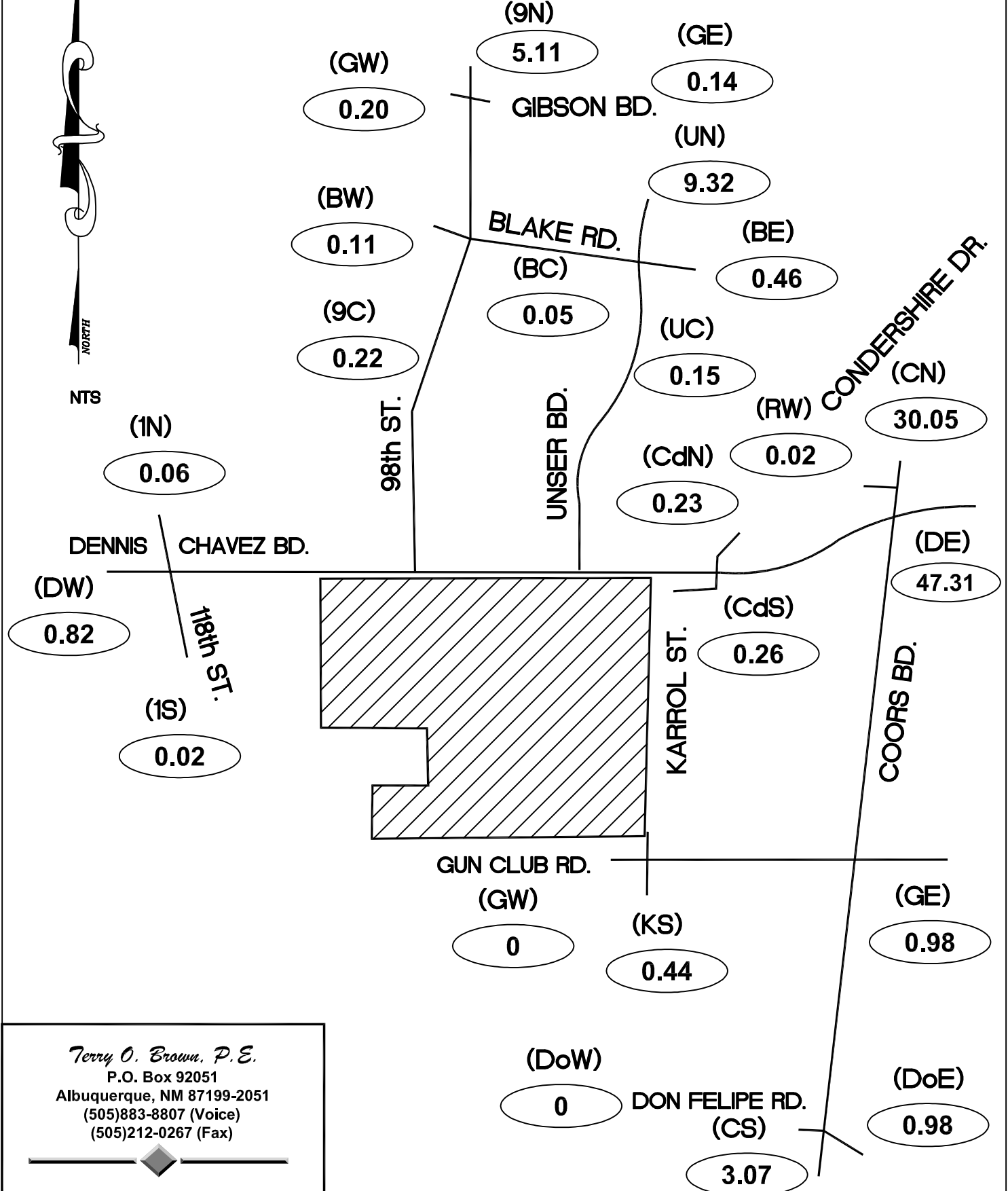
*Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

Sub Area I.D.#	% Sub Area in Study	2012	2040	Interpolated Employment for the Year 2020	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	(9C) 98th St. Central			(UC) Unser Bd. Central		
		2012	2040						% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
1	100%	6,548	26,200	12,163	12,163	20.3	599	1.26%	0%	0.00%	0	0%	0.00%	0
2	100%	17,489	33,517	22,068	22,068	15.7	1,406	2.96%	0%	0.00%	0	0%	0.00%	0
3	100%	1,518	2,100	1,684	1,684	16.4	103	0.22%	0%	0.00%	0	0%	0.00%	0
4	100%	3,550	6,305	4,337	4,337	23.7	183	0.39%	0%	0.00%	0	0%	0.00%	0
5	100%	12,899	22,103	15,529	15,529	12.5	1,242	2.61%	0%	0.00%	0	0%	0.00%	0
6	100%	1,888	3,935	2,473	2,473	8.9	278	0.58%	0%	0.00%	0	0%	0.00%	0
7	100%	8,784	16,098	10,874	10,874	7.6	1,431	3.01%	0%	0.00%	0	0%	0.00%	0
8	100%	9,396	15,659	11,185	11,185	4.7	2,380	5.01%	0%	0.00%	0	0%	0.00%	0
9	100%	1,002	1,815	1,234	1,234	13.2	94	0.20%	0%	0.00%	0	0%	0.00%	0
10*	100%	3,954	7,907	5,083	5,083	1.4	3,631	7.64%	3%	0.22%	106	2%	0.15%	73
11	100%	5,772	7,560	6,283	6,283	2.7	2,327	4.90%	0%	0.00%	0	0%	0.00%	0
12	100%	7,107	9,021	7,654	7,654	12.1	633	1.33%	0%	0.00%	0	0%	0.00%	0
13	100%	31,747	47,896	36,361	36,361	13.3	2,734	5.75%	0%	0.00%	0	0%	0.00%	0
14	100%	36,255	47,165	39,372	39,372	14.5	2,715	5.72%	0%	0.00%	0	0%	0.00%	0
15	100%	15,719	25,356	18,472	18,472	8.3	2,226	4.68%	0%	0.00%	0	0%	0.00%	0
16	100%	55,543	67,295	58,901	58,901	13.2	4,462	9.39%	0%	0.00%	0	0%	0.00%	0
17	100%	37,312	52,468	41,642	41,642	6.7	6,215	13.08%	0%	0.00%	0	0%	0.00%	0
18	100%	49,455	58,200	51,954	51,954	8.3	6,259	13.18%	0%	0.00%	0	0%	0.00%	0
19	100%	25,348	33,772	27,755	27,755	11.3	2,456	5.17%	0%	0.00%	0	0%	0.00%	0
20	100%	5,536	13,277	7,748	7,748	4.9	1,581	3.33%	0%	0.00%	0	0%	0.00%	0
21	100%	412	10,347	3,251	3,251	7.7	422	0.89%	0%	0.00%	0	0%	0.00%	0
22	100%	26,765	26,990	26,829	26,829	12.5	2,146	4.52%	0%	0.00%	0	0%	0.00%	0
23	100%	2,514	3,393	2,765	2,765	20	138	0.29%	0%	0.00%	0	0%	0.00%	0
24	100%	1,196	1,765	1,359	1,359	8.1	168	0.35%	0%	0.00%	0	0%	0.00%	0
25	100%	77	137	94	94	10.4	9	0.02%	0%	0.00%	0	0%	0.00%	0
26	100%	15,619	25,509	18,445	18,445	14.6	1,263	2.66%	0%	0.00%	0	0%	0.00%	0
27	100%	5,361	7,954	6,102	6,102	29.4	208	0.44%	0%	0.00%	0	0%	0.00%	0
28	100%	4,139	4,864	4,346	4,346	30.2	144	0.30%	0%	0.00%	0	0%	0.00%	0
29	100%	1,563	2,486	1,827	1,827	32.3	57	0.12%	0%	0.00%	0	0%	0.00%	0
		394,468	581,094	447,790	447,790		47,509	100.00%		0.22%	106		0.15%	73
											0.22%			0.15%

# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

Residential Trip Distribution Map (%)



NTS



Terry O. Brown, P.E.  
 P.O. Box 92051  
 Albuquerque, NM 87199-2051  
 (505)883-8807 (Voice)  
 (505)212-0267 (Fax)



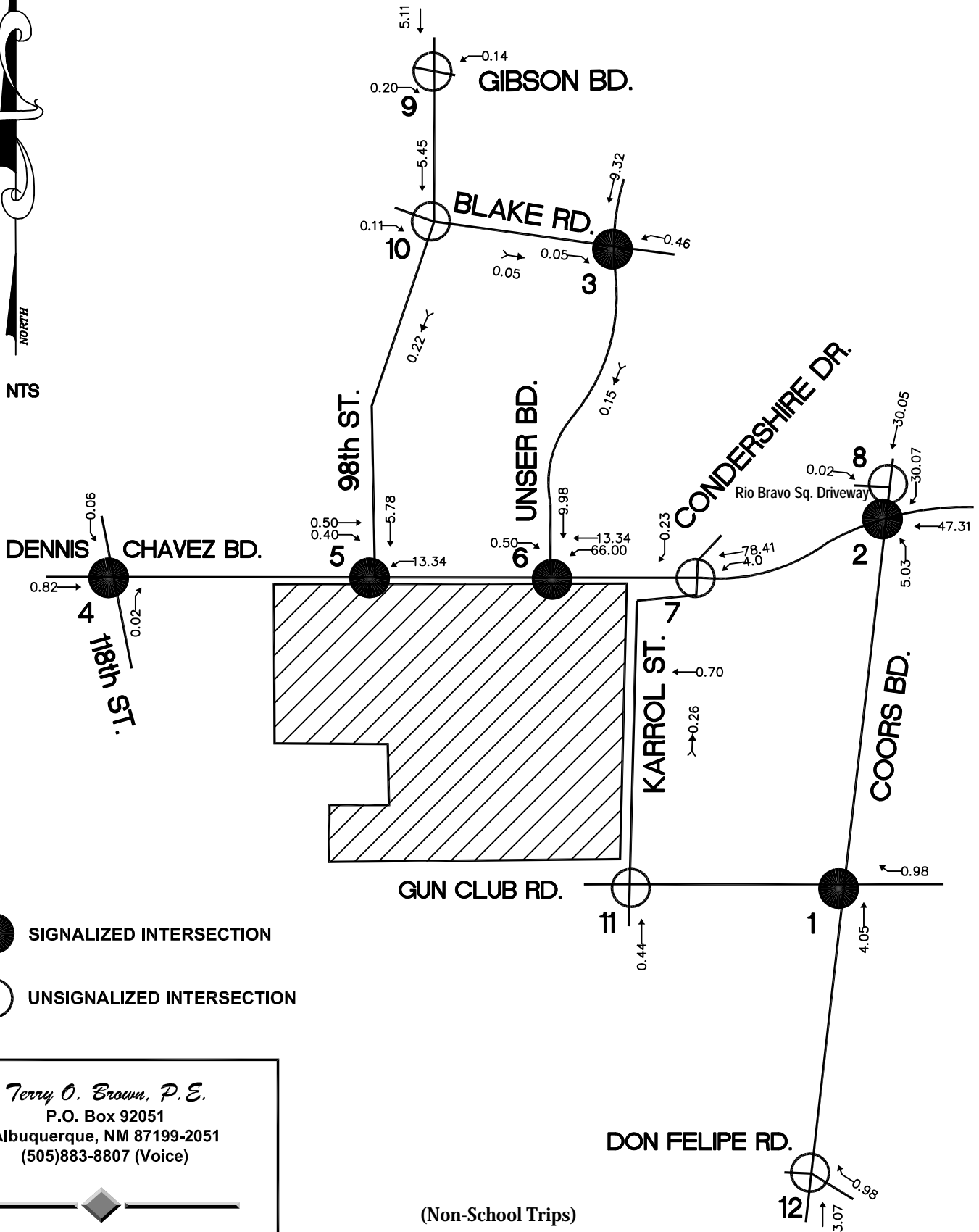
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

## Residential Trip Assignments (% Entering)



NTS



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 Albuquerque, NM 87199-2051  
 (505)883-8807 (Voice)

(Non-School Trips)

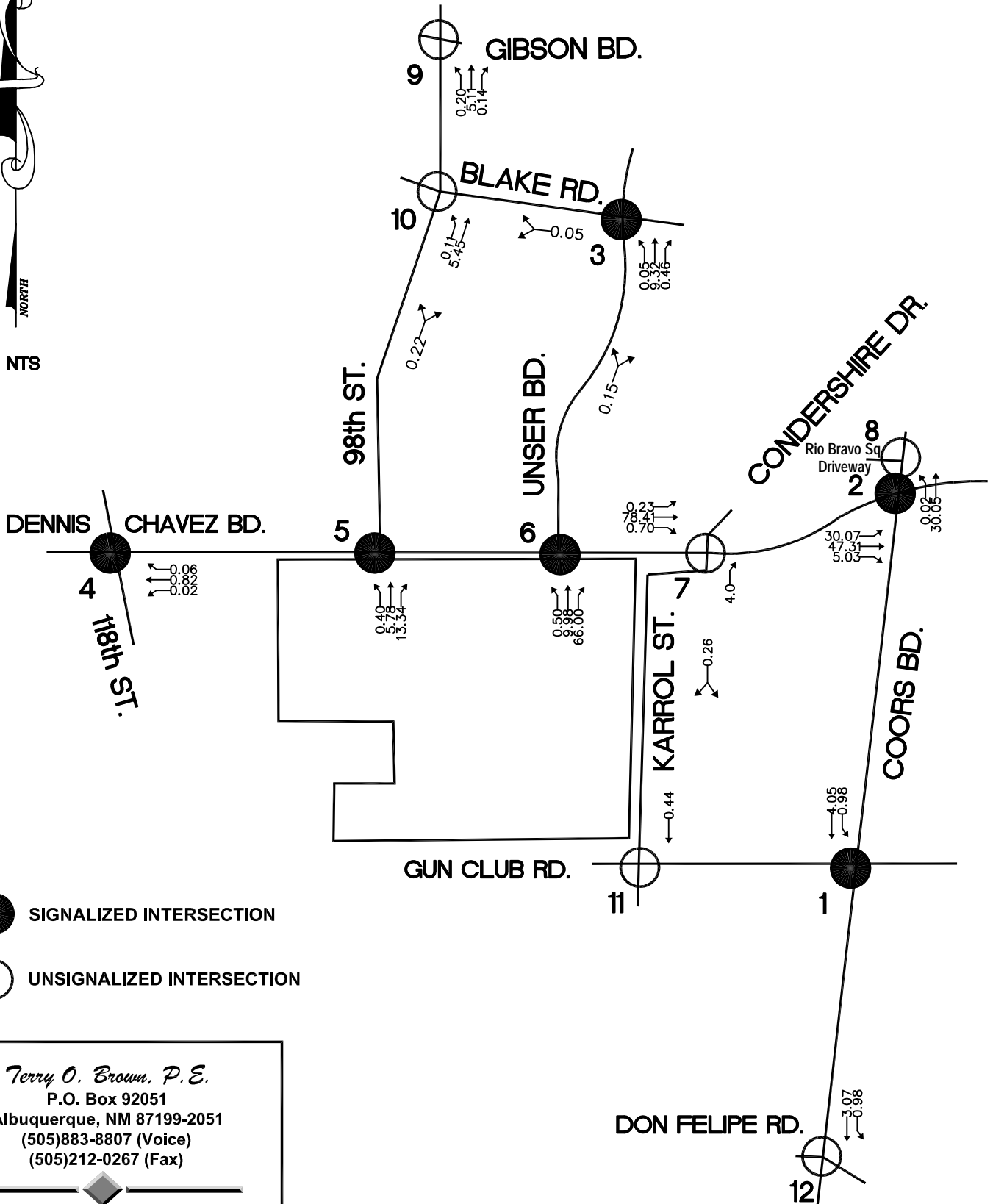
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

## Residential Trip Assignments (% Exiting)



NTS



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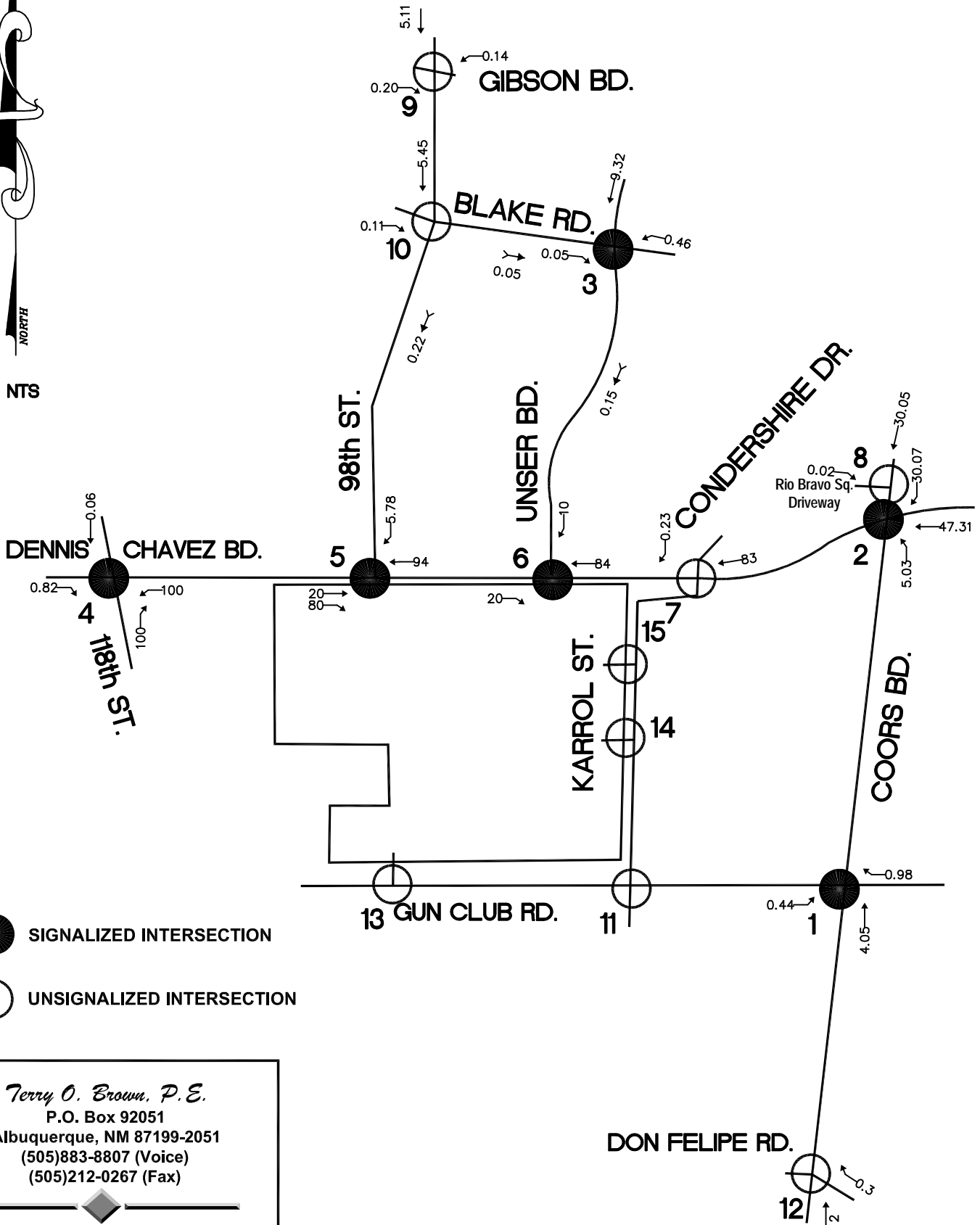
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

## Diverted School Trip Assignments (% Entering)



NTS



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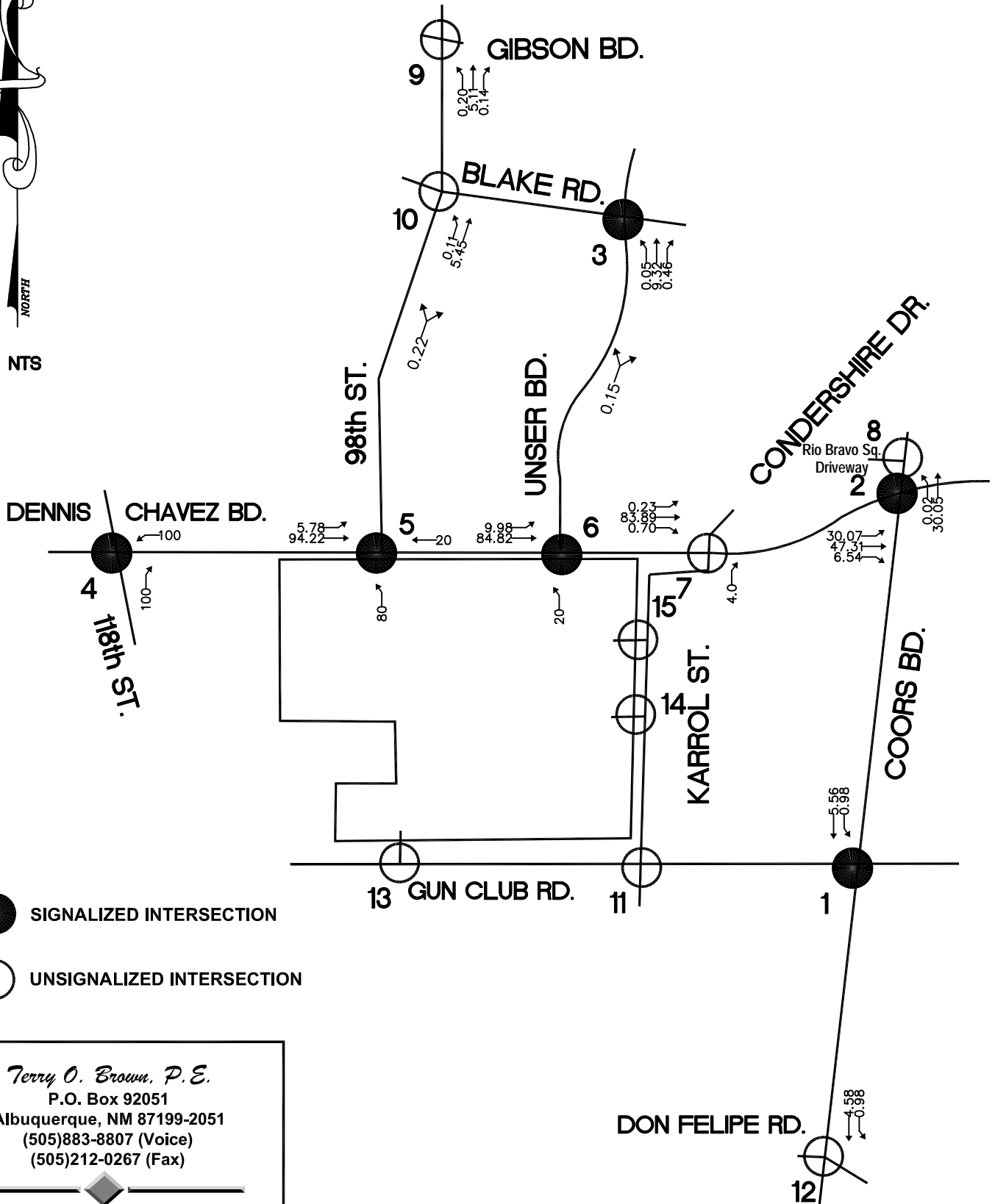
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

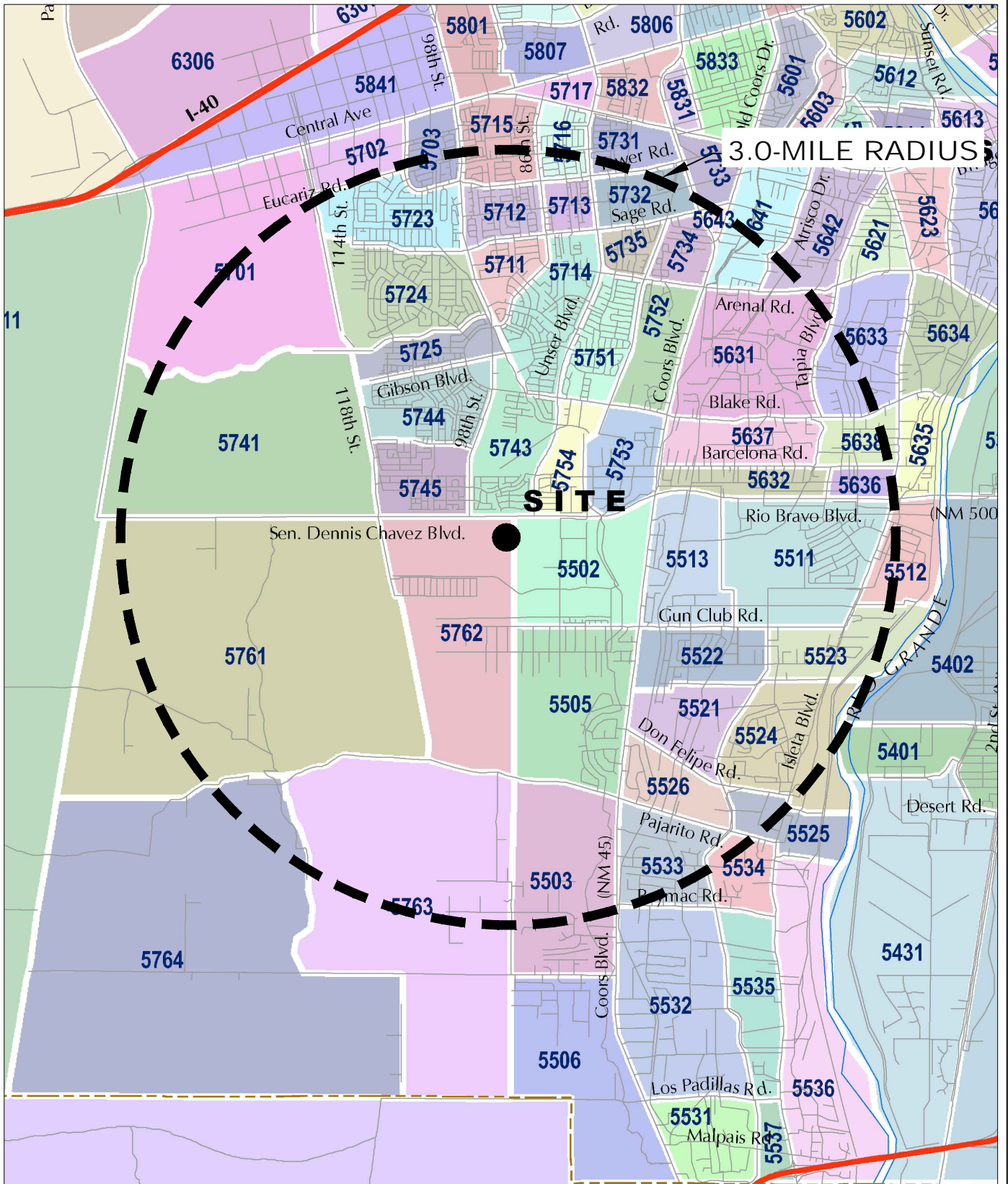
## Diverted School Trip Assignments (% Exiting)



NTS



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 P.O. Box 92051  
 Albuquerque, NM 87199-2051  
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**DATA ANALYSIS SUBZONE (DASZ) MAP**  
**Ceja Vista Development (Dennis Chavez Blvd. / 98th St.)**

### Trip Distribution Table Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

2012 and 2040 Data Taken from Mid-Region Council of Governments'  
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(9N) 98th St. North			(GE) Gibson Bd. East			(UN) Unser Bd. North				
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population		
Boundary Specified on DASZ Map																			
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	50%	0.53%	367	0%	0.00%	0		
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	100%	3.20%	2,218	0%	0.00%	0		
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	100%	0.53%	369	0%	0.00%	0		
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	100%	0.10%	69		
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	100%	1.25%	864	0%	0.00%	0	0%	0.00%	0		
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	100%	1.06%	736	0%	0.00%	0	0%	0.00%	0		
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	100%	2.68%	1,855	0%	0.00%	0	0%	0.00%	0		
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	100%	3.82%	2,642	0%	0.00%	0	0%	0.00%	0		
5713	100%	995	859	956	956	1.00	956	1.38%	100%	1.38%	956	0%	0.00%	0	0%	0.00%	0		
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	35%	2.68%	1,856	30%	2.30%	1,591	35%	2.68%	1,856		
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	100%	1.77%	1,228	0%	0.00%	0	0%	0.00%	0		
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	100%	0.79%	546	0%	0.00%	0	0%	0.00%	0		
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	100%	6.75%	4,669	0%	0.00%	0	0%	0.00%	0		
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	100%	7.39%	5,113	0%	0.00%	0	0%	0.00%	0		
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	100%	0.10%	71		
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	100%	0.64%	441		
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	50%	0.70%	486		
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	50%	1.22%	845		
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	50%	3.90%	2,702		
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0		
				87,003	69,216		69,216	100.00%				20,465				4,545			6,470
												29.57%				6.57%			9.35%

**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(BE) Blake Rd. East			(CdN) Condershire Dr. North			(RW) Rio Bravo Sq. West		
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																	
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	50%	1.68%	1,164	0%	0.00%	0	0%	0.00%	0
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	50%	0.36%	249	0%	0.00%	0	0%	0.00%	0
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	972	972	1.00	972	1.40%	50%	0.70%	486	0%	0.00%	0	0%	0.00%	0
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	50%	1.22%	845	0%	0.00%	0	0%	0.00%	0
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	50%	3.90%	2,702	0%	0.00%	0	0%	0.00%	0
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	50%	0.81%	562	0%	0.00%	0	0%	0.00%	0
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	50%	1.36%	945	5%	0.14%	94
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	45%	0.72%	497	10%	0.16%	110	0%	0.00%	0
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
									6,504 9.40%			1,055 1.52%			94 0.14%		

**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	Population		Interpolated Population for the Year	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(CN) Coors Bd. North			(DE) Dennis Chavez Bd. East			(CdS) Candershire Dr. South			
		2012	2040						2020	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																		
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	100%	1.92%	1,332	
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	100%	3.55%	2,459	0%	0.00%	0	
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	100%	0.12%	82	0%	0.00%	0	
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	50%	0.35%	245	0%	0.00%	0	
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	50%	1.68%	1,164	0%	0.00%	0	0%	0.00%	0	
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	100%	1.20%	831	0%	0.00%	0	
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	50%	0.36%	249	0%	0.00%	0	0%	0.00%	0	
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	50%	0.21%	145	0%	0.00%	0	
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	50%	0.64%	443	0%	0.00%	0	
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	100%	0.69%	475	0%	0.00%	0	
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	100%	0.58%	404	0%	0.00%	0	0%	0.00%	0	
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	100%	0.12%	80	0%	0.00%	0	0%	0.00%	0	
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	50%	0.81%	562	0%	0.00%	0	0%	0.00%	0	
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	45%	1.23%	850	0%	0.00%	0	0%	0.00%	0	
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	
				87,003	69,216		69,216	100.00%										
									3,309 4.78%			4,679 6.76%			1,332 1.92%			



**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	Population		Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(GuE) Gun Club Rd. East			(DoE) Don Felipe Rd. East			(CS) Coors Bd. South		
		2012	2040						% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																	
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	100%	0.60%	412
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	100%	2.56%	1,769
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	50%	0.35%	245
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	50%	0.53%	367	0%	0.00%	0
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	100%	1.10%	764	0%	0.00%	0
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	100%	0.11%	73	0%	0.00%	0
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	100%	0.74%	512	0%	0.00%	0
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	100%	0.86%	597
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	100%	0.14%	98
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	100%	0.03%	20
				87,003	69,216		69,216	100.00%			-			1,716			3,141
										0.00%			2.48%				4.54%

**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(DoW) Don Felipe Rd. West			(KS) Karrol St. South			(GuW) Gun Club Rd. West		
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																	
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	100%	1.20%	830	0%	0.00%	0
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
									0.00%			830 1.20%			0.00%		

### Trip Distribution Table Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

2012 and 2040 Data Taken from Mid-Region Council of Governments'  
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(1S) 118th St. South			(DW) Dennis Chavez Bd. West			(1N) 118th St. North		
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																	
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	100%	1.01%	698	0%	0.00%	0
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	50%	2.13%	1,477
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5761	75%	137	3150	998	749	1.00	749	1.08%	50%	0.54%	375	50%	0.54%	375	0%	0.00%	0
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
									375 0.54%			1,073 1.55%			1,477 2.13%		

**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(BW) Blake Rd. West			(GW) Gibson Bd. West			(BC) Blake Rd. Central					
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population			
Boundary Specified on DASZ Map																				
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	100%	3.61%	2,499	0%	0.00%	0			
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	0%	0.00%	0	0%	0.00%	0	30%	1.28%	889			
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	35%	2.09%	1,446	30%	1.79%	1,240	0%	0.00%	0			
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0			
									87,003			69,216			69,216			100.00%		
												1,446			3,739			889		
												2.09%			5.40%			1.28%		

**Trip Distribution Table**  
**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

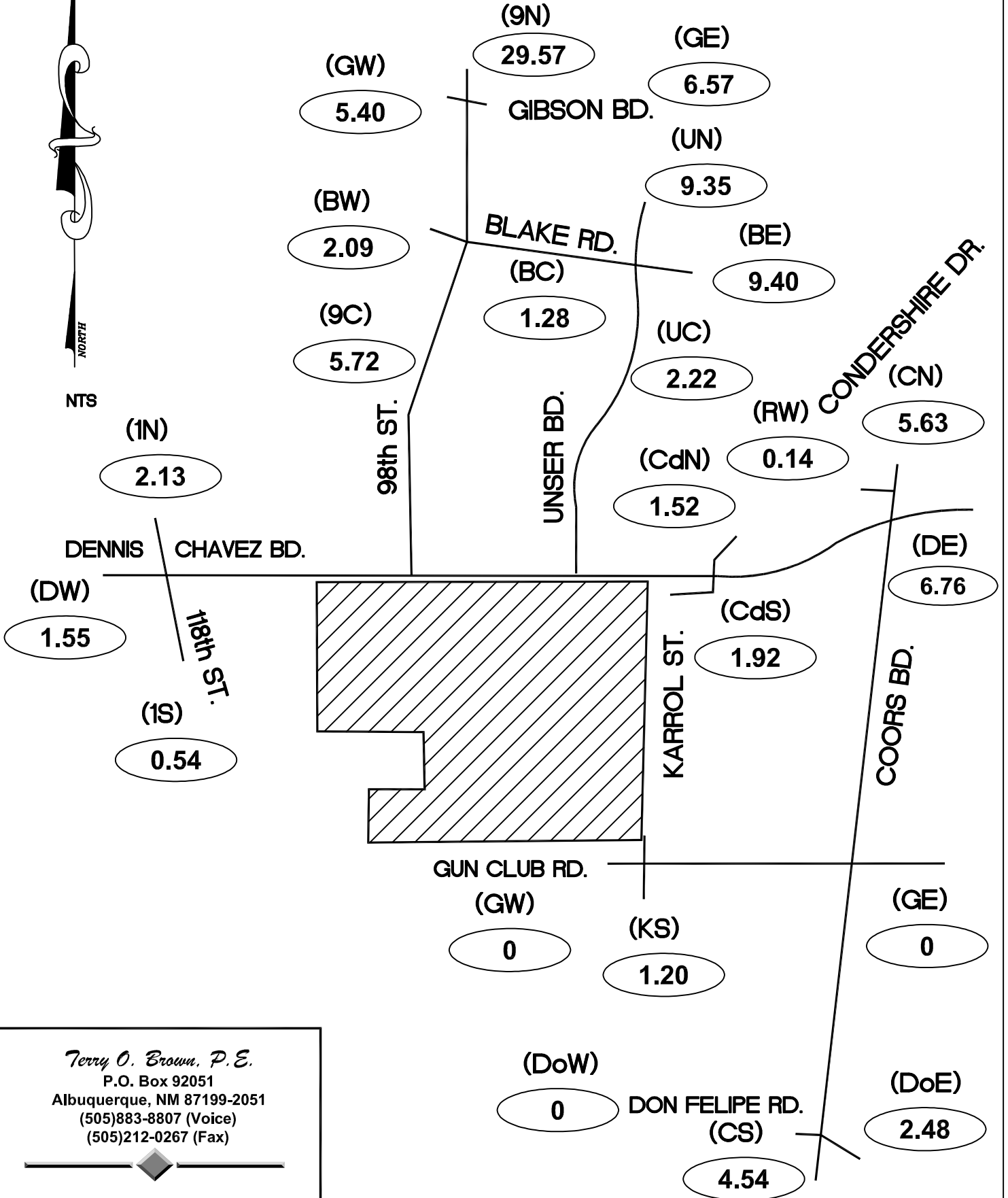
*2012 and 2040 Data Taken from Mid-Region Council of Governments'*  
*2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico*

DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year 2020	Population in Study	Dist. (Mi.)	Population / Distance	Percent Population	(9C) 98th St. Central			(UC) Unser Bd. Central			(CC) Coors Bd. Central		
									% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																	
5502	100%	1054	2027	1,332	1,332	1.00	1,332	1.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5503	60%	681	703	687	412	1.00	412	0.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5505	100%	1663	2034	1,769	1,769	1.00	1,769	2.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5511	100%	2409	2585	2,459	2,459	1.00	2,459	3.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5512	10%	832	802	823	82	1.00	82	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5513	100%	450	586	489	489	1.00	489	0.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5521	100%	751	692	734	734	1.00	734	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5522	100%	2299	2015	2,218	2,218	1.00	2,218	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5523	60%	608	633	615	369	1.00	369	0.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5524	70%	1095	1083	1,092	764	1.00	764	1.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5525	20%	369	358	366	73	1.00	73	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5526	100%	510	516	512	512	1.00	512	0.74%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5533	70%	849	862	853	597	1.00	597	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,450	2,328	1.00	2,328	3.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	100%	822	852	831	831	1.00	831	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5633	20%	2463	2553	2,489	498	1.00	498	0.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5636	85%	346	325	340	289	1.00	289	0.42%	0%	0.00%	0	0%	0.00%	0	50%	0.21%	145
5637	100%	857	954	885	885	1.00	885	1.28%	0%	0.00%	0	0%	0.00%	0	50%	0.64%	443
5638	60%	793	787	791	475	1.00	475	0.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5641	25%	1610	1626	1,615	404	1.00	404	0.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5642	5%	1601	1577	1,594	80	1.00	80	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	50%	140	132	138	69	1.00	69	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5701	45%	1099	3972	1,920	864	1.00	864	1.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	30%	2470	2412	2,453	736	1.00	736	1.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,855	1,855	1.00	1,855	2.68%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,642	2,642	1.00	2,642	3.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	956	956	1.00	956	1.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,302	5,302	1.00	5,302	7.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	30%	4039	4232	4,094	1,228	1.00	1,228	1.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	20%	2780	2608	2,731	546	1.00	546	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	95%	4569	5779	4,915	4,669	1.00	4,669	6.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,113	5,113	1.00	5,113	7.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,499	2,499	1.00	2,499	3.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	5%	1330	1632	1,416	71	1.00	71	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	75%	389	1086	588	441	1.00	441	0.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	972	972	1.00	972	1.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5735	100%	1721	1612	1,690	1,690	1.00	1,690	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5741	90%	0	2716	776	698	1.00	698	1.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	100%	2583	3912	2,963	2,963	1.00	2,963	4.28%	35%	1.50%	1,037	35%	1.50%	1,037	0%	0.00%	0
5744	100%	3396	5971	4,132	4,132	1.00	4,132	5.97%	35%	2.09%	1,446	0%	0.00%	0	0%	0.00%	0
5745	100%	2777	3394	2,953	2,953	1.00	2,953	4.27%	50%	2.13%	1,477	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,404	5,404	1.00	5,404	7.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5752	100%	1088	1212	1,123	1,123	1.00	1,123	1.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5753	100%	1953	1728	1,889	1,889	1.00	1,889	2.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5754	100%	997	1373	1,104	1,104	1.00	1,104	1.60%	0%	0.00%	0	45%	0.72%	497	0%	0.00%	0
5761	75%	137	3150	998	749	1.00	749	1.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5762	100%	340	2055	830	830	1.00	830	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5763	50%	209	160	195	98	1.00	98	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5764	5%	408	408	408	20	1.00	20	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
									3,960 5.72%			1,534 2.22%			587 0.85%		

# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

Commercial Trip Distribution Map (%)



Terry O. Brown, P.E.  
 P.O. Box 92051  
 Albuquerque, NM 87199-2051  
 (505)883-8807 (Voice)  
 (505)212-0267 (Fax)

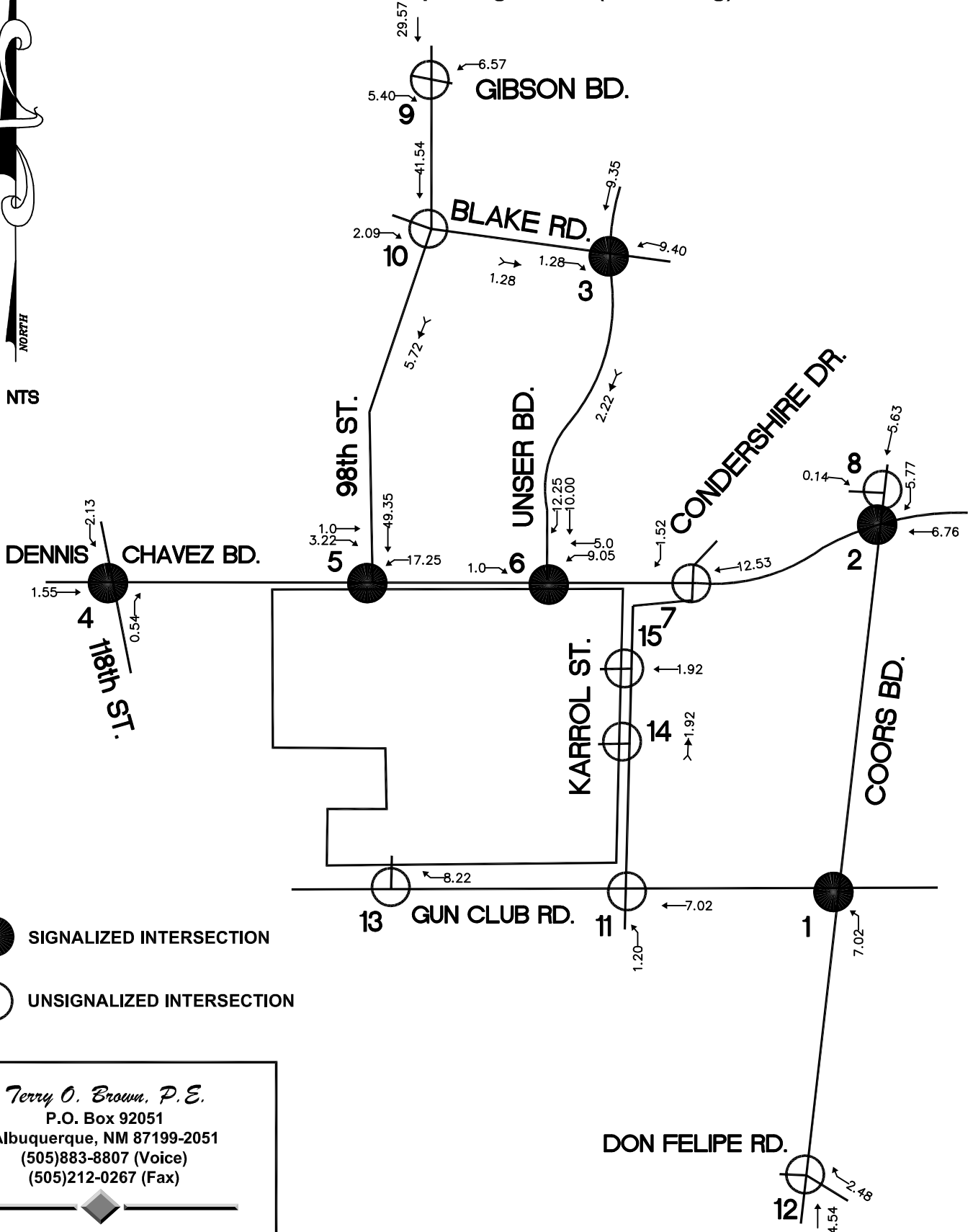
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

## Commercial Trip Assignments (% Entering)



NTS



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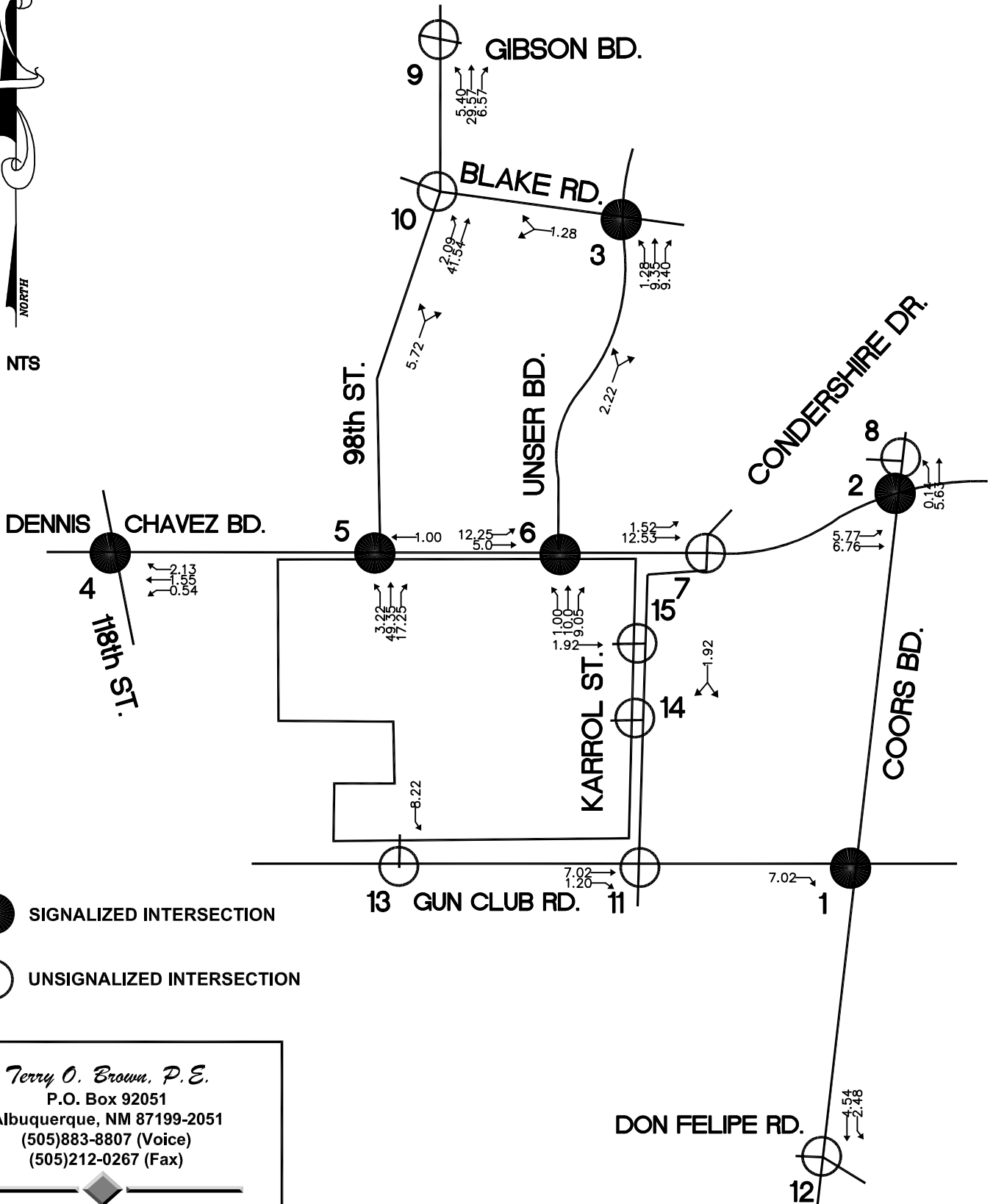
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

Commercial Trip Assignments (% Exiting)



NTS



Terry O. Brown, P.E.  
 P.O. Box 92051  
 Albuquerque, NM 87199-2051  
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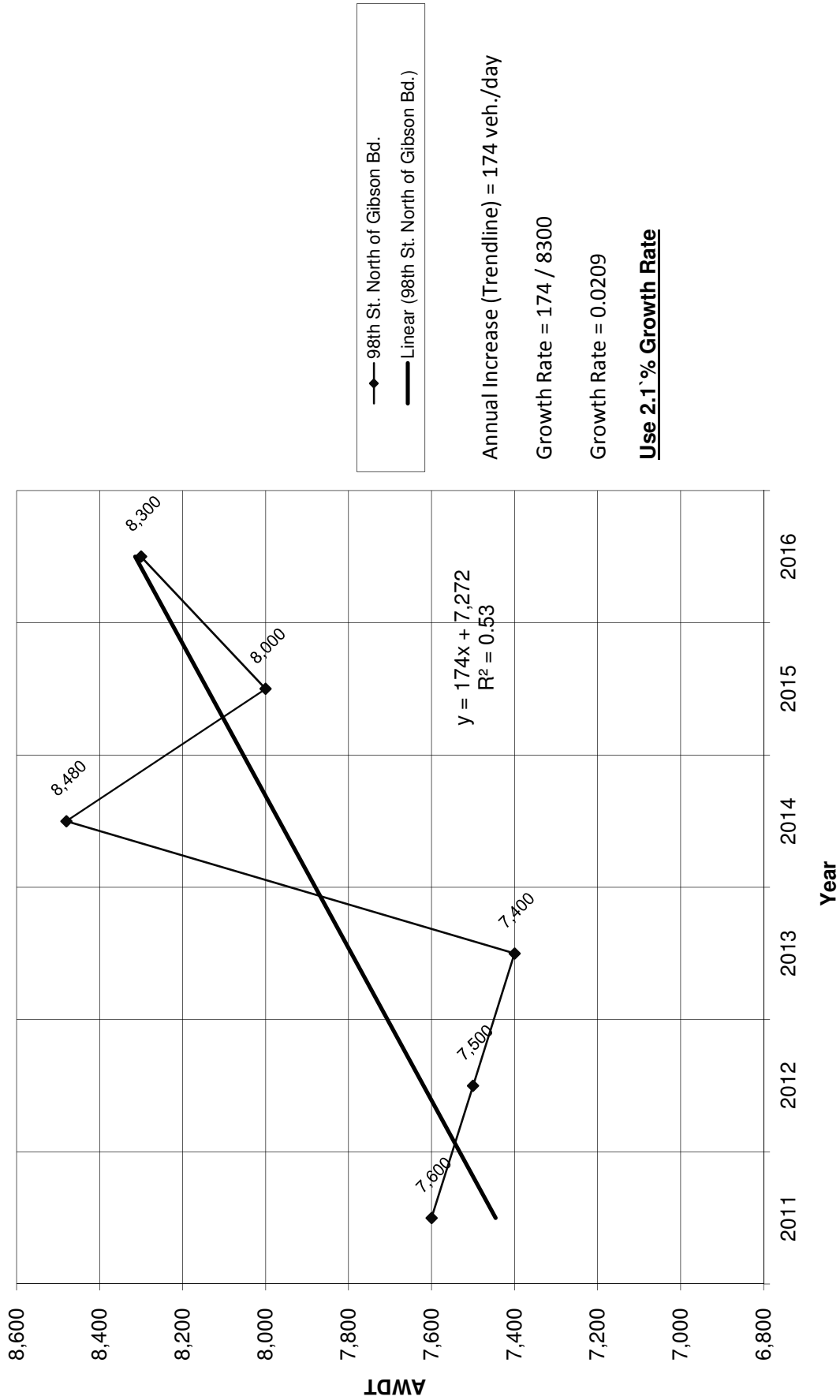
**Ceja Vista Development (Dennis Chavez Rd. / 98th St.)**

**Historic Growth Rate Table**

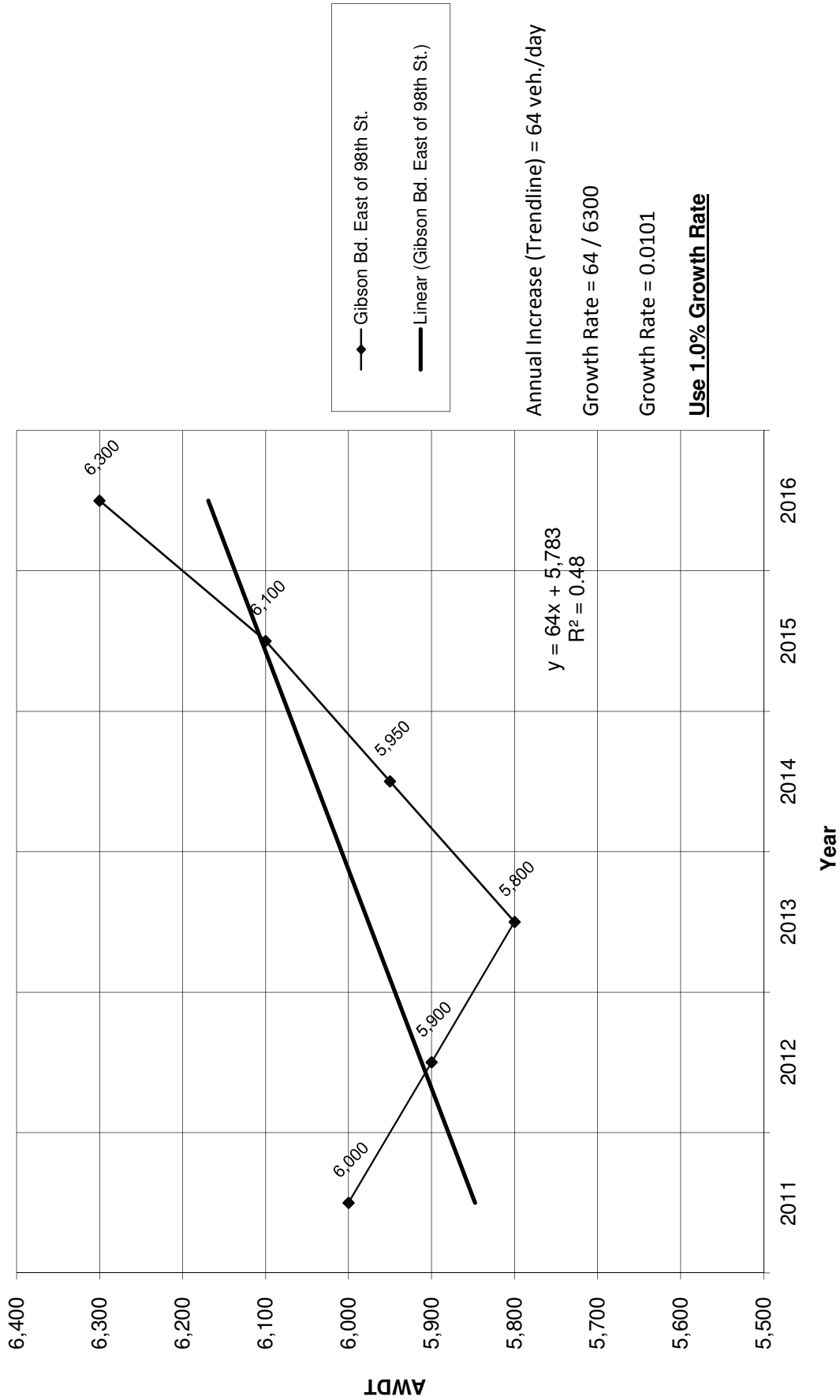
**Traffic Flows from MRCOG Map**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
98th St. North of Gibson Bd.	-	-	-	-	7,600	7,500	7,400	8,480	8,000	8,300
Gibson Bd. East of 98th St.	-	-	-	-	6,000	5,900	5,800	5,950	6,100	6,300
98th St. btwn Gibson Bd. & Blake Rd.	-	-	-	-	8,100	8,000	7,800	8,180	8,400	8,700
Blake Rd. btwn 98th St. & Unser Blvd.	-	-	-	-	6,300	6,200	6,100	6,090	6,900	7,200
Unser Bd. North of Blake Rd.	6,700	9,600	5,000	4,900	9,200	9,000	11,500	11,510	11,800	13,700
Blake Rd. East of Unser Blvd.	2,900	2,900	9,500	9,400	7,900	7,800	7,700	9,250	9,300	9,700
Unser Bd. btwn Blake & Dennis Chavez	-	-	-	-	4,300	4,300	4,200	7,890	8,100	8,400
Dennis Chavez btwn Unser & Condersire	1,900	3,600	10,600	10,500	10,300	14,200	14,000	17,080	17,500	17,800
Dennis Chavez btwn Condersire & Coors	1,900	3,600	10,600	10,500	10,300	14,200	14,000	17,080	17,500	18,200
Coors Bd. North of Dennis Chavez Bd.	31,300	29,600	29,600	29,100	25,100	16,200	21,200	21,250	21,800	24,500
Dennis Chavez East of Coors Bd.	21,300	21,400	21,300	14,800	14,600	18,600	20,900	20,850	21,400	21,600
Coors btwn Dennis Chavez & Gun Club	21,800	20,500	20,400	21,700	21,400	22,000	21,900	21,890	23,200	23,800
Gun Club Rd. East of Coors Bd.	4,700	4,900	4,900	4,800	5,100	5,000	4,900	4,680	4,800	5,000
Coors btwn Gun Club & Don Felipe	17,900	14,200	14,200	17,600	17,400	17,100	17,100	17,100	17,500	17,900
Don Felipe East of Coors Bd.	1,900	1,700	1,700	1,700	1,800	1,700	1,700	1,600	1,600	1,700
Coors Bd. South of Don Felipe Rd.	14,100	12,500	12,500	10,500	10,400	12,300	12,100	12,090	12,600	13,100
Gun Club Rd. btwn Coors Bd. & Karrol St.	-	-	-	-	3,000	3,000	2,900	4,080	4,200	4,300
Dennis Chavez btwn Unser & 98th	1,900	3,600	10,600	10,500	8,000	7,900	7,800	9,880	10,100	10,500
Dennis Chavez btwn 118th & 98th	-	3,600	10,600	10,500	4,100	4,000	4,000	6,750	6,900	7,200
Dennis Chavez Bd. West of 118th St.	-	3,700	3,700	3,600	2,000	2,000	1,900	2,230	2,300	2,400
118th St. North of Dennis Chavez Bd.	-	-	-	-	2,300	2,200	2,200	2,500	2,600	2,700
98th St. btwn Dennis Chavez & Blake	-	-	-	-	6,000	5,900	5,800	6,290	7,600	7,900
Gibson Bd. West of 98th St.	-	-	-	-	3,900	3,800	3,800	4,140	4,200	4,400

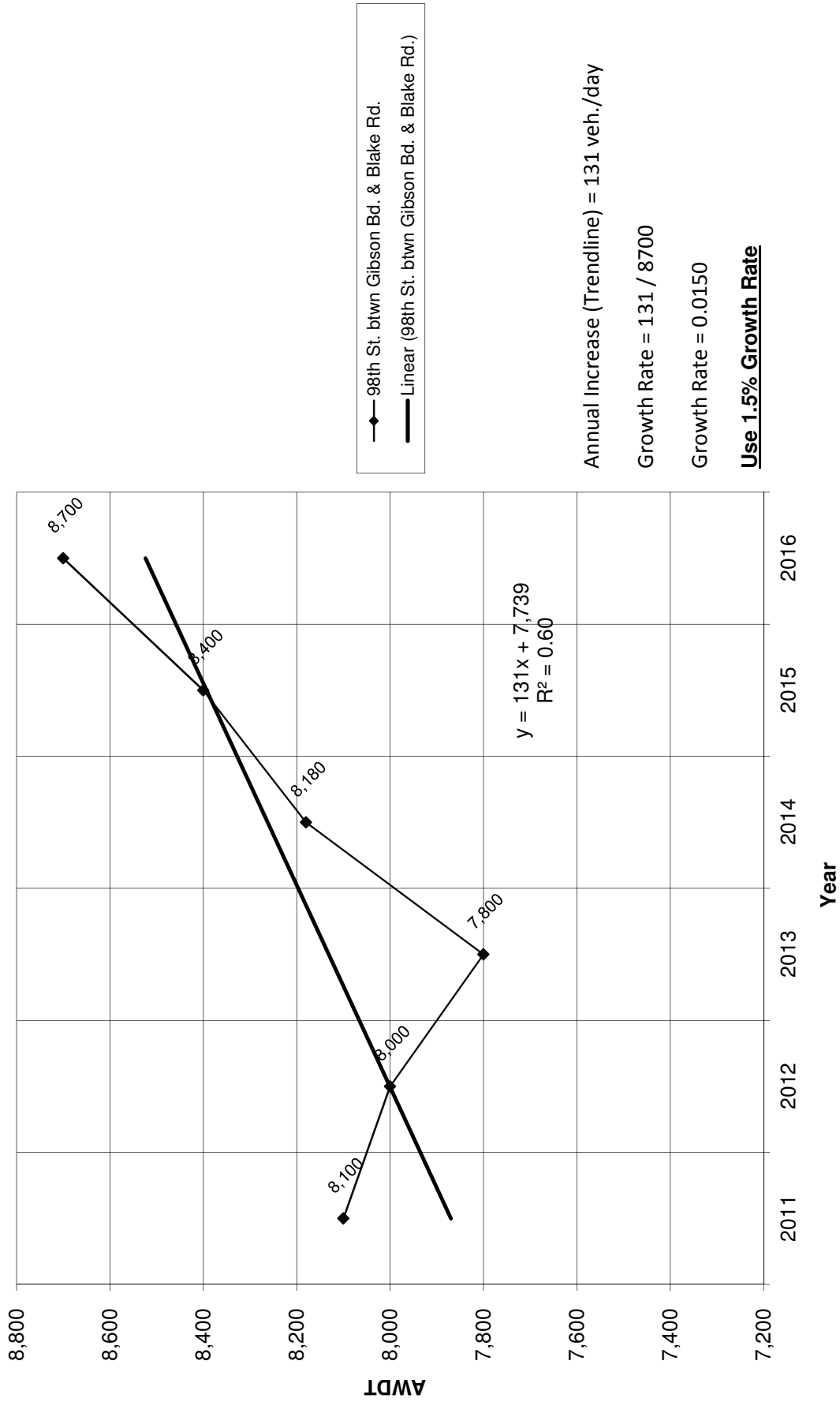
Historic Growth Chart 98th St. North of Gibson Bd. (2011-2016)



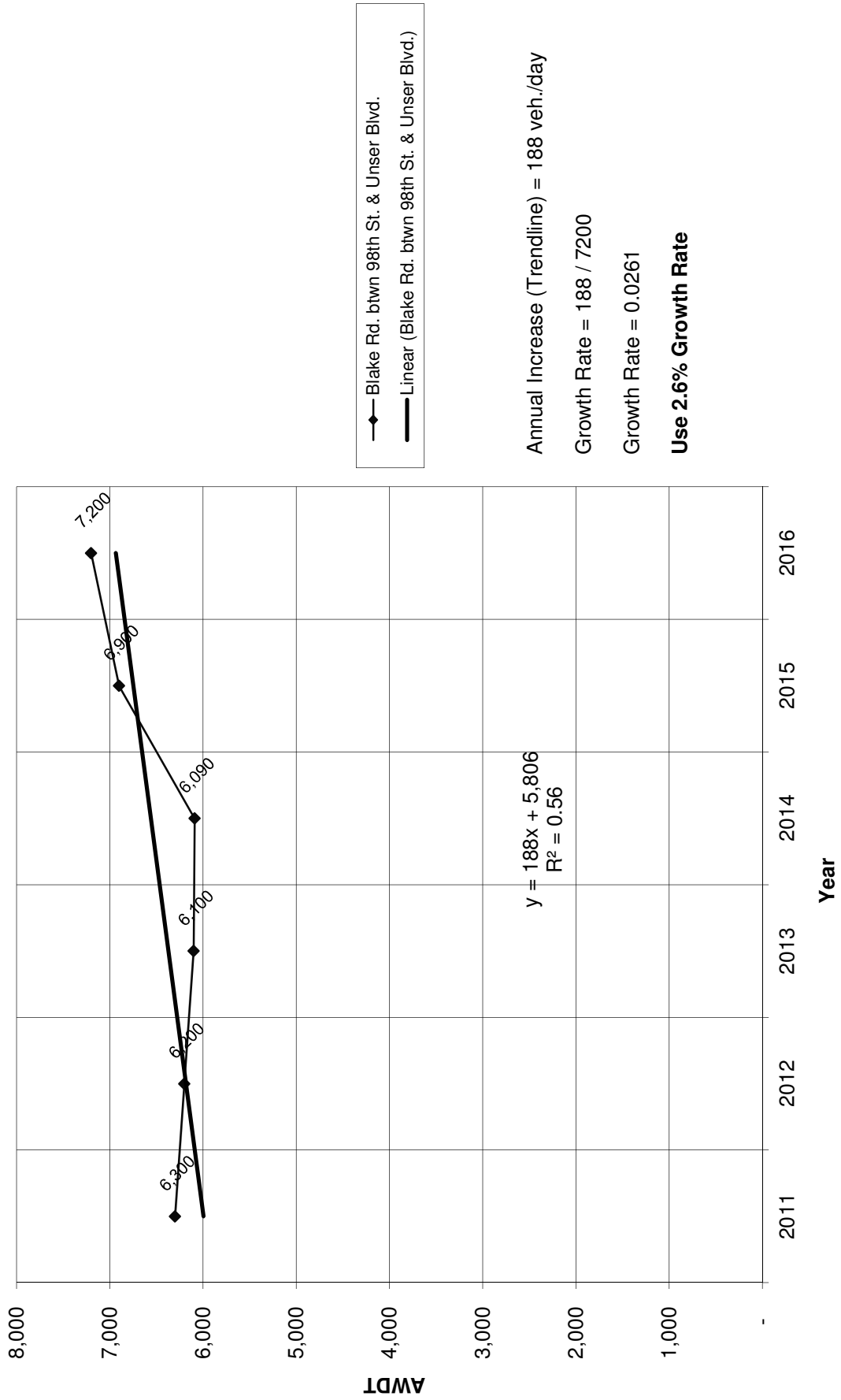
Historic Growth Chart Gibson Bd. East of 98th St. (2011-2016)



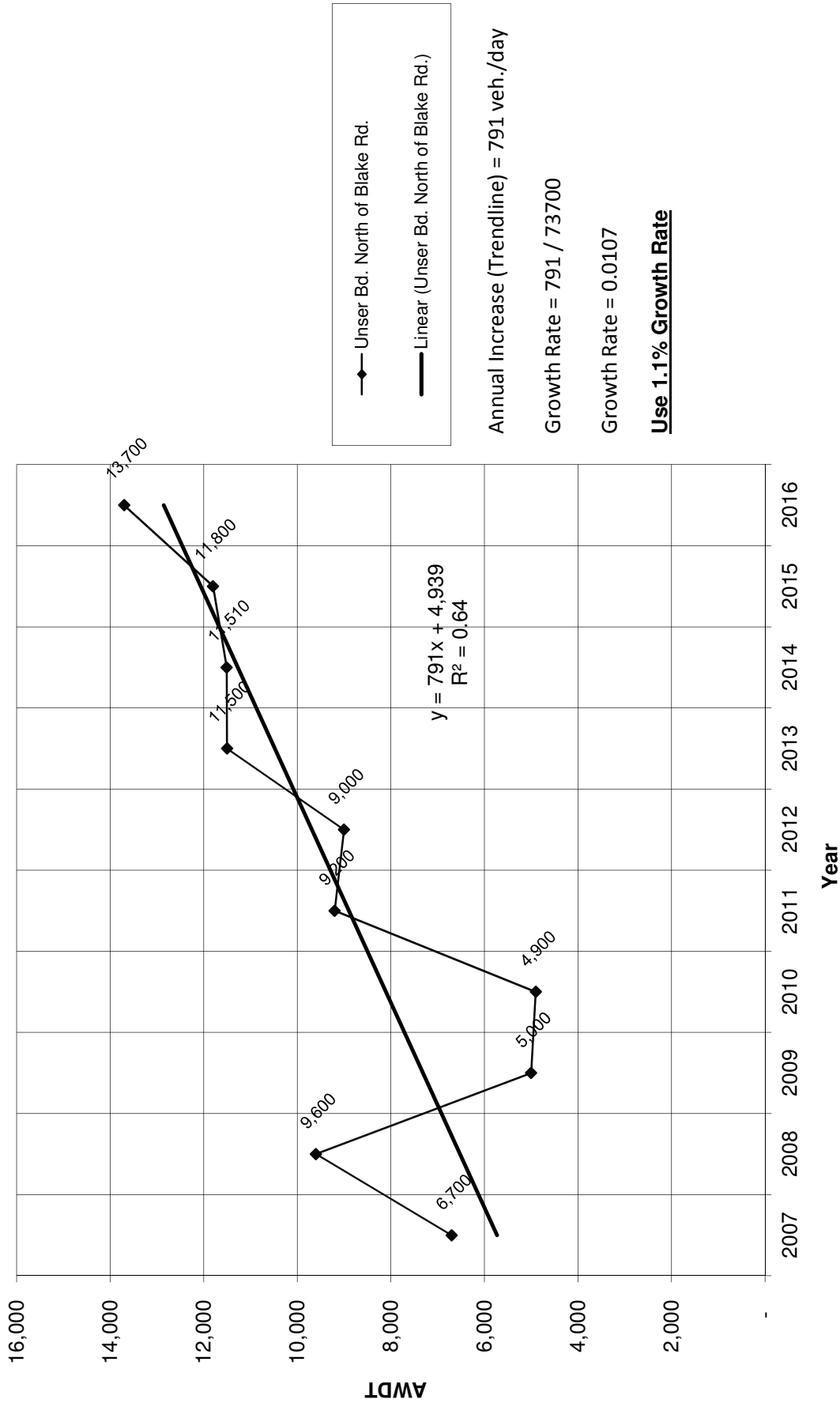
**Historic Growth Chart 98th St. btwn Gibson Bd. & Blake Rd. (2011-2016)**



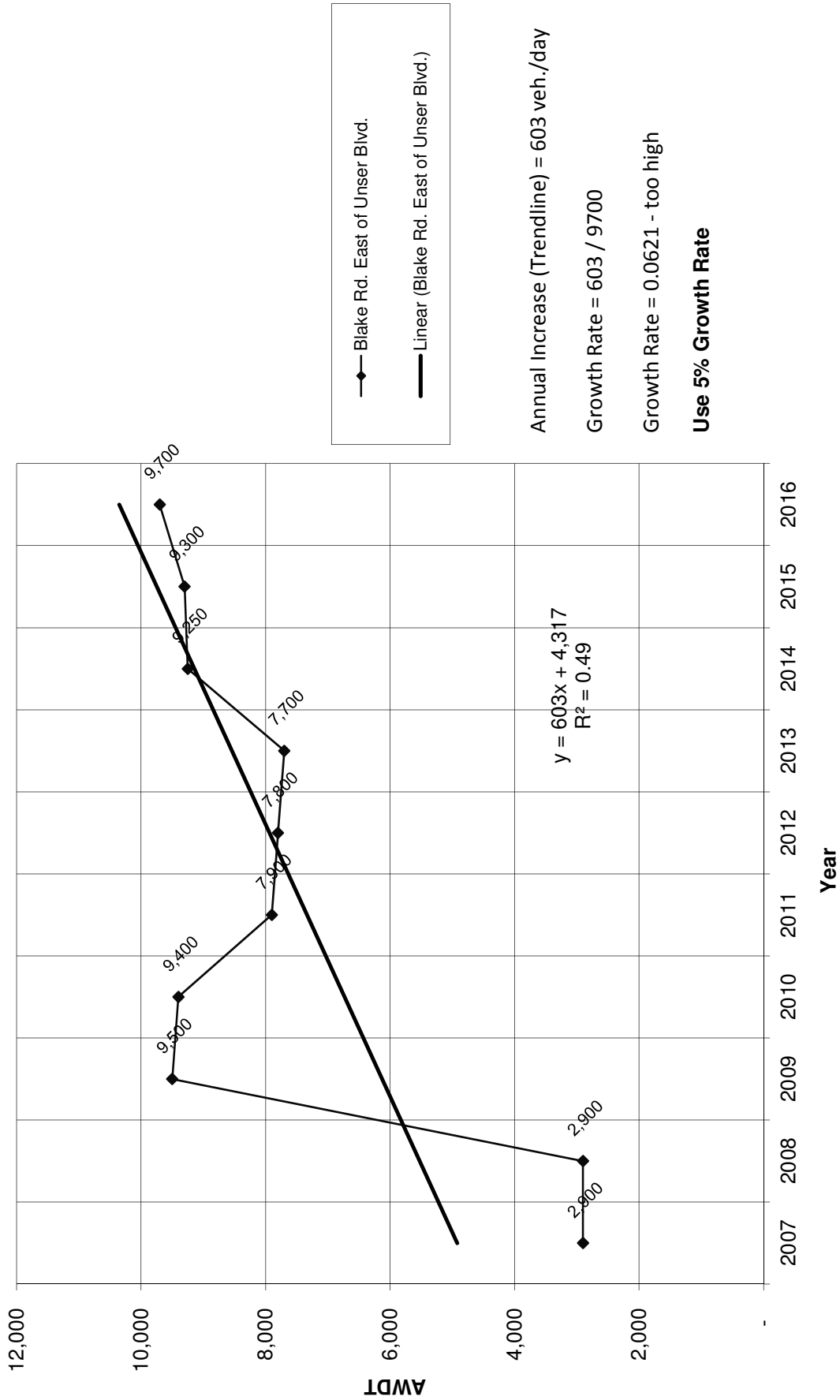
Historic Growth Chart Blake Rd. btwn 98th St. & Unser Blvd. (2011-2016)



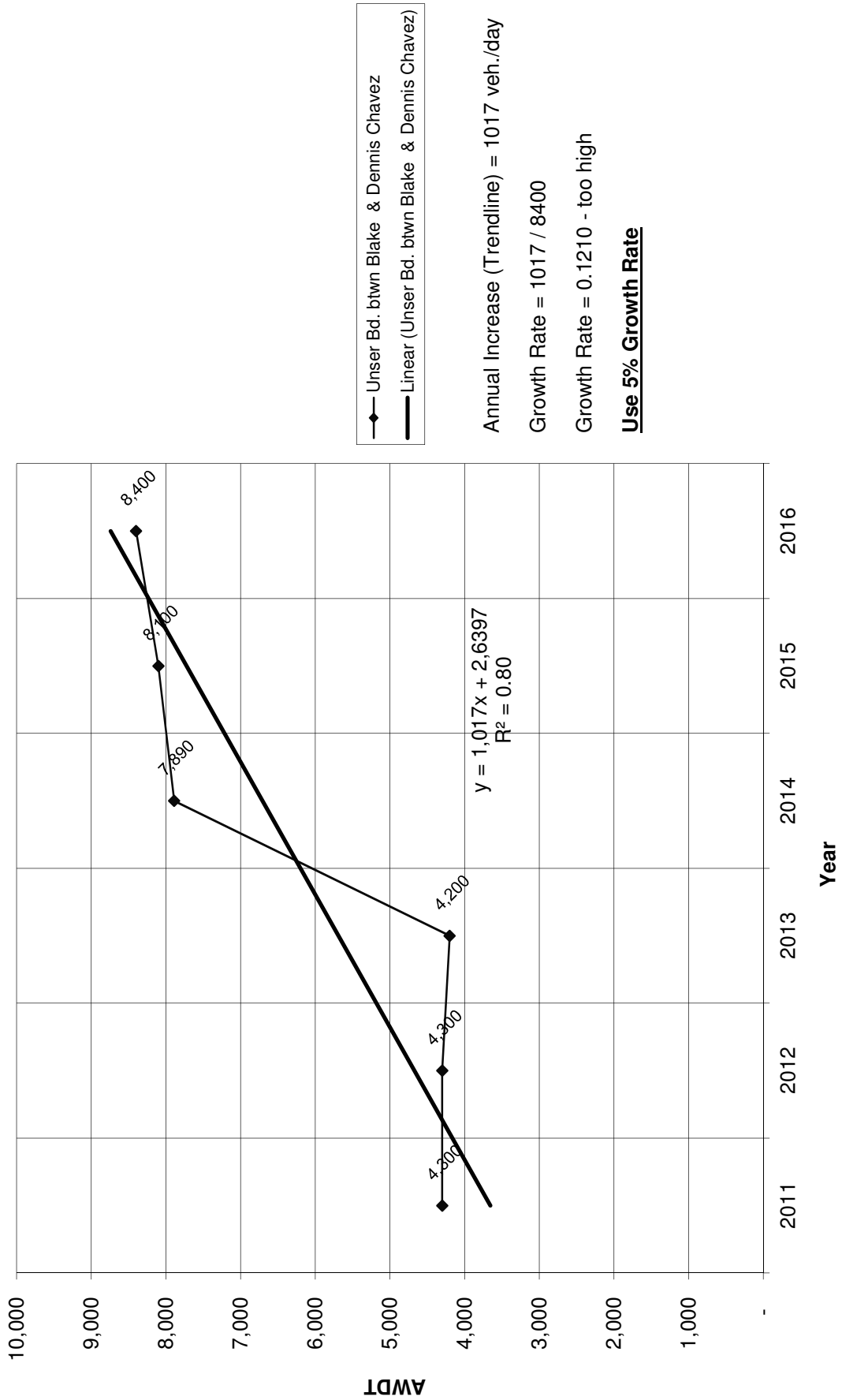
Historic Growth Chart Unser Bd. North of Blake Rd. (2007-2016)



**Historic Growth Chart Blake Rd. East of Unser Blvd. (2007-2016)**

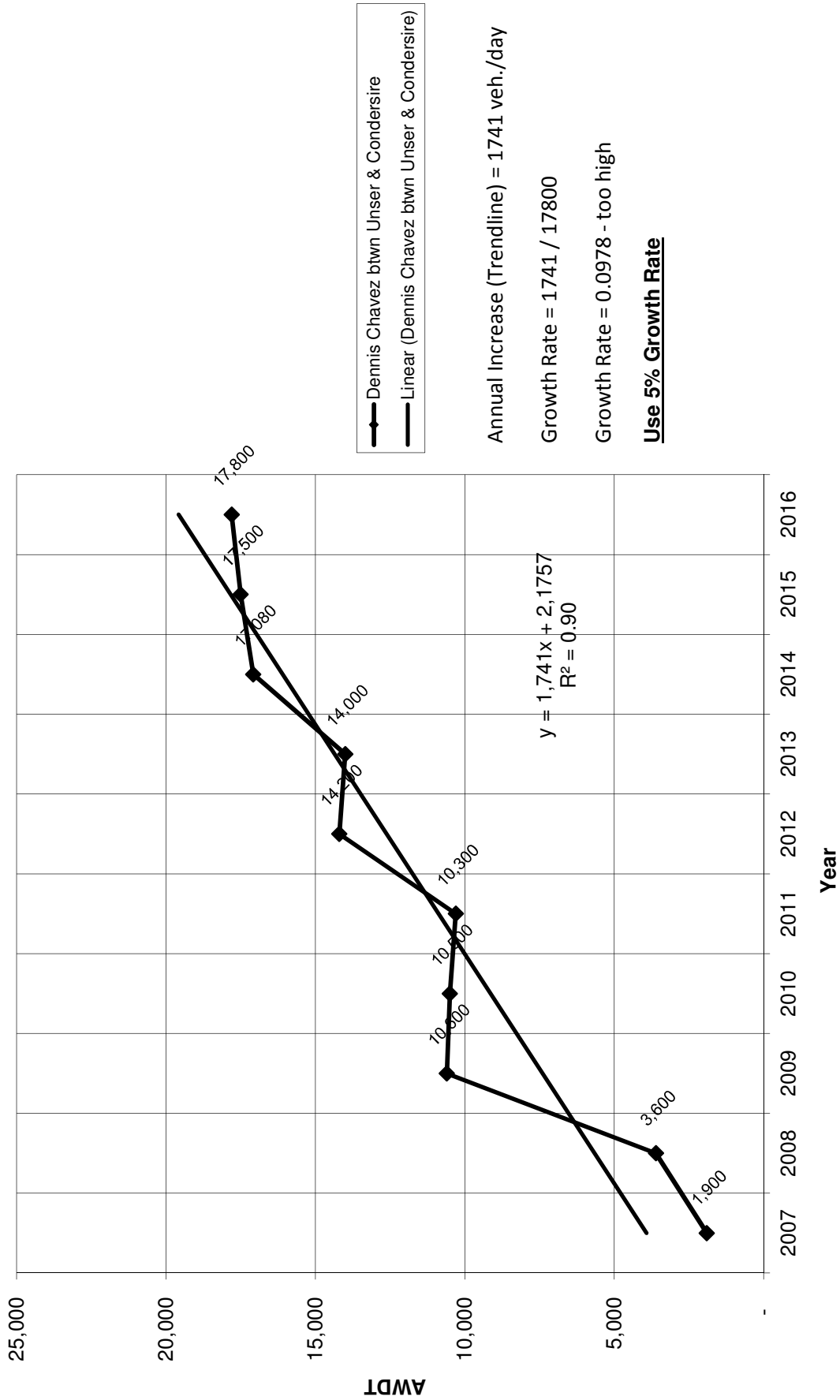


Historic Growth Chart Unser Bd. btwn Blake & Dennis Chavez (2011-2016)

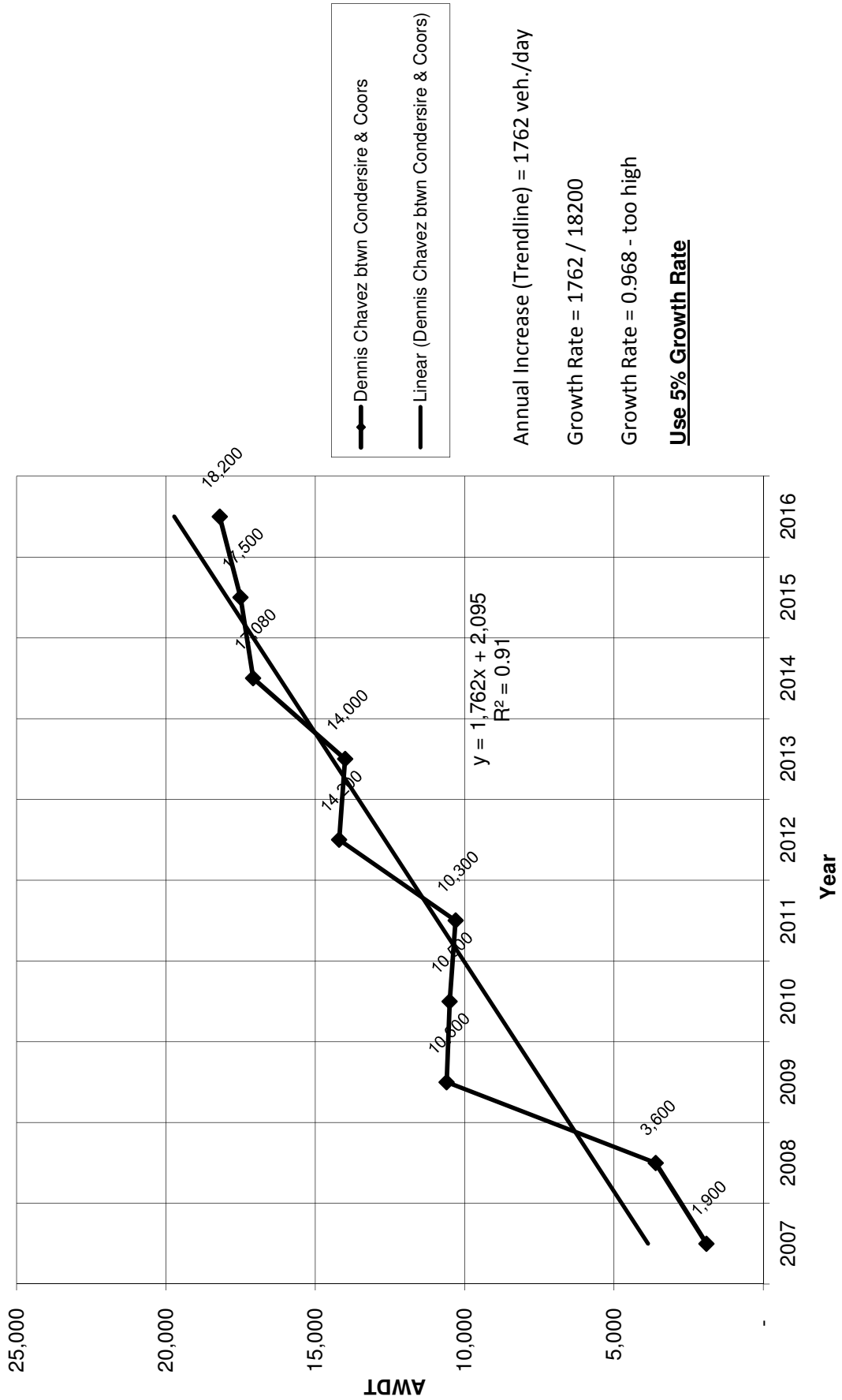




**Historic Growth Chart Dennis Chavez btwn Unser & Condersire (2007-2016)**



### Historic Growth Chart Dennis Chavez btwn Condensire & Coors (2007-2016)



—◆— Dennis Chavez btwn Condensire & Coors  
 — Linear (Dennis Chavez btwn Condensire & Coors)

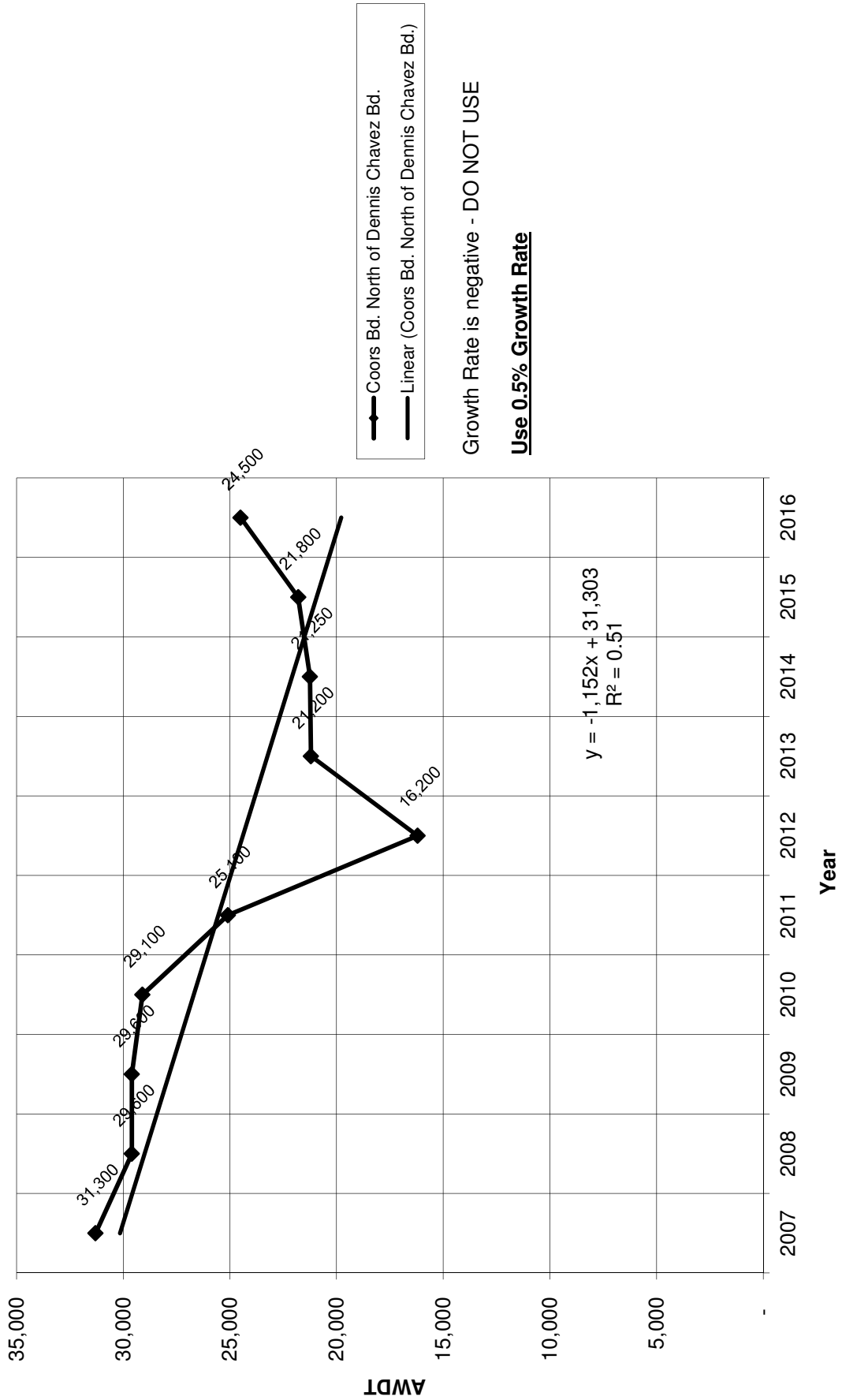
Annual Increase (Trendline) = 1762 veh./day

Growth Rate = 1762 / 18200

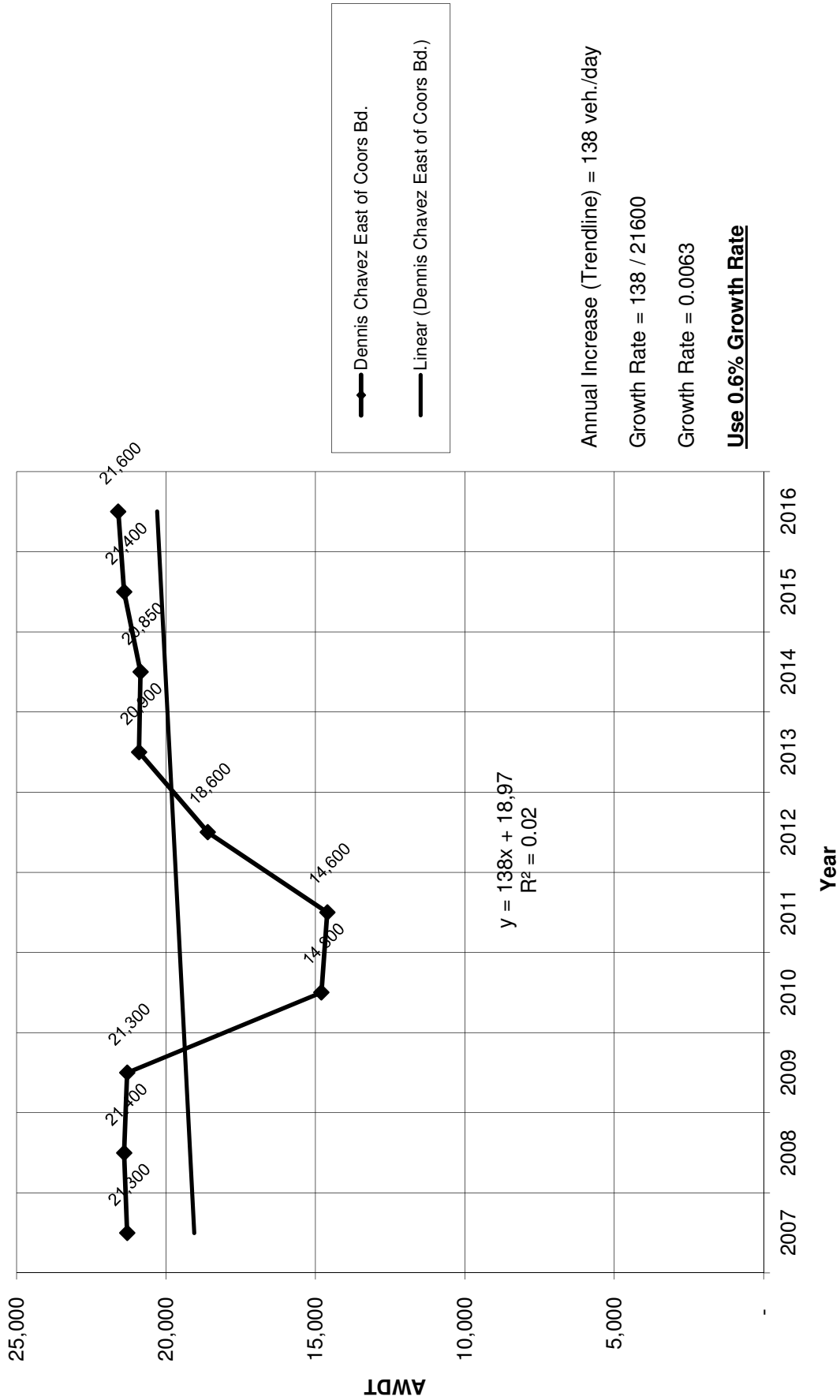
Growth Rate = 0.968 - too high

Use 5% Growth Rate

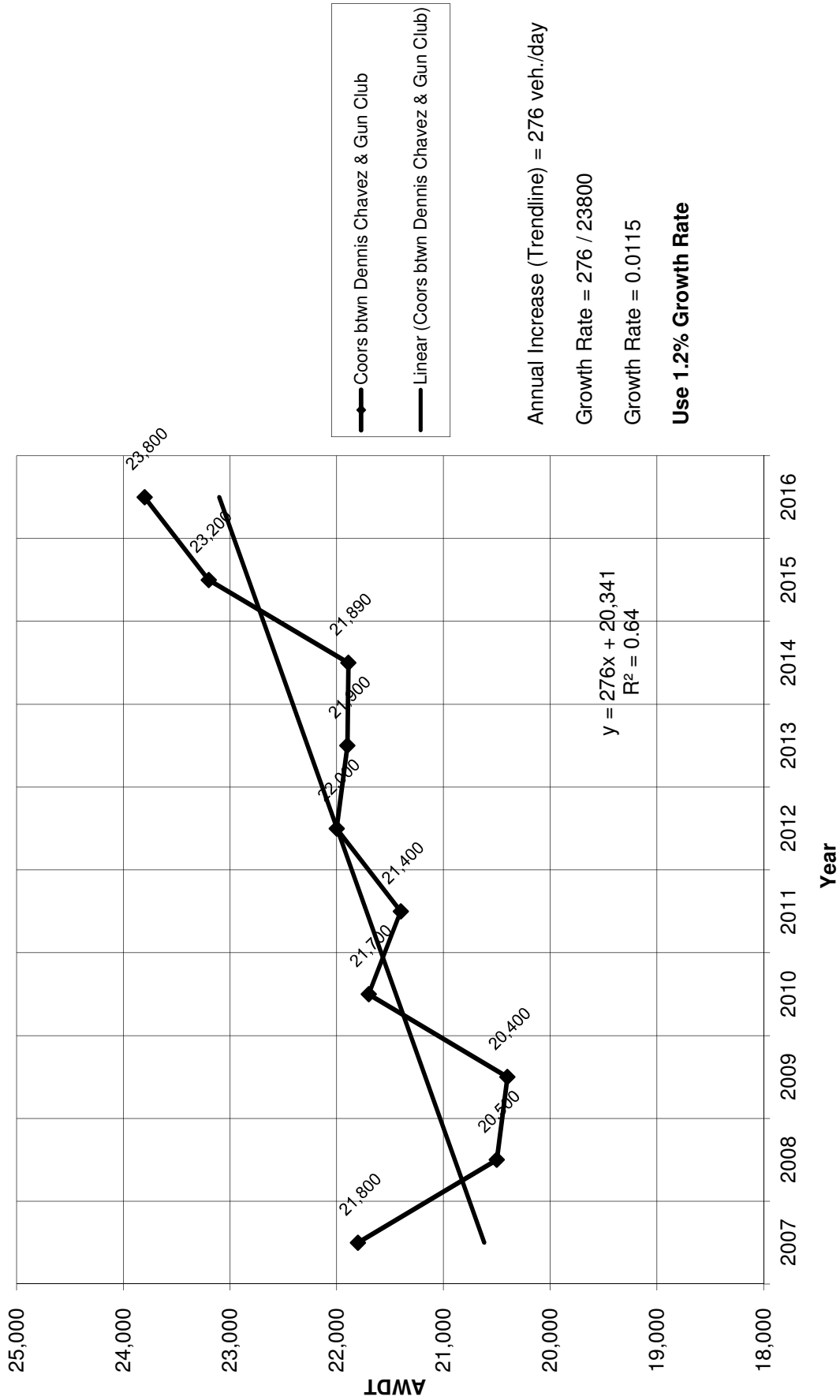
Historic Growth Chart Coors Bd. North of Dennis Chavez Bd. (2007-2016)



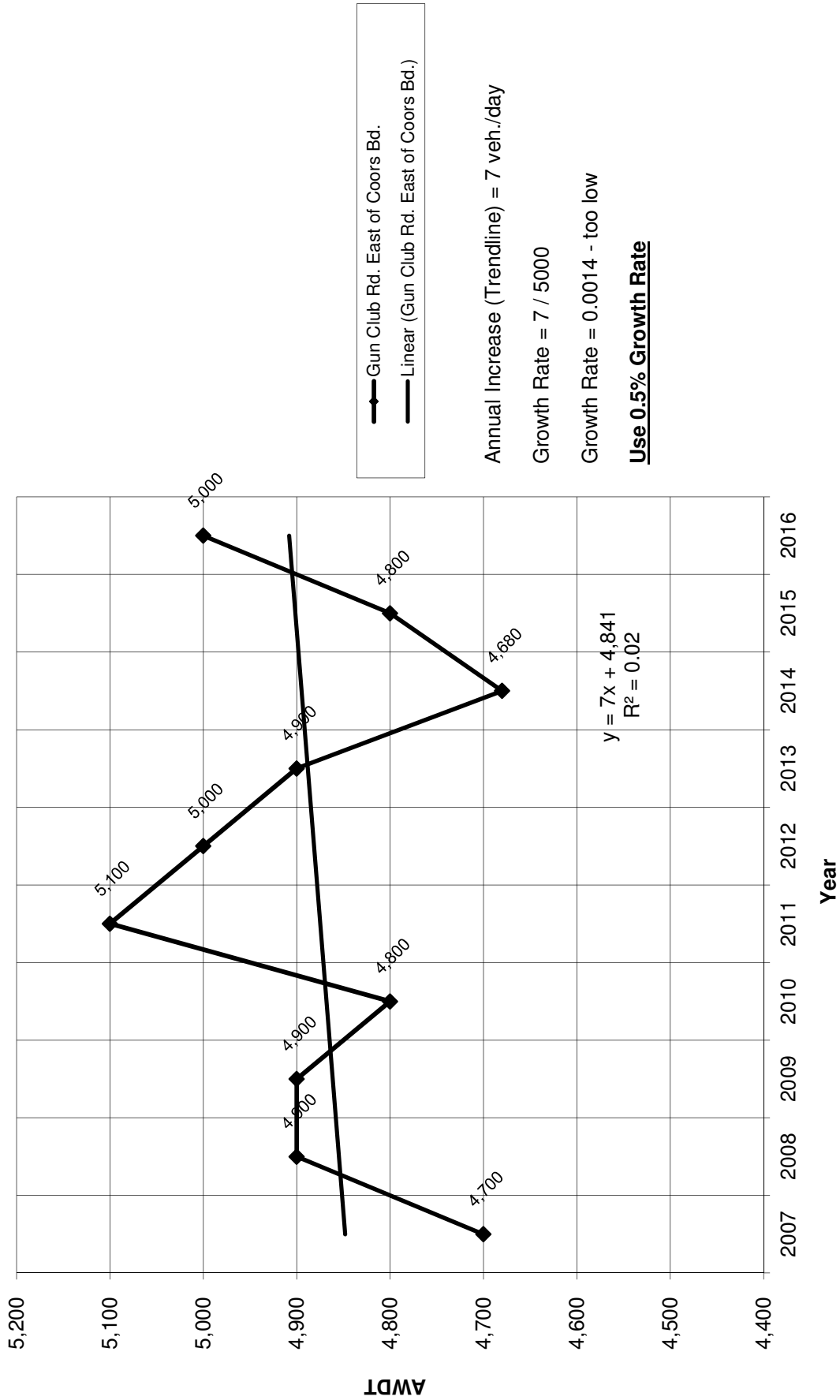
**Historic Growth Chart Dennis Chavez East of Coors Bd. (2007-2016)**



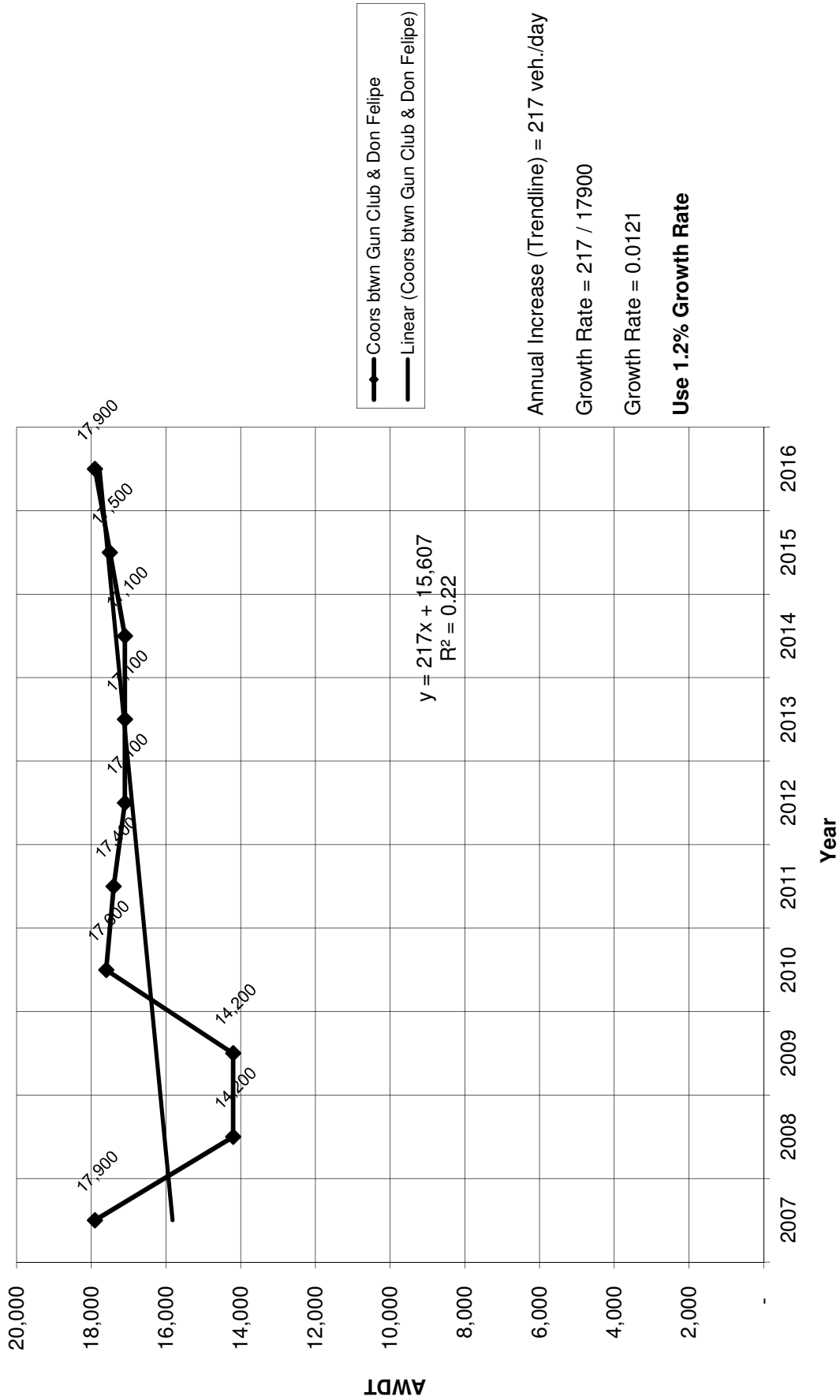
### Historic Growth Chart Coors btwn Dennis Chavez & Gun Club (2007-2016)



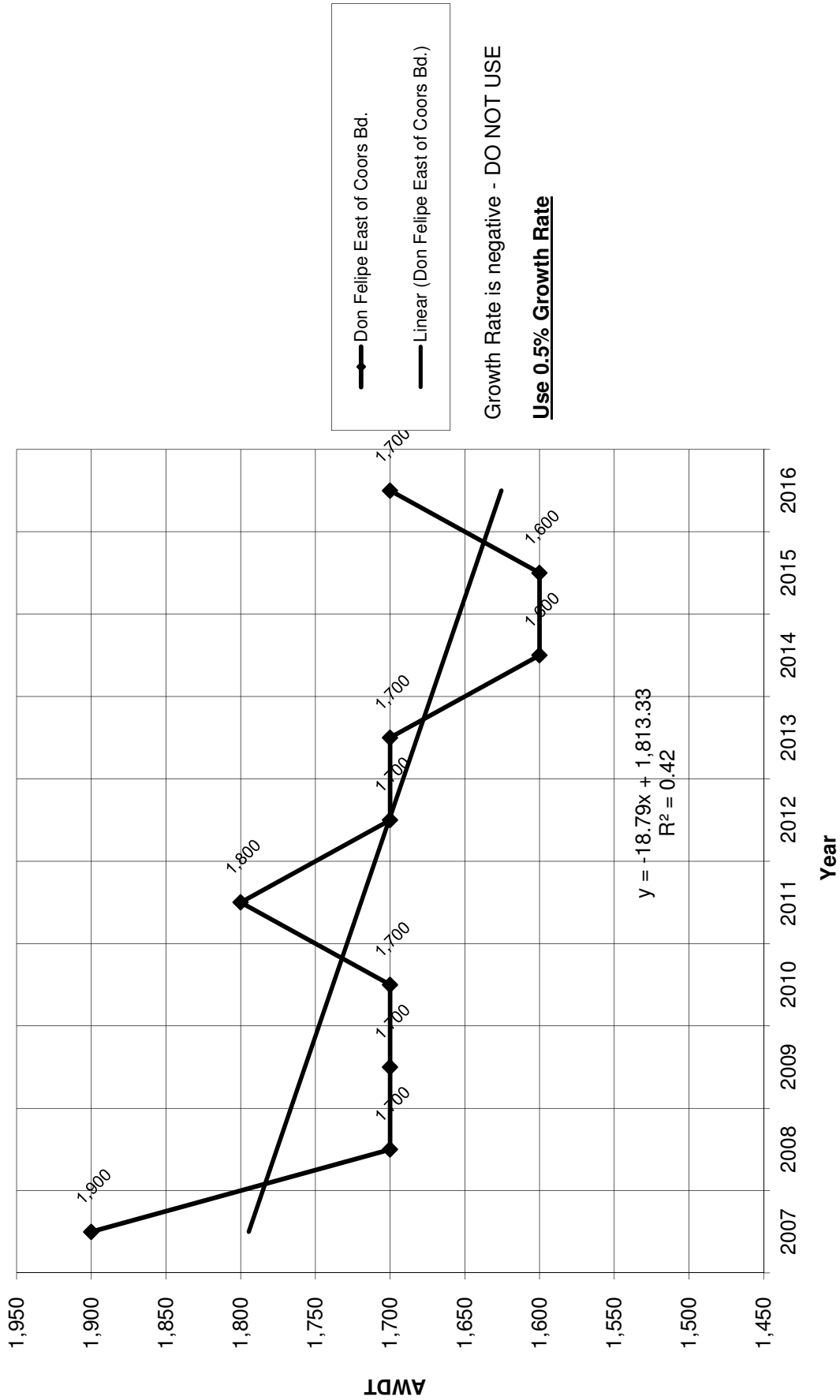
### Historic Growth Chart Gun Club Rd. East of Coors Bd. (2007-2016)



**Historic Growth Chart Coors btwn Gun Club & Don Felipe (2007-2016)**

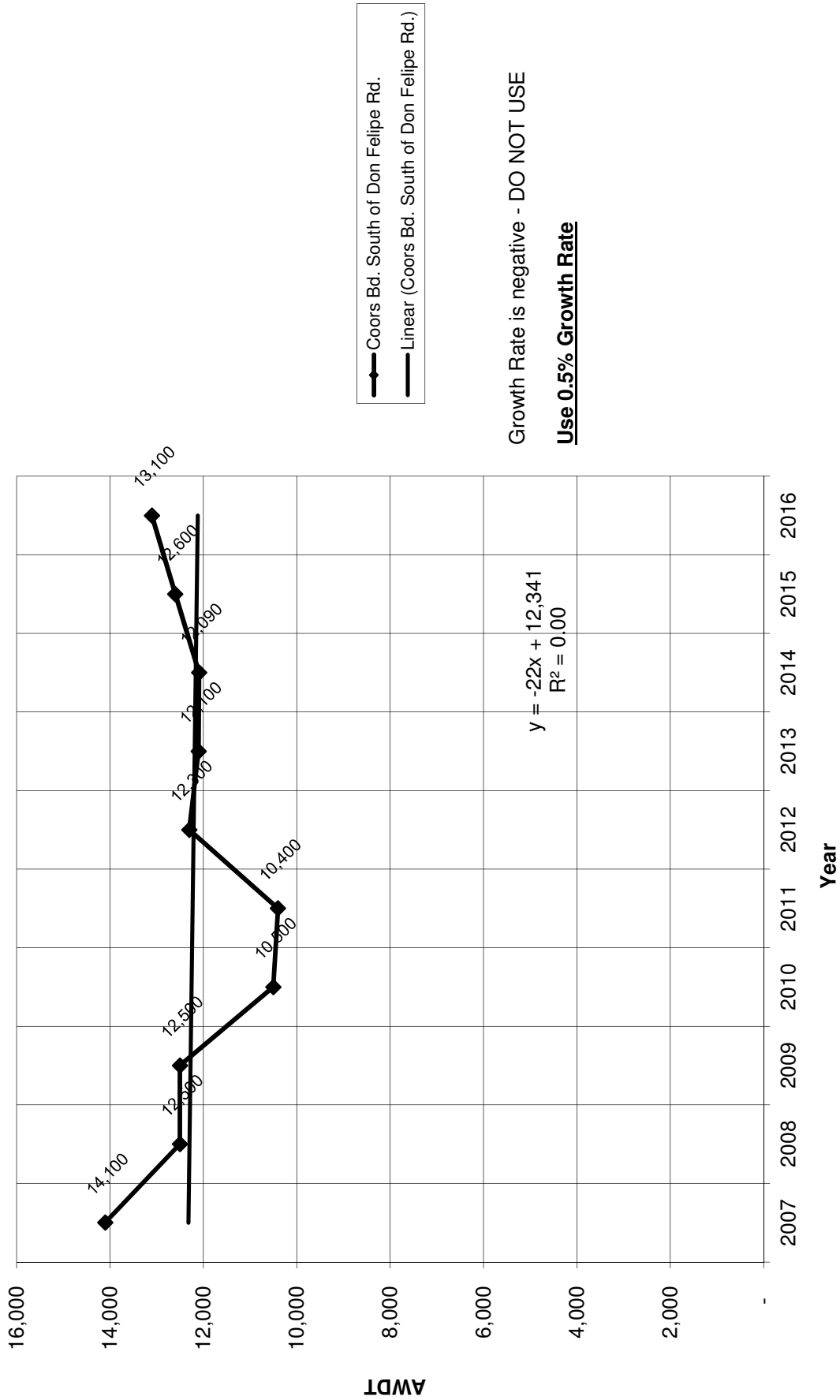


Historic Growth Chart Don Felipe East of Coors Bd. (2007-2016)

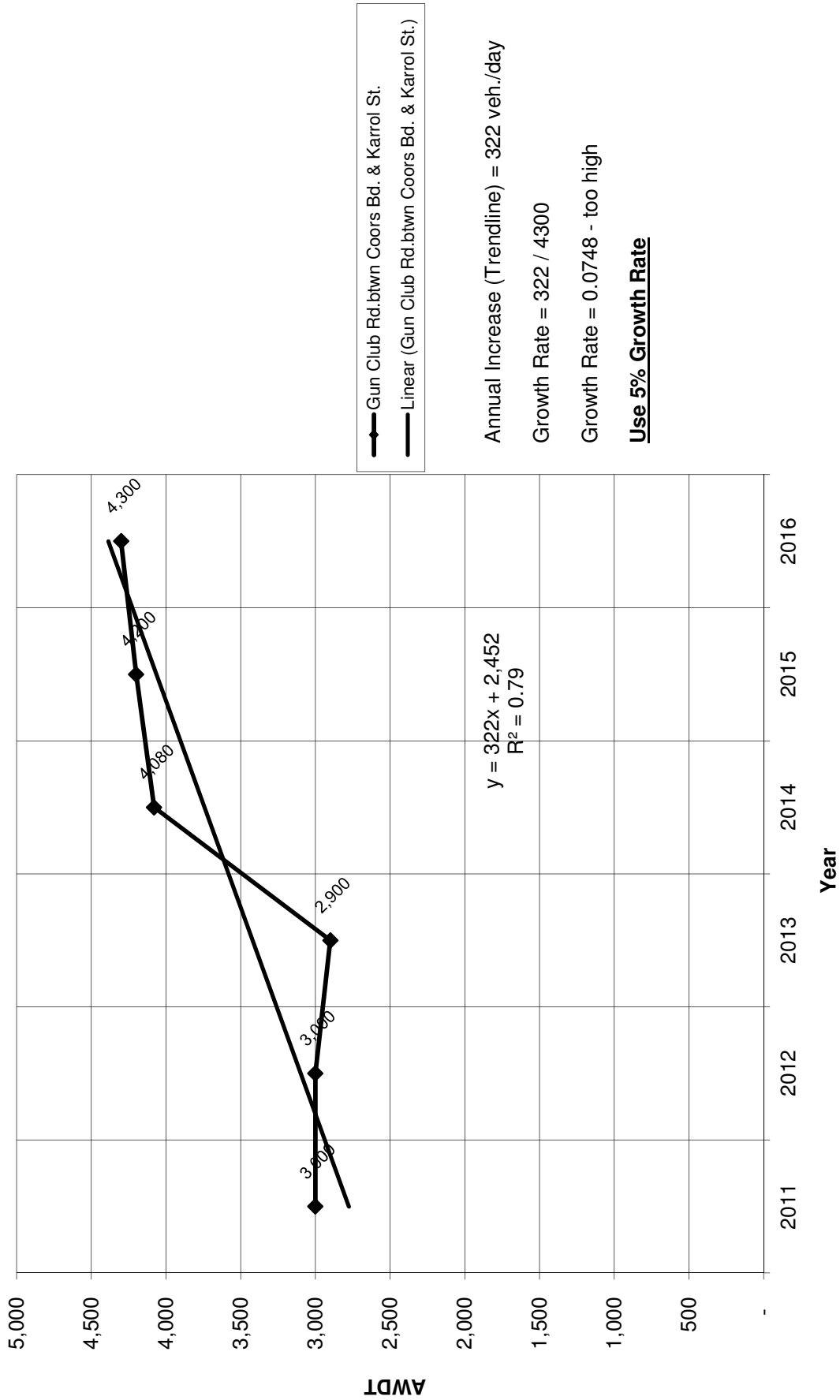




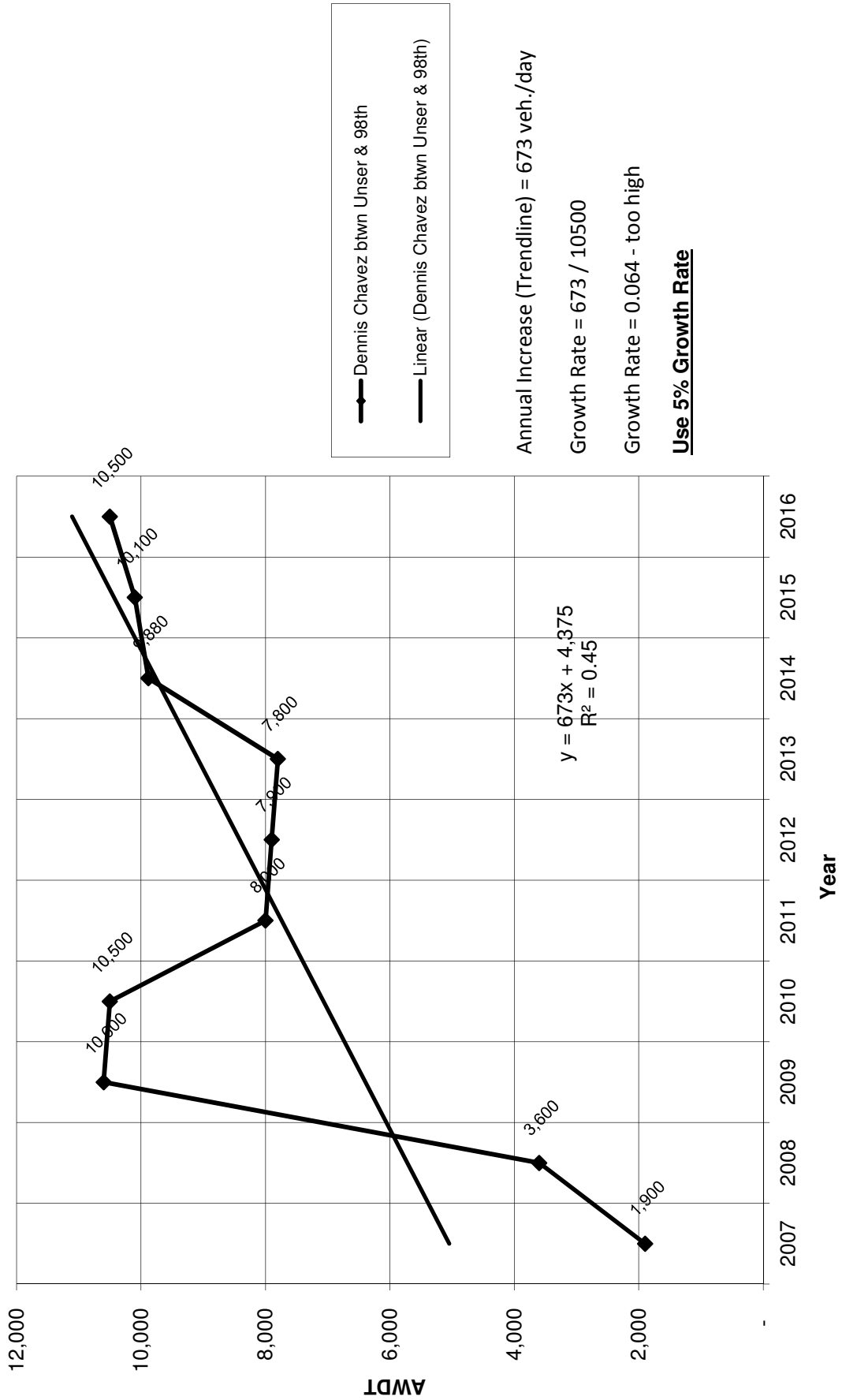
Historic Growth Chart Coors Bd. South of Don Felipe Rd. (2007-2016)



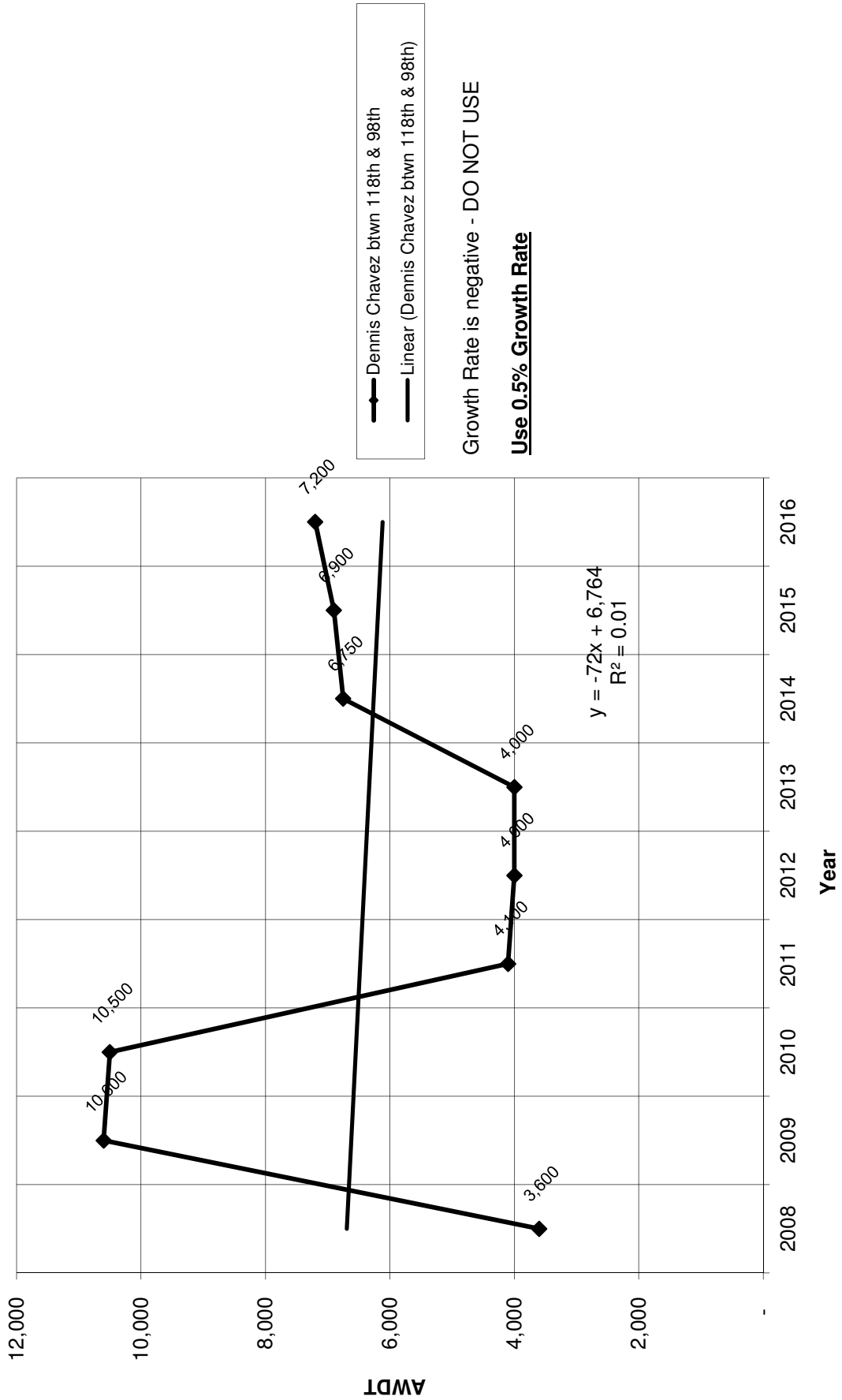
Historic Growth Chart Gun Club Rd. btwn Coors Bd. & Karrol St. (2007-2016)



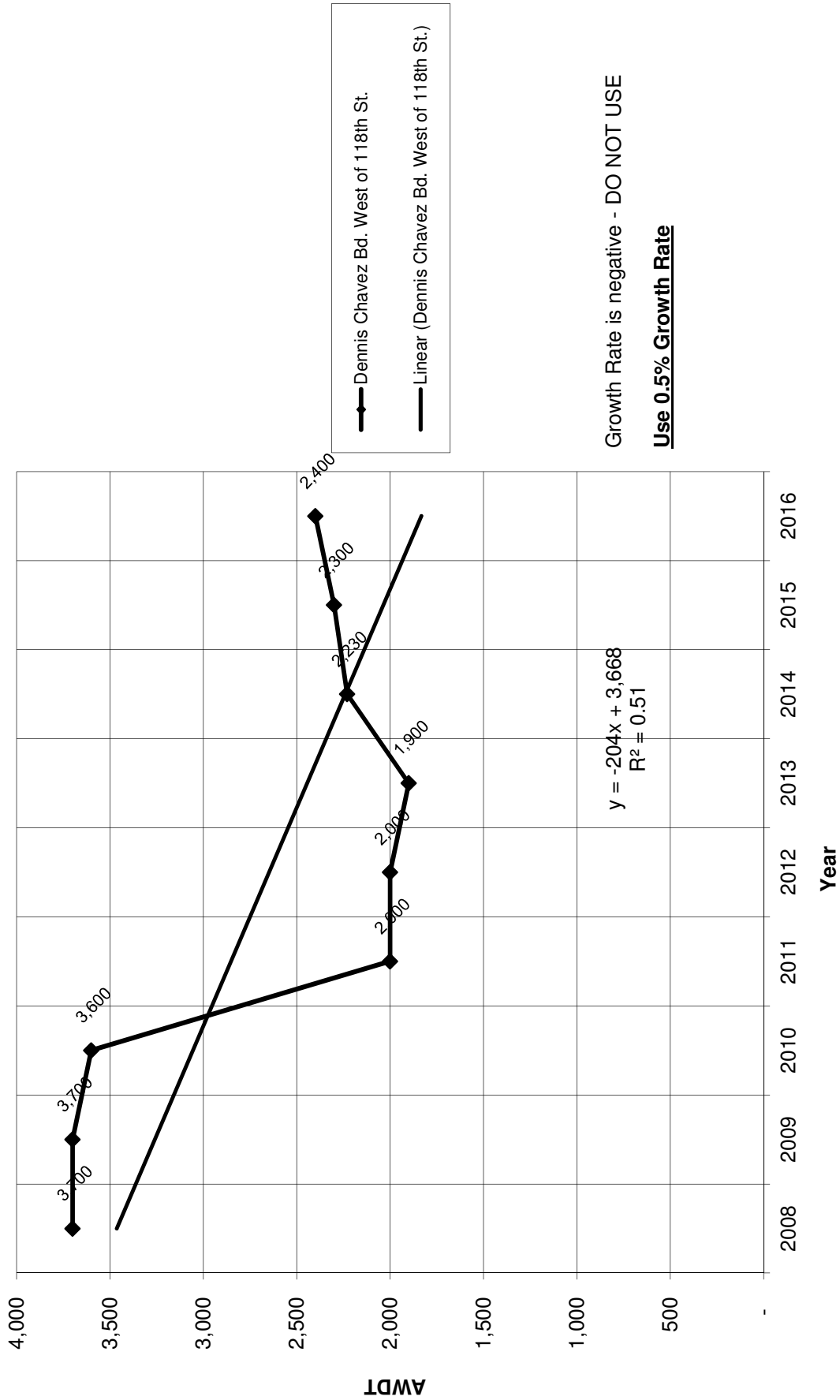
**Historic Growth Chart Dennis Chavez btwn Unser & 98th (2007-2016)**



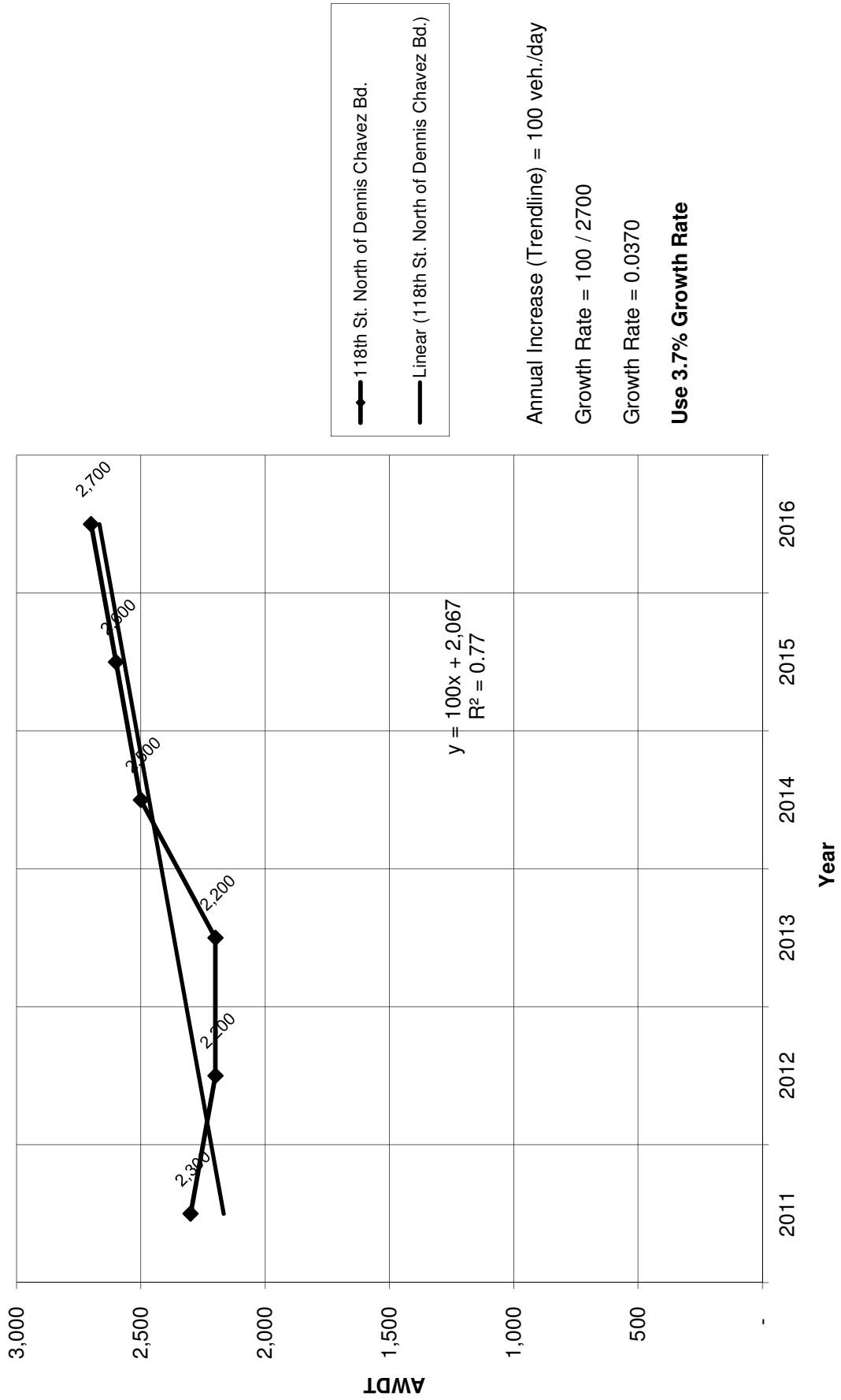
Historic Growth Chart Dennis Chavez btwn 118th & 98th (2007-2016)



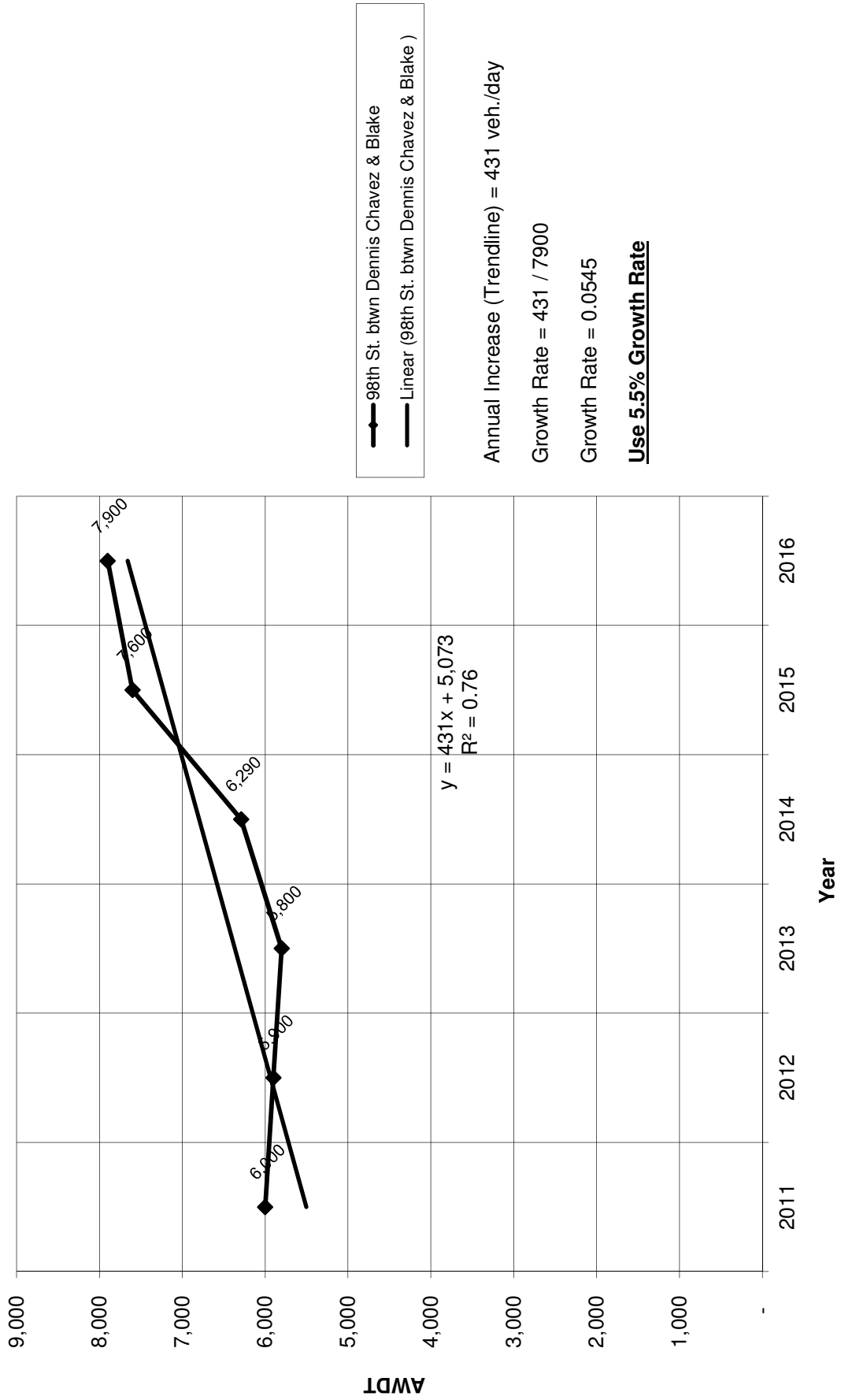
Historic Growth Chart Dennis Chavez Bd. West of 118th St. (2007-2016)



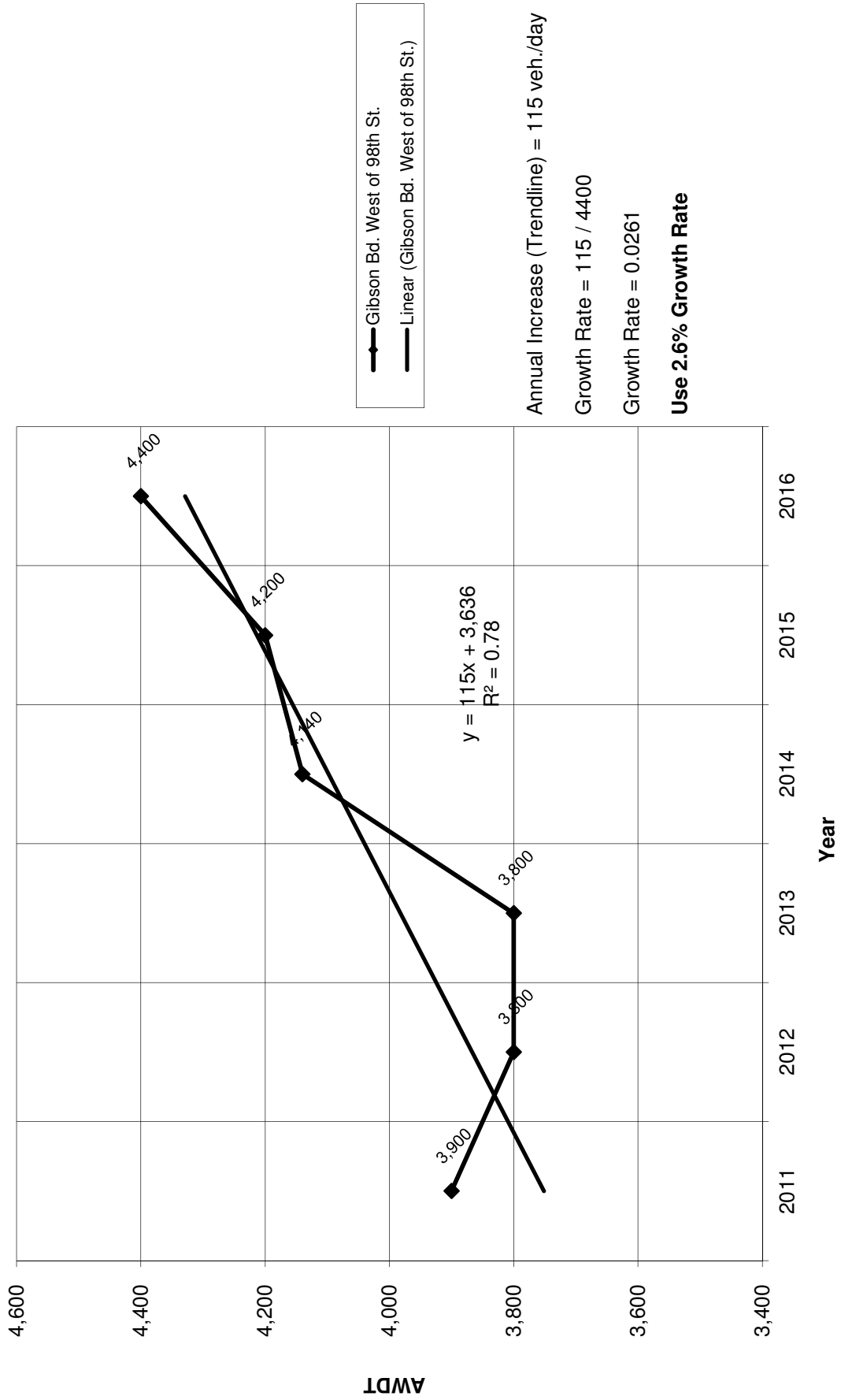
Historic Growth Chart 118th St. North of Dennis Chavez Bd. (2007-2016)



**Historic Growth Chart 98th St. btwn Dennis Chavez & Blake (2007-2016)**



Historic Growth Chart Gibson Bd. West of 98th St. (2007-2016)





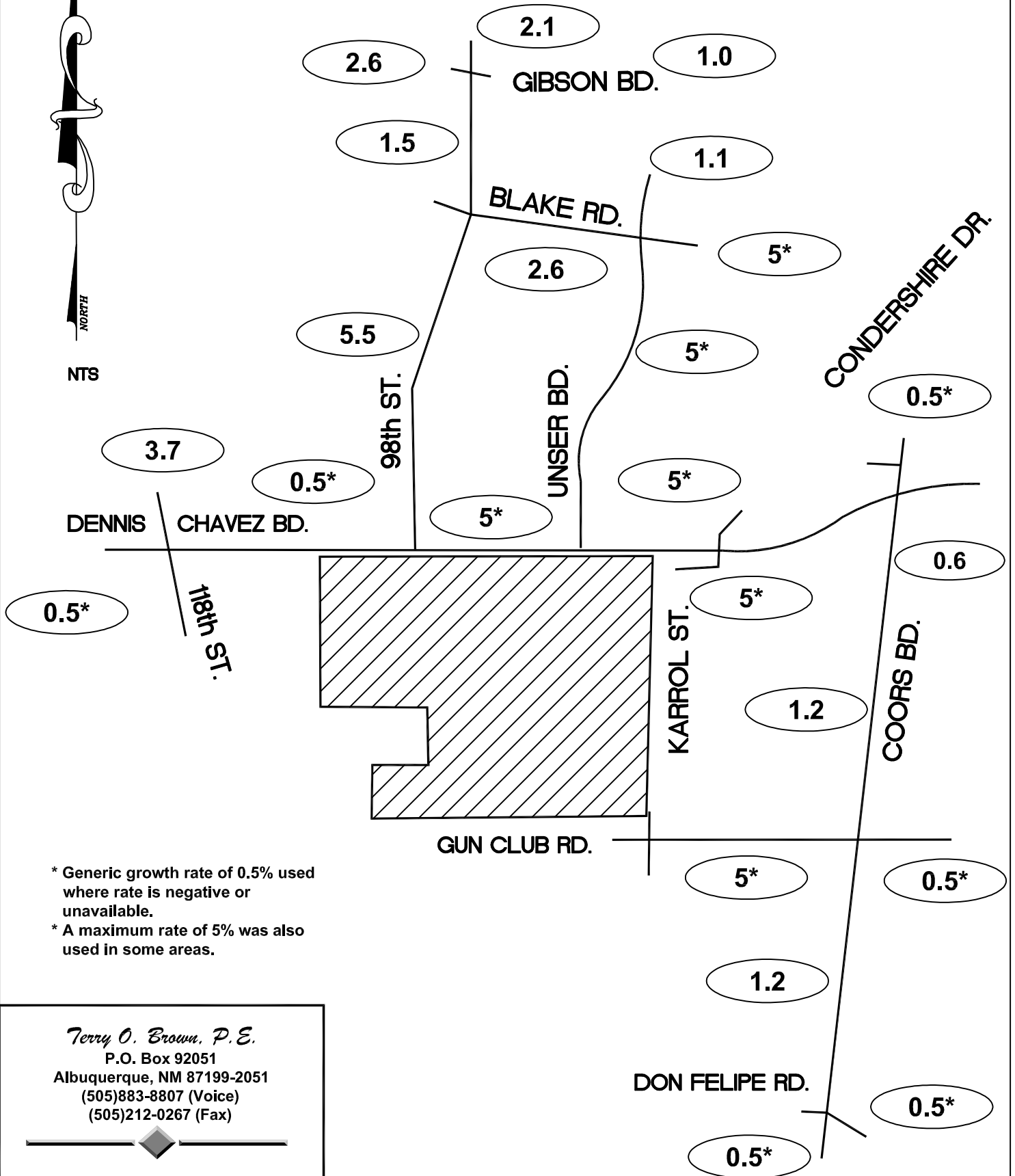
# Ceja Vista Development

(Dennis Chavez Bd. / 98th St.)

Growth Rate Map (%)



NTS



\* Generic growth rate of 0.5% used where rate is negative or unavailable.

\* A maximum rate of 5% was also used in some areas.

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### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2022) - 100% Development**

**INTERSECTION: Summary**

**Gun Club Rd. / Coors Bd.**

		0.91			0.91			0.91			0.91			PHF
		Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(1)	10.0% Truck													
Existing (2019)		147	53	25	68	20	249	15	665	70	136	538	37	
	2022 (NO BUILD - A.M.)	174	60	32	69	20	258	17	704	72	150	628	50	
	2022 (BUILD - A.M.)	174	60	38	69	20	261	29	716	72	159	668	50	

		0.96			0.96			0.96			0.96			PHF
		Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		80	33	45	101	42	150	41	702	49	193	751	104	
	2022 (NO BUILD - P.M.)	107	37	55	102	43	167	47	827	50	200	888	109	
	2022 (BUILD - P.M.)	108	37	82	102	43	177	70	867	50	206	913	109	

**Dennis Chavez Bd. / Coors Bd.**

		0.96			0.96			0.96			0.96			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(2)	10.0% Truck													
Existing (2019)		37	803	348	62	214	137	247	441	232	211	236	26	
	2022 (NO BUILD - A.M.)	48	940	408	63	225	139	287	657	240	214	265	29	
	2022 (BUILD - A.M.)	332	1,385	459	63	380	139	306	657	240	214	265	130	

		0.95			0.95			0.95			0.95			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		70	261	364	149	653	404	332	615	88	193	557	108	
	2022 (NO BUILD - P.M.)	83	313	471	152	689	412	397	987	91	196	885	116	
	2022 (BUILD - P.M.)	277	610	510	152	1,173	412	453	987	91	196	885	428	

**Blake Rd. / Unser Bd.**

		0.89			0.89			0.89			0.89			PHF
		Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(3)	10.0% Truck													
Existing (2019)		136	13	79	104	16	260	26	276	65	45	328	30	
	2022 (NO BUILD - A.M.)	147	14	85	119	18	298	30	316	74	47	338	31	
	2022 (BUILD - A.M.)	147	14	87	136	18	298	31	411	88	47	382	31	

		0.91			0.91			0.91			0.91			PHF
		Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		76	45	56	88	22	162	120	344	132	269	375	132	
	2022 (NO BUILD - P.M.)	82	49	61	101	25	185	137	394	151	278	387	137	
	2022 (BUILD - P.M.)	82	49	65	137	25	185	142	483	189	278	509	137	

**Dennis Chavez Bd. / 118th St.**

		0.65			0.65			0.65			0.65			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(4)	10.0% Truck													
Existing (2019)		6	74	140	490	129	16	37	104	405	135	334	77	
	2022 (NO BUILD - A.M.)	6	75	142	497	131	16	38	106	411	149	369	85	
	2022 (BUILD - A.M.)	6	80	142	712	138	18	38	106	627	153	369	85	

		0.50			0.50			0.50			0.50			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		20	96	20	171	72	68	41	97	394	61	72	17	
	2022 (NO BUILD - P.M.)	21	97	21	173	73	69	42	98	400	68	79	19	
	2022 (BUILD - P.M.)	21	109	22	446	83	77	42	98	673	75	79	19	

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2022) - 100% Development**

**INTERSECTION : Summary**

**Dennis Chavez Bd. / 98th St.** 0.65                      0.65                      0.65                      0.65                      PHF

(5) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	188	445	0	0	439	116	0	0	0	481	0	251
2022 (NO BUILD - A.M.)	191	452	0	0	499	131	0	0	0	552	0	288
2022 (BUILD - A.M.)	<b>200</b>	<b>619</b>	<b>49</b>	<b>63</b>	<b>582</b>	<b>131</b>	<b>136</b>	<b>89</b>	<b>118</b>	<b>552</b>	<b>99</b>	<b>291</b>

0.50                      0.50                      0.50                      0.50                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	186	333	0	0	267	211	0	0	0	183	0	90
2022 (NO BUILD - P.M.)	189	338	0	0	304	240	0	0	0	210	0	103
2022 (BUILD - P.M.)	<b>195</b>	<b>473</b>	<b>151</b>	<b>164</b>	<b>489</b>	<b>240</b>	<b>94</b>	<b>217</b>	<b>130</b>	<b>210</b>	<b>209</b>	<b>113</b>

**Dennis Chavez Bd. / Unser Bd.** 0.92                      0.92                      0.92                      0.92                      PHF

(6) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	74	846	0	0	398	311	0	0	0	581	0	89
2022 (NO BUILD - A.M.)	84	969	0	0	461	359	0	0	0	665	0	102
2022 (BUILD - A.M.)	<b>111</b>	<b>1,213</b>	<b>14</b>	<b>180</b>	<b>548</b>	<b>359</b>	<b>37</b>	<b>85</b>	<b>513</b>	<b>665</b>	<b>42</b>	<b>128</b>

0.91                      0.91                      0.91                      0.91                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	74	491	0	0	674	629	0	0	0	479	0	44
2022 (NO BUILD - P.M.)	84	569	0	0	773	722	0	0	0	551	0	50
2022 (BUILD - P.M.)	<b>141</b>	<b>736</b>	<b>41</b>	<b>561</b>	<b>1,040</b>	<b>722</b>	<b>26</b>	<b>86</b>	<b>347</b>	<b>551</b>	<b>113</b>	<b>107</b>

**Dennis Chavez Bd. / Condershire Dr.** 0.99                      0.99                      0.99                      0.99                      PHF

(7) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	16	1,356	25	2	662	6	21	1	11	5	1	23
2022 (NO BUILD - A.M.)	18	1,549	32	14	756	7	34	1	47	6	1	26
2022 (BUILD - A.M.)	<b>21</b>	<b>2,296</b>	<b>38</b>	<b>24</b>	<b>1,017</b>	<b>7</b>	<b>34</b>	<b>1</b>	<b>84</b>	<b>6</b>	<b>1</b>	<b>30</b>

0.97                      0.97                      0.97                      0.97                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	33	793	40	8	1,295	16	37	0	15	3	1	75
2022 (NO BUILD - P.M.)	37	906	57	49	1,480	18	48	0	39	4	1	85
2022 (BUILD - P.M.)	<b>44</b>	<b>1,409</b>	<b>61</b>	<b>81</b>	<b>2,294</b>	<b>18</b>	<b>48</b>	<b>0</b>	<b>62</b>	<b>4</b>	<b>1</b>	<b>92</b>

### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2022) - 100% Development**

**INTERSECTION : Summary**

**Rio Bravo Sq. / Coors Bd.**

(8) 10.0% Truck  
**Existing (2019)**  
 2022 (NO BUILD - A.M.)  
 2022 (BUILD - A.M.)

0.96			0.96			0.96			0.96			PHF
Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	9	0	0	0	27	583	0	0	464	23	
5	0	9	0	0	0	28	816	0	0	499	23	
5	0	9	0	0	0	28	1,100	0	0	600	23	

**Existing (2019)**  
 2022 (NO BUILD - P.M.)  
 2022 (BUILD - P.M.)

0.95			0.95			0.95			0.95			PHF
Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
45	0	109	0	0	0	78	1,004	0	0	749	36	
46	0	110	0	0	0	80	1,402	0	0	1,087	37	
46	0	110	0	0	0	81	1,596	0	0	1,399	37	

**Gibson Bd. / 98th St.**

(9) 10.0% Truck  
**Existing (2019)**  
 2022 (NO BUILD - A.M.)  
 2022 (BUILD - A.M.)

0.82			0.82			0.82			0.82			PHF
Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
154	101	18	11	37	10	17	339	48	7	202	18	
166	108	20	11	38	10	18	354	50	8	215	20	
166	108	29	22	38	10	25	428	57	8	282	20	

**Existing (2019)**  
 2022 (NO BUILD - P.M.)  
 2022 (BUILD - P.M.)

0.93			0.93			0.93			0.93			PHF
Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
111	60	30	37	135	31	48	317	35	36	467	118	
119	64	32	38	139	32	50	331	36	38	495	126	
119	64	52	61	139	32	72	474	62	38	642	126	

**Blake Rd. / 98th St.**

(10) 10.0% Truck  
**Existing (2019)**  
 2022 (NO BUILD - A.M.)  
 2022 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
22	20	66	27	17	28	23	284	26	22	208	3	
22	20	67	29	19	30	27	328	31	23	217	3	
22	20	71	29	19	30	30	417	31	23	306	3	

**Existing (2019)**  
 2022 (NO BUILD - P.M.)  
 2022 (BUILD - P.M.)

0.96			0.96			0.96			0.96			PHF
Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	21	41	69	26	55	52	329	22	66	353	30	
18	21	42	74	28	60	60	381	26	69	369	32	
18	21	50	74	28	60	69	572	26	69	559	32	

### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2022) - 100% Development**

**INTERSECTION: Summary**

**Gun Club Rd. / Karrol St.**

(11) 10.0% Truck

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.81			0.81			0.81			0.81			PHF
Existing (2019)	3	15	0	6	3	9	0	7	23	12	8	0
2022 (NO BUILD - A.M.)	3	15	0	7	4	13	0	7	23	16	8	0
2022 (BUILD - A.M.)	3	21	1	7	16	13	2	8	23	16	12	0

Existing (2019)

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.90			0.90			0.90			0.90			PHF
Existing (2019)	2	9	0	24	11	33	0	9	11	15	7	5
2022 (NO BUILD - P.M.)	2	9	0	28	12	42	0	9	11	19	7	5
2022 (BUILD - P.M.)	2	36	5	28	35	42	4	14	11	19	9	5

**Don Felipe Rd. / Coors Bd.**

(12) 10.0% Truck

Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.90			0.90			0.90			0.90			PHF
Existing (2019)	17	2	3	13	1	70	0	569	16	43	454	6
2022 (NO BUILD - A.M.)	17	2	3	13	1	71	0	577	16	44	471	6
2022 (BUILD - A.M.)	17	2	3	13	1	78	0	595	16	55	503	6

Existing (2019)

Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.89			0.89			0.89			0.89			PHF
Existing (2019)	9	1	4	8	6	24	6	621	6	34	682	29
2022 (NO BUILD - P.M.)	9	1	4	8	6	24	6	630	6	36	706	30
2022 (BUILD - P.M.)	9	1	4	8	6	42	6	675	6	52	742	30

**Gun Club Rd. / Unser Connection**

(13) 10.0% Truck

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.89			0.89			0.89			0.89			PHF
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2022 (NO BUILD - A.M.)	0	18	0	0	20	0	0	0	0	0	0	0
2022 (BUILD - A.M.)	0	18	0	0	20	0	0	0	0	25	0	0

Existing (2019)

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.91			0.91			0.91			0.91			PHF
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2022 (NO BUILD - P.M.)	0	11	0	0	31	0	0	0	0	0	0	0
2022 (BUILD - P.M.)	0	11	0	0	31	46	0	0	0	43	0	0

**Future Connection / Karrol St.**

(14) 10.0% Truck

EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.65			0.65			0.65			0.65			PHF
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2022 (NO BUILD - A.M.)	0	0	0	0	0	0	0	90	0	0	50	0
2022 (BUILD - A.M.)	8	0	0	0	0	0	5	90	0	0	50	0

Existing (2019)

EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.50			0.50			0.50			0.50			PHF
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2022 (NO BUILD - P.M.)	0	0	0	0	0	0	0	100	0	0	110	0
2022 (BUILD - P.M.)	11	0	0	0	0	0	13	100	0	0	110	0

***Ceja Vista Development (Dennis Chavez Bd. / 98th St.)***

Projected Turning Movements SUMMARY

**PROPOSED DEVELOPMENT (2022) - 100% Development**

INTERSECTION :

**Summary**

**Meade Ave. / Karroll St.**

(15)

10.0% Truck

Existing (2019)

2022 (NO BUILD - A.M.)

2022 (BUILD - A.M.)

0.65			0.65			0.65			0.65			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	90	0	0	50	0	0
8	0	0	0	0	0	5	90	0	0	50	0	0

Existing (2019)

2022 (NO BUILD - P.M.)

2022 (BUILD - P.M.)

0.50			0.50			0.50			0.50			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	100	0	0	110	0	0
11	0	0	0	0	0	13	100	0	0	110	0	0

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gun Club Rd. / Coors Bd.**

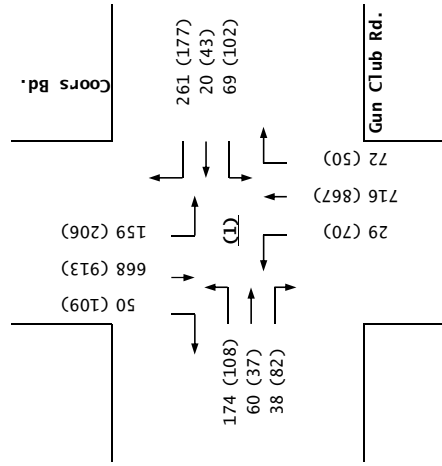
**INTERSECTION :** E-W Street: **Gun Club Rd.** (1)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**

	5.00%			0.50%			1.20%			1.20%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	140	50	24	68	20	248	15	657	69	134	532	37
Background Traffic Growth	28	10	5	1	0	5	1	32	3	6	26	2
Subtotal	168	60	29	69	20	253	16	689	72	140	558	39
Las Estancias	5	0	0	0	0	5	0	15	0	10	70	10
Sunrise Village	1	0	3	0	0	0	1	0	0	0	0	1
<b>Subtotal (NO BUILD - A.M.)</b>	<b>174</b>	<b>60</b>	<b>32</b>	<b>69</b>	<b>20</b>	<b>258</b>	<b>17</b>	<b>704</b>	<b>72</b>	<b>150</b>	<b>628</b>	<b>50</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	4.05%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.44%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	5.56%	0.00%
Total Trips Generated	0	0	6	0	0	3	12	12	0	9	40	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>174</b>	<b>60</b>	<b>38</b>	<b>69</b>	<b>20</b>	<b>261</b>	<b>29</b>	<b>716</b>	<b>72</b>	<b>159</b>	<b>668</b>	<b>50</b>

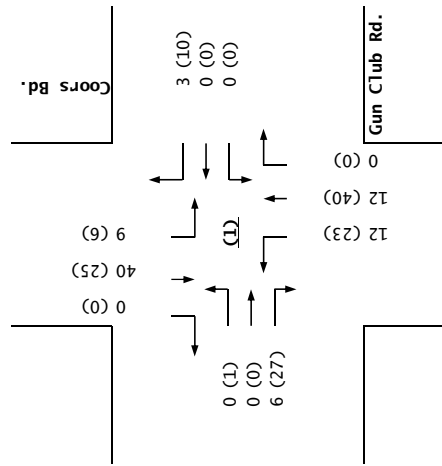
	5.00%			0.50%			1.20%			1.20%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	76	31	43	100	42	149	41	694	48	191	742	103
Background Traffic Growth	15	6	9	2	1	3	2	33	2	9	36	5
Subtotal	91	37	52	102	43	152	43	727	50	200	778	108
Las Estancias	15	0	0	0	0	15	0	100	0	0	110	0
Sunrise Village	1	0	3	0	0	0	4	0	0	0	0	1
<b>Subtotal (NO BUILD - P.M.)</b>	<b>107</b>	<b>37</b>	<b>55</b>	<b>102</b>	<b>43</b>	<b>167</b>	<b>47</b>	<b>827</b>	<b>50</b>	<b>200</b>	<b>888</b>	<b>109</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	4.05%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.44%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	5.56%	0.00%
Total Trips Generated	1	0	27	0	0	10	23	40	0	6	25	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>108</b>	<b>37</b>	<b>82</b>	<b>102</b>	<b>43</b>	<b>177</b>	<b>70</b>	<b>867</b>	<b>50</b>	<b>206</b>	<b>913</b>	<b>109</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

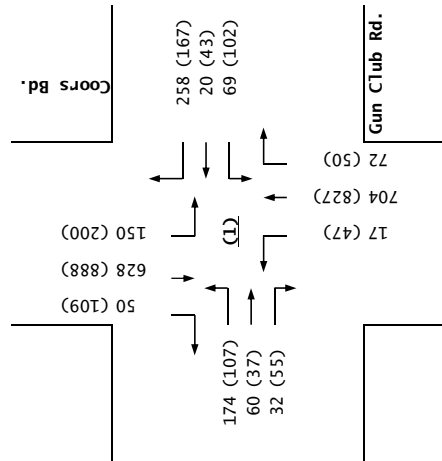
2022  
BUILD



Trips



2022  
NO BUILD



Gun Club Rd. / Coors Bd.



**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Coors Bd.**

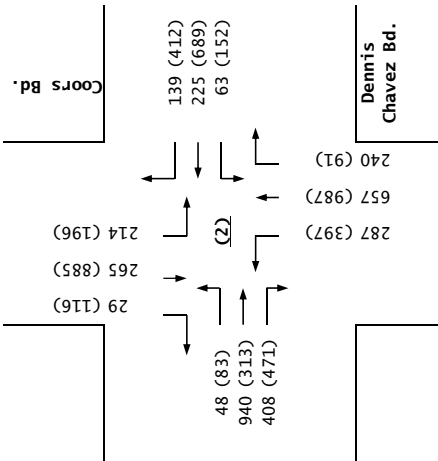
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (2)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**

	5.00%			0.60%			1.20%			0.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	35	765	331	62	213	136	244	436	229	210	235	26
Background Traffic Growth	7	153	66	1	5	3	12	21	11	4	5	1
<i>Subtotal</i>	42	918	397	63	218	139	256	457	240	214	240	27
Las Estancias	0	0	4	0	0	0	28	200	0	0	25	0
Sunrise Village	6	22	7	0	7	0	3	0	0	0	0	2
<b>Subtotal (NO BUILD - A.M.)</b>	<b>48</b>	<b>940</b>	<b>408</b>	<b>63</b>	<b>225</b>	<b>139</b>	<b>287</b>	<b>657</b>	<b>240</b>	<b>214</b>	<b>265</b>	<b>29</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent Residential Trips Generated(Exiting)</i>	30.07%	47.31%	5.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	6.76%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.77%
<i>Percent Commercial Trips Generated(Exiting)</i>	5.77%	6.76%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent School Diverted Trips Generated (Exiting)</i>	30.07%	47.31%	6.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	284	445	51	0	155	0	19	0	0	0	0	101
<b>Total AM Peak Hour BUILD Volumes</b>	<b>332</b>	<b>1,385</b>	<b>459</b>	<b>63</b>	<b>380</b>	<b>139</b>	<b>306</b>	<b>657</b>	<b>240</b>	<b>214</b>	<b>265</b>	<b>130</b>

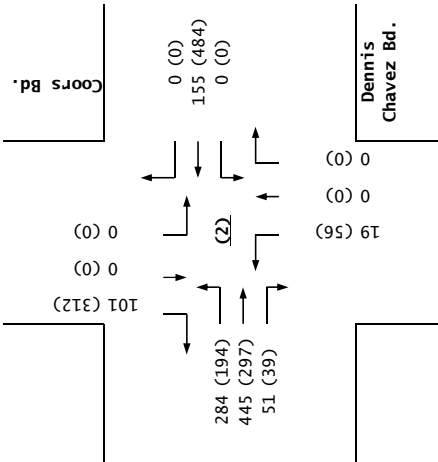
	5.00%			0.60%			1.20%			0.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	67	249	347	148	649	402	328	608	87	192	554	107
Background Traffic Growth	13	50	69	4	16	10	16	29	4	4	11	2
<i>Subtotal</i>	80	299	416	152	665	412	344	637	91	196	565	109
Las Estancias	0	0	50	0	0	0	45	350	0	0	320	0
Sunrise Village	3	14	5	0	24	0	8	0	0	0	0	7
<b>Subtotal (NO BUILD - P.M.)</b>	<b>83</b>	<b>313</b>	<b>471</b>	<b>152</b>	<b>689</b>	<b>412</b>	<b>397</b>	<b>987</b>	<b>91</b>	<b>196</b>	<b>885</b>	<b>116</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent Residential Trips Generated(Exiting)</i>	30.07%	47.31%	5.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	6.76%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.77%
<i>Percent Commercial Trips Generated(Exiting)</i>	5.77%	6.76%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent School Diverted Trips Generated (Exiting)</i>	30.07%	47.31%	6.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	194	297	39	0	484	0	56	0	0	0	0	312
<b>Total PM Peak Hour BUILD Volumes</b>	<b>277</b>	<b>610</b>	<b>510</b>	<b>152</b>	<b>1,173</b>	<b>412</b>	<b>453</b>	<b>987</b>	<b>91</b>	<b>196</b>	<b>885</b>	<b>428</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

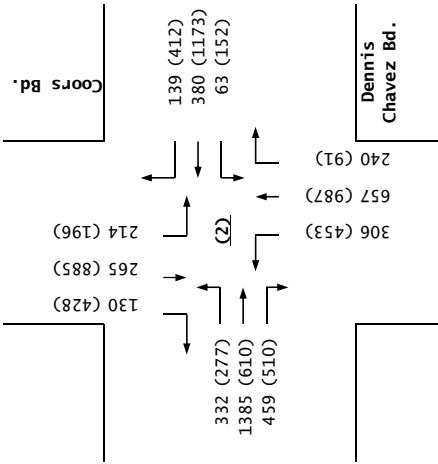
2022  
NO BUILD



Trips



2022  
BUILD



Dennis Chavez Bd. / Coors Bd.

***Ceja Vista Development (Dennis Chavez Bd. / 98th St.)***  
 Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2022) - 100% Development**

INTERSECTION :

**Summary**

**Meade Ave. / Karroll St.**

(15) 10.0% Truck

**Existing (2019)**  
**2022 (NO BUILD - A.M.)**  
**2022 (BUILD - A.M.)**

0.65			0.65			0.65			0.65			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	90	0	0	50	0	0
8	0	0	0	0	0	5	90	0	0	50	0	0

**Existing (2019)**  
**2022 (NO BUILD - P.M.)**  
**2022 (BUILD - P.M.)**

0.50			0.50			0.50			0.50			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	100	0	0	110	0	0
11	0	0	0	0	0	13	100	0	0	110	0	0

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Blake Rd. / Unser Bd.**

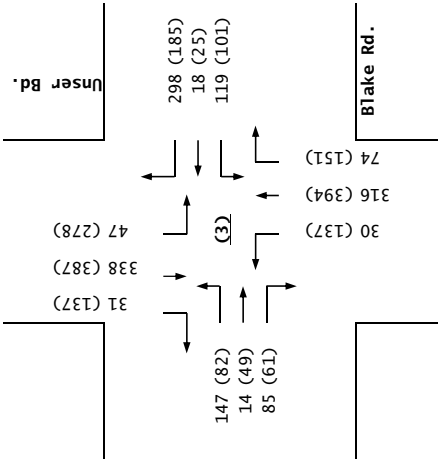
**INTERSECTION :** E-W Street: **Blake Rd.** (3)  
 N-S Street: **Unser Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2022  
 Growth Rates: 2.60% 5.00% 5.00% 1.10%

	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	133	13	77	99	15	248	25	263	62	45	324	30
Background Traffic Growth	14	1	8	20	3	50	5	53	12	2	14	1
<b>Subtotal (NO BUILD - A.M.)</b>	<b>147</b>	<b>14</b>	<b>85</b>	<b>119</b>	<b>18</b>	<b>298</b>	<b>30</b>	<b>316</b>	<b>74</b>	<b>47</b>	<b>338</b>	<b>31</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	1.28%	9.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.35%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.28%	9.35%	9.40%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	2	17	0	0	1	95	14	0	44	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>147</b>	<b>14</b>	<b>87</b>	<b>136</b>	<b>18</b>	<b>298</b>	<b>31</b>	<b>411</b>	<b>88</b>	<b>47</b>	<b>382</b>	<b>31</b>

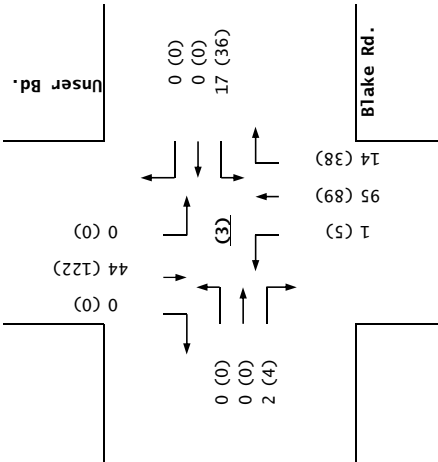
	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	74	44	55	84	21	154	114	328	126	266	371	131
Background Traffic Growth	8	5	6	17	4	31	23	66	25	12	16	6
<b>Subtotal (NO BUILD - P.M.)</b>	<b>82</b>	<b>49</b>	<b>61</b>	<b>101</b>	<b>25</b>	<b>185</b>	<b>137</b>	<b>394</b>	<b>151</b>	<b>278</b>	<b>387</b>	<b>137</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	1.28%	9.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.35%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.28%	9.35%	9.40%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	4	36	0	0	5	89	38	0	122	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>82</b>	<b>49</b>	<b>65</b>	<b>137</b>	<b>25</b>	<b>185</b>	<b>142</b>	<b>483</b>	<b>189</b>	<b>278</b>	<b>509</b>	<b>137</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

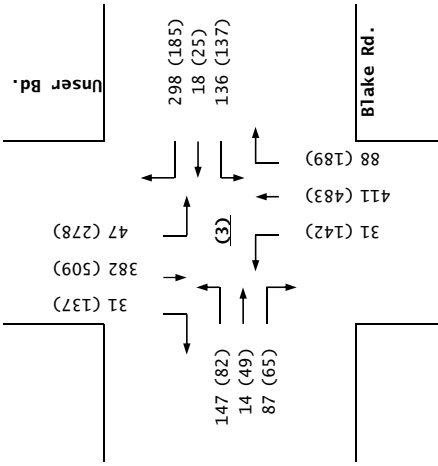
2022  
NO BUILD



Trips



2022  
BUILD



Blake Rd. / Unser Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / 118th St.**

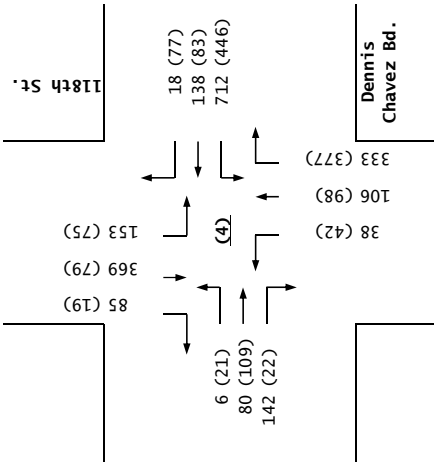
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (4)  
 N-S Street: **118th St.**  
 Year of Existing Counts: 2017  
 Horizon Year: **2022**

	0.50%			0.50%			0.50%			3.70%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	6	73	139	485	128	16	37	103	401	126	311	72
Background Traffic Growth	0	2	3	12	3	0	1	3	10	23	58	13
<i>Subtotal</i>	6	75	142	497	131	16	38	106	411	149	369	85
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	-294	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	6	75	142	497	131	16	38	106	117	149	369	85
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.06%	0.00%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.02%	0.82%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	2.13%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.54%	1.55%	2.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.82%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.06%	0.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	5	0	215	7	2	0	0	216	4	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	6	80	142	712	138	18	38	106	333	153	369	85

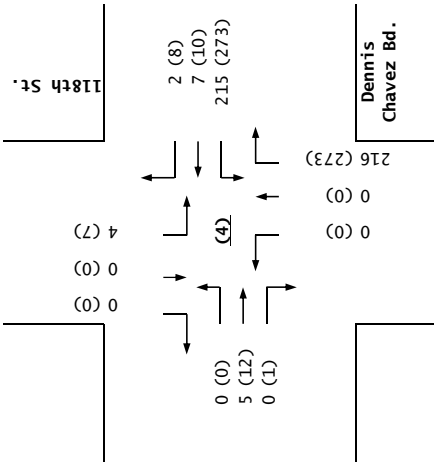
	0.50%			0.50%			0.50%			3.70%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	20	95	20	169	71	67	41	96	390	57	67	16
Background Traffic Growth	1	2	1	4	2	2	1	2	10	11	12	3
<i>Subtotal</i>	21	97	21	173	73	69	42	98	400	68	79	19
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	-296	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	21	97	21	173	73	69	42	98	104	68	79	19
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.06%	0.00%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.02%	0.82%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	2.13%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.54%	1.55%	2.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.82%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.06%	0.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	12	1	273	10	8	0	0	273	7	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	21	109	22	446	83	77	42	98	377	75	79	19

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

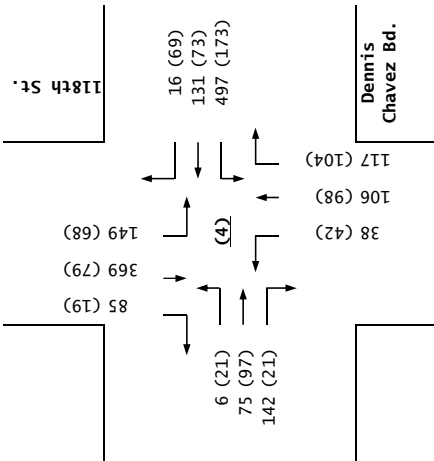
2022  
BUILD



Trips



2022  
NO BUILD



Dennis Chavez Bd. / 118th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / 98th St.**

**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (5)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2017  
 Horizon Year: **2022**

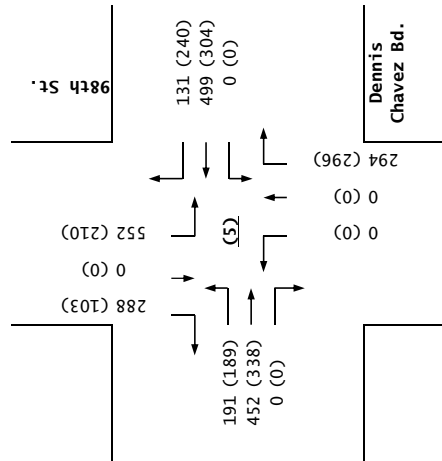
	0.50%			5.00%			0.50%			5.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	186	441	0	0	399	105	0	0	0	433	0	226
Background Traffic Growth	5	11	0	0	100	26	0	0	0	119	0	62
<i>Subtotal</i>	191	452	0	0	499	131	0	0	0	552	0	288
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	294	0	0	0
<b><i>Subtotal (NO BUILD - A.M.)</i></b>	<b>191</b>	<b>452</b>	<b>0</b>	<b>0</b>	<b>499</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>552</b>	<b>0</b>	<b>288</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.50%	0.40%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	5.78%	13.34%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.00%	3.22%	17.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.35%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	3.22%	49.35%	17.25%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	20.00%	80.00%	0.00%	94.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%
<i>Percent School Diverted Trips Generated (Exiting)</i>	5.78%	94.22%	0.00%	0.00%	20.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	9	167	49	63	83	0	136	89	118	0	99	3
<b>Total AM Peak Hour BUILD Volumes</b>	<b>200</b>	<b>619</b>	<b>49</b>	<b>63</b>	<b>582</b>	<b>131</b>	<b>136</b>	<b>89</b>	<b>412</b>	<b>552</b>	<b>99</b>	<b>291</b>

	0.50%			5.00%			0.50%			5.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	184	330	0	0	243	192	0	0	0	165	0	81
Background Traffic Growth	5	8	0	0	61	48	0	0	0	45	0	22
<i>Subtotal</i>	189	338	0	0	304	240	0	0	0	210	0	103
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	296	0	0	0
<b><i>Subtotal (NO BUILD - P.M.)</i></b>	<b>189</b>	<b>338</b>	<b>0</b>	<b>0</b>	<b>304</b>	<b>240</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>210</b>	<b>0</b>	<b>103</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.50%	0.40%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	5.78%	13.34%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.00%	3.22%	17.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.35%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	3.22%	49.35%	17.25%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	20.00%	80.00%	0.00%	94.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%
<i>Percent School Diverted Trips Generated (Exiting)</i>	5.78%	94.22%	0.00%	0.00%	20.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	6	135	151	164	185	0	94	217	130	0	209	10
<b>Total PM Peak Hour BUILD Volumes</b>	<b>195</b>	<b>473</b>	<b>151</b>	<b>164</b>	<b>489</b>	<b>240</b>	<b>94</b>	<b>217</b>	<b>426</b>	<b>210</b>	<b>209</b>	<b>113</b>

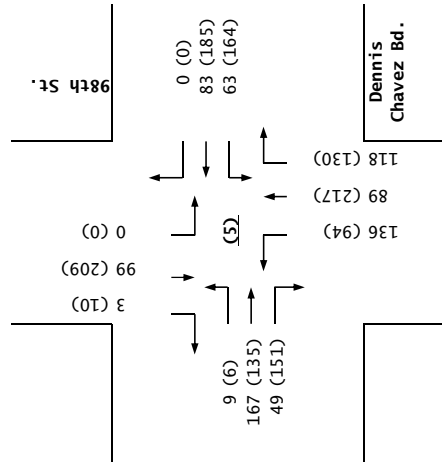
	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.



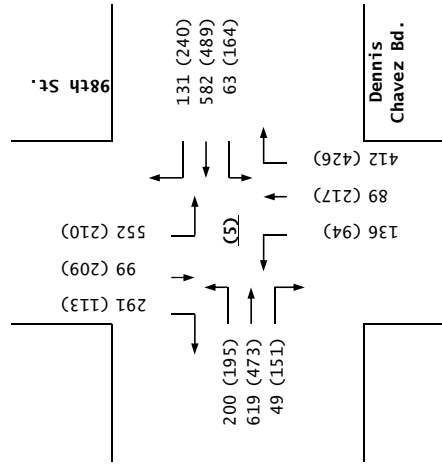
2022  
NO BUILD



Trips



2022  
BUILD



Dennis Chavez Bd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Unser Bd.**

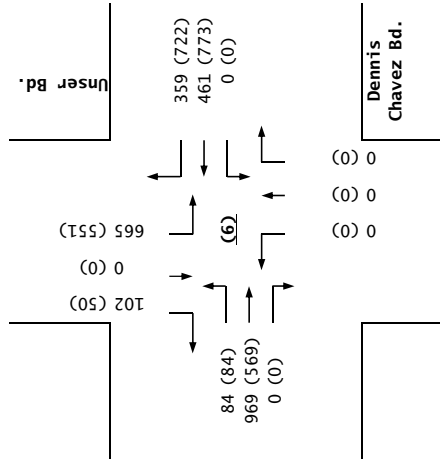
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (6)  
 N-S Street: **Unser Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**

	5.00%			5.00%			0.50%			5.00%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	70	806	0	0	379	296	0	0	0	553	0	85
Background Traffic Growth	14	161	0	0	76	59	0	0	0	111	0	17
<i>Subtotal</i>	84	967	0	0	455	355	0	0	0	664	0	102
Sunrise Village	0	2	0	0	6	4	0	0	0	1	0	0
<b><i>Subtotal (NO BUILD - A.M.)</i></b>	<b>84</b>	<b>969</b>	<b>0</b>	<b>0</b>	<b>461</b>	<b>359</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>665</b>	<b>0</b>	<b>102</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.50%	66.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	9.98%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.50%	9.98%	66.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	1.00%	9.05%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	12.25%
<i>Percent Commercial Trips Generated(Exiting)</i>	12.25%	5.00%	0.00%	0.00%	0.00%	0.00%	1.00%	10.00%	9.05%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	20.00%	0.00%	84.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	9.98%	84.82%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	27	244	14	180	87	0	37	85	513	0	42	26
<b>Total AM Peak Hour BUILD Volumes</b>	<b>111</b>	<b>1,213</b>	<b>14</b>	<b>180</b>	<b>548</b>	<b>359</b>	<b>37</b>	<b>85</b>	<b>513</b>	<b>665</b>	<b>42</b>	<b>128</b>

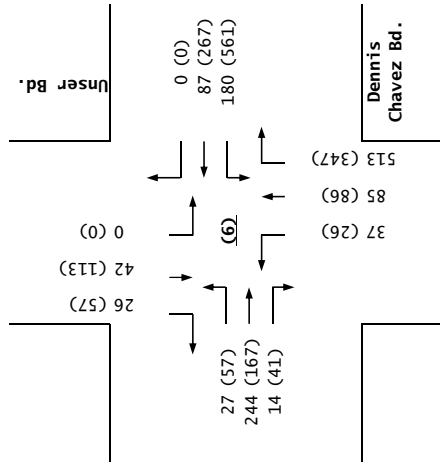
	5.00%			5.00%			0.50%			5.00%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	70	468	0	0	642	599	0	0	0	456	0	42
Background Traffic Growth	14	94	0	0	128	120	0	0	0	91	0	8
<i>Subtotal</i>	84	562	0	0	770	719	0	0	0	547	0	50
Sunrise Village	0	7	0	0	3	3	0	0	0	4	0	0
<b><i>Subtotal (NO BUILD - P.M.)</i></b>	<b>84</b>	<b>569</b>	<b>0</b>	<b>0</b>	<b>773</b>	<b>722</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>551</b>	<b>0</b>	<b>50</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.50%	66.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	9.98%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.50%	9.98%	66.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	1.00%	9.05%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	12.25%
<i>Percent Commercial Trips Generated(Exiting)</i>	12.25%	5.00%	0.00%	0.00%	0.00%	0.00%	1.00%	10.00%	9.05%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	20.00%	0.00%	84.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	9.98%	84.82%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	57	167	41	561	267	0	26	86	347	0	113	57
<b>Total PM Peak Hour BUILD Volumes</b>	<b>141</b>	<b>736</b>	<b>41</b>	<b>561</b>	<b>1,040</b>	<b>722</b>	<b>26</b>	<b>86</b>	<b>347</b>	<b>551</b>	<b>113</b>	<b>107</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

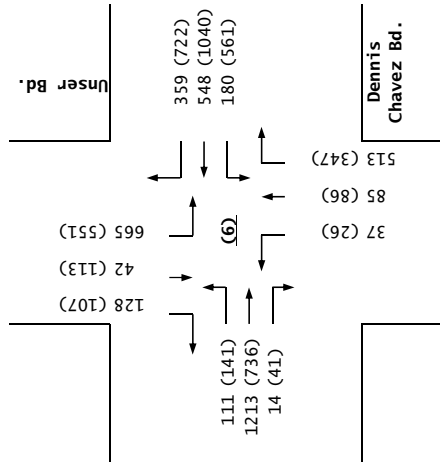
2022  
NO BUILD



Trips



2022  
BUILD



Dennis Chavez Bd. / Unser Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Condershire Dr.**

**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (7)  
 N-S Street: **Condershire Dr.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**

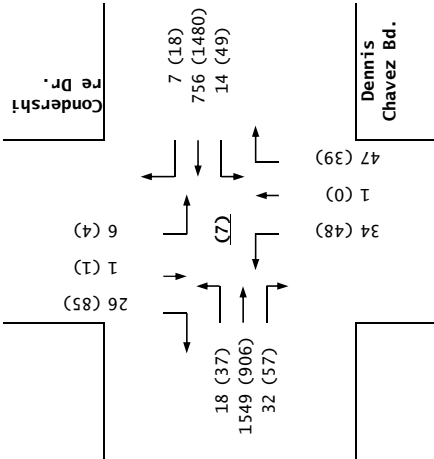
Growth Rates: **5.00%** **5.00%** **5.00%** **5.00%**

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	15	1,291	24	2	630	6	20	1	10	5	1	22
Background Traffic Growth	3	258	5	0	126	1	4	0	2	1	0	4
Subtotal	18	1,549	29	2	756	7	24	1	12	6	1	26
Sunrise Village	0	0	3	12	0	0	10	0	35	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>18</b>	<b>1,549</b>	<b>32</b>	<b>14</b>	<b>756</b>	<b>7</b>	<b>34</b>	<b>1</b>	<b>47</b>	<b>6</b>	<b>1</b>	<b>26</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	4.00%	78.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent Residential Trips Generated(Exiting)	0.23%	78.41%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%
Percent Commercial Trips Generated(Exiting)	1.52%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	83.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent School Diverted Trips Generated (Exiting)	0.23%	83.89%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Total Trips Generated	3	747	6	10	261	0	0	0	37	0	0	4
<b>Total AM Peak Hour BUILD Volumes</b>	<b>21</b>	<b>2,296</b>	<b>38</b>	<b>24</b>	<b>1,017</b>	<b>7</b>	<b>34</b>	<b>1</b>	<b>84</b>	<b>6</b>	<b>1</b>	<b>30</b>

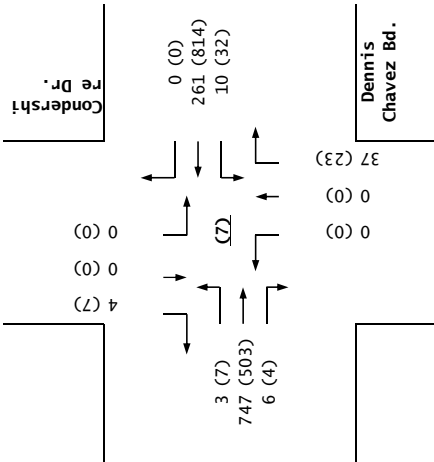
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	31	755	38	8	1,233	15	35	0	14	3	1	71
Background Traffic Growth	6	151	8	2	247	3	7	0	3	1	0	14
Subtotal	37	906	46	10	1,480	18	42	0	17	4	1	85
Sunrise Village	0	0	11	39	0	0	6	0	22	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>37</b>	<b>906</b>	<b>57</b>	<b>49</b>	<b>1,480</b>	<b>18</b>	<b>48</b>	<b>0</b>	<b>39</b>	<b>4</b>	<b>1</b>	<b>85</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	4.00%	78.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent Residential Trips Generated(Exiting)	0.23%	78.41%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%
Percent Commercial Trips Generated(Exiting)	1.52%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	83.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent School Diverted Trips Generated (Exiting)	0.23%	83.89%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Total Trips Generated	7	503	4	32	814	0	0	0	23	0	0	7
<b>Total PM Peak Hour BUILD Volumes</b>	<b>44</b>	<b>1,409</b>	<b>61</b>	<b>81</b>	<b>2,294</b>	<b>18</b>	<b>48</b>	<b>0</b>	<b>62</b>	<b>4</b>	<b>1</b>	<b>92</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

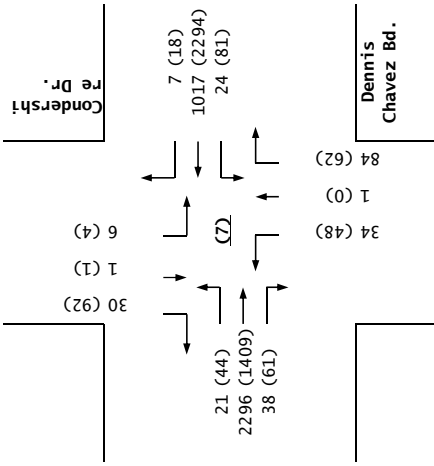
2022  
NO BUILD



Trips



2022  
BUILD



Dennis Chavez Bd. / Condershire Dr.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Rio Bravo Sq. / Coors Bd.**

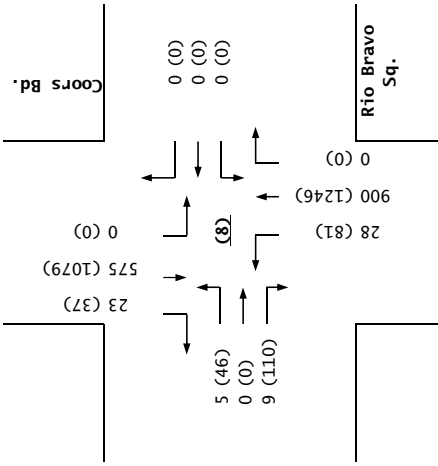
**INTERSECTION :** E-W Street: **Rio Bravo Sq.** (8)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2022  
 Growth Rates: 0.50% 0.50% 0.50% 0.50%

	Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	9	0	0	0	27	580	0	0	462	23
Background Traffic Growth	0	0	0	0	0	0	1	12	0	0	9	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>616</b>	<b>0</b>	<b>0</b>	<b>474</b>	<b>23</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.63%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	5.63%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	284	0	0	101	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>900</b>	<b>0</b>	<b>0</b>	<b>575</b>	<b>23</b>

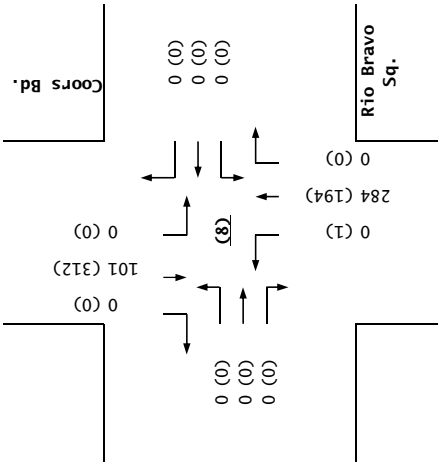
	Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	45	0	108	0	0	0	78	999	0	0	745	36
Background Traffic Growth	1	0	2	0	0	0	2	20	0	0	15	1
<b>Subtotal</b>	<b>46</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>1,019</b>	<b>0</b>	<b>0</b>	<b>760</b>	<b>37</b>
<b>Subtotal (NO BUILD - P.M.)</b>	<b>46</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>1,052</b>	<b>0</b>	<b>0</b>	<b>767</b>	<b>37</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.63%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	5.63%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	1	194	0	0	312	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>46</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>81</b>	<b>1,246</b>	<b>0</b>	<b>0</b>	<b>1,079</b>	<b>37</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

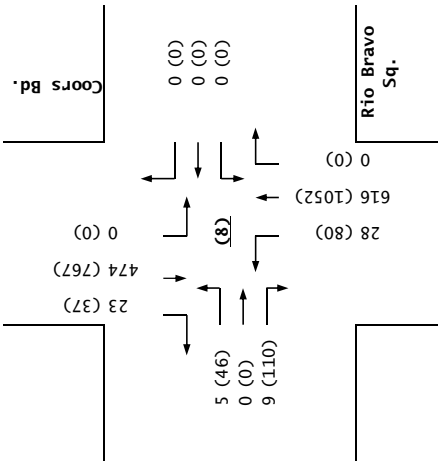
2022  
BUILD



Trips



2022  
NO BUILD



Rio Bravo Sq. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gibson Bd. / 98th St.**

**INTERSECTION :** E-W Street: **Gibson Bd.** (9)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**  
 Growth Rates: 2.60% 1.00% 1.50% 2.10%

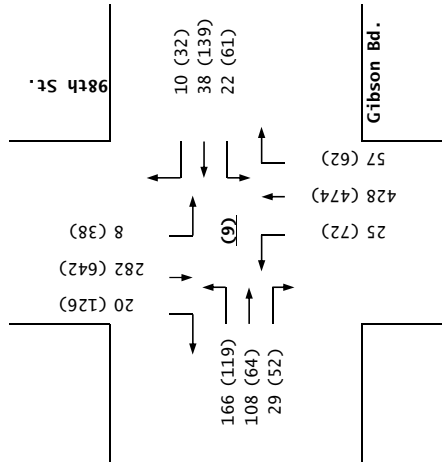
	Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	150	98	18	11	37	10	17	334	47	7	198	18
Background Traffic Growth	16	10	2	0	1	0	1	20	3	1	17	2
<b>Subtotal (NO BUILD - A.M.)</b>	<b>166</b>	<b>108</b>	<b>20</b>	<b>11</b>	<b>38</b>	<b>10</b>	<b>18</b>	<b>354</b>	<b>50</b>	<b>8</b>	<b>215</b>	<b>20</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	5.40%	6.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.57%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.40%	29.57%	6.57%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	9	11	0	0	7	74	7	0	67	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>166</b>	<b>108</b>	<b>29</b>	<b>22</b>	<b>38</b>	<b>10</b>	<b>25</b>	<b>428</b>	<b>57</b>	<b>8</b>	<b>282</b>	<b>20</b>

	Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	108	58	29	37	134	31	47	312	34	35	457	116
Background Traffic Growth	11	6	3	1	5	1	3	19	2	3	38	10
<b>Subtotal (NO BUILD - P.M.)</b>	<b>119</b>	<b>64</b>	<b>32</b>	<b>38</b>	<b>139</b>	<b>32</b>	<b>50</b>	<b>331</b>	<b>36</b>	<b>38</b>	<b>495</b>	<b>126</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	5.40%	6.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.57%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.40%	29.57%	6.57%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	20	23	0	0	22	143	26	0	147	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>119</b>	<b>64</b>	<b>52</b>	<b>61</b>	<b>139</b>	<b>32</b>	<b>72</b>	<b>474</b>	<b>62</b>	<b>38</b>	<b>642</b>	<b>126</b>

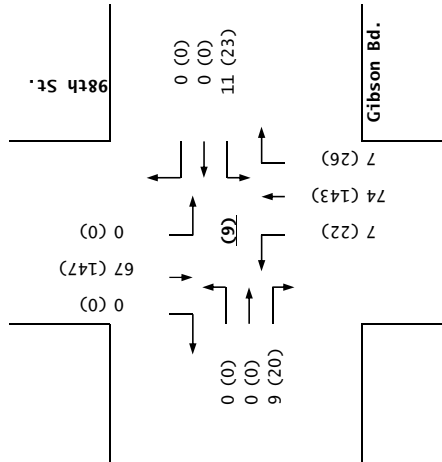
	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	



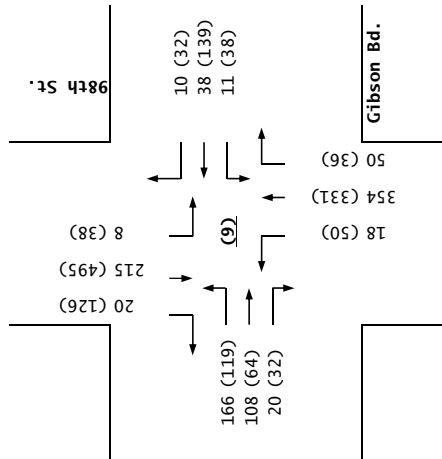
2022  
BUILD



Trips



2022  
NO BUILD



Gibson Bd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Blake Rd. / 98th St.**

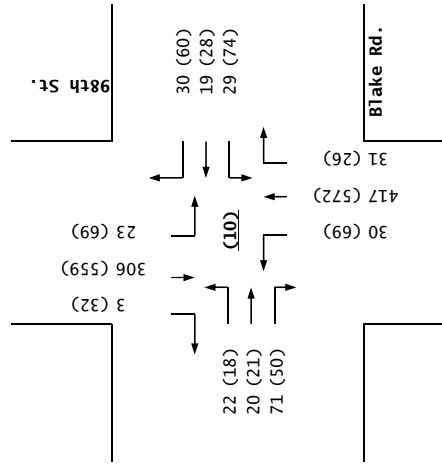
**INTERSECTION :** E-W Street: **Blake Rd.** (10)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**  
 Growth Rates: 0.50% 2.60% 5.50% 1.50%

	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	22	20	66	26	17	27	22	269	25	22	205	3
Background Traffic Growth	0	0	1	3	2	3	5	59	6	1	12	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>22</b>	<b>20</b>	<b>67</b>	<b>29</b>	<b>19</b>	<b>30</b>	<b>27</b>	<b>328</b>	<b>31</b>	<b>23</b>	<b>217</b>	<b>3</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.54%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.09%	41.54%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	4	0	0	0	3	89	0	0	89	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>22</b>	<b>20</b>	<b>71</b>	<b>29</b>	<b>19</b>	<b>30</b>	<b>30</b>	<b>417</b>	<b>31</b>	<b>23</b>	<b>306</b>	<b>3</b>

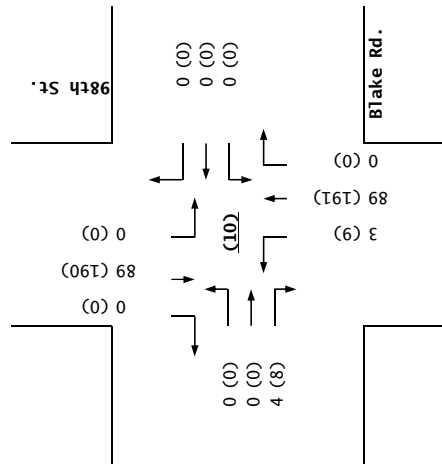
	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	18	21	41	67	25	54	49	312	21	65	348	30
Background Traffic Growth	0	0	1	7	3	6	11	69	5	4	21	2
<b>Subtotal (NO BUILD - P.M.)</b>	<b>18</b>	<b>21</b>	<b>42</b>	<b>74</b>	<b>28</b>	<b>60</b>	<b>60</b>	<b>381</b>	<b>26</b>	<b>69</b>	<b>369</b>	<b>32</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.54%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.09%	41.54%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	8	0	0	0	9	191	0	0	190	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>18</b>	<b>21</b>	<b>50</b>	<b>74</b>	<b>28</b>	<b>60</b>	<b>69</b>	<b>572</b>	<b>26</b>	<b>69</b>	<b>559</b>	<b>32</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

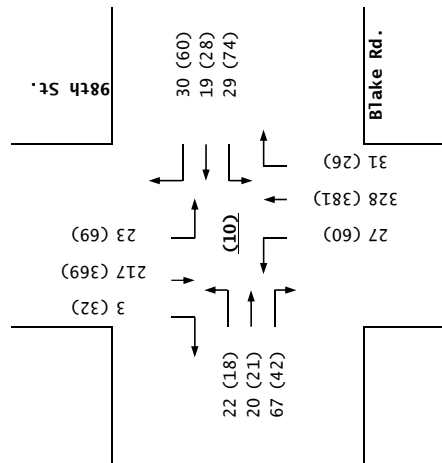
2022  
BUILD



Trips



2022  
NO BUILD



Blake Rd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gun Club Rd. / Karrol St.**

**INTERSECTION :** E-W Street: **Gun Club Rd.** (11)  
 N-S Street: **Karrol St.**  
 Year of Existing Counts 2018  
 Horizon Year **2022**

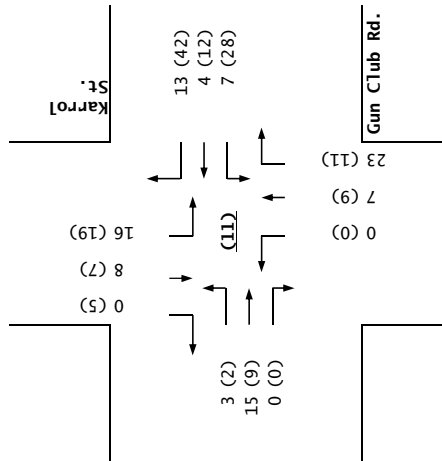
Growth Rates 0.50% 5.00% 0.50% 0.50%

	0.50%			5.00%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	3	15	0	6	3	9	0	7	23	12	8	0
Background Traffic Growth	0	0	0	1	1	2	0	0	0	0	0	0
<b>Subtotal</b>	3	15	0	7	4	11	0	7	23	12	8	0
Sunrise Village	0	0	0	0	0	2	0	0	0	4	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	3	15	0	7	4	13	0	7	23	16	8	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	7.02%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Total Trips Generated	0	6	1	0	12	0	2	1	0	0	4	0
<b>Subtotal AM Pk Hr. BUILD Volumes</b>	3	21	1	7	16	13	2	8	23	16	12	0
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	3	21	1	7	16	13	2	8	23	16	12	0

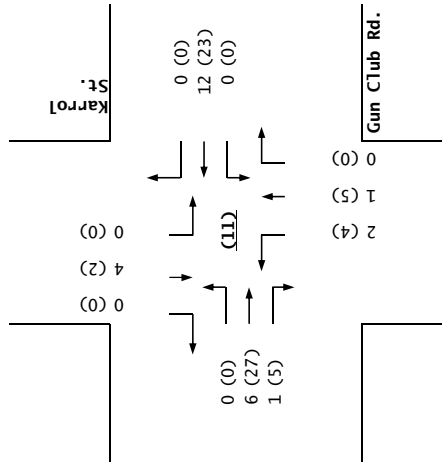
	0.50%			5.00%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	2	9	0	23	10	31	0	9	11	15	7	5
Background Traffic Growth	0	0	0	5	2	6	0	0	0	0	0	0
<b>Subtotal</b>	2	9	0	28	12	37	0	9	11	15	7	5
Sunrise Village	0	0	0	0	0	5	0	0	0	4	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	2	9	0	28	12	42	0	9	11	19	7	5
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	7.02%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Total Trips Generated	0	27	5	0	23	0	4	5	0	0	2	0
<b>Total PM Peak Hour BUILD Volumes</b>	2	36	5	28	35	42	4	14	11	19	9	5

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

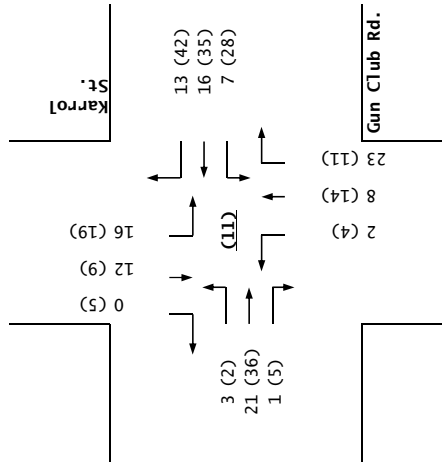
2022  
NO BUILD



Trips



2022  
BUILD



Gun Club Rd. / Karrol St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Don Felipe Rd. / Coors Bd.**

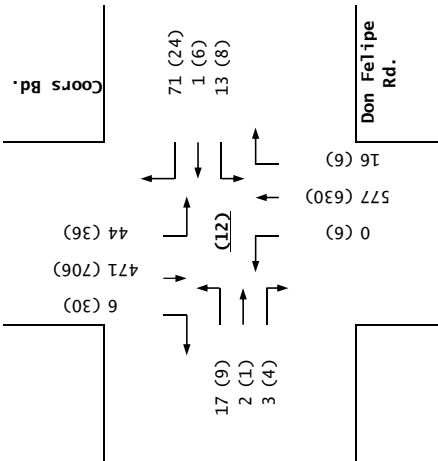
**INTERSECTION :** E-W Street: **Don Felipe Rd.** (12)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**  
 Growth Rates: 0.50% 0.50% 0.50% 1.20%

	0.50%			0.50%			0.50%			1.20%		
	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	17	2	3	13	1	70	0	566	16	42	449	6
Background Traffic Growth	0	0	0	0	0	1	0	11	0	2	22	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>17</b>	<b>2</b>	<b>3</b>	<b>13</b>	<b>1</b>	<b>71</b>	<b>0</b>	<b>577</b>	<b>16</b>	<b>44</b>	<b>471</b>	<b>6</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	0.00%	4.54%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	4.54%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Total Trips Generated	0	0	0	0	0	7	0	18	0	11	32	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>17</b>	<b>2</b>	<b>3</b>	<b>13</b>	<b>1</b>	<b>78</b>	<b>0</b>	<b>595</b>	<b>16</b>	<b>55</b>	<b>503</b>	<b>6</b>

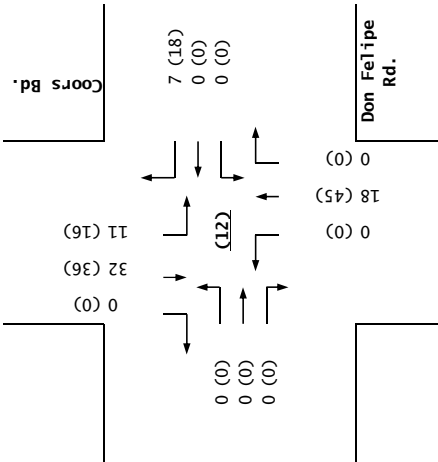
	0.50%			0.50%			0.50%			1.20%		
	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	1	4	8	6	24	6	618	6	34	674	29
Background Traffic Growth	0	0	0	0	0	0	0	12	0	2	32	1
<b>Subtotal (NO BUILD - P.M.)</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>24</b>	<b>6</b>	<b>630</b>	<b>6</b>	<b>36</b>	<b>706</b>	<b>30</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	0.00%	4.54%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	4.54%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Total Trips Generated	0	0	0	0	0	18	0	45	0	16	36	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>42</b>	<b>6</b>	<b>675</b>	<b>6</b>	<b>52</b>	<b>742</b>	<b>30</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

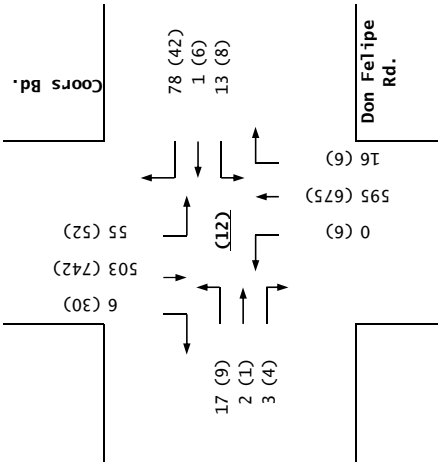
2022  
NO BUILD



Trips



2022  
BUILD



Don Felipe Rd. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Projected Turning Movements Worksheet

**Gun Club Rd. / Unser Connection**

**INTERSECTION :** E-W Street: **Gun Club Rd.** (13)  
 N-S Street: **Unser Connection**  
 Year of Existing Counts: 2018  
 Horizon Year: **2022**  
 Growth Rates: **0.00%** **0.00%** **0.00%** **0.00%**

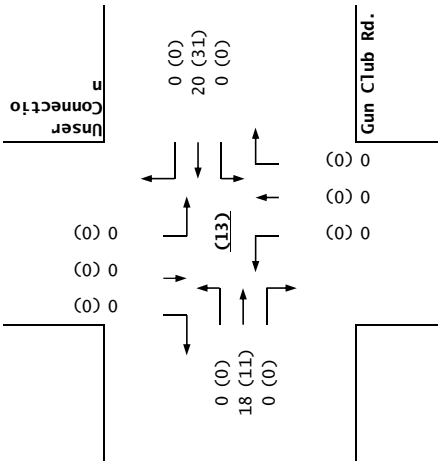
	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	20	0	0	0	25	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	46	0	0	0	43	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>0</b>

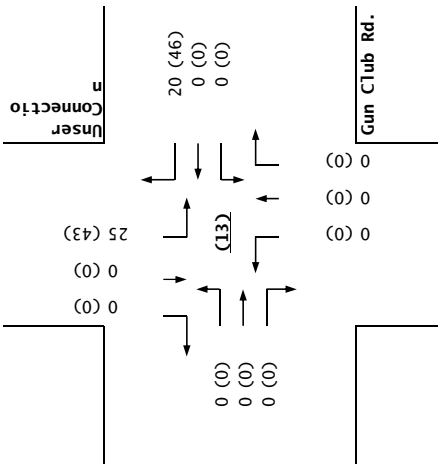
	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.



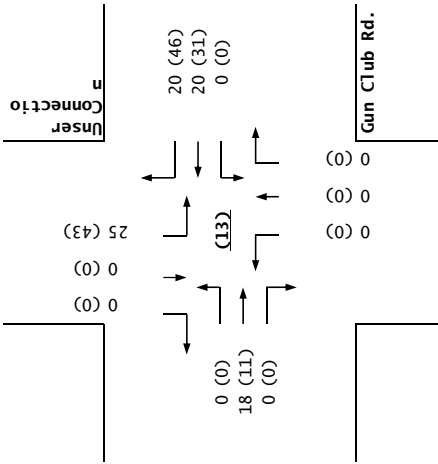
2022  
NO BUILD



Trips



2022  
BUILD



Gun Club Rd. / Unser Connection

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Projected Turning Movements Worksheet

**Future Connection / Karrol St.**

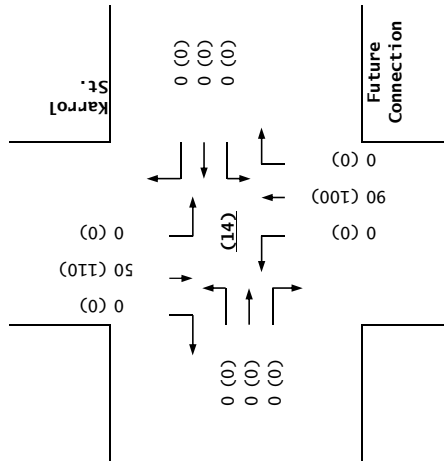
**INTERSECTION :** E-W Street: **Future Connection** (14)  
 N-S Street: **Karrol St.**  
 Year of Existing Counts: 2017  
 Horizon Year: 2022  
 Growth Rates: 0.00% 0.00% 0.00% 0.00%

	EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	8	0	0	0	0	0	5	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>

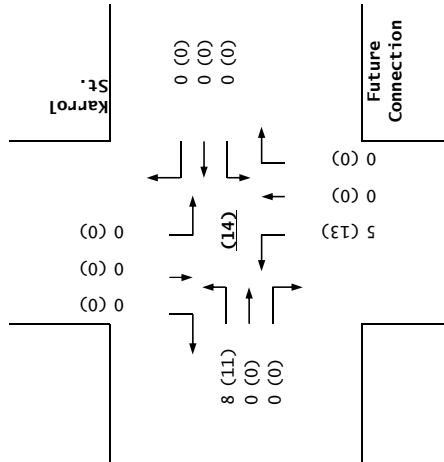
	EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	0	0	0	0	0	13	0	0	0	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

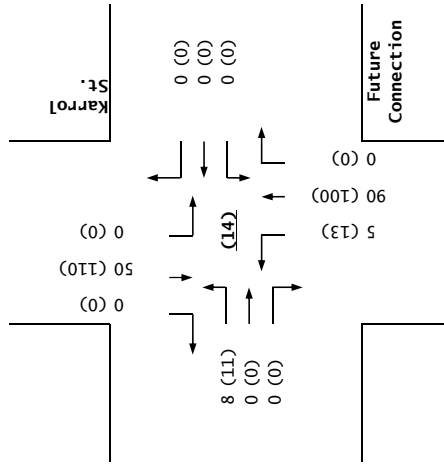
2022  
NO BUILD



Trips



2022  
BUILD



Future Connection / Karrol St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**

Projected Turning Movements Worksheet

**Meade Ave. / Karroll St.**

INTERSECTION : E-W Street: **Meade Ave.** (15)

N-S Street: **Karroll St.**

Year of Existing Counts 2017

Horizon Year 2022

Growth Rates 0.00% 0.00% 0.00% 0.00%

	Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	8	0	0	0	0	0	5	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>

	Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	0	0	0	0	0	13	0	0	0	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.



### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2032) - 100% Development**

**INTERSECTION : Summary**

**Gun Club Rd. / Coors Bd.**

		0.91			0.91			0.91			0.91			PHF
		Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(1)	10.0% Truck													
Existing (2019)		147	53	25	68	20	249	15	665	70	136	538	37	
	2032 (NO BUILD - A.M.)	244	85	44	73	21	270	19	782	81	167	691	54	
	2032 (BUILD - A.M.)	244	85	50	73	21	273	31	794	81	176	731	54	

		0.96			0.96			0.96			0.96			PHF
		Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		80	33	45	101	42	150	41	702	49	193	751	104	
	2032 (NO BUILD - P.M.)	145	53	76	107	45	174	52	911	56	223	977	121	
	2032 (BUILD - P.M.)	146	53	103	107	45	184	75	951	56	229	1,002	121	

**Dennis Chavez Bd. / Coors Bd.**

		0.96			0.96			0.96			0.96			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(2)	10.0% Truck													
Existing (2019)		37	803	348	62	214	137	247	441	232	211	236	26	
	2032 (NO BUILD - A.M.)	66	1,323	574	67	238	147	316	709	267	225	276	30	
	2032 (BUILD - A.M.)	350	1,768	625	67	393	147	335	709	267	225	276	131	

		0.95			0.95			0.95			0.95			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		70	261	364	149	653	404	332	615	88	193	557	108	
	2032 (NO BUILD - P.M.)	117	437	645	160	728	436	436	1,060	102	205	913	121	
	2032 (BUILD - P.M.)	311	734	684	160	1,212	436	492	1,060	102	205	913	433	

**Blake Rd. / Unser Bd.**

		0.89			0.89			0.89			0.89			PHF
		Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(3)	10.0% Truck													
Existing (2019)		136	13	79	104	16	260	26	276	65	45	328	30	
	2032 (NO BUILD - A.M.)	181	18	105	168	26	422	43	447	105	52	374	35	
	2032 (BUILD - A.M.)	181	18	107	185	26	422	44	542	119	52	418	35	

		0.91			0.91			0.91			0.91			PHF
		Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		76	45	56	88	22	162	120	344	132	269	375	132	
	2032 (NO BUILD - P.M.)	101	60	75	143	36	262	194	558	214	307	428	151	
	2032 (BUILD - P.M.)	101	60	79	179	36	262	199	647	252	307	550	151	

**Dennis Chavez Bd. / 118th St.**

		0.65			0.65			0.65			0.65			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
(4)	10.0% Truck													
Existing (2019)		6	74	140	490	129	16	37	104	405	135	334	77	
	2032 (NO BUILD - A.M.)	6	78	149	521	138	17	40	111	431	196	484	112	
	2032 (BUILD - A.M.)	6	83	149	736	145	19	40	111	647	200	484	112	

		0.50			0.50			0.50			0.50			PHF
		Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)		20	96	20	171	72	68	41	97	394	61	72	17	
	2032 (NO BUILD - P.M.)	22	102	22	182	76	72	44	103	419	89	104	25	
	2032 (BUILD - P.M.)	22	114	23	455	86	80	44	103	692	96	104	25	

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2032) - 100% Development**

**INTERSECTION : Summary**

**Dennis Chavez Bd. / 98th St.** 0.65                      0.65                      0.65                      0.65                      PHF

(5) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	188	445	0	0	439	116	0	0	0	481	0	251
2032 (NO BUILD - A.M.)	200	474	0	0	698	184	0	0	0	790	0	412
2032 (BUILD - A.M.)	209	641	49	63	781	184	136	89	118	790	99	415

0.50                      0.50                      0.50                      0.50                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	186	333	0	0	267	211	0	0	0	183	0	90
2032 (NO BUILD - P.M.)	198	355	0	0	425	336	0	0	0	301	0	148
2032 (BUILD - P.M.)	204	490	151	164	610	336	94	217	130	301	209	158

**Dennis Chavez Bd. / Unser Bd.** 0.92                      0.92                      0.92                      0.92                      PHF

(6) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	74	846	0	0	398	311	0	0	0	581	0	89
2032 (NO BUILD - A.M.)	119	1,372	0	0	650	507	0	0	0	941	0	145
2032 (BUILD - A.M.)	146	1,616	14	180	737	507	37	85	513	941	42	171

0.91                      0.91                      0.91                      0.91                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	74	491	0	0	674	629	0	0	0	479	0	44
2032 (NO BUILD - P.M.)	119	803	0	0	1,094	1,021	0	0	0	779	0	71
2032 (BUILD - P.M.)	176	970	41	561	1,361	1,021	26	86	347	779	113	128

**Dennis Chavez Bd. / Condershire Dr.** 0.99                      0.99                      0.99                      0.99                      PHF

(7) 10.0% Truck

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	16	1,356	25	2	662	6	21	1	11	5	1	23
2032 (NO BUILD - A.M.)	26	2,195	44	15	1,071	10	44	2	52	9	2	37
2032 (BUILD - A.M.)	29	2,942	50	25	1,332	10	44	2	89	9	2	41

0.97                      0.97                      0.97                      0.97                      PHF

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
<b>Existing (2019)</b>	33	793	40	8	1,295	16	37	0	15	3	1	75
2032 (NO BUILD - P.M.)	53	1,284	76	53	2,096	26	66	0	46	5	2	121
2032 (BUILD - P.M.)	60	1,787	80	85	2,910	26	66	0	69	5	2	128

### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2032) - 100% Development**

**INTERSECTION: Summary**

**Rio Bravo Sq. / Coors Bd.**

(8) 10.0% Truck  
**Existing (2019)**  
 2032 (NO BUILD - A.M.)  
 2032 (BUILD - A.M.)

0.96			0.96			0.96			0.96			PHF
Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	9	0	0	0	27	583	0	0	464	23	
5	0	10	0	0	0	29	893	0	0	521	25	
5	0	10	0	0	0	29	1,177	0	0	622	25	

**Existing (2019)**  
 2032 (NO BUILD - P.M.)  
 2032 (BUILD - P.M.)

0.95			0.95			0.95			0.95			PHF
Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
45	0	109	0	0	0	78	1,004	0	0	749	36	
48	0	116	0	0	0	83	1,530	0	0	1,123	39	
48	0	116	0	0	0	84	1,724	0	0	1,435	39	

**Gibson Bd. / 98th St.**

(9) 10.0% Truck  
**Existing (2019)**  
 2032 (NO BUILD - A.M.)  
 2032 (BUILD - A.M.)

0.82			0.82			0.82			0.82			PHF
Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
154	101	18	11	37	10	17	339	48	7	202	18	
205	134	25	13	42	11	21	404	57	9	256	23	
205	134	34	24	42	11	28	478	64	9	323	23	

**Existing (2019)**  
 2032 (NO BUILD - P.M.)  
 2032 (BUILD - P.M.)

0.93			0.93			0.93			0.93			PHF
Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
111	60	30	37	135	31	48	317	35	36	467	118	
147	79	40	42	153	35	57	378	41	45	591	150	
147	79	60	65	153	35	79	521	67	45	738	150	

**Blake Rd. / 98th St.**

(10) 10.0% Truck  
**Existing (2019)**  
 2032 (NO BUILD - A.M.)  
 2032 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
22	20	66	27	17	28	23	284	26	22	208	3	
24	21	71	35	23	37	39	476	44	27	248	4	
24	21	75	35	23	37	42	565	44	27	337	4	

**Existing (2019)**  
 2032 (NO BUILD - P.M.)  
 2032 (BUILD - P.M.)

0.96			0.96			0.96			0.96			PHF
Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	21	41	69	26	55	52	329	22	66	353	30	
19	22	44	91	34	74	87	552	37	79	421	36	
19	22	52	91	34	74	96	743	37	79	611	36	



### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2032) - 100% Development**

**INTERSECTION: Summary**

**Gun Club Rd. / Karrol St.**

(11) 10.0% Truck

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	3	15	0	6	3	9	0	7	23	12	8	0
2032 (NO BUILD - A.M.)	3	16	0	10	5	17	0	7	25	17	9	0
2032 (BUILD - A.M.)	3	22	1	10	17	17	2	8	25	17	13	0

Existing (2019)

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	2	9	0	24	11	33	0	9	11	15	7	5
2032 (NO BUILD - P.M.)	2	10	0	39	17	58	0	10	12	20	7	5
2032 (BUILD - P.M.)	2	37	5	39	40	58	4	15	12	20	9	5

**Don Felipe Rd. / Coors Bd.**

(12) 10.0% Truck

Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	17	2	3	13	1	70	0	569	16	43	454	6
2032 (NO BUILD - A.M.)	18	2	3	14	1	75	0	606	17	49	524	7
2032 (BUILD - A.M.)	18	2	3	14	1	82	0	624	17	60	556	7

Existing (2019)

Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	9	1	4	8	6	24	6	621	6	34	682	29
2032 (NO BUILD - P.M.)	10	1	4	9	6	26	6	661	6	40	787	34
2032 (BUILD - P.M.)	10	1	4	9	6	44	6	706	6	56	823	34

**Gun Club Rd. / Unser Connection**

(13) 10.0% Truck

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2032 (NO BUILD - A.M.)	0	19	0	0	22	0	0	0	0	0	0	0
2032 (BUILD - A.M.)	0	19	0	0	22	20	0	0	0	25	0	0

Existing (2019)

Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2032 (NO BUILD - P.M.)	0	12	0	0	37	0	0	0	0	0	0	0
2032 (BUILD - P.M.)	0	12	0	0	37	46	0	0	0	43	0	0

**Future Connection / Karrol St.**

(14) 10.0% Truck

EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2032 (NO BUILD - A.M.)	0	0	0	0	0	0	90	0	0	50	0	0
2032 (BUILD - A.M.)	8	0	0	0	0	5	90	0	0	50	0	0

Existing (2019)

EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2019)	0	0	0	0	0	0	0	0	0	0	0	0
2032 (NO BUILD - P.M.)	0	0	0	0	0	0	100	0	0	110	0	0
2032 (BUILD - P.M.)	11	0	0	0	0	13	100	0	0	110	0	0

***Ceja Vista Development (Dennis Chavez Bd. / 98th St.)***  
 Projected Turning Movements SUMMARY  
**PROPOSED DEVELOPMENT (2032) - 100% Development**

INTERSECTION :

**Summary**

**Meade Ave. / Karroll St.**

(15) 10.0% Truck

**Existing (2019)**  
**2032 (NO BUILD - A.M.)**  
**2032 (BUILD - A.M.)**

0.65			0.65			0.65			0.65			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	90	0	0	50	0	0
8	0	0	0	0	0	5	90	0	0	50	0	0

**Existing (2019)**  
**2032 (NO BUILD - P.M.)**  
**2032 (BUILD - P.M.)**

0.50			0.50			0.50			0.50			PHF
Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	100	0	0	110	0	0
11	0	0	0	0	0	13	100	0	0	110	0	0

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gun Club Rd. / Coors Bd.**

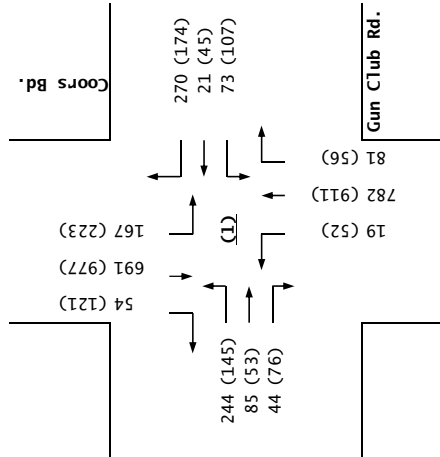
**INTERSECTION :** E-W Street: **Gun Club Rd.** (1)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032

	5.00%			0.50%			1.20%			1.20%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	140	50	24	68	20	248	15	657	69	134	532	37
Background Traffic Growth	98	35	17	5	1	17	3	110	12	23	89	6
Subtotal	238	85	41	73	21	265	18	767	81	157	621	43
Las Estancias	5	0	0	0	0	5	0	15	0	10	70	10
Sunrise Village	1	0	3	0	0	0	1	0	0	0	0	1
<b>Subtotal (NO BUILD - A.M.)</b>	<b>244</b>	<b>85</b>	<b>44</b>	<b>73</b>	<b>21</b>	<b>270</b>	<b>19</b>	<b>782</b>	<b>81</b>	<b>167</b>	<b>691</b>	<b>54</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	4.05%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.44%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	5.56%	0.00%
Total Trips Generated	0	0	6	0	0	3	12	12	0	9	40	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>244</b>	<b>85</b>	<b>50</b>	<b>73</b>	<b>21</b>	<b>273</b>	<b>31</b>	<b>794</b>	<b>81</b>	<b>176</b>	<b>731</b>	<b>54</b>

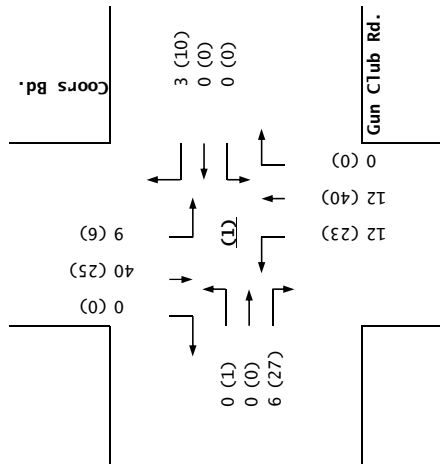
	5.00%			0.50%			1.20%			1.20%		
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	76	31	43	100	42	149	41	694	48	191	742	103
Background Traffic Growth	53	22	30	7	3	10	7	117	8	32	125	17
Subtotal	129	53	73	107	45	159	48	811	56	223	867	120
Las Estancias	15	0	0	0	0	15	0	100	0	0	110	0
Sunrise Village	1	0	3	0	0	0	4	0	0	0	0	1
<b>Subtotal (NO BUILD - P.M.)</b>	<b>145</b>	<b>53</b>	<b>76</b>	<b>107</b>	<b>45</b>	<b>174</b>	<b>52</b>	<b>911</b>	<b>56</b>	<b>223</b>	<b>977</b>	<b>121</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	4.05%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	7.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.44%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	4.05%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	5.56%	0.00%
Total Trips Generated	1	0	27	0	0	10	23	40	0	6	25	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>146</b>	<b>53</b>	<b>103</b>	<b>107</b>	<b>45</b>	<b>184</b>	<b>75</b>	<b>951</b>	<b>56</b>	<b>229</b>	<b>1,002</b>	<b>121</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

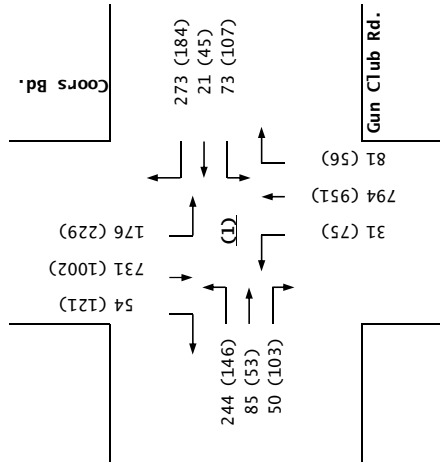
2032  
NO BUILD



Trips



2032  
BUILD



Gun Club Rd. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Coors Bd.**

**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (2)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032

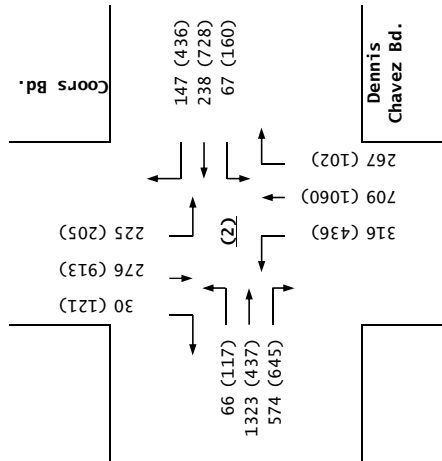
Growth Rates: **5.00%**      **0.60%**      **1.20%**      **0.50%**

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	35	765	331	62	213	136	244	436	229	210	235	26
Background Traffic Growth	25	536	232	5	18	11	41	73	38	15	16	2
<i>Subtotal</i>	60	1,301	563	67	231	147	285	509	267	225	251	28
Las Estancias	0	0	4	0	0	0	28	200	0	0	25	0
Sunrise Village	6	22	7	0	7	0	3	0	0	0	0	2
<b><i>Subtotal (NO BUILD - A.M.)</i></b>	<b>66</b>	<b>1,323</b>	<b>574</b>	<b>67</b>	<b>238</b>	<b>147</b>	<b>316</b>	<b>709</b>	<b>267</b>	<b>225</b>	<b>276</b>	<b>30</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent Residential Trips Generated(Exiting)</i>	30.07%	47.31%	5.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	6.76%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.77%
<i>Percent Commercial Trips Generated(Exiting)</i>	5.77%	6.76%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent School Diverted Trips Generated (Exiting)</i>	30.07%	47.31%	6.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	284	445	51	0	155	0	19	0	0	0	0	101
<b>Total AM Peak Hour BUILD Volumes</b>	<b>350</b>	<b>1,768</b>	<b>625</b>	<b>67</b>	<b>393</b>	<b>147</b>	<b>335</b>	<b>709</b>	<b>267</b>	<b>225</b>	<b>276</b>	<b>131</b>

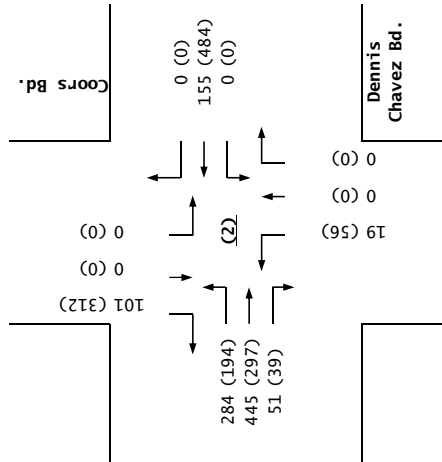
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	67	249	347	148	649	402	328	608	87	192	554	107
Background Traffic Growth	47	174	243	12	55	34	55	102	15	13	39	7
<i>Subtotal</i>	114	423	590	160	704	436	383	710	102	205	593	114
Las Estancias	0	0	50	0	0	0	45	350	0	0	320	0
Sunrise Village	3	14	5	0	24	0	8	0	0	0	0	7
<b><i>Subtotal (NO BUILD - P.M.)</i></b>	<b>117</b>	<b>437</b>	<b>645</b>	<b>160</b>	<b>728</b>	<b>436</b>	<b>436</b>	<b>1,060</b>	<b>102</b>	<b>205</b>	<b>913</b>	<b>121</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent Residential Trips Generated(Exiting)</i>	30.07%	47.31%	5.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	0.00%	0.00%	6.76%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.77%
<i>Percent Commercial Trips Generated(Exiting)</i>	5.77%	6.76%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.00%	0.00%	47.31%	0.00%	5.03%	0.00%	0.00%	0.00%	0.00%	30.07%
<i>Percent School Diverted Trips Generated (Exiting)</i>	30.07%	47.31%	6.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	194	297	39	0	484	0	56	0	0	0	0	312
<b>Total PM Peak Hour BUILD Volumes</b>	<b>311</b>	<b>734</b>	<b>684</b>	<b>160</b>	<b>1,212</b>	<b>436</b>	<b>492</b>	<b>1,060</b>	<b>102</b>	<b>205</b>	<b>913</b>	<b>433</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

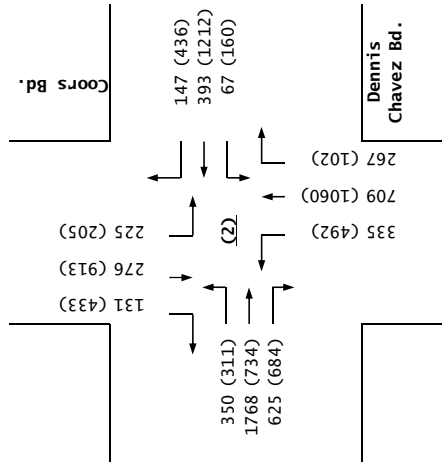
2032  
NO BUILD



Trips



2032  
BUILD



Dennis Chavez Bd. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Blake Rd. / Unser Bd.**

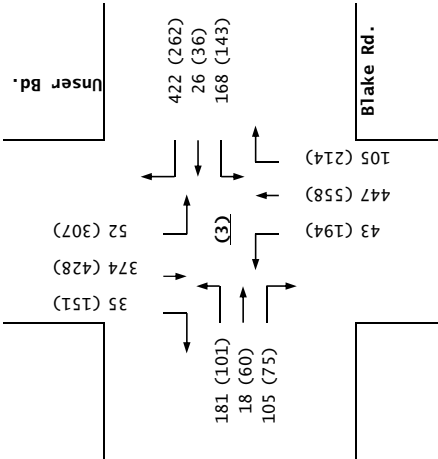
**INTERSECTION :** E-W Street: **Blake Rd.** (3)  
 N-S Street: **Unser Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032  
 Growth Rates: 2.60% 5.00% 5.00% 1.10%

	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	133	13	77	99	15	248	25	263	62	45	324	30
Background Traffic Growth	48	5	28	69	11	174	18	184	43	7	50	5
<b>Subtotal (NO BUILD - A.M.)</b>	<b>181</b>	<b>18</b>	<b>105</b>	<b>168</b>	<b>26</b>	<b>422</b>	<b>43</b>	<b>447</b>	<b>105</b>	<b>52</b>	<b>374</b>	<b>35</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	1.28%	9.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.35%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.28%	9.35%	9.40%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	2	17	0	0	1	95	14	0	44	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>181</b>	<b>18</b>	<b>107</b>	<b>185</b>	<b>26</b>	<b>422</b>	<b>44</b>	<b>542</b>	<b>119</b>	<b>52</b>	<b>418</b>	<b>35</b>

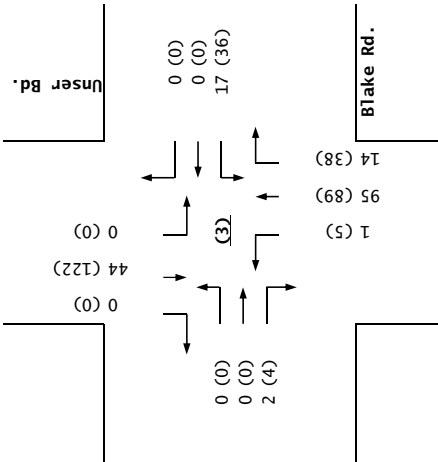
	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	74	44	55	84	21	154	114	328	126	266	371	131
Background Traffic Growth	27	16	20	59	15	108	80	230	88	41	57	20
<b>Subtotal (NO BUILD - P.M.)</b>	<b>101</b>	<b>60</b>	<b>75</b>	<b>143</b>	<b>36</b>	<b>262</b>	<b>194</b>	<b>558</b>	<b>214</b>	<b>307</b>	<b>428</b>	<b>151</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	1.28%	9.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.35%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.28%	9.35%	9.40%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.05%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.32%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	9.32%	0.46%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	4	36	0	0	5	89	38	0	122	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>101</b>	<b>60</b>	<b>79</b>	<b>179</b>	<b>36</b>	<b>262</b>	<b>199</b>	<b>647</b>	<b>252</b>	<b>307</b>	<b>550</b>	<b>151</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

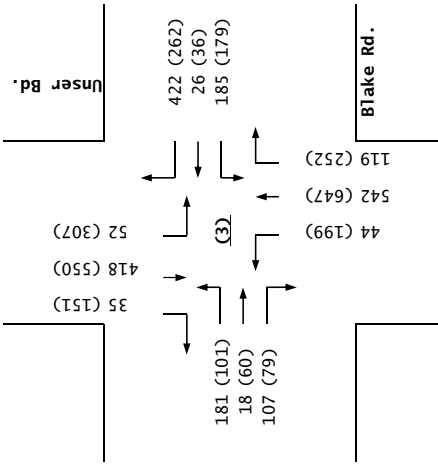
2032  
NO BUILD



Trips



2032  
BUILD



Blake Rd. / Unser Bd.



**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / 118th St.**

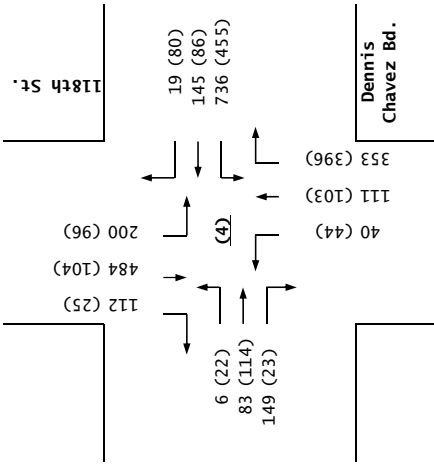
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (4)  
 N-S Street: **118th St.**  
 Year of Existing Counts: 2017  
 Horizon Year: **2032**

	0.50%			0.50%			0.50%			3.70%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	6	73	139	485	128	16	37	103	401	126	311	72
Background Traffic Growth	0	5	10	36	10	1	3	8	30	70	173	40
<i>Subtotal</i>	6	78	149	521	138	17	40	111	431	196	484	112
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	-294	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	6	78	149	521	138	17	40	111	137	196	484	112
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.06%	0.00%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.02%	0.82%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	2.13%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.54%	1.55%	2.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.82%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.06%	0.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	5	0	215	7	2	0	0	216	4	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	6	83	149	736	145	19	40	111	353	200	484	112

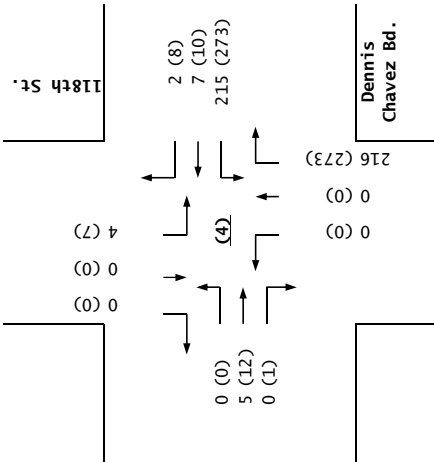
	0.50%			0.50%			0.50%			3.70%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (118th St.)			Southbound (118th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	20	95	20	169	71	67	41	96	390	57	67	16
Background Traffic Growth	2	7	2	13	5	5	3	7	29	32	37	9
<i>Subtotal</i>	22	102	22	182	76	72	44	103	419	89	104	25
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	-296	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	22	102	22	182	76	72	44	103	123	89	104	25
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.06%	0.00%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.02%	0.82%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	2.13%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.54%	1.55%	2.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	0.82%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.06%	0.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	12	1	273	10	8	0	0	273	7	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	22	114	23	455	86	80	44	103	396	96	104	25

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

2032  
BUILD

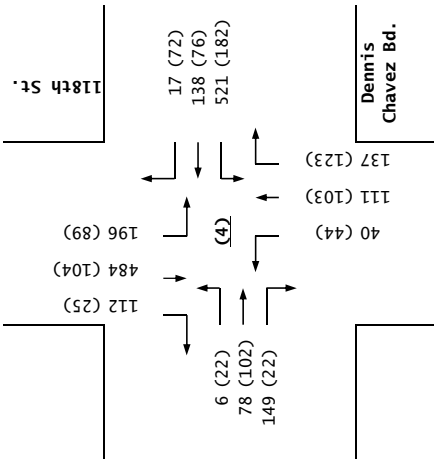


Trips



Dennis Chavez Bd. / 118th St.

2032  
NO BUILD



**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / 98th St.**

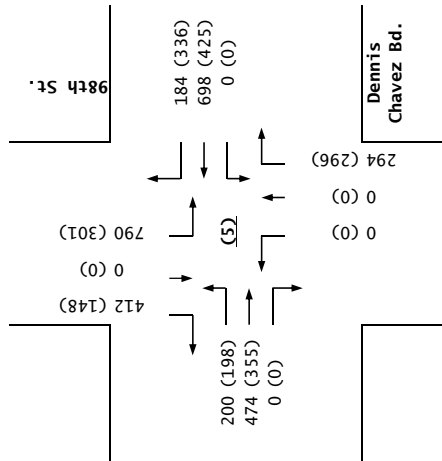
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (5)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2017  
 Horizon Year: **2032**

	0.50%			5.00%			0.50%			5.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	186	441	0	0	399	105	0	0	0	433	0	226
Background Traffic Growth	14	33	0	0	299	79	0	0	0	357	0	186
<i>Subtotal</i>	200	474	0	0	698	184	0	0	0	790	0	412
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	294	0	0	0
<b><i>Subtotal (NO BUILD - A.M.)</i></b>	<b>200</b>	<b>474</b>	<b>0</b>	<b>0</b>	<b>698</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>790</b>	<b>0</b>	<b>412</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.50%	0.40%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	5.78%	13.34%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.00%	3.22%	17.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.35%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	3.22%	49.35%	17.25%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	20.00%	80.00%	0.00%	94.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%
<i>Percent School Diverted Trips Generated (Exiting)</i>	5.78%	94.22%	0.00%	0.00%	20.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	9	167	49	63	83	0	136	89	118	0	99	3
<b>Total AM Peak Hour BUILD Volumes</b>	<b>209</b>	<b>641</b>	<b>49</b>	<b>63</b>	<b>781</b>	<b>184</b>	<b>136</b>	<b>89</b>	<b>412</b>	<b>790</b>	<b>99</b>	<b>415</b>

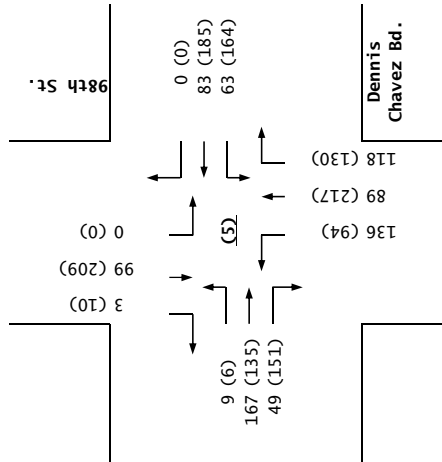
	0.50%			5.00%			0.50%			5.50%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	184	330	0	0	243	192	0	0	0	165	0	81
Background Traffic Growth	14	25	0	0	182	144	0	0	0	136	0	67
<i>Subtotal</i>	198	355	0	0	425	336	0	0	0	301	0	148
Atrisco Heritage Academy HS	0	0	0	0	0	0	0	0	296	0	0	0
<b><i>Subtotal (NO BUILD - P.M.)</i></b>	<b>198</b>	<b>355</b>	<b>0</b>	<b>0</b>	<b>425</b>	<b>336</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>301</b>	<b>0</b>	<b>148</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.50%	0.40%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	5.78%	13.34%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	1.00%	3.22%	17.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.35%	0.00%
<i>Percent Commercial Trips Generated(Exiting)</i>	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	3.22%	49.35%	17.25%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	20.00%	80.00%	0.00%	94.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.78%
<i>Percent School Diverted Trips Generated (Exiting)</i>	5.78%	94.22%	0.00%	0.00%	20.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	6	135	151	164	185	0	94	217	130	0	209	10
<b>Total PM Peak Hour BUILD Volumes</b>	<b>204</b>	<b>490</b>	<b>151</b>	<b>164</b>	<b>610</b>	<b>336</b>	<b>94</b>	<b>217</b>	<b>426</b>	<b>301</b>	<b>209</b>	<b>158</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

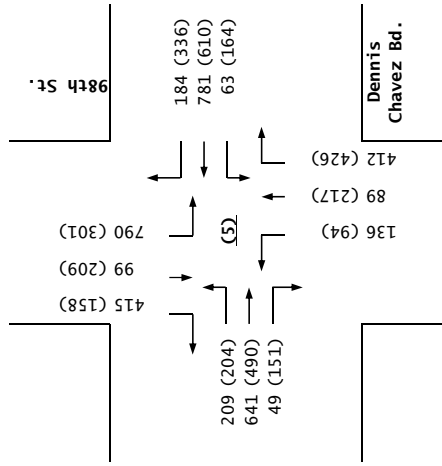
2032  
NO BUILD



Trips



2032  
BUILD



Dennis Chavez Bd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Unser Bd.**

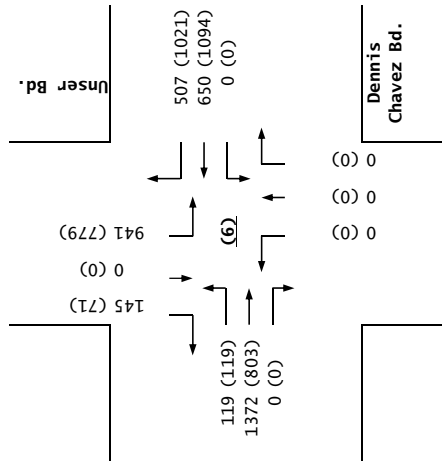
**INTERSECTION :** E-W Street: **Dennis Chavez Bd.** (6)  
 N-S Street: **Unser Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2032**

	5.00%			5.00%			0.50%			5.00%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	70	806	0	0	379	296	0	0	0	553	0	85
Background Traffic Growth	49	564	0	0	265	207	0	0	0	387	0	60
<i>Subtotal</i>	119	1,370	0	0	644	503	0	0	0	940	0	145
Sunrise Village	0	2	0	0	6	4	0	0	0	1	0	0
<b><i>Subtotal (NO BUILD - A.M.)</i></b>	<b>119</b>	<b>1,372</b>	<b>0</b>	<b>0</b>	<b>650</b>	<b>507</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>941</b>	<b>0</b>	<b>145</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.50%	66.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	9.98%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.50%	9.98%	66.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	1.00%	9.05%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	12.25%
<i>Percent Commercial Trips Generated(Exiting)</i>	12.25%	5.00%	0.00%	0.00%	0.00%	0.00%	1.00%	10.00%	9.05%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	20.00%	0.00%	84.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	9.98%	84.82%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	27	244	14	180	87	0	37	85	513	0	42	26
<b>Total AM Peak Hour BUILD Volumes</b>	<b>146</b>	<b>1,616</b>	<b>14</b>	<b>180</b>	<b>737</b>	<b>507</b>	<b>37</b>	<b>85</b>	<b>513</b>	<b>941</b>	<b>42</b>	<b>171</b>

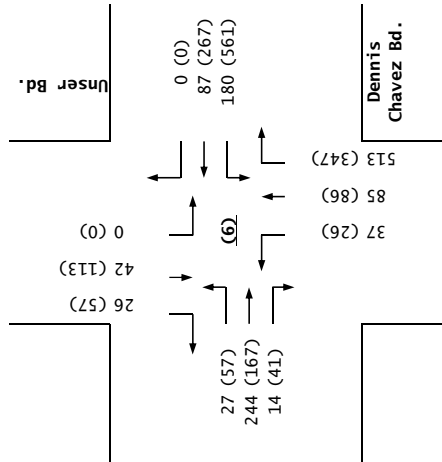
	5.00%			5.00%			0.50%			5.00%		
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	70	468	0	0	642	599	0	0	0	456	0	42
Background Traffic Growth	49	328	0	0	449	419	0	0	0	319	0	29
<i>Subtotal</i>	119	796	0	0	1,091	1,018	0	0	0	775	0	71
Sunrise Village	0	7	0	0	3	3	0	0	0	4	0	0
<b><i>Subtotal (NO BUILD - P.M.)</i></b>	<b>119</b>	<b>803</b>	<b>0</b>	<b>0</b>	<b>1,094</b>	<b>1,021</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>779</b>	<b>0</b>	<b>71</b>
<i>Percent Residential Trips Generated(Entering)</i>	0.00%	0.00%	0.50%	66.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.00%	9.98%	0.00%
<i>Percent Residential Trips Generated(Exiting)</i>	0.00%	13.34%	0.00%	0.00%	0.00%	0.00%	0.50%	9.98%	66.00%	0.00%	0.00%	0.00%
<i>Percent Commercial Trips Generated(Entering)</i>	0.00%	0.00%	1.00%	9.05%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	12.25%
<i>Percent Commercial Trips Generated(Exiting)</i>	12.25%	5.00%	0.00%	0.00%	0.00%	0.00%	1.00%	10.00%	9.05%	0.00%	0.00%	0.00%
<i>Percent School Diverted Trips Generated (Entering)</i>	0.00%	0.00%	20.00%	0.00%	84.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
<i>Percent School Diverted Trips Generated (Exiting)</i>	9.98%	84.82%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	57	167	41	561	267	0	26	86	347	0	113	57
<b>Total PM Peak Hour BUILD Volumes</b>	<b>176</b>	<b>970</b>	<b>41</b>	<b>561</b>	<b>1,361</b>	<b>1,021</b>	<b>26</b>	<b>86</b>	<b>347</b>	<b>779</b>	<b>113</b>	<b>128</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

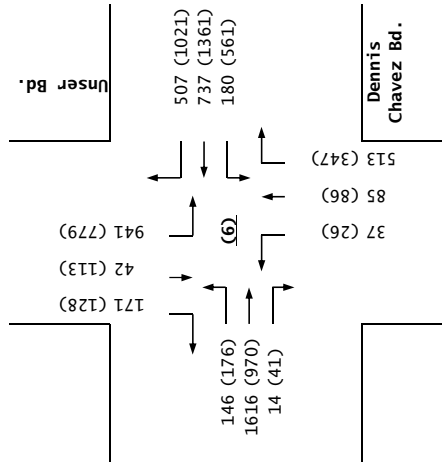
2032  
NO BUILD



Trips



2032  
BUILD



Dennis Chavez Bd. / Unser Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Dennis Chavez Bd. / Condershire Dr.**

INTERSECTION: E-W Street: **Dennis Chavez Bd.** (7)  
 N-S Street: **Condershire Dr.**  
 Year of Existing Counts: 2018  
 Horizon Year: **2032**

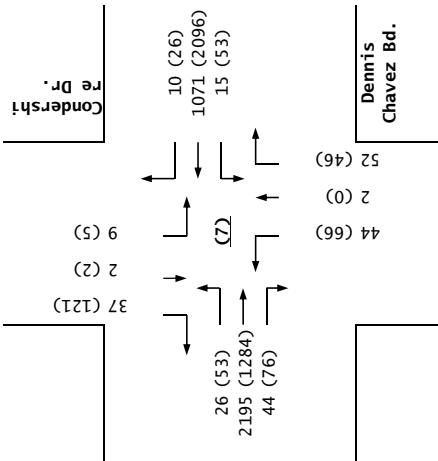
Growth Rates: **5.00%** **5.00%** **5.00%** **5.00%**

	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	15	1,291	24	2	630	6	20	1	10	5	1	22
Background Traffic Growth	11	904	17	1	441	4	14	1	7	4	1	15
Subtotal	26	2,195	41	3	1,071	10	34	2	17	9	2	37
Sunrise Village	0	0	3	12	0	0	10	0	35	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>26</b>	<b>2,195</b>	<b>44</b>	<b>15</b>	<b>1,071</b>	<b>10</b>	<b>44</b>	<b>2</b>	<b>52</b>	<b>9</b>	<b>2</b>	<b>37</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	4.00%	78.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent Residential Trips Generated(Exiting)	0.23%	78.41%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%
Percent Commercial Trips Generated(Exiting)	1.52%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	83.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent School Diverted Trips Generated (Exiting)	0.23%	83.89%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Total Trips Generated	3	747	6	10	261	0	0	0	37	0	0	4
<b>Total AM Peak Hour BUILD Volumes</b>	<b>29</b>	<b>2,942</b>	<b>50</b>	<b>25</b>	<b>1,332</b>	<b>10</b>	<b>44</b>	<b>2</b>	<b>89</b>	<b>9</b>	<b>2</b>	<b>41</b>

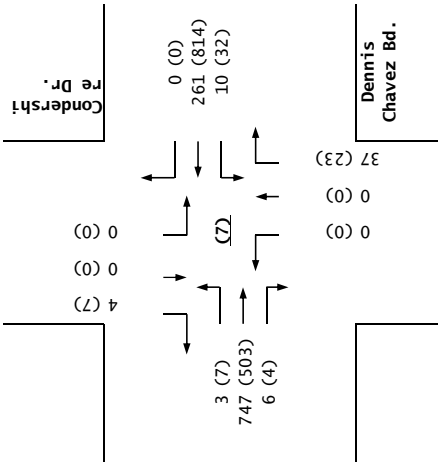
	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	31	755	38	8	1,233	15	35	0	14	3	1	71
Background Traffic Growth	22	529	27	6	863	11	25	0	10	2	1	50
Subtotal	53	1,284	65	14	2,096	26	60	0	24	5	2	121
Sunrise Village	0	0	11	39	0	0	6	0	22	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>53</b>	<b>1,284</b>	<b>76</b>	<b>53</b>	<b>2,096</b>	<b>26</b>	<b>66</b>	<b>0</b>	<b>46</b>	<b>5</b>	<b>2</b>	<b>121</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	4.00%	78.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent Residential Trips Generated(Exiting)	0.23%	78.41%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%
Percent Commercial Trips Generated(Exiting)	1.52%	12.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	83.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Percent School Diverted Trips Generated (Exiting)	0.23%	83.89%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%
Total Trips Generated	7	503	4	32	814	0	0	0	23	0	0	7
<b>Total PM Peak Hour BUILD Volumes</b>	<b>60</b>	<b>1,787</b>	<b>80</b>	<b>85</b>	<b>2,910</b>	<b>26</b>	<b>66</b>	<b>0</b>	<b>69</b>	<b>5</b>	<b>2</b>	<b>128</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

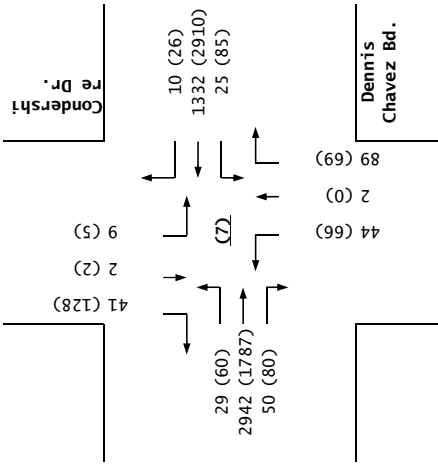
2032  
NO BUILD



Trips



2032  
BUILD



Dennis Chavez Bd. / Condershire Dr.



**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Rio Bravo Sq. / Coors Bd.**

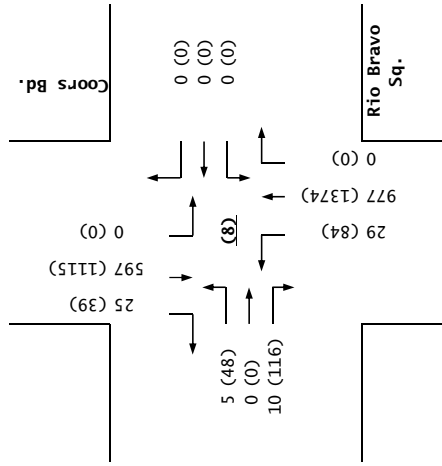
**INTERSECTION :** E-W Street: **Rio Bravo Sq.** (8)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032  
 Growth Rates: 0.50% 0.50% 0.50% 0.50%

	Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	9	0	0	0	27	580	0	0	462	23
Background Traffic Growth	0	0	1	0	0	0	2	41	0	0	32	2
<b>Subtotal (NO BUILD - A.M.)</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>693</b>	<b>0</b>	<b>0</b>	<b>496</b>	<b>25</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.63%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	5.63%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	284	0	0	101	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>977</b>	<b>0</b>	<b>0</b>	<b>597</b>	<b>25</b>

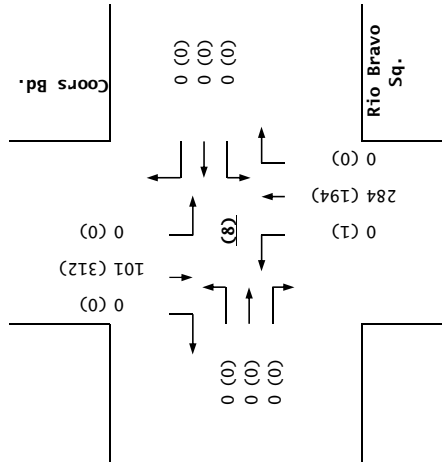
	Eastbound (Rio Bravo Sq.)			Westbound (Rio Bravo Sq.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	45	0	108	0	0	0	78	999	0	0	745	36
Background Traffic Growth	3	0	8	0	0	0	5	70	0	0	52	3
<b>Subtotal (NO BUILD - P.M.)</b>	<b>48</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>1,180</b>	<b>0</b>	<b>0</b>	<b>803</b>	<b>39</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.63%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	5.63%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.05%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	30.05%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	1	194	0	0	312	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>48</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>1,374</b>	<b>0</b>	<b>0</b>	<b>1,115</b>	<b>39</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

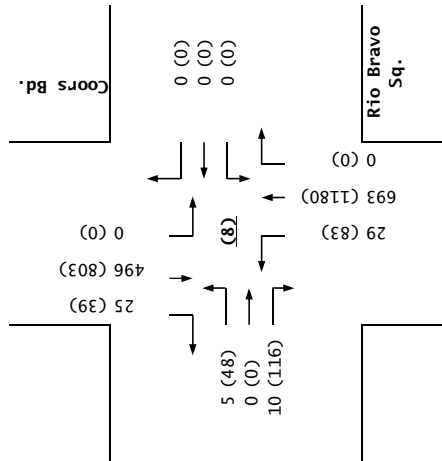
2032  
BUILD



Trips



2032  
NO BUILD



Rio Bravo Sq. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gibson Bd. / 98th St.**

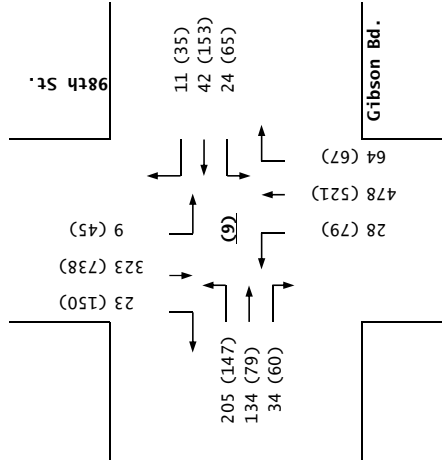
**INTERSECTION :** E-W Street: **Gibson Bd.** (9)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032  
 Growth Rates: 2.60% 1.00% 1.50% 2.10%

	Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	150	98	18	11	37	10	17	334	47	7	198	18
Background Traffic Growth	55	36	7	2	5	1	4	70	10	2	58	5
<b>Subtotal (NO BUILD - A.M.)</b>	<b>205</b>	<b>134</b>	<b>25</b>	<b>13</b>	<b>42</b>	<b>11</b>	<b>21</b>	<b>404</b>	<b>57</b>	<b>9</b>	<b>256</b>	<b>23</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	5.40%	6.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.57%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.40%	29.57%	6.57%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	9	11	0	0	7	74	7	0	67	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>205</b>	<b>134</b>	<b>34</b>	<b>24</b>	<b>42</b>	<b>11</b>	<b>28</b>	<b>478</b>	<b>64</b>	<b>9</b>	<b>323</b>	<b>23</b>

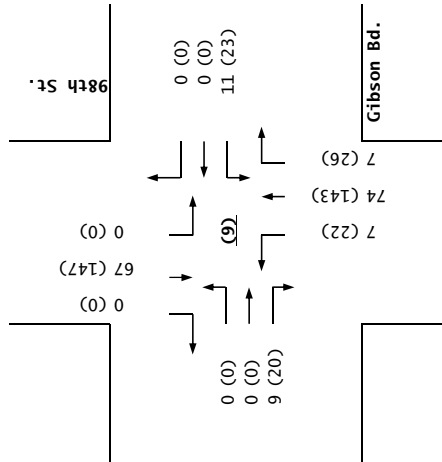
	Eastbound (Gibson Bd.)			Westbound (Gibson Bd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	108	58	29	37	134	31	47	312	34	35	457	116
Background Traffic Growth	39	21	11	5	19	4	10	66	7	10	134	34
<b>Subtotal (NO BUILD - P.M.)</b>	<b>147</b>	<b>79</b>	<b>40</b>	<b>42</b>	<b>153</b>	<b>35</b>	<b>57</b>	<b>378</b>	<b>41</b>	<b>45</b>	<b>591</b>	<b>150</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	5.40%	6.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.57%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.40%	29.57%	6.57%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.20%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	5.11%	0.14%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	20	23	0	0	22	143	26	0	147	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>147</b>	<b>79</b>	<b>60</b>	<b>65</b>	<b>153</b>	<b>35</b>	<b>79</b>	<b>521</b>	<b>67</b>	<b>45</b>	<b>738</b>	<b>150</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

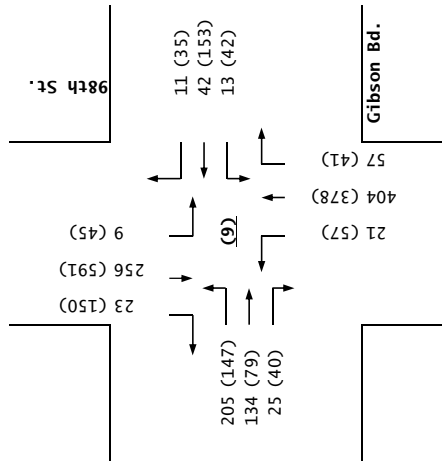
2032  
BUILD



Trips



2032  
NO BUILD



Gibson Bd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Blake Rd. / 98th St.**

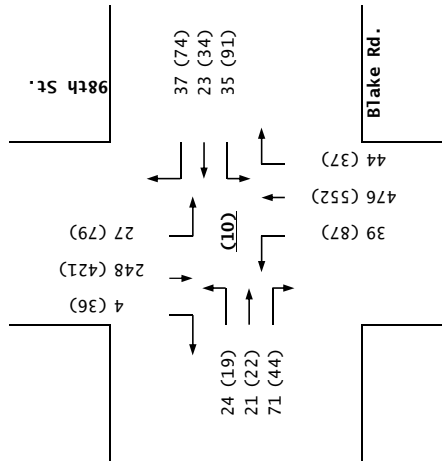
**INTERSECTION :** E-W Street: **Blake Rd.** (10)  
 N-S Street: **98th St.**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032  
 Growth Rates: 0.50% 2.60% 5.50% 1.50%

	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	22	20	66	26	17	27	22	269	25	22	205	3
Background Traffic Growth	2	1	5	9	6	10	17	207	19	5	43	1
<b>Subtotal (NO BUILD - A.M.)</b>	<b>24</b>	<b>21</b>	<b>71</b>	<b>35</b>	<b>23</b>	<b>37</b>	<b>39</b>	<b>476</b>	<b>44</b>	<b>27</b>	<b>248</b>	<b>4</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.54%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.09%	41.54%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	4	0	0	0	3	89	0	0	89	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>24</b>	<b>21</b>	<b>75</b>	<b>35</b>	<b>23</b>	<b>37</b>	<b>42</b>	<b>565</b>	<b>44</b>	<b>27</b>	<b>337</b>	<b>4</b>

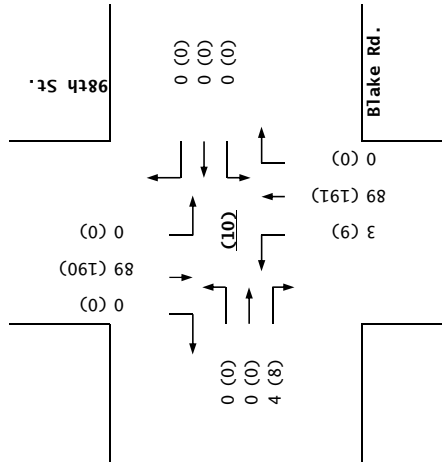
	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	18	21	41	67	25	54	49	312	21	65	348	30
Background Traffic Growth	1	1	3	24	9	20	38	240	16	14	73	6
<b>Subtotal (NO BUILD - P.M.)</b>	<b>19</b>	<b>22</b>	<b>44</b>	<b>91</b>	<b>34</b>	<b>74</b>	<b>87</b>	<b>552</b>	<b>37</b>	<b>79</b>	<b>421</b>	<b>36</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.54%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.09%	41.54%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.45%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	5.45%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	8	0	0	0	9	191	0	0	190	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>19</b>	<b>22</b>	<b>52</b>	<b>91</b>	<b>34</b>	<b>74</b>	<b>96</b>	<b>743</b>	<b>37</b>	<b>79</b>	<b>611</b>	<b>36</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

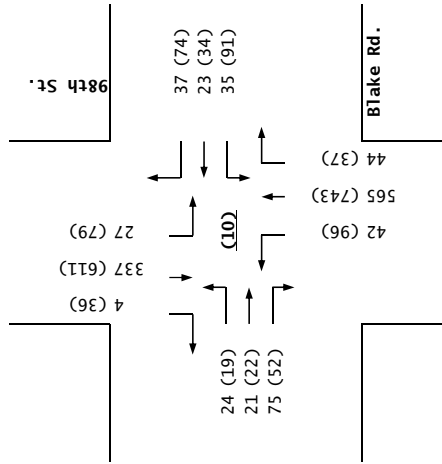
2032  
NO BUILD



Trips



2032  
BUILD



Blake Rd. / 98th St.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gun Club Rd. / Karrol St.**

**INTERSECTION :** E-W Street: **Gun Club Rd.** (11)  
 N-S Street: **Karrol St.**  
 Year of Existing Counts 2018  
 Horizon Year 2032

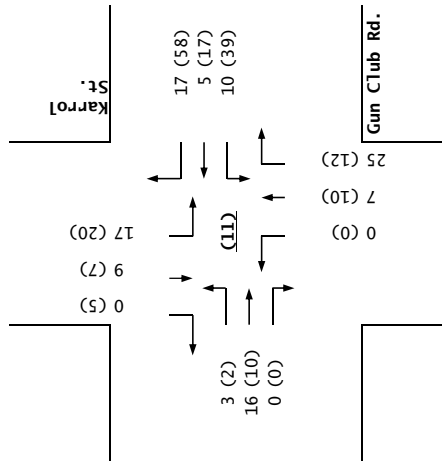
Growth Rates 0.50% 5.00% 0.50% 0.50%

	0.50%			5.00%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	3	15	0	6	3	9	0	7	23	12	8	0
Background Traffic Growth	0	1	0	4	2	6	0	0	2	1	1	0
Subtotal	3	16	0	10	5	15	0	7	25	13	9	0
Sunrise Village	0	0	0	0	0	2	0	0	0	4	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>3</b>	<b>16</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>17</b>	<b>0</b>	<b>7</b>	<b>25</b>	<b>17</b>	<b>9</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	7.02%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Total Trips Generated	0	6	1	0	12	0	2	1	0	0	4	0
<b>Subtotal AM Pk Hr. BUILD Volumes</b>	<b>3</b>	<b>22</b>	<b>1</b>	<b>10</b>	<b>17</b>	<b>17</b>	<b>2</b>	<b>8</b>	<b>25</b>	<b>17</b>	<b>13</b>	<b>0</b>
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>3</b>	<b>22</b>	<b>1</b>	<b>10</b>	<b>17</b>	<b>17</b>	<b>2</b>	<b>8</b>	<b>25</b>	<b>17</b>	<b>13</b>	<b>0</b>

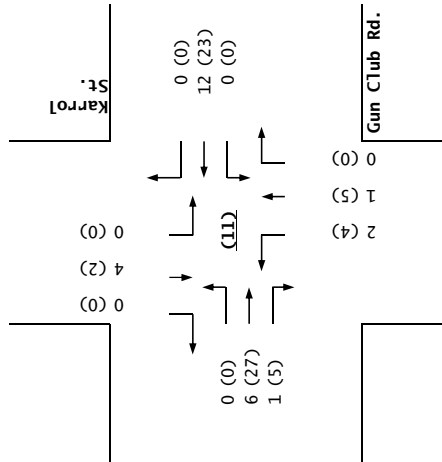
	0.50%			5.00%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	2	9	0	23	10	31	0	9	11	15	7	5
Background Traffic Growth	0	1	0	16	7	22	0	1	1	1	0	0
Subtotal	2	10	0	39	17	53	0	10	12	16	7	5
Sunrise Village	0	0	0	0	0	5	0	0	0	4	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>39</b>	<b>17</b>	<b>58</b>	<b>0</b>	<b>10</b>	<b>12</b>	<b>20</b>	<b>7</b>	<b>5</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	7.02%	0.00%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	7.02%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%
Total Trips Generated	0	27	5	0	23	0	4	5	0	0	2	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>2</b>	<b>37</b>	<b>5</b>	<b>39</b>	<b>40</b>	<b>58</b>	<b>4</b>	<b>15</b>	<b>12</b>	<b>20</b>	<b>9</b>	<b>5</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

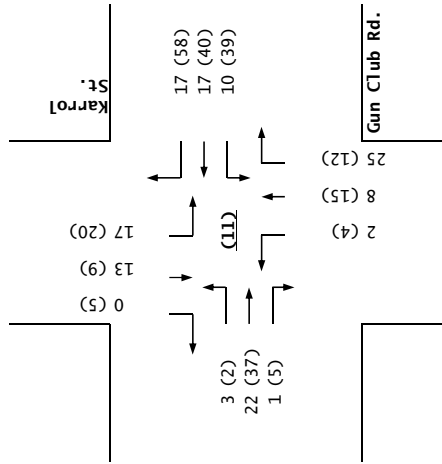
2032  
NO BUILD



Trips



2032  
BUILD



Gun Club Rd. / Karrol St.



**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Don Felipe Rd. / Coors Bd.**

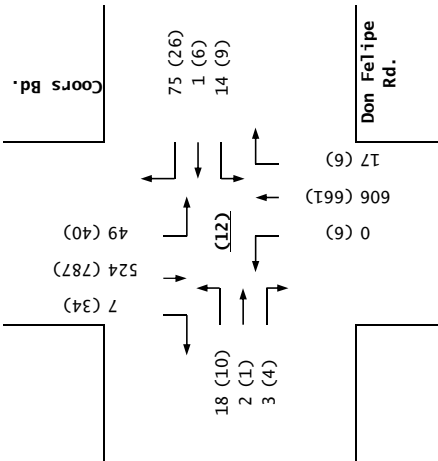
**INTERSECTION :** E-W Street: **Don Felipe Rd.** (12)  
 N-S Street: **Coors Bd.**  
 Year of Existing Counts 2018  
 Horizon Year 2032  
 Growth Rates 0.50% 0.50% 0.50% 1.20%

	0.50%			0.50%			0.50%			1.20%		
	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	17	2	3	13	1	70	0	566	16	42	449	6
Background Traffic Growth	1	0	0	1	0	5	0	40	1	7	75	1
<b>Subtotal (NO BUILD - A.M.)</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>14</b>	<b>1</b>	<b>75</b>	<b>0</b>	<b>606</b>	<b>17</b>	<b>49</b>	<b>524</b>	<b>7</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	0.00%	4.54%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	4.54%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Total Trips Generated	0	0	0	0	0	7	0	18	0	11	32	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>14</b>	<b>1</b>	<b>82</b>	<b>0</b>	<b>624</b>	<b>17</b>	<b>60</b>	<b>556</b>	<b>7</b>

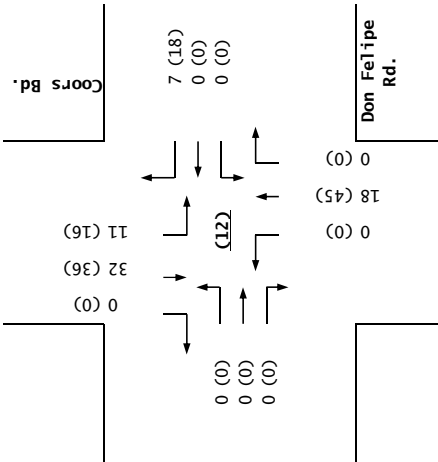
	0.50%			0.50%			0.50%			1.20%		
	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	1	4	8	6	24	6	618	6	34	674	29
Background Traffic Growth	1	0	0	1	0	2	0	43	0	6	113	5
<b>Subtotal (NO BUILD - P.M.)</b>	<b>10</b>	<b>1</b>	<b>4</b>	<b>9</b>	<b>6</b>	<b>26</b>	<b>6</b>	<b>661</b>	<b>6</b>	<b>40</b>	<b>787</b>	<b>34</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	0.00%	4.54%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	4.54%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	3.07%	0.00%
Total Trips Generated	0	0	0	0	0	18	0	45	0	16	36	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>10</b>	<b>1</b>	<b>4</b>	<b>9</b>	<b>6</b>	<b>44</b>	<b>6</b>	<b>706</b>	<b>6</b>	<b>56</b>	<b>823</b>	<b>34</b>

	Entering	Exiting		
Number of Residential Trips Generated	249	765	A.M.	100% Residential Development
	805	473	P.M.	
Number of Commercial Trips Generated	173	91	A.M.	100% Commercial Development
	329	386	P.M.	
Number of Diverted School Trips	53	162	A.M.	100% Residential Development
	171	100	P.M.	

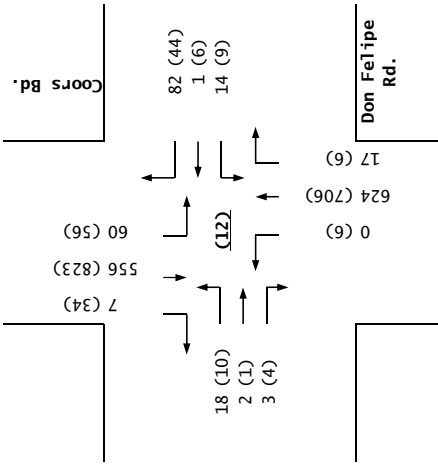
2032  
NO BUILD



Trips



2032  
BUILD



Don Felipe Rd. / Coors Bd.

**Ceja Vista Development (Dennis Chavez Bd. / 98th St.)**  
 Projected Turning Movements Worksheet  
**Gun Club Rd. / Unser Connection**

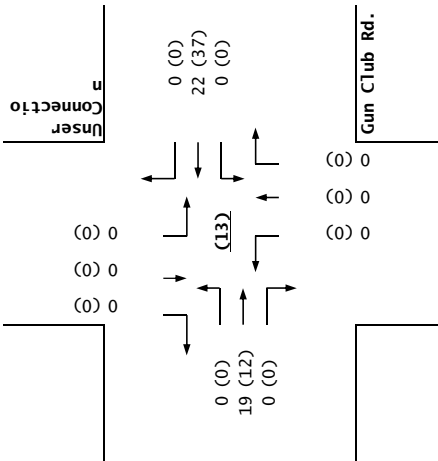
**INTERSECTION :** E-W Street: **Gun Club Rd.** (13)  
 N-S Street: **Unser Connection**  
 Year of Existing Counts: 2018  
 Horizon Year: 2032  
 Growth Rates: 0.00% 0.00% 0.00% 0.00%

	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	20	0	0	0	25	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>

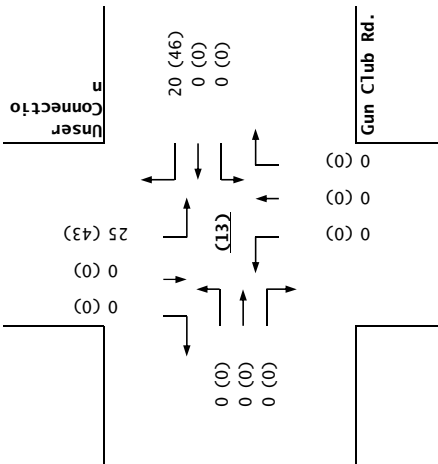
	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			NB (Unser Connection)			SB (Unser Connection)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.22%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	46	0	0	0	43	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>0</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

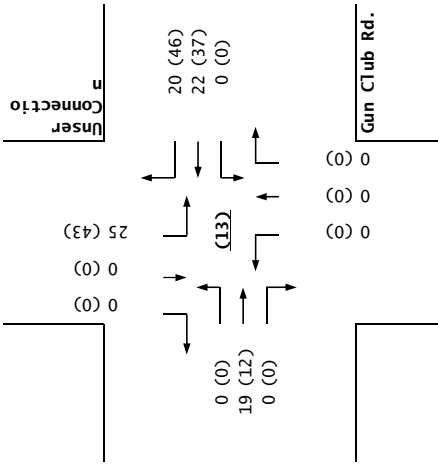
2032  
NO BUILD



Trips



2032  
BUILD



Gun Club Rd. / Unser Connection

### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements Worksheet

#### Future Connection / Karrol St.

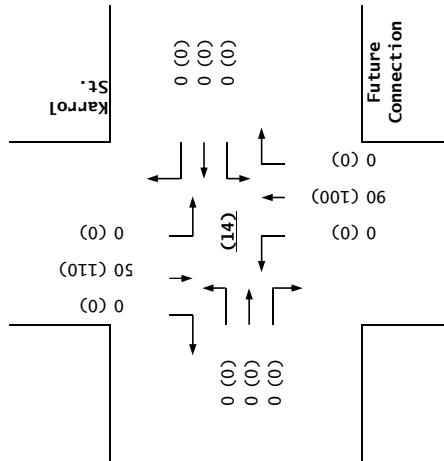
**INTERSECTION :** E-W Street: **Future Connection** (14)  
 N-S Street: **Karrol St.**  
 Year of Existing Counts: 2017  
 Horizon Year: 2032  
 Growth Rates: 0.00% 0.00% 0.00% 0.00%

	EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	8	0	0	0	0	0	5	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>

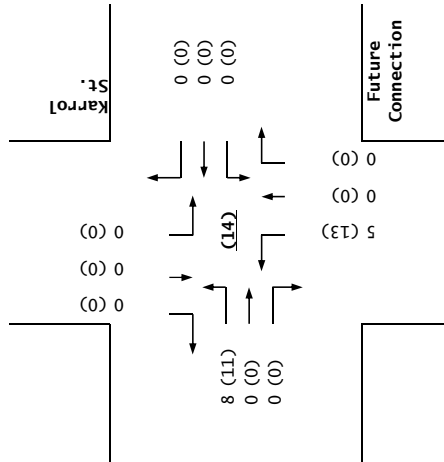
	EB (Future Connection)			WB (Future Connection)			Northbound (Karrol St.)			Southbound (Karrol St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	0	0	0	0	0	13	0	0	0	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

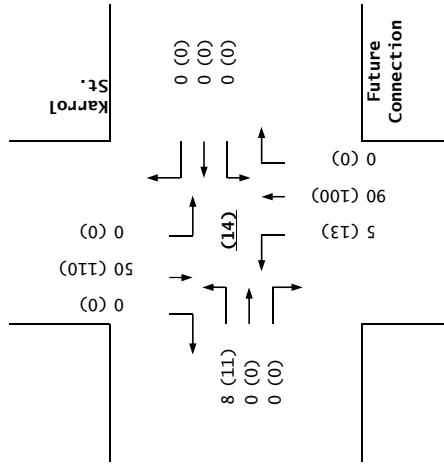
2032  
NO BUILD



Trips



2032  
BUILD



Future Connection / Karrol St.

### Ceja Vista Development (Dennis Chavez Bd. / 98th St.)

Projected Turning Movements Worksheet

#### Meade Ave. / Karroll St.

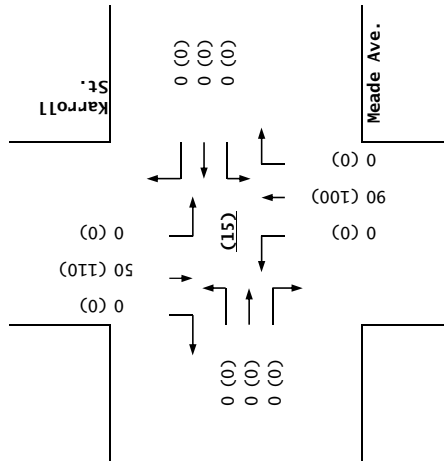
**INTERSECTION :** E-W Street: **Meade Ave.** (15)  
 N-S Street: **Karroll St.**  
 Year of Existing Counts: 2017  
 Horizon Year: 2032  
 Growth Rates: 0.00% 0.00% 0.00% 0.00%

	Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - A.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	8	0	0	0	0	0	5	0	0	0	0	0
<b>Total AM Peak Hour BUILD Volumes</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>

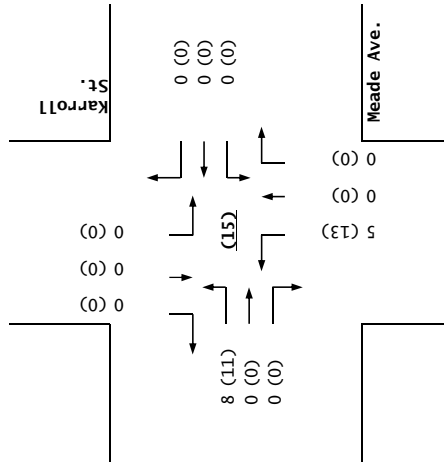
	Eastbound (Meade Ave.)			Westbound (Meade Ave.)			Northbound (Karroll St.)			Southbound (Karroll St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (NO BUILD - P.M.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent School Diverted Trips Generated (Exiting)	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	0	0	0	0	0	13	0	0	0	0	0
<b>Total PM Peak Hour BUILD Volumes</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>0</b>

	Entering	Exiting	
Number of Residential Trips Generated	249	765	A.M. 100% Residential Development
	805	473	P.M.
Number of Commercial Trips Generated	173	91	A.M. 100% Commercial Development
	329	386	P.M.
Number of Diverted School Trips	53	162	A.M. 100% Residential Development
	171	100	P.M.

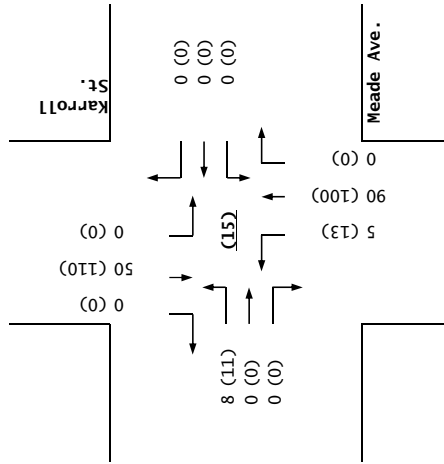
2032  
NO BUILD



Trips



2032  
BUILD



Meade Ave. / Karroll St.



Timings  
1: Coors Bld. & Gun Club Rd.

Terry O. Brown, PE  
07/27/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	140	50	68	20	248	15	667	69	134	532
Traffic Volume (vph)	140	50	68	20	248	15	667	69	134	532
Future Volume (vph)	140	50	68	20	248	15	667	69	134	532
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	154	55	26	75	22	273	16	722	76	147
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	408	271	128	398	357	303	464	1752	781	412
Arrive On Green	0.09	0.23	0.23	0.05	0.19	0.19	0.04	0.50	0.06	0.51
Sat Flow, veh/h	1767	1191	563	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	154	0	81	75	22	273	16	722	76	147
Grip Sat Flow(s), veh/h/ln	1767	0	1754	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	8.2	0.0	4.5	4.0	1.2	20.4	0.5	15.6	3.1	4.8
Cycle Q Clear(g, c), s	8.2	0.0	4.5	4.0	1.2	20.4	0.5	15.6	3.1	4.8
Prop In Lane	1.00	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.38	0.00	0.20	0.19	0.06	0.90	0.03	0.41	0.10	0.36
Avail Cap(c, a), veh/h	478	0	585	441	526	446	523	1752	781	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	37.5	35.9	39.6	47.3	13.3	19.1	16.0	14.2
Incr Delay (d2), s/veh	0.6	0.0	0.2	0.2	0.1	15.7	0.0	0.7	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	3.5	0.0	1.9	1.7	0.5	9.0	0.2	6.0	1.1	1.8
Unsig. Movement Delay, s/veh	33.9	0.0	37.8	36.1	39.7	63.1	13.3	19.8	16.2	14.7
LnGrip Delay(d), s/veh	C	A	D	D	D	E	B	B	B	B
LnGrip LOS	C	A	D	D	D	E	B	B	B	B
Approach Vol, veh/h	236						814			773
Approach Delay, s/veh	35.3						19.4			16.8
Approach LOS	D						B			B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	12.0	64.6	11.1	32.3	10.0	66.6	15.2	28.1		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0		
Max Q Clear Time (g, c+11), s	6.8	17.6	6.0	6.5	2.5	13.6	10.2	22.4		
Green Ext Time (p, c), s	0.2	4.4	0.0	0.4	0.0	3.7	0.1	0.8		
Intersection Summary										
HCM 6th Ctrl Delay	26.4									
HCM 6th LOS	C									

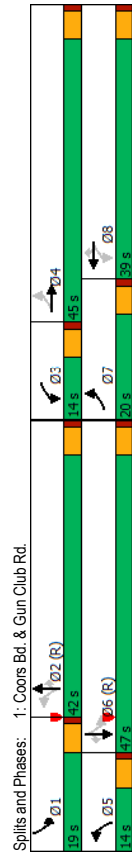
2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

HCM 6th Signalized Intersection Summary  
1: Coors Bld. & Gun Club Rd.

Terry O. Brown, PE  
07/27/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	140	50	24	68	15	667	69	134	532	37
Traffic Volume (veh/h)	140	50	24	68	15	667	69	134	532	37
Future Volume (veh/h)	140	50	24	68	15	667	69	134	532	37
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	154	55	26	75	22	273	16	722	76	147
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	408	271	128	398	357	303	464	1752	781	412
Arrive On Green	0.09	0.23	0.23	0.05	0.19	0.19	0.04	0.50	0.06	0.51
Sat Flow, veh/h	1767	1191	563	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	154	0	81	75	22	273	16	722	76	147
Grip Sat Flow(s), veh/h/ln	1767	0	1754	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	8.2	0.0	4.5	4.0	1.2	20.4	0.5	15.6	3.1	4.8
Cycle Q Clear(g, c), s	8.2	0.0	4.5	4.0	1.2	20.4	0.5	15.6	3.1	4.8
Prop In Lane	1.00	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.38	0.00	0.20	0.19	0.06	0.90	0.03	0.41	0.10	0.36
Avail Cap(c, a), veh/h	478	0	585	441	526	446	523	1752	781	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	37.5	35.9	39.6	47.3	13.3	19.1	16.0	14.2
Incr Delay (d2), s/veh	0.6	0.0	0.2	0.2	0.1	15.7	0.0	0.7	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	3.5	0.0	1.9	1.7	0.5	9.0	0.2	6.0	1.1	1.8
Unsig. Movement Delay, s/veh	33.9	0.0	37.8	36.1	39.7	63.1	13.3	19.8	16.2	14.7
LnGrip Delay(d), s/veh	C	A	D	D	D	E	B	B	B	B
LnGrip LOS	C	A	D	D	D	E	B	B	B	B
Approach Vol, veh/h	236						814			773
Approach Delay, s/veh	35.3						19.4			16.8
Approach LOS	D						B			B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	12.0	64.6	11.1	32.3	10.0	66.6	15.2	28.1		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0		
Max Q Clear Time (g, c+11), s	6.8	17.6	6.0	6.5	2.5	13.6	10.2	22.4		
Green Ext Time (p, c), s	0.2	4.4	0.0	0.4	0.0	3.7	0.1	0.8		
Intersection Summary										
HCM 6th Ctrl Delay	26.4									
HCM 6th LOS	C									

2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

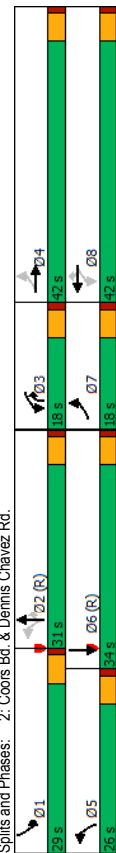


2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

Timings  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
07/27/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
35	765	62	213	136	244	436	229	210
35	765	62	213	136	244	436	229	210
NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA
7	4	3	8	5	2	3	1	6
4	8	8	8	2	2	2	1	6
7	4	3	8	8	5	2	3	1
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
55.8	49.0	57.8	50.0	47.4	30.2	43.0	13.0	26.0
0.46	0.41	0.48	0.42	0.42	0.40	0.25	0.36	0.11
0.07	0.82	0.35	0.29	0.19	0.56	0.51	0.38	0.60
16.4	36.5	21.4	25.8	4.8	24.4	34.6	12.2	57.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16.4	36.5	21.4	25.8	4.8	24.4	34.6	12.2	57.5
B	D	C	A	C	C	B	E	D
35.9	18.2			26.2				47.8
D		B		C				D
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 120								
Offset: 106 (88%), Referenced to phase 2:NBL and 6:SBT, Start of Green								
Natural Cycle: 70								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.82								
Intersection Signal Delay: 32.3								
Intersection Capacity Utilization 73.4%								
Analysis Period (min) 15								



2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

HCM 6th Signalized Intersection Summary  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
07/27/2019

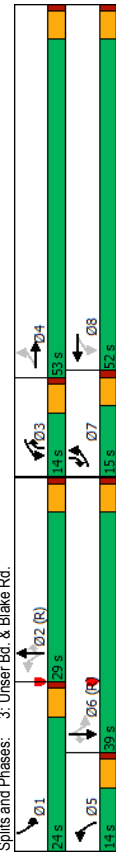
EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
35	765	62	213	136	244	436	229	210
35	765	62	213	136	244	436	229	210
0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	No	No	No	No	No	No	No	No
1856	1856	1856	1856	1856	1856	1856	1856	1856
36	797	0	65	222	0	254	454	239
0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
3	3	3	3	3	3	3	3	3
320	918	167	487	656	1569	769	288	1377
0.04	0.26	0.00	0.04	0.26	0.00	0.10	0.45	0.08
1767	3618	0	1767	1856	1572	1767	3526	1572
36	797	0	65	222	0	254	454	239
1767	1763	0	1767	1856	1572	1767	1763	1572
1.7	25.9	0.0	3.2	12.0	0.0	9.5	9.8	11.0
1.7	25.9	0.0	3.2	12.0	0.0	9.5	9.8	11.0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
320	918	167	487	656	1569	769	288	1377
0.11	0.87	0.39	0.46	0.39	0.29	0.31	0.76	0.18
438	1087	282	572	789	1969	789	686	757
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30.4	42.4	0.0	33.3	37.1	0.0	15.7	21.2	18.5
0.2	6.7	0.0	1.5	0.7	0.0	0.4	0.9	4.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.7	11.7	0.0	1.4	5.4	0.0	3.7	4.0	3.3
30.6	49.1	0.0	34.7	37.7	0.0	16.0	21.6	19.4
C	D	C	D	B	C	B	E	C
833	A	287	A	947				491
48.3		37.1		19.6				37.8
D	D	D	D	B				D
1	2	3	4	5	6	7	8	
15.1	58.4	10.2	36.3	17.0	56.5	10.0	36.5	
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0	
9.5	13.0	5.2	27.9	11.5	7.7	3.7	14.0	
0.6	2.9	0.1	3.3	0.5	1.3	0.0	1.1	
Intersection Summary								
HCM 6th Ctrl Delay 34.4								
HCM 6th LOS C								
Notes								
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.								

2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

Timings  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
07/27/2019

	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	133	13	99	15	25	263	62	45	324	30
Traffic Volume (vph)	133	13	99	15	25	263	62	45	324	30
Future Volume (vph)	133	13	99	15	25	263	62	45	324	30
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	5	2	3	1	6	7
Permitted Phases	4	4	3	8	2	2	3	1	6	6
Detector Phase	7	4	3	8	5	2	3	1	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
Minimum Split (s)	15.0	53.0	14.0	52.0	14.0	29.0	14.0	24.0	39.0	15.0
Total Split (%)	12.5%	44.2%	11.7%	43.3%	11.7%	24.2%	11.7%	20.0%	32.5%	12.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	26.6	12.3	21.1	9.5	75.6	69.4	85.9	76.7	69.9	89.2
Act Effct Green (s)	0.22	0.10	0.18	0.08	0.63	0.58	0.72	0.64	0.58	0.74
Actuated g/C Ratio	0.55	0.42	0.41	0.77	0.04	0.15	0.06	0.07	0.18	0.03
Control Delay	43.9	18.0	39.7	21.6	9.2	13.6	0.6	9.0	13.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	18.0	39.7	21.6	9.2	13.6	0.6	9.0	13.5	0.5
LOS	D	B	D	C	A	B	A	A	B	A
Approach Delay	33.4	26.5	33.4	26.5	33.4	26.5	33.4	26.5	33.4	26.5
Approach LOS	C	C	C	C	B	B	B	B	C	B
Intersection Summary										
Cycle Length: 120										
Actuated Cycle Length: 120										
Offset Cycle Length: 120										
Offset 94 (78%), Referenced to phase 2:NBL and 6:SBTL - Start of Green										
Natural Cycle: 65										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.77										
Intersection Signal Delay: 19.2										
Intersection Capacity Utilization 53.3%										
Analysis Period (min) 15										



2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
07/27/2019

	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	133	13	99	15	248	25	263	62	45	324
Traffic Volume (veh/h)	133	13	77	99	15	248	25	263	62	45
Future Volume (veh/h)	133	13	77	99	15	248	25	263	62	45
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	149	15	87	111	17	279	28	296	70	51
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	238	54	313	401	19	317	565	1756	886	589
Arrive On Green	0.08	0.23	0.23	0.07	0.21	0.21	0.04	0.50	0.04	0.50
Sat Flow, veh/h	1767	237	1372	1767	91	1495	1767	3526	1572	1767
Grip Volume(v), veh/h	149	0	102	111	0	296	28	296	70	51
Grip Sat Flow(s), veh/h/in	1767	0	1609	1767	0	1586	1767	1763	1572	1763
Q Serve(g, s), s	7.8	0.0	6.3	5.8	0.0	21.7	0.9	5.5	2.4	1.6
Cycle Q Clear(g, c), s	7.8	0.0	6.3	5.8	0.0	21.7	0.9	5.5	2.4	1.6
Prop In Lane	1.00	0.85	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.63	0.00	0.28	0.28	0.00	0.88	0.05	0.17	0.08	0.09
Lane Grip Cap(c), veh/h	238	0	367	401	0	336	565	1756	886	589
Avail Cap(c,a), veh/h	241	0	643	418	0	621	623	1756	886	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	38.2	33.5	0.0	45.8	13.1	16.5	12.0	13.2
Incr Delay (d2), s/veh	5.0	0.0	0.4	0.4	0.0	7.5	0.0	0.2	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	3.6	0.0	2.5	2.5	0.0	9.0	0.3	2.2	0.8	0.6
Unsig. Movement Delay, s/veh	39.9	0.0	38.6	33.9	0.0	53.3	13.2	16.7	12.1	13.3
LnGrip Delay(d), s/veh	D	A	D	C	A	D	B	B	B	B
LnGrip LOS	D	A	D	C	A	D	B	B	B	B
Approach Vol, veh/h	251	39.4	407	480	394	156	394	449	162	449
Approach Delay, s/veh	39.4	48.0	407	480	39.4	156	394	449	162	449
Approach LOS	D	D	D	D	B	B	B	B	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	10.0	64.8	12.8	32.4	10.0	64.8	14.8	30.4		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	19.0	24.0	9.0	48.0	9.0	34.0	10.0	47.0		
Max Q Clear Time (g, c+1), s	3.6	7.5	7.8	8.3	2.9	8.9	9.8	23.7		
Green Ext Time (p, c), s	0.1	1.7	0.0	0.6	0.0	2.3	0.0	1.7		
Intersection Summary										
HCM 6th Ctrl Delay	28.6									
HCM 6th LOS	C									

2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

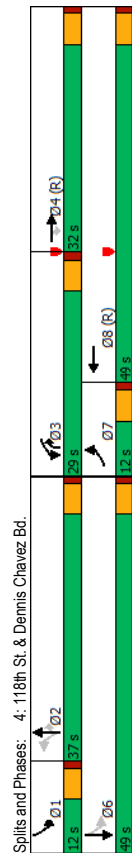
Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
07/27/2019

Terry O. Brown, PE  
07/27/2019

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
6	73	140	487	129	37	104	403	131	323
6	73	140	487	129	37	104	403	131	323
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
12.0	32.0	29.0	49.0	37.0	37.0	29.0	12.0	12.0	49.0
10.9%	29.1%	29.1%	26.4%	44.5%	33.6%	33.6%	26.4%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
6.1	20.8	30.9	45.6	24.7	24.7	60.6	43.3	43.3	37.6
0.06	0.19	0.19	0.28	0.41	0.22	0.22	0.55	0.39	0.39
0.09	0.32	0.50	0.79	0.30	0.56	0.39	0.56	0.45	0.86
51.0	43.9	15.8	50.9	16.5	58.4	37.8	3.8	24.7	41.8
51.0	43.9	15.8	50.9	16.5	58.4	37.8	3.8	24.7	41.8
D	D	B	D	B	E	D	A	C	D
26.1			43.0			14.0			
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 25 (23%), Referenced to phase 4:EFT and 6:WBT, Start of Green									
Natural Cycle: 80									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.86									
Intersection Signal Delay: 31.4									
Intersection Capacity Utilization 58.8%									
Analysis Period (min) 15									



2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
6	73	140	487	129	37	104	403	131	323	75
6	73	140	487	129	37	104	403	131	323	75
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
9	112	215	749	198	25	57	160	620	202	497
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3	3
80	455	386	748	675	85	137	540	801	332	583
0.05	0.25	0.25	0.22	0.42	0.42	0.29	0.29	0.29	0.06	0.40
1767	1856	1572	3428	1615	204	803	1856	1572	1767	1458
9	112	215	749	0	223	57	160	620	202	0
1767	1856	1572	1714	0	1819	803	1856	1572	1767	0
0.5	5.3	13.1	24.0	0.0	8.9	7.6	7.4	32.0	7.0	0.0
0.5	5.3	13.1	24.0	0.0	8.9	29.8	7.4	32.0	7.0	0.0
1.00	1.00	1.00	1.00	0.11	1.00	1.00	1.00	1.00	1.00	0.19
80	455	386	748	0	761	137	540	801	332	0
0.11	0.25	0.56	1.00	0.00	0.29	0.41	0.30	0.77	0.61	0.00
112	455	386	748	0	761	137	540	801	332	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.63	0.00	0.63	1.00	1.00	1.00	1.00	1.00
50.4	33.3	36.3	43.0	0.0	21.2	49.1	30.3	21.9	27.1	0.0
0.6	1.3	5.7	26.4	0.0	0.6	2.0	0.3	4.8	3.2	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	2.5	5.5	12.5	0.0	3.7	1.6	3.2	12.8	1.2	0.0
51.0	34.6	42.0	69.4	0.0	21.8	51.1	30.6	26.6	30.3	0.0
D	C	D	F	A	C	D	C	C	C	A
336			972			837			814	
39.8			98.5			29.1			37.4	
Approach LOS										
Timer - Assigned Phs										
1	2	3	4		6	7	8			
12.0	37.0	29.0	32.0		49.0	10.0	51.0			
5.0	5.0	5.0	5.0		5.0	5.0	5.0			
7.0	32.0	24.0	27.0		44.0	7.0	44.0			
9.0	34.0	26.0	15.1		36.1	2.5	10.9			
0.0	0.0	0.0	1.0		2.3	0.0	1.2			
Intersection Summary										
HCM 6th Ctrl Delay										
HCM 6th LOS										

2018 AM Peak Existing Conditions  
Synchro 10 Report  
2018AX.syn

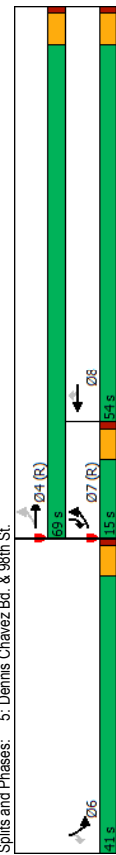
Timings  
5: Dennis Chavez Bd. & 98th St.

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
07/27/2019

Terry O. Brown, PE  
07/27/2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	187	443	419	110	457	238
Future Volume (vph)	187	443	419	110	457	238
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	15.0	69.0	54.0	54.0	41.0	15.0
Total Split (%)	13.6%	62.7%	49.1%	49.1%	37.3%	13.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	58.8	58.8	43.8	43.8	41.2	56.2
Actuated g/C Ratio	0.53	0.53	0.40	0.40	0.37	0.51
v/c Ratio	1.19	0.69	0.88	0.23	1.07	0.42
Control Delay	141.7	26.6	33.5	1.1	91.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.7	26.6	33.5	1.1	91.1	11.3
LOS	F	C	C	A	F	B
Approach Delay	60.8	26.7			63.8	
Approach LOS	E	C			E	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 36 (33%), Referenced to phase 4:EBTL and 7:EBL, Start of Green						
Natural Cycle: 100						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.19						
Intersection Signal Delay: 52.2						
Intersection Capacity Utilization 70.2%						
Analysis Period (min) 15						



Splits and Phases: 5: Dennis Chavez Bd. & 98th St.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	187	443	419	110	457	238
Future Volume (veh/h)	187	443	419	110	457	238
Initial Q (Obs), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	288	682	645	169	703	366
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	406	1080	674	571	578	787
Arrive On Green	0.17	0.58	0.73	0.73	0.33	0.33
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	288	682	645	169	703	366
Gp Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	10.3	26.7	34.3	4.1	36.0	16.7
Cycle Q Clear(g, c), s	10.3	26.7	34.3	4.1	36.0	16.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	406	1080	674	571	578	787
V/C Ratio(X)	0.71	0.63	0.96	0.30	1.22	0.47
Avail Cap(c, a), veh/h	406	1080	827	700	578	787
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(l)	0.85	0.85	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	22.7	15.2	14.2	10.1	37.0	17.9
Incr Delay (d2), s/veh	4.9	2.4	18.0	0.3	112.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	10.6	8.5	1.2	32.6	16.9
Unsig. Movement Delay, s/veh	27.6	17.6	32.3	10.4	149.2	18.3
LnGp Delay(d),s/veh	C	B	C	B	F	B
LnGp LOS	C	B	C	B	F	B
Approach Vol, veh/h	970	814			1069	
Approach Delay, s/veh	20.6	27.7			104.4	
Approach LOS	C	C			F	
Timer - Assigned Phis				4	6	7
Phs Duration (G+Y+Rc), s				69.0	41.0	45.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				64.0	36.0	49.0
Max Q Clear Time (g, c+1), s				28.7	38.0	36.3
Green Ext Time (p, c), s				4.7	0.0	0.0
3.7						
Intersection Summary						
HCM 6th Ctrl Delay				54.0		
HCM 6th LOS				D		

2018 AM Peak Existing Conditions

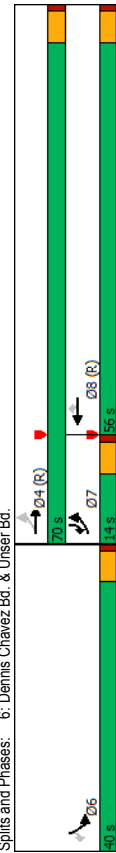
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Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
07/27/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	70	806	379	296	553	85
Traffic Volume (vph)	70	806	379	296	553	85
Future Volume (vph)	70	806	379	296	553	85
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	14.0	70.0	56.0	56.0	40.0	14.0
Total Split (%)	12.7%	63.6%	50.9%	50.9%	36.4%	12.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	60.1	47.6	47.6	39.9	52.4	52.4
Actuated g/C Ratio	0.55	0.55	0.43	0.43	0.36	0.48
v/c Ratio	0.18	0.87	0.52	0.37	0.95	0.12
Control Delay	10.2	22.0	24.8	3.2	61.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	22.0	24.8	3.2	61.2	4.1
LOS	B	C	C	A	E	A
Approach Delay		21.1	15.3		53.6	
Approach LOS		C	B		D	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 19 (17%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 90						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.95						
Intersection Signal Delay: 28.8						Intersection LOS: C
Intersection Capacity Utilization 81.4%						ICU Level of Service D
Analysis Period (min) 15						



2018 AM Peak Existing Conditions  
Synchro 10 Report  
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HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
07/27/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	70	806	379	296	553	85
Traffic Volume (veh/h)	70	806	379	296	553	85
Future Volume (veh/h)	70	806	379	296	553	85
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	76	876	412	322	601	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	402	1096	928	786	562	572
Arrive On Green	0.03	0.40	0.50	0.50	0.32	0.32
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	76	876	412	322	601	92
Gp Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	2.2	45.9	15.7	14.2	35.0	4.3
Cycle Q Clear(g, c), s	2.2	45.9	15.7	14.2	35.0	4.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	402	1096	928	786	562	572
V/C Ratio(X)	0.19	0.80	0.44	0.41	1.07	0.16
Avail Cap(c,a), veh/h	466	1096	928	786	562	572
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.34	0.34	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	27.5	17.7	17.3	37.5	23.7
Incr Delay (d2), s/veh	0.1	2.2	1.5	1.6	57.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	21.2	6.6	5.1	23.3	4.6
Unsig. Movement Delay, s/veh	12.8	29.6	19.2	18.9	95.2	23.8
LnGrp Delay(d),s/veh	B	C	B	B	F	C
LnGrp LOS	B	C	B	B	F	C
Approach Vol, veh/h	962	734			693	
Approach Delay, s/veh	28.3	19.1			85.7	
Approach LOS	C	B			F	
Timer - Assigned Phis				4	6	7
Phis Duration (G+Y+Rc), s				70.0	40.0	10.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0	35.0	51.0
Max Q Clear Time (g, c+1), s				47.9	37.0	4.2
Green Ext Time (p, c), s				5.6	0.0	0.1
Green Ext Time (p, c), s				5.6	0.0	0.1
Intersection Summary						
HCM 6th Ctrl Delay				42.2		
HCM 6th LOS				D		

2018 AM Peak Existing Conditions  
Synchro 10 Report  
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Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	15	1291	24	2	630	6	20	1	10	5	1	22
Future Vol, veh/h	15	1291	24	2	630	6	20	1	10	5	1	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	1304	24	2	636	6	20	1	10	5	1	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	642	0	0	1328	0	0	2001	1992	1316	1995	2001	639
Stage 1	-	-	-	-	-	-	1346	1346	-	643	643	-
Stage 2	-	-	-	-	-	-	655	646	-	1352	1358	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	938	-	-	517	-	-	44	60	192	45	59	474
Stage 1	-	-	-	-	-	-	186	219	-	460	467	-
Stage 2	-	-	-	-	-	-	453	465	-	184	216	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	938	-	-	517	-	-	39	56	192	40	55	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	39	56	-	40	55	-
Stage 1	-	-	-	-	-	-	174	205	-	431	464	-
Stage 2	-	-	-	-	-	-	428	462	-	163	203	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			143.8			32.7		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	53	938	-	-	517	-	-	42	474
HCM Lane V/C Ratio	0.591	0.016	-	-	0.004	-	-	0.144	0.047
HCM Control Delay (s)	143.8	8.9	0	-	12	0	-	104.7	13
HCM Lane LOS	F	A	A	-	B	A	-	F	B
HCM 95th %tile Q(veh)	2.3	0	-	-	0	-	-	0.5	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	5	9	27	580	462	23
Future Vol, veh/h	5	9	27	580	462	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	9	28	604	481	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	839	241	505	0	-	0
Stage 1	481	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	302	757	1049	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	294	757	1049	-	-	-
Mov Cap-2 Maneuver	294	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1049	-	294	757	-	-
HCM Lane V/C Ratio	0.027	-	0.018	0.012	-	-
HCM Control Delay (s)	8.5	-	17.5	9.8	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-



Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	150	98	18	11	37	10	17	334	47	7	198	18
Future Vol, veh/h	150	98	18	11	37	10	17	334	47	7	198	18
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	183	120	22	13	45	12	21	407	57	9	241	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13	10.8	14.2	12.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	70%	0%	100%	64%	0%	100%	55%	0%	100%
Vol Right, %	0%	0%	30%	0%	0%	36%	0%	0%	45%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	223	158	150	65	51	11	25	22	7	132
LT Vol	17	0	0	150	0	0	11	0	0	7	0
Through Vol	0	223	111	0	65	33	0	25	12	0	132
RT Vol	0	0	47	0	0	18	0	0	10	0	0
Lane Flow Rate	21	272	193	183	80	62	13	30	27	9	161
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.041	0.497	0.342	0.379	0.154	0.115	0.031	0.064	0.056	0.018	0.313
Departure Headway (Hd)	7.085	6.585	6.377	7.468	6.968	6.719	8.206	7.706	7.392	7.489	6.989
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	503	546	560	479	512	530	439	468	488	475	512
Service Time	4.86	4.36	4.152	5.251	4.751	4.502	5.906	5.406	5.092	5.274	4.774
HCM Lane V/C Ratio	0.042	0.498	0.345	0.382	0.156	0.117	0.03	0.064	0.055	0.019	0.314
HCM Control Delay	10.2	15.8	12.5	14.8	11	10.4	11.2	10.9	10.5	10.4	13
HCM Lane LOS	B	C	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.1	2.7	1.5	1.7	0.5	0.4	0.1	0.2	0.2	0.1	1.3

Intersection												
Intersection Delay, s/veh	10.9											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	22	20	66	26	17	27	22	269	25	22	205	3
Future Vol, veh/h	22	20	66	26	17	27	22	269	25	22	205	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	24	80	31	20	33	27	324	30	27	247	4
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	10.2	10	11.3	10.8
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	78%	0%	23%	0%	39%	0%	100%	96%
Vol Right, %	0%	0%	22%	0%	77%	0%	61%	0%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	179	115	22	86	26	44	22	137	71
LT Vol	22	0	0	22	0	26	0	22	0	0
Through Vol	0	179	90	0	20	0	17	0	137	68
RT Vol	0	0	25	0	66	0	27	0	0	3
Lane Flow Rate	27	216	138	27	104	31	53	27	165	86
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.048	0.359	0.224	0.053	0.176	0.063	0.093	0.049	0.283	0.147
Departure Headway (Hd)	6.488	5.984	5.83	7.149	6.109	7.26	6.328	6.682	6.178	6.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	601	615	500	586	493	565	536	581	583
Service Time	4.228	3.723	3.569	4.898	3.859	5.015	4.082	4.425	3.92	3.891
HCM Lane V/C Ratio	0.049	0.359	0.224	0.054	0.177	0.063	0.094	0.05	0.284	0.148
HCM Control Delay	9.6	12.1	10.3	10.3	10.2	10.5	9.7	9.8	11.4	10
HCM Lane LOS	A	B	B	B	B	B	A	A	B	A
HCM 95th-tile Q	0.2	1.6	0.9	0.2	0.6	0.2	0.3	0.2	1.2	0.5

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	15	1	6	3	9	1	7	23	12	8	1
Future Vol, veh/h	3	15	1	6	3	9	1	7	23	12	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	19	1	7	4	11	1	9	28	15	10	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	20	0	0	53	53	20	66	48	10
Stage 1	-	-	-	-	-	-	24	24	-	24	24	-
Stage 2	-	-	-	-	-	-	29	29	-	42	24	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1596	-	-	1590	-	-	943	836	1055	925	842	1068
Stage 1	-	-	-	-	-	-	991	873	-	991	873	-
Stage 2	-	-	-	-	-	-	985	869	-	970	873	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1596	-	-	1590	-	-	930	832	1055	890	838	1068
Mov Cap-2 Maneuver	-	-	-	-	-	-	930	832	-	890	838	-
Stage 1	-	-	-	-	-	-	990	872	-	990	870	-
Stage 2	-	-	-	-	-	-	969	866	-	934	872	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			2.4			8.8			9.2		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	991	1596	-	-	1590	-	-	876
HCM Lane V/C Ratio	0.039	0.001	-	-	0.005	-	-	0.03
HCM Control Delay (s)	8.8	7.3	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↑↑	↵	↵	↑↑	↵
Traffic Vol, veh/h	17	2	3	13	1	70	1	566	16	42	449	6
Future Vol, veh/h	17	2	3	13	1	70	1	566	16	42	449	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	100	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	2	3	14	1	78	1	629	16	47	499	7

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	910	1240	250	976	1231	315	506	0	0	645	0	0
Stage 1	593	593	-	631	631	-	-	-	-	-	-	-
Stage 2	317	647	-	345	600	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	228	172	747	204	175	678	1048	-	-	929	-	-
Stage 1	456	489	-	433	470	-	-	-	-	-	-	-
Stage 2	666	462	-	641	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	193	163	747	193	166	678	1048	-	-	929	-	-
Mov Cap-2 Maneuver	193	163	-	193	166	-	-	-	-	-	-	-
Stage 1	456	464	-	433	470	-	-	-	-	-	-	-
Stage 2	588	462	-	603	461	-	-	-	-	-	-	-

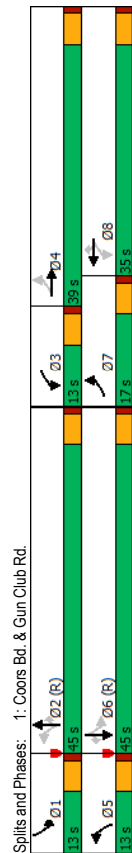
Approach	EB		WB		NB			SB		
HCM Control Delay, s	21.7		13.5		0			0.8		
HCM LOS	C		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1048	-	-	193	307	193	650	929	-	-
HCM Lane V/C Ratio	0.001	-	-	0.049	0.018	0.075	0.121	0.05	-	-
HCM Control Delay (s)	8.4	-	-	24.6	16.9	25.2	11.3	9.1	-	-
HCM Lane LOS	A	-	-	C	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.2	0.4	0.2	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
07/27/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	76	31	100	42	149	41	694	48	191	742
Traffic Volume (vph)	76	31	100	42	149	41	694	48	191	742
Future Volume (vph)	76	31	100	42	149	41	694	48	191	742
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	2	1	6	6
Permitted Phases	4	4	3	8	8	2	2	2	1	6
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Minimum Split (s)	17.0	39.0	13.0	35.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	15.5%	35.5%	11.8%	31.8%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	Min	Min	C-Min	C-Min	Min	C-Min	C-Min
Act Effct Green (s)	17.5	8.0	20.4	11.3	11.3	65.1	58.7	76.0	65.1	65.1
Actuated g/C Ratio	0.16	0.07	0.19	0.10	0.10	0.59	0.53	0.69	0.59	0.59
v/c Ratio	0.32	0.47	0.40	0.23	0.52	0.10	0.39	0.06	0.39	0.37
Control Delay	37.5	33.0	39.4	49.2	13.8	7.8	17.2	0.1	8.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	33.0	39.4	49.2	13.8	7.8	17.2	0.1	8.8	13.3
LOS	D	C	D	D	B	A	B	A	A	B
Approach Delay										
Approach LOS	D	D	C	C	C	B	B	B	B	B
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL - Start of Green										
Natural Cycle: 65										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.52										
Intersection Signal Delay: 16.5										
Intersection Capacity Utilization 54.5%										
Analysis Period (min) 15										



2018 PM Peak Existing Conditions  
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HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
07/27/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	76	31	43	100	42	149	41	694	48	191
Traffic Volume (veh/h)	76	31	43	100	42	149	41	694	48	191
Future Volume (veh/h)	76	31	43	100	42	149	41	694	48	191
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	79	32	45	104	44	155	43	723	50	199
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	275	72	101	267	222	188	451	2051	915	506
Arrive On Green	0.05	0.10	0.10	0.07	0.12	0.05	0.58	0.06	0.06	0.60
Sat Flow, veh/h	1767	698	981	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	79	0	77	104	44	155	43	723	50	199
Grip Sat Flow(s), veh/h/ln	1767	0	1679	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	4.3	0.0	4.7	5.7	2.4	10.6	1.0	11.9	1.5	5.0
Cycle Q Clear(g, c), s	4.3	0.0	4.7	5.7	2.4	10.6	1.0	11.9	1.5	5.0
Prop In Lane	1.00	0.58	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.29	0.00	0.45	0.39	0.20	0.82	0.10	0.35	0.05	0.39
Avail Cap(c, a), veh/h	374	0	519	272	506	429	499	2051	915	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	46.4	40.1	43.6	47.3	8.4	12.1	9.9	8.7
Incr Delay (d2), s/veh	0.6	0.0	1.8	0.9	0.4	8.7	0.1	0.5	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.9	0.0	2.0	2.5	1.1	4.5	0.3	4.1	0.5	1.6
Unsig. Movement Delay, s/veh	41.6	0.0	48.2	41.0	44.1	55.9	8.5	12.6	10.1	8.9
LnGrip Delay(d), s/veh	D	A	D	D	D	E	A	B	A	B
LnGrip LOS	D	A	D	D	D	E	A	B	A	B
Approach Vol, veh/h	156	44.9	303	49.1	816	1079	10.9	10.9	10.9	10.9
Approach Delay, s/veh	44.9	49.1	49.1	49.1	12.2	12.2	12.2	12.2	12.2	12.2
Approach LOS	D	D	D	D	B	B	B	B	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phs Duration (G+Y+Rc), s	12.0	69.0	12.7	16.3	10.0	71.0	10.8	18.2		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	8.0	40.0	8.0	34.0	8.0	40.0	12.0	30.0		
Max Q Clear Time (g, c+11), s	7.0	13.9	7.7	6.7	3.0	14.4	6.3	12.6		
Green Ext Time (p, c), s	0.1	4.6	0.0	0.3	0.0	5.2	0.1	0.6		
Intersection Summary										
HCM 6th Ctrl Delay	18.5									
HCM 6th LOS	B									

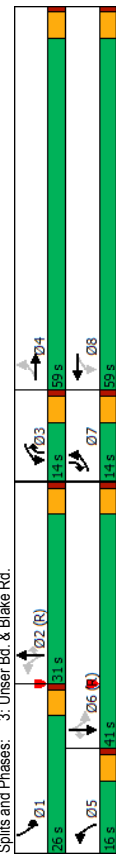
2018 PM Peak Existing Conditions  
Synchro 10 Report  
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Timings  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
07/27/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
74	44	84	21	114	328	126	266	371	131
74	44	84	21	114	328	126	266	371	131
pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
7	4	3	8	5	2	3	1	6	7
4	8	3	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0
14.0	59.0	14.0	59.0	16.0	31.0	14.0	26.0	41.0	14.0
10.8%	45.4%	10.8%	45.4%	12.3%	23.8%	10.8%	20.0%	31.5%	10.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
20.0	9.7	21.4	10.4	77.6	69.1	85.2	94.3	80.8	96.2
0.15	0.07	0.16	0.08	0.60	0.53	0.66	0.73	0.62	0.74
0.41	0.60	0.42	0.68	0.20	0.19	0.13	0.37	0.19	0.12
48.3	41.7	48.3	23.9	8.6	18.2	2.2	8.2	11.9	1.3
48.3	41.7	48.3	23.9	8.6	18.2	2.2	8.2	11.9	1.3
D	D	D	C	A	B	A	B	A	B
44.5	31.8	44.5	31.8	12.7	12.7	8.8	8.8	8.8	8.8
D	C	C	C	B	B	A	A	A	A



2018 PM Peak Existing Conditions  
Synchro 10 Report  
2018PX.syn

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
07/27/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
74	44	84	21	114	328	126	266	371	131
74	44	84	21	114	328	126	266	371	131
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
81	48	60	92	23	169	125	360	138	292
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3
180	102	127	259	27	199	606	1990	981	667
0.05	0.14	0.14	0.06	0.14	0.14	0.05	0.56	0.09	0.60
1767	750	937	1767	192	1410	1767	3526	1572	1767
81	0	108	92	0	192	125	360	138	292
1767	0	1687	1767	0	1602	1767	1763	1572	1767
5.1	0.0	7.7	5.7	0.0	15.2	3.9	6.4	4.7	8.6
5.1	0.0	7.7	5.7	0.0	15.2	3.9	6.4	4.7	8.6
1.00	0.56	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00
180	0	229	259	0	226	606	1990	981	667
0.45	0.00	0.47	0.36	0.00	0.85	0.21	0.18	0.14	0.44
206	0	701	276	0	665	674	1990	981	800
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45.5	0.0	51.9	44.6	0.0	54.5	10.6	13.7	10.1	9.1
1.8	0.0	1.5	0.8	0.0	8.6	0.2	0.2	0.3	0.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.3	0.0	3.3	2.5	0.0	6.5	1.4	2.5	1.6	3.0
47.3	0.0	53.4	45.4	0.0	63.1	10.8	13.9	10.4	9.5
D	A	D	D	A	E	B	B	A	B
189	50.8	284	57.4	623	12.5	10.4	844	10.4	844
D	D	E	E	B	B	B	B	B	B
1	2	3	4	5	6	7	8	8	8
16.2	78.4	12.8	22.7	11.0	83.6	12.1	23.3	23.3	23.3
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
21.0	26.0	9.0	54.0	11.0	36.0	9.0	54.0	54.0	54.0
10.6	8.4	7.7	9.7	5.9	8.7	7.1	17.2	17.2	17.2
0.6	2.3	0.0	0.6	0.1	3.0	0.0	1.1	1.1	1.1
21.9	C								

2018 PM Peak Existing Conditions  
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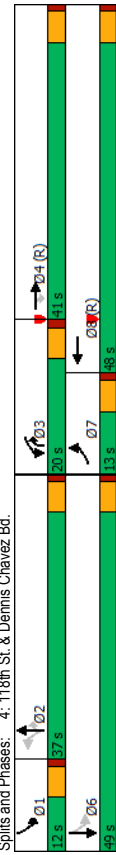
Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
07/27/2019

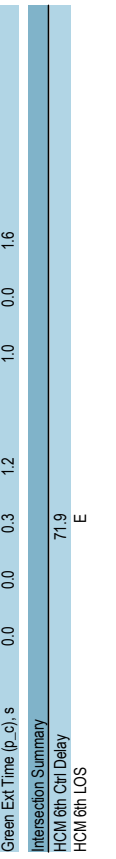
Terry O. Brown, PE  
07/27/2019

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	106	22	174	73	41	97	394	63	74
22	106	22	174	73	41	97	394	63	74
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
13.0	41.0	41.0	20.0	48.0	37.0	37.0	20.0	12.0	49.0
11.8%	37.3%	37.3%	18.2%	43.6%	33.6%	33.6%	18.2%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
8.2	44.1	44.1	18.0	53.9	16.9	16.9	39.9	32.9	32.9
0.07	0.40	0.40	0.16	0.49	0.15	0.15	0.36	0.30	0.30
0.34	0.29	0.06	0.62	0.33	0.45	0.69	0.91	0.44	0.34
54.6	27.4	0.1	61.1	4.4	49.1	56.0	27.8	32.3	28.2
54.6	27.4	0.1	61.1	4.4	49.1	56.0	27.8	32.3	28.2
D	C	A	E	A	D	E	C	C	C
27.4			35.6		34.6				29.9
C			D		C				C



2018 PM Peak Existing Conditions  
Synchro 10 Report  
2018PX.syn

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	106	22	174	73	69	41	97	394	63
22	106	22	174	73	69	41	97	394	63
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
44	212	44	348	146	138	82	194	788	126
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3	3	3	3	3	3	3	3	3	3
80	638	540	411	367	347	412	540	646	296
0.05	0.34	0.34	0.12	0.42	0.42	0.29	0.29	0.06	0.40
1767	1856	1572	3428	877	829	1190	1856	1572	1767
44	212	44	348	0	284	82	194	788	126
1767	1856	1572	1714	0	1706	1190	1856	1572	1767
2.7	9.3	2.1	10.9	0.0	12.8	5.8	9.1	32.0	5.3
2.7	9.3	2.1	10.9	0.0	12.8	5.8	9.1	32.0	5.3
1.00	1.00	1.00	1.00	0.49	1.00	1.00	1.00	1.00	0.20
80	638	540	411	0	714	412	540	646	296
0.55	0.33	0.08	0.85	0.00	0.40	0.20	0.36	1.22	0.43
129	638	540	467	0	714	412	540	646	296
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.73	0.00	0.73	1.00	1.00	1.00	1.00
51.4	26.8	24.4	47.4	0.0	22.3	29.7	30.9	32.4	24.0
5.7	1.4	0.3	9.3	0.0	1.2	0.2	0.4	112.4	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.3	4.2	0.8	5.0	0.0	5.1	1.6	4.0	36.0	2.2
57.1	28.2	24.7	56.7	0.0	23.5	29.9	31.3	144.8	25.0
E	C	C	E	A	C	C	C	F	C
300			632				1064		310
31.9			41.8				115.2		23.4
C			D				F		C
1	2	3	4	6	7	8			
12.0	37.0	18.2	42.8	49.0	10.0	51.0			
5.0	5.0	5.0	5.0	5.0	5.0	5.0			
7.0	32.0	15.0	36.0	44.0	8.0	43.0			
7.3	34.0	12.9	11.3	9.6	4.7	14.8			
0.0	0.0	0.3	1.2	1.0	0.0	1.6			



2018 PM Peak Existing Conditions  
Synchro 10 Report  
2018PX.syn



Timings  
5: Dennis Chavez Bd. & 98th St.

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
07/27/2019

Terry O. Brown, PE  
07/27/2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	185	332	255	202	174	85
Future Volume (vph)	185	332	255	202	174	85
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0
Total Split (s)	13.0	70.0	57.0	57.0	40.0	13.0
Total Split (%)	11.8%	63.6%	51.8%	51.8%	36.4%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	72.9	38.7	38.7	27.1	61.3	61.3
Actuated g/C Ratio	0.66	0.66	0.35	0.35	0.25	0.56
v/c Ratio	0.63	0.54	0.79	0.50	0.81	0.18
Control Delay	19.7	10.6	24.8	5.0	53.2	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	10.6	24.8	5.0	53.2	3.0
LOS	B	B	C	A	D	A
Approach Delay	13.8	16.1			36.7	
Approach LOS	B	B			D	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 8 (7%), Referenced to phase 4:EBTL and 7:EBL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.81						
Intersection Signal Delay: 19.5						
Intersection Capacity Utilization 45.8%						
Analysis Period (min) 15						



Splits and Phases: 5: Dennis Chavez Bd. & 98th St.

2018 PM Peak Existing Conditions

2018 PM Peak Existing Conditions

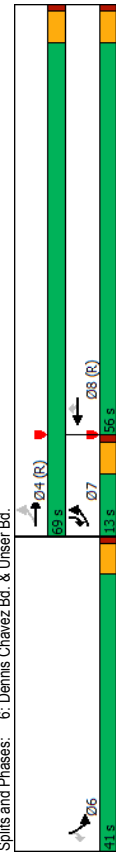
Synchro 10 Report  
2018PX.syn

Synchro 10 Report  
2018PX.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
07/27/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	70	468	642	599	456	42
Traffic Volume (vph)	70	468	642	599	456	42
Future Volume (vph)	70	468	642	599	456	42
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	13.0	69.0	56.0	56.0	41.0	13.0
Total Split (%)	11.8%	62.7%	50.9%	50.9%	37.3%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	65.9	65.9	53.6	53.6	34.1	46.4
Actuated g/C Ratio	0.60	0.60	0.49	0.49	0.31	0.42
v/c Ratio	0.29	0.47	0.78	0.60	0.92	0.07
Control Delay	13.1	15.9	31.9	3.9	60.5	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	15.9	31.9	3.9	60.5	5.4
LOS	B	B	C	A	E	A
Approach Delay	15.5	18.4			55.9	
Approach LOS	B	B			E	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 78 (71%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 80						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.92						
Intersection Signal Delay: 25.9						Intersection LOS: C
Intersection Capacity Utilization 75.7%						ICU Level of Service D
Analysis Period (min) 15						



Splits and Phases: 6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
07/27/2019

HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	70	468	642	599	456	42
Traffic Volume (veh/h)	70	468	642	599	456	42
Future Volume (veh/h)	70	468	642	599	456	42
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	514	705	658	501	46
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	233	1128	960	813	532	545
Arrive On Green	0.09	1.00	0.52	0.52	0.30	0.30
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	77	514	705	658	501	46
Gp Sat Flow(s), veh/h/in	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	2.1	0.0	32.5	38.2	30.4	2.2
Cycle Q Clear(g, c), s	2.1	0.0	32.5	38.2	30.4	2.2
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	233	1128	960	813	532	545
V/C Ratio(X)	0.33	0.46	0.73	0.81	0.94	0.08
Avail Cap(c, a), veh/h	282	1128	960	813	578	586
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.73	0.73	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	20.7	22.0	37.5	24.2
Incr Delay (d2), s/veh	0.6	0.0	5.0	8.5	23.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	0.7	0.3	14.1	14.6	15.8	2.3
Unsig. Movement Delay, s/veh	16.6	1.0	25.7	30.6	60.5	24.3
LnGp Delay(d), s/veh	B	A	C	C	E	C
LnGp LOS	B	A	C	C	E	C
Approach Vol, veh/h	591	1363			547	
Approach Delay, s/veh	3.0	28.0			57.5	
Approach LOS	A	C			E	
Timer - Assigned Phis				4	6	7
Phis Duration (G+Y+Rc), s				71.9	38.1	10.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				64.0	36.0	51.0
Max Q Clear Time (g, c+11), s				2.0	32.4	4.1
Green Ext Time (p, c), s				3.3	0.7	0.0
Intersection Summary						
HCM 6th Ctrl Delay				28.6		
HCM 6th LOS				C		

2018 PM Peak Existing Conditions

2018 PM Peak Existing Conditions

Intersection												
Int Delay, s/veh	20.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	31	755	38	8	1233	15	35	1	14	3	1	71
Future Vol, veh/h	31	755	38	8	1233	15	35	1	14	3	1	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	778	39	8	1271	15	36	1	14	3	1	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1286	0	0	817	0	0	2194	2164	798	2164	2176	1279
Stage 1	-	-	-	-	-	-	862	862	-	1295	1295	-
Stage 2	-	-	-	-	-	-	1332	1302	-	869	881	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	536	-	-	807	-	-	~ 32	47	384	34	46	202
Stage 1	-	-	-	-	-	-	348	371	-	199	232	-
Stage 2	-	-	-	-	-	-	189	230	-	345	363	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	536	-	-	807	-	-	~ 18	40	384	29	40	202
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 18	40	-	29	40	-
Stage 1	-	-	-	-	-	-	310	330	-	177	224	-
Stage 2	-	-	-	-	-	-	116	222	-	295	323	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			\$ 824.6			38.2		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	25	536	-	-	807	-	-	31	202
HCM Lane V/C Ratio	2.062	0.06	-	-	0.01	-	-	0.133	0.362
HCM Control Delay (s)	\$ 824.6	12.1	0	-	9.5	0	-	138.2	32.6
HCM Lane LOS	F	B	A	-	A	A	-	F	D
HCM 95th %tile Q(veh)	6.4	0.2	-	-	0	-	-	0.4	1.6

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	108	78	999	745	36
Future Vol, veh/h	48	108	78	999	745	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	114	82	1052	784	38

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1474	392	822	0	-	0
Stage 1	784	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	116	604	797	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	104	604	797	-	-	-
Mov Cap-2 Maneuver	104	-	-	-	-	-
Stage 1	366	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.7	0.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	797	-	104	604	-	-
HCM Lane V/C Ratio	0.103	-	0.486	0.188	-	-
HCM Control Delay (s)	10	-	68.7	12.3	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	2.1	0.7	-	-

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↔		↵	↕↔		↵	↕↔		↵	↕↔	
Traffic Vol, veh/h	108	58	29	37	134	31	47	312	34	35	457	116
Future Vol, veh/h	108	58	29	37	134	31	47	312	34	35	457	116
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	116	62	31	40	144	33	51	335	37	38	491	125
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.9	13.2	15.8	21.1
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	75%	0%	100%	40%	0%	100%	59%	0%	100%
Vol Right, %	0%	0%	25%	0%	0%	60%	0%	0%	41%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	208	138	108	39	48	37	89	76	35	305
LT Vol	47	0	0	108	0	0	37	0	0	35	0
Through Vol	0	208	104	0	39	19	0	89	45	0	305
RT Vol	0	0	34	0	0	29	0	0	31	0	0
Lane Flow Rate	51	224	148	116	42	52	40	96	81	38	328
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.117	0.486	0.315	0.289	0.098	0.116	0.099	0.226	0.185	0.083	0.673
Departure Headway (Hd)	8.324	7.824	7.652	8.973	8.473	8.053	8.971	8.471	8.184	7.899	7.399
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	430	461	469	399	422	444	399	424	438	453	488
Service Time	6.082	5.582	5.41	6.74	6.24	5.82	6.735	6.235	5.949	5.649	5.149
HCM Lane V/C Ratio	0.119	0.486	0.316	0.291	0.1	0.117	0.1	0.226	0.185	0.084	0.672
HCM Control Delay	12.2	17.8	13.9	15.4	12.2	11.9	12.7	13.7	12.8	11.4	24.1
HCM Lane LOS	B	C	B	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.4	2.6	1.3	1.2	0.3	0.4	0.3	0.9	0.7	0.3	4.9

Intersection												
Intersection Delay, s/veh	12.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↕	
Traffic Vol, veh/h	18	21	41	67	25	54	49	312	21	65	348	30
Future Vol, veh/h	18	21	41	67	25	54	49	312	21	65	348	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	22	43	70	26	56	51	325	22	68	363	31
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	10.9	11.3	12.4	12.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	83%	0%	34%	0%	32%	0%	100%	79%
Vol Right, %	0%	0%	17%	0%	66%	0%	68%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	208	125	18	62	67	79	65	232	146
LT Vol	49	0	0	18	0	67	0	65	0	0
Through Vol	0	208	104	0	21	0	25	0	232	116
RT Vol	0	0	21	0	41	0	54	0	0	30
Lane Flow Rate	51	217	130	19	65	70	82	68	242	152
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.1	0.394	0.232	0.041	0.125	0.15	0.155	0.13	0.432	0.266
Departure Headway (Hd)	7.053	6.547	6.428	7.955	6.987	7.742	6.76	6.938	6.432	6.287
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	506	548	556	448	510	461	527	515	558	569
Service Time	4.824	4.318	4.199	5.75	4.781	5.526	4.543	4.704	4.198	4.053
HCM Lane V/C Ratio	0.101	0.396	0.234	0.042	0.127	0.152	0.156	0.132	0.434	0.267
HCM Control Delay	10.6	13.6	11.2	11.1	10.8	11.9	10.8	10.7	14	11.3
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.3	1.9	0.9	0.1	0.4	0.5	0.5	0.4	2.2	1.1

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	9	1	23	10	31	1	9	11	15	7	5
Future Vol, veh/h	2	9	1	23	10	31	1	9	11	15	7	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	10	1	26	11	34	1	10	12	17	8	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	11	0	0	100	110	11	104	93	28
Stage 1	-	-	-	-	-	-	13	13	-	80	80	-
Stage 2	-	-	-	-	-	-	87	97	-	24	13	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1557	-	-	1602	-	-	879	778	1067	874	795	1044
Stage 1	-	-	-	-	-	-	1005	883	-	926	826	-
Stage 2	-	-	-	-	-	-	918	813	-	991	883	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1557	-	-	1602	-	-	856	764	1067	843	781	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	856	764	-	843	781	-
Stage 1	-	-	-	-	-	-	1004	882	-	925	812	-
Stage 2	-	-	-	-	-	-	889	799	-	968	882	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			2.6			9.1			9.4		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	903	1557	-	-	1602	-	-	856
HCM Lane V/C Ratio	0.026	0.001	-	-	0.016	-	-	0.035
HCM Control Delay (s)	9.1	7.3	0	-	7.3	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↑↑	↵	↵	↑↑	↵
Traffic Vol, veh/h	9	1	4	8	6	24	6	618	6	34	674	29
Future Vol, veh/h	9	1	4	8	6	24	6	618	6	34	674	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1	4	9	7	27	7	694	7	38	757	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1198	1548	379	1163	1574	347	790	0	0	701	0	0
Stage 1	833	833	-	708	708	-	-	-	-	-	-	-
Stage 2	365	715	-	455	866	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	140	112	616	149	108	646	819	-	-	885	-	-
Stage 1	327	379	-	389	433	-	-	-	-	-	-	-
Stage 2	624	430	-	552	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	123	106	616	141	102	646	819	-	-	885	-	-
Mov Cap-2 Maneuver	123	106	-	141	102	-	-	-	-	-	-	-
Stage 1	324	363	-	385	429	-	-	-	-	-	-	-
Stage 2	584	426	-	523	350	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.6		20.9		0.1		0.4	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	819	-	-	123	314	141	313	885	-	-
HCM Lane V/C Ratio	0.008	-	-	0.041	0.018	0.064	0.108	0.043	-	-
HCM Control Delay (s)	9.4	-	-	35.5	16.7	32.3	17.9	9.3	-	-
HCM Lane LOS	A	-	-	E	C	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.2	0.4	0.1	-	-



Timings  
1: Coors Bd. & Gun Club Rd.

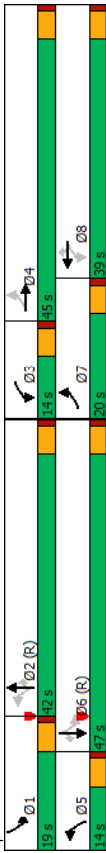
HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (vph)	174	60	69	20	258	17	704	72	150	628
Future Volume (vph)	174	60	69	20	258	17	704	72	150	628
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	2	1	6	6
Permitted Phases	4	4	3	8	8	2	2	1	6	6
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Minimum Split (s)	20.0	45.0	14.0	39.0	14.0	42.0	42.0	19.0	47.0	47.0
Total Split (%)	16.7%	37.5%	11.7%	32.5%	11.7%	35.0%	35.0%	15.8%	39.2%	39.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	None	Min	Min	Min	Min	Min	Min	Min	Min	C-Min
Recall Mode	None	Min	Min	Min	Min	Min	Min	Min	Min	C-Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 36 (30%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated



Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (veh/h)	174	60	69	20	258	17	704	72	150	628
Future Volume (veh/h)	174	60	69	20	258	17	704	72	150	628
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	191	66	35	76	22	284	19	774	79	165
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	440	285	151	406	370	314	395	1646	734	381
Arrive On Green	0.10	0.25	0.05	0.20	0.20	0.04	0.47	0.47	0.07	0.49
Sat Flow, veh/h	1767	1141	605	1767	1856	1572	1767	3526	1572	1767
Gp Volume(v), veh/h	191	0	101	76	22	284	19	774	79	165
Gp Sat Flow(s), veh/h/in	1767	0	1747	1767	1856	1572	1767	1767	1767	1767
Q Serve(g, s)	9.9	0.0	5.5	4.0	1.2	21.2	0.6	18.0	3.4	5.8
Cycle Q Clear(g, c), s	9.9	0.0	5.5	4.0	1.2	21.2	0.6	18.0	3.4	5.8
Prop In Lane	1.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.43	0.00	0.23	0.19	0.06	0.91	0.05	0.47	0.11	0.43
Avail Cap(c, a), veh/h	483	0	582	449	526	446	454	1646	734	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Uniform Delay (d), s/veh	31.5	0.0	35.9	35.3	38.9	46.9	15.2	21.8	17.9	16.2
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.2	0.1	16.9	0.0	1.0	0.3	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	7.5	0.0	4.2	3.1	0.9	14.5	0.4	11.4	2.2	3.9
Unsig. Movement Delay, s/veh	32.1	0.0	36.2	35.5	39.0	63.9	15.3	22.8	18.2	17.0
LnGp Delay(d), s/veh	C	A	D	D	D	E	B	C	B	B
LnGp LOS	C	A	D	D	D	E	B	C	B	B
Approach Vol, veh/h	292	33.5	382	362	872	22.2	19.2	910	19.2	910
Approach Delay, s/veh	33.5	33.5	36.2	36.2	87.2	22.2	19.2	91.0	19.2	91.0
Approach LOS	C	C	E	E	C	C	B	C	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	13.0	61.0	11.1	34.9	10.0	64.0	17.1	28.9		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0		
Max Q Clear Time (g, c+11), s	7.8	20.0	6.0	7.5	2.6	16.8	11.9	23.2		
Green Ext Time (p, c), s	0.2	4.5	0.0	0.5	0.0	4.4	0.1	0.8		

Intersection Summary  
HCM 6th Ctrl Delay: 27.8  
HCM 6th LOS: C

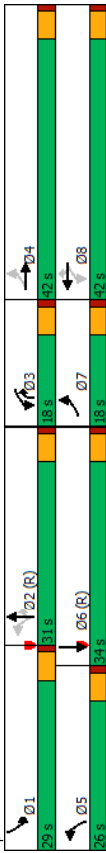
2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

Timings Terry O. Brown, PE  
2: Coors Bd. & Dennis Chavez Rd. 08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	48	940	63	225	139	287	667	240	214
Future Volume (vph)	48	940	63	225	139	287	667	240	214
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Minimum Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 99.6 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Natural Cycle: 90  
Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
2: Coors Bd. & Dennis Chavez Rd. 08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	48	940	408	63	225	139	287	667	240	214
Future Volume (veh/h)	48	940	408	63	225	139	287	667	240	214
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	50	979	0	66	234	0	299	684	250	223
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	360	1054	152	557	605	1433	706	292	1187	128
Arrive On Green	0.04	0.30	0.00	0.04	0.30	0.00	0.12	0.41	0.09	0.37
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428
Grip Volume(v), veh/h	50	979	0	66	234	0	299	684	250	223
Grip Sat Flow(s), veh/h/in	1767	1763	0	1767	1856	1572	1767	1763	1572	1714
Q Serve(g, s)	2.3	32.3	0.0	3.1	12.1	0.0	12.1	17.1	12.5	7.6
Cycle Q Clear(g, c), s	2.3	32.3	0.0	3.1	12.1	0.0	12.1	17.1	12.5	7.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	360	1054	152	557	605	1433	706	292	652	663
VIC Ratio(X)	0.14	0.93	0.43	0.42	0.49	0.48	0.35	0.76	0.23	0.23
Avail Cap(c, a), veh/h	478	1087	268	572	699	1433	706	686	652	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	40.8	0.0	31.9	33.6	0.0	18.2	26.2	21.6	53.7
Incr Delay (d2), s/veh	0.2	13.3	0.0	1.9	0.5	0.0	1.2	4.1	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/h	1.7	21.8	0.0	2.4	9.2	0.0	8.0	11.1	7.9	6.1
Unsig. Movement Delay, s/veh	27.6	54.1	0.0	33.9	34.1	0.0	18.8	27.2	22.8	57.8
LnGrip Delay(d), s/veh	27.6	54.1	0.0	33.9	34.1	0.0	18.8	27.2	22.8	57.8
LnGrip LOS	C	D	A	C	C	A	B	C	C	C
Approach Vol, veh/h	1029	1029	1029	1029	1029	1029	1029	1029	1029	1029
Approach Delay, s/veh	52.8	52.8	34.1	34.1	34.1	34.1	24.3	39.9	39.9	52.8
Approach LOS	D	D	C	C	C	C	D	D	D	D
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	15.2	53.8	10.1	40.9	19.6	49.4	10.0	41.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g, c+1), s	9.6	19.1	5.1	34.3	14.1	9.2	4.3	14.1		
Green Ext Time (p, c), s	0.6	2.9	0.1	1.5	0.5	1.5	0.0	1.1		
Intersection Summary										
HCM 6th Ctrl Delay	37.4									
HCM 6th LOS	D									
Notes										
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.										

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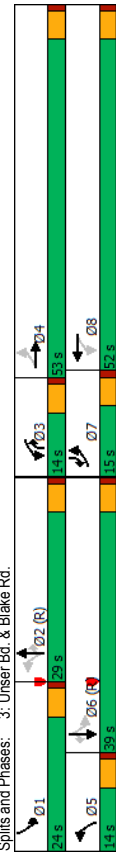
Timings  
3: Unsers Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unsers Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
147	14	119	18	30	316	74	47	338	31
147	14	119	18	30	316	74	47	338	31
NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	NA
4	3	8	8	5	2	3	1	6	7
4	3	8	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
15.0	53.0	14.0	52.0	14.0	29.0	14.0	24.0	39.0	15.0
12.5%	44.2%	11.7%	43.3%	11.7%	24.2%	11.7%	20.0%	32.5%	12.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
27.4	12.4	23.0	10.2	74.3	67.9	85.7	75.3	68.4	88.4
0.23	0.10	0.19	0.08	0.62	0.57	0.71	0.63	0.57	0.74
0.89	0.44	0.46	0.80	0.05	0.18	0.07	0.08	0.19	0.03
44.0	17.7	39.6	21.3	9.8	14.7	1.0	9.7	14.4	0.6
44.0	17.7	39.6	21.3	9.8	14.7	1.0	9.7	14.4	0.6
D	B	D	C	A	B	A	A	B	A
33.4		26.3			11.9			12.9	
C	C	C	C	C	B	B	B	B	B
120									
120									
93.6 (78%)									
65									
Actuated-Coordinated									
0.80									
19.8									
57.7%									
15									



2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
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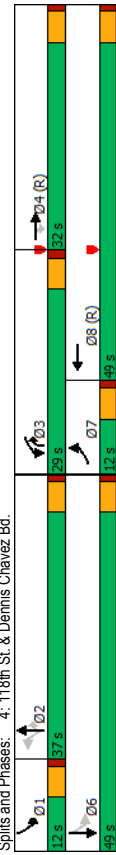
EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
147	14	85	119	18	298	30	316	74	47
147	14	85	119	18	298	30	316	74	47
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
165	16	96	134	20	335	34	355	83	53
0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
3	3	3	3	3	3	3	3	3	3
241	60	359	449	22	374	512	1617	835	509
0.08	0.26	0.26	0.07	0.25	0.25	0.04	0.46	0.46	0.46
1767	230	1378	1767	89	1497	1767	3526	1572	1767
165	0	112	134	0	355	34	355	83	53
1767	0	1608	1767	0	1586	1767	1767	1767	1767
8.2	0.0	6.6	6.7	0.0	26.0	1.2	7.3	3.1	1.9
8.2	0.0	6.6	6.7	0.0	26.0	1.2	7.3	3.1	1.9
1.00	0.86	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00
241	0	419	449	0	396	512	1617	835	509
0.68	0.00	0.27	0.30	0.00	0.90	0.07	0.22	0.10	0.10
241	0	643	454	0	621	571	1617	835	715
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
32.8	0.0	35.2	30.0	0.0	43.5	15.5	19.6	13.9	15.7
7.7	0.0	0.3	0.4	0.0	10.5	0.1	0.3	0.2	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.0	0.0	4.6	5.0	0.0	16.4	0.8	5.3	2.0	1.3
40.5	0.0	35.6	30.3	0.0	54.0	15.6	19.9	14.2	15.8
D	A	D	C	A	D	B	B	B	C
277									
38.5									
D	D	D	D	D	D	D	D	D	D
1	2	3	4	5	6	7	8		
10.0	60.0	13.7	36.3	10.0	60.0	15.0	35.0		
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
19.0	24.0	9.0	48.0	9.0	34.0	10.0	47.0		
3.9	9.3	8.7	8.6	3.2	9.8	10.2	28.0		
0.1	2.0	0.0	0.6	0.0	2.3	0.0	2.0		
30.2									
C									

2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
6	75	142	497	131	38	106	411	149	369
6	75	142	497	131	38	106	411	149	369
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
12.0	32.0	29.0	49.0	37.0	37.0	29.0	12.0	49.0	37.0
10.9%	29.1%	29.1%	26.4%	44.5%	33.6%	33.6%	26.4%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
6.1	14.9	14.9	27.8	36.6	34.1	34.1	66.9	52.3	52.3
0.06	0.14	0.14	0.25	0.33	0.31	0.31	0.61	0.48	0.48
0.09	0.46	0.61	0.89	0.37	0.42	0.28	0.54	0.41	0.81
51.0	50.7	19.9	46.7	24.1	40.5	29.9	3.9	19.2	32.7
51.0	50.7	19.9	46.7	24.1	40.5	29.9	3.9	19.2	32.7
D	D	B	D	C	D	C	A	B	C
31.1			41.5			11.3			29.3
C			D			B			C
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 25.3 (23%), Referenced to phase 4:EBT and 8:WBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.89									
Intersection Signal Delay: 28.5									
Intersection Capacity Utilization 60.8%									
Analysis Period (min) 15									



2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

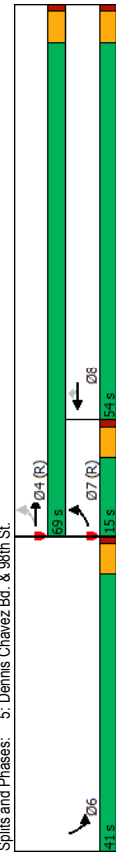
EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
6	75	142	497	131	38	106	411	149	369	85
6	75	142	497	131	38	106	411	149	369	85
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
9	115	218	765	202	25	58	163	632	229	583
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3	3
80	455	386	748	677	84	78	540	801	329	583
0.05	0.25	0.25	0.22	0.42	0.42	0.29	0.29	0.29	0.06	0.40
1767	1856	1572	3428	1619	200	741	1856	1572	1767	1459
9	115	218	765	0	227	58	163	632	229	0
1767	1856	1572	1714	0	1819	741	1856	1572	1767	0
0.5	5.5	13.4	24.0	0.0	9.1	1.9	7.5	32.0	7.0	0.0
0.5	5.5	13.4	24.0	0.0	9.1	32.0	7.5	32.0	7.0	0.0
1.00	1.00	1.00	1.00	0.11	1.00	1.00	1.00	1.00	1.00	0.19
80	455	386	748	0	761	78	540	801	329	0
0.11	0.25	0.56	1.02	0.00	0.30	0.74	0.30	0.79	0.70	0.00
112	455	386	748	0	761	78	540	801	329	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	0.20	1.00	1.00	1.00	1.00	1.00	1.00
50.4	33.4	36.4	43.0	0.0	21.3	54.8	30.3	22.2	29.1	0.0
0.6	1.3	5.9	20.9	0.0	0.2	30.8	0.3	5.3	6.3	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.4	4.6	9.4	14.6	0.0	5.1	4.0	5.9	19.2	4.3	0.0
51.0	34.7	42.2	63.9	0.0	21.5	85.6	30.6	27.5	35.5	0.0
D	C	D	F	A	C	F	A	C	D	A
342			992			853			928	
399			54.2			32.1			53.5	
D			D			C			D	
1	2	3	4		6	7	8			
12.0	37.0	29.0	32.0		49.0	10.0	51.0			
5.0	5.0	5.0	5.0		5.0	5.0	5.0			
7.0	32.0	24.0	27.0		44.0	7.0	44.0			
9.0	34.0	26.0	15.4		44.1	2.5	11.1			
0.0	0.0	0.0	1.0		0.0	0.0	1.2			
Intersection Summary										
HCM 6th Ctrl Delay 46.4										
HCM 6th LOS D										

2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
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Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL
Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	191	452	499	131	552
Traffic Volume (vph)	191	452	499	131	552
Future Volume (vph)	191	452	499	131	552
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	7	4	8	8	6
Permitted Phases	4	4	8	8	6
Detector Phase	7	4	8	8	6
Switch Phase	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0
Minimum Split (s)	15.0	69.0	54.0	54.0	41.0
Total Split (%)	13.6%	62.7%	49.1%	49.1%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	63.0	63.0	48.0	48.0	37.0
Actuated g/C Ratio	0.57	0.57	0.44	0.44	0.34
v/c Ratio	1.30	0.66	0.96	0.25	2.19
Control Delay	188.2	24.1	42.6	1.0	564.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	188.2	24.1	42.6	1.0	564.5
LOS	F	C	D	A	F
Approach Delay	72.9	33.9			
Approach LOS	E	C			
Intersection Summary					
Cycle Length: 110					
Actuated Cycle Length: 110					
Offset: 36.3 (33%). Referenced to phase 4:EBTL and 7:EBL, Start of Green					
Natural Cycle: 130					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 2.19					
Intersection Signal Delay: 256.6					
Intersection LOS: F					
Intersection Capacity Utilization 97.5%					
Analysis Period (min) 15					



2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

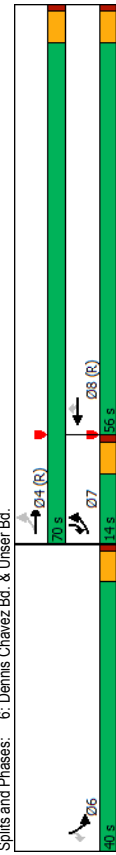
HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	191	452	499	131	552	288
Traffic Volume (veh/h)	191	452	499	131	552	288
Future Volume (veh/h)	191	452	499	131	552	288
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1900	1900
Adj Flow Rate, veh/h	294	695	768	202	849	443
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	294	1080	781	661	364	190
Arrive On Green	0.12	0.58	0.84	0.84	0.33	0.33
Sat Flow, veh/h	1767	1856	1856	1572	1113	581
Gp Volume(v), veh/h	294	695	768	202	1293	0
Gp Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1695	0
Q Serve(g, s), s	12.7	27.5	42.0	3.0	36.0	0.0
Cycle Q Clear(g, c), s	12.7	27.5	42.0	3.0	36.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	0.66	0.34
Lane Gp Cap(c), veh/h	294	1080	781	661	555	0
V/C Ratio(X)	1.00	0.64	0.98	0.31	2.33	0.00
Avail Cap(c, a), veh/h	294	1080	827	700	555	0
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(l)	0.86	0.86	0.86	0.86	1.00	0.00
Uniform Delay (d), s/veh	31.6	15.4	8.4	5.3	37.0	0.0
Incr Delay (d2), s/veh	48.8	2.6	24.6	0.2	604.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.9	16.0	13.2	1.5	170.7	0.0
Unsig. Movement Delay, s/veh	80.4	17.9	32.9	5.5	641.3	0.0
LnGp Delay(d),s/veh	F	B	C	A	F	A
LnGp LOS	F	B	C	A	F	A
Approach Vol, veh/h	989	970			1293	
Approach Delay, s/veh	36.5	27.2			641.3	
Approach LOS	D	C			F	
Timer - Assigned Phis				4	6	7
Plus Duration (G+Y+Rc), s				69.0	41.0	17.7
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				64.0	36.0	10.0
Max Q Clear Time (g, c+11), s				29.5	38.0	14.7
Green Ext Time (p, c), s				4.9	0.0	0.0
Green Ext Time (p, c), s				4.9	0.0	2.5
Intersection Summary						
HCM 6th Ctrl Delay				274.2		
HCM 6th LOS				F		

2022 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2022ANX.syn

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	84	969	461	359	665	102
Future Volume (vph)	84	969	461	359	665	102
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	14.0	70.0	56.0	56.0	40.0	14.0
Total Split (%)	12.7%	63.6%	50.9%	50.9%	36.4%	12.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	64.7	64.7	51.9	51.9	35.3	48.1
Actuated g/C Ratio	0.59	0.59	0.47	0.47	0.32	0.44
v/c Ratio	0.23	0.97	0.58	0.41	1.29	0.15
Control Delay	8.6	20.2	24.5	3.2	174.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	20.2	24.5	3.2	174.6	5.0
LOS	A	C	C	A	F	A
Approach Delay		19.3	15.2		152.0	
Approach LOS		B	B		F	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 19.8 (18%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 130						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.29						
Intersection Signal Delay: 56.6						
Intersection Delay: 56.2%						
Intersection Capacity Utilization 96.2%						
Analysis Period (min) 15						



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	84	969	461	359	665	102
Future Volume (veh/h)	84	969	461	359	665	102
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	91	1053	501	390	723	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	341	1096	928	786	562	572
Arrive On Green	0.03	0.40	0.50	0.50	0.32	0.32
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	91	1053	501	390	723	111
Gp Sat Flow(s), veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	2.6	60.8	20.3	18.1	35.0	5.3
Cycle Q Clear(g, c), s	2.6	60.8	20.3	18.1	35.0	5.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	341	1096	928	786	562	572
V/C Ratio(X)	0.27	0.96	0.54	0.50	1.29	0.19
Avail Cap(c, a), veh/h	405	1096	928	786	562	572
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	32.0	18.8	18.3	37.5	24.0
Incr Delay (d2), s/veh	0.0	3.1	2.3	2.2	141.7	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	1.4	30.8	13.4	10.8	53.6	9.4
Unsig. Movement Delay, s/veh	14.0	35.0	21.1	20.5	179.2	24.1
LnGrp Delay(d), s/veh	B	D	C	C	F	C
LnGrp LOS	B	D	C	C	F	C
Approach Vol, veh/h	1144	891			834	
Approach Delay, s/veh	33.4	20.8			198.6	
Approach LOS	C	C			F	
Timer - Assigned Phis			4		6	7
Plus Duration (G+Y+Rc), s			70.0		40.0	60.0
Change Period (Y+Rc), s			5.0		5.0	5.0
Max Green Setting (Gmax), s			65.0		35.0	51.0
Max Q Clear Time (g, c+11), s			62.8		37.0	4.6
Green Ext Time (p, c), s			1.4		0.0	0.1
Green Ext Time (p, c), s			1.4		0.0	0.1
Intersection Summary						
HCM 6th Ctrl Delay	65.9					
HCM 6th LOS	E					

**Intersection**

Int Delay, s/veh 32.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	18	1549	32	14	756	7	34	1	47	6	1	26
Future Vol, veh/h	18	1549	32	14	756	7	34	1	47	6	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	1565	32	14	764	7	34	1	47	6	1	26

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	771	0	0	1597
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	-	4.13
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227
Pot Cap-1 Maneuver	839	-	-	407
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	839	-	-	407
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	\$ 942.3	119.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	33	839	-	-	407	-	-	12	400
HCM Lane V/C Ratio	2.51	0.022	-	-	0.035	-	-	0.589	0.066
HCM Control Delay (s)	\$ 942.3	9.4	0	-	14.2	0	-	\$ 509.4	14.6
HCM Lane LOS	F	A	A	-	B	A	-	F	B
HCM 95th %tile Q(veh)	9.5	0.1	-	-	0.1	-	-	1.3	0.2

**Notes**  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	5	9	28	616	474	23
Future Vol, veh/h	5	9	28	616	474	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	9	29	642	494	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	873	247	518	0	-	0
Stage 1	494	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	288	750	1037	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	280	750	1037	-	-	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1037	-	280	750	-	-
HCM Lane V/C Ratio	0.028	-	0.019	0.013	-	-
HCM Control Delay (s)	8.6	-	18.1	9.9	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-



Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↔		↵	↕↔		↵	↕↔		↵	↕↔	
Traffic Vol, veh/h	166	108	20	11	38	10	18	354	50	8	215	20
Future Vol, veh/h	166	108	20	11	38	10	18	354	50	8	215	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	202	132	24	13	46	12	22	432	61	10	262	24
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14	11.2	15.5	13.1
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	70%	0%	100%	64%	0%	100%	56%	0%	100%
Vol Right, %	0%	0%	30%	0%	0%	36%	0%	0%	44%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	236	168	166	72	56	11	25	23	8	143
LT Vol	18	0	0	166	0	0	11	0	0	8	0
Through Vol	0	236	118	0	72	36	0	25	13	0	143
RT Vol	0	0	50	0	0	20	0	0	10	0	0
Lane Flow Rate	22	288	205	202	88	68	13	31	28	10	175
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.044	0.543	0.374	0.43	0.174	0.131	0.032	0.069	0.059	0.021	0.355
Departure Headway (Hd)	7.389	6.889	6.681	7.76	7.26	7.01	8.507	8.007	7.698	7.805	7.305
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	527	543	468	497	514	423	450	467	461	495
Service Time	5.089	4.589	4.381	5.46	4.96	4.71	6.218	5.718	5.409	5.505	5.005
HCM Lane V/C Ratio	0.045	0.546	0.378	0.432	0.177	0.132	0.031	0.069	0.06	0.022	0.354
HCM Control Delay	10.4	17.5	13.3	16.2	11.5	10.8	11.5	11.3	10.9	10.7	14
HCM Lane LOS	B	C	B	C	B	B	B	B	B	B	B
HCM 95th-tile Q	0.1	3.2	1.7	2.1	0.6	0.4	0.1	0.2	0.2	0.1	1.6

Intersection												
Intersection Delay, s/veh	11.7											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↕	
Traffic Vol, veh/h	22	20	67	29	19	30	27	328	31	23	217	3
Future Vol, veh/h	22	20	67	29	19	30	27	328	31	23	217	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	24	81	35	23	36	33	395	37	28	261	4
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	10.7	10.5	12.5	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	78%	0%	23%	0%	39%	0%	100%	96%
Vol Right, %	0%	0%	22%	0%	77%	0%	61%	0%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	219	140	22	87	29	49	23	145	75
LT Vol	27	0	0	22	0	29	0	23	0	0
Through Vol	0	219	109	0	20	0	19	0	145	72
RT Vol	0	0	31	0	67	0	30	0	0	3
Lane Flow Rate	33	263	169	27	105	35	59	28	174	91
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.448	0.28	0.055	0.187	0.073	0.109	0.053	0.312	0.162
Departure Headway (Hd)	6.62	6.116	5.959	7.466	6.424	7.561	6.629	6.94	6.435	6.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	588	602	478	557	472	538	515	558	558
Service Time	4.369	3.865	3.708	5.234	4.191	5.332	4.4	4.699	4.193	4.165
HCM Lane V/C Ratio	0.061	0.447	0.281	0.056	0.189	0.074	0.11	0.054	0.312	0.163
HCM Control Delay	9.8	13.8	11	10.7	10.7	10.9	10.2	10.1	12.1	10.4
HCM Lane LOS	A	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.2	2.3	1.1	0.2	0.7	0.2	0.4	0.2	1.3	0.6

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	15	1	7	4	13	1	7	23	16	8	1
Future Vol, veh/h	3	15	1	7	4	13	1	7	23	16	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	19	1	9	5	16	1	9	28	20	10	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	20	0	0	61	63	20	73	55	13
Stage 1	-	-	-	-	-	-	24	24	-	31	31	-
Stage 2	-	-	-	-	-	-	37	39	-	42	24	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1588	-	-	1590	-	-	932	826	1055	915	834	1064
Stage 1	-	-	-	-	-	-	991	873	-	983	867	-
Stage 2	-	-	-	-	-	-	976	860	-	970	873	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1588	-	-	1590	-	-	917	820	1055	878	828	1064
Mov Cap-2 Maneuver	-	-	-	-	-	-	917	820	-	878	828	-
Stage 1	-	-	-	-	-	-	990	872	-	982	862	-
Stage 2	-	-	-	-	-	-	958	855	-	934	872	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			2.1			8.8			9.3		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	986	1588	-	-	1590	-	-	867
HCM Lane V/C Ratio	0.039	0.001	-	-	0.005	-	-	0.036
HCM Control Delay (s)	8.8	7.3	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕	↕	↵	↕	↵
Traffic Vol, veh/h	17	2	3	13	1	71	1	577	16	44	471	6
Future Vol, veh/h	17	2	3	13	1	71	1	577	16	44	471	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	100	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	2	3	14	1	79	1	641	16	49	523	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	944	1280	262	1004	1271	321	530	0	0	657	0	0
Stage 1	621	621	-	643	643	-	-	-	-	-	-	-
Stage 2	323	659	-	361	628	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	215	163	734	195	165	672	1026	-	-	920	-	-
Stage 1	439	475	-	426	464	-	-	-	-	-	-	-
Stage 2	660	456	-	627	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	181	154	734	185	156	672	1026	-	-	920	-	-
Mov Cap-2 Maneuver	301	265	-	306	279	-	-	-	-	-	-	-
Stage 1	439	450	-	426	464	-	-	-	-	-	-	-
Stage 2	581	456	-	588	447	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.9		12.1		0		0.8	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1026	-	-	301	430	306	659	920	-	-
HCM Lane V/C Ratio	0.001	-	-	0.031	0.013	0.047	0.121	0.053	-	-
HCM Control Delay (s)	8.5	-	-	17.3	13.5	17.3	11.2	9.1	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	0.4	0.2	-	-

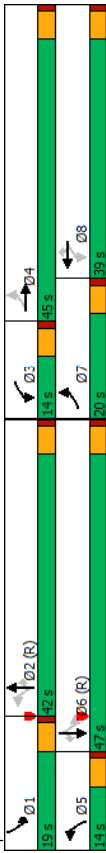
Timings  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	174	60	69	20	261	29	716	72	159	668
Future Volume (vph)	174	60	69	20	261	29	716	72	159	668
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	2	1	6	6
Permitted Phases	4	4	3	8	8	5	2	2	1	6
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Minimum Split (s)	20.0	45.0	14.0	39.0	32.5%	11.7%	35.0%	35.0%	15.8%	39.2%
Total Split (%)	16.7%	37.5%	11.7%	32.5%	11.7%	35.0%	35.0%	15.8%	39.2%	39.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	None	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	None	Min	Min	Min	Min	Min	Min	Min	Min	Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 36 (30%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated



Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	174	60	69	20	261	29	716	72	159	668
Future Volume (veh/h)	174	60	69	20	261	29	716	72	159	668
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	191	66	42	76	22	287	32	787	79	175
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	441	266	169	406	374	317	376	1629	727	378
Arrive On Green	0.10	0.25	0.25	0.05	0.20	0.20	0.04	0.46	0.46	0.07
Sat Flow, veh/h	1767	1060	674	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	191	0	108	76	22	287	32	787	79	175
Grip Sat Flow(s), veh/h/in	1767	0	1734	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	9.9	0.0	6.0	4.0	1.1	21.4	1.1	18.5	3.4	6.1
Cycle Q Clear(g, c), s	9.9	0.0	6.0	4.0	1.1	21.4	1.1	18.5	3.4	6.1
Prop In Lane	1.00	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	441	0	435	406	374	317	376	1629	727	378
VIC Ratio(X)	0.43	0.00	0.25	0.19	0.06	0.91	0.09	0.48	0.11	0.46
Avail Cap(c, a), veh/h	485	0	578	449	526	446	435	1629	727	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	35.9	35.1	38.7	46.8	46.8	22.3	18.3	16.5
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.2	0.1	17.3	0.1	1.0	0.3	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	7.5	0.0	4.5	3.1	0.9	14.7	0.8	11.7	2.3	4.2
Unsig. Movement Delay, s/veh	32.0	0.0	36.2	35.3	38.8	64.1	15.8	23.4	18.6	17.3
LnGrip Delay(d), s/veh	C	A	D	D	D	E	B	C	B	C
LnGrip LOS	C	A	D	D	D	E	B	C	B	C
Approach Vol, veh/h	299	335	385	385	898	22.7	898	964	19.6	964
Approach Delay, s/veh	33.5	33.5	57.0	57.0	22.7	22.7	22.7	19.6	19.6	19.6
Approach LOS	C	C	E	E	C	C	C	B	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	13.3	60.5	11.1	35.1	10.0	63.8	17.0	29.2		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0		
Max Q Clear Time (g, c+H), s	8.1	20.5	6.0	8.0	3.1	18.1	11.9	23.4		
Green Ext Time (p, c), s	0.2	4.5	0.0	0.5	0.0	4.6	0.1	0.8		

Intersection Summary  
HCM 6th Ctrl Delay: 28.0  
HCM 6th LOS: C

2022 AM Peak BUILD Conditions  
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Timings  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	332	1385	63	380	139	306	657	240	214
Future Volume (vph)	332	1385	63	380	139	306	657	240	214
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	C-Min

Intersection Summary

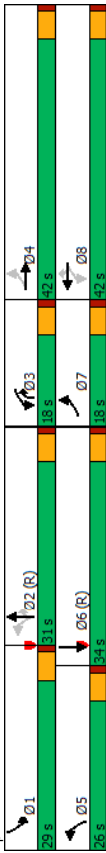
Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	332	1385	63	380	139	306	657	240	214	265
Future Volume (veh/h)	332	1385	63	380	139	306	657	240	214	265
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	346	1443	0	66	396	0	319	684	250	223
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	290	1087	139	454	542	1393	692	292	808	385
Arrive On Green	0.11	0.31	0.00	0.04	0.24	0.00	0.13	0.40	0.40	0.35
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	2317
Grip Volume(v), veh/h	346	1443	0	66	396	0	319	684	250	223
Grip Sat Flow(s) veh/h/ln	1767	1763	0	1767	1856	1572	1767	1714	1763	1667
Q Serve(g, s)	13.0	37.0	0.0	3.3	24.6	0.0	13.3	17.5	12.7	7.6
Cycle Q Clear(g, c), s	13.0	37.0	0.0	3.3	24.6	0.0	13.3	17.5	12.7	7.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	290	1087	139	454	542	1393	692	292	615	578
VIC Ratio(X)	1.19	1.33	0.47	0.87	0.59	0.49	0.36	0.76	0.34	0.35
Avail Cap(c, a), veh/h	290	1087	251	572	619	1393	692	686	615	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	41.5	0.0	35.1	43.5	0.0	19.6	27.2	22.4	28.8
Incr Delay (d2), s/veh	114.9	153.8	0.0	2.5	11.6	0.0	1.0	1.2	4.1	1.7
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	23.3	57.2	0.0	2.7	18.1	0.0	8.7	11.3	8.0	6.1
Unsig. Movement Delay, s/veh	149.6	196.3	0.0	37.6	55.1	0.0	20.5	28.3	23.6	30.3
LnGrip Delay(d) s/veh	F	F	A	D	E	C	C	E	C	C
LnGrip LOS	F	F	A	D	E	C	C	E	C	C
Approach Vol, veh/h	1789	1789	186.5	462	A	1253	25.4	634	40.1	
Approach Delay, s/veh	186.5	186.5	52.6	52.6	D	25.4	25.4	40.1	40.1	
Approach LOS	F	F	D	D	C	C	C	D	D	
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	15.2	52.4	10.4	42.0	20.8	46.9	18.0	34.4		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g, c+1), s	9.6	19.5	5.3	39.0	15.3	12.9	15.0	26.6		
Green Ext Time (p, c), s	0.6	2.8	0.1	0.0	0.5	2.0	0.0	1.5		
Intersection Summary										
HCM 6th Ctrl Delay	100.3									
HCM 6th LOS	F									

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2022 AM Peak BUILD Conditions

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2022 AM Peak BUILD Conditions

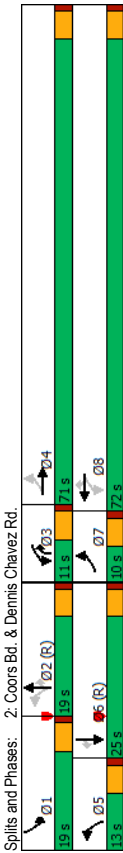
Synchro 10 Report  
2022ABX.syn

Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	332	1385	63	380	139	278	457	240	214	240
Future Volume (vph)	332	1385	63	380	139	278	457	240	214	240
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6	
Permitted Phases	4	4	3	8	8	2	2	3	1	6
Detector Phase	7	4	3	8	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	10.0	71.0	11.0	72.0	13.0	19.0	11.0	19.0	25.0	25.0
Total Split (%)	8.3%	59.2%	9.2%	60.0%	10.8%	15.8%	9.2%	15.8%	20.8%	20.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	C-Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 99.6 (83%), Referenced to phase 2:NBLT and 6:SBT, Start of Green  
Natural Cycle: 100  
Control Type: Actuated-Coordinated



2022 AM Peak BUILD Conditions - MITTIGATED Conditions  
Synchro 10 Report  
2022AB\_MIT.syn

HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

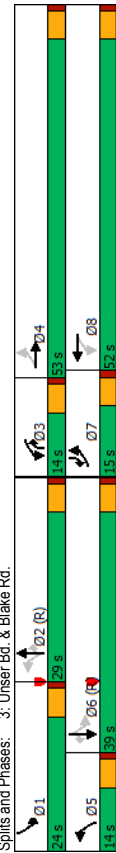
Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	332	1385	63	380	139	278	457	240	214	240
Future Volume (veh/h)	332	1385	63	380	139	278	457	240	214	240
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	346	1443	0	66	396	0	290	476	250	223
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1027	1653	171	1653	731	846	443	284	903	403
Arrive On Green	0.04	0.47	0.00	0.04	0.47	0.00	0.24	0.24	0.08	0.26
Sat Flow, veh/h	3428	3618	0	1767	3526	1572	3428	3526	1572	1572
Gp Volume(v), veh/h	346	1443	0	66	396	0	290	476	250	223
Gp Sat Flow(s), veh/h/ln	1714	1763	0	1767	1763	1572	1714	1763	1572	1714
Q Serve(g, s)	5.0	44.2	0.0	2.3	8.1	0.0	7.7	14.2	16.3	7.7
Cycle Q Clear(g, c), s	5.0	44.2	0.0	2.3	8.1	0.0	7.7	14.2	16.3	7.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	1027	1653	171	1653	731	846	443	284	903	403
VIC Ratio(X)	0.34	0.87	0.39	0.24	0.40	0.56	0.56	0.79	0.28	0.34
Avail Cap(c, a), veh/h	1027	1939	185	1968	731	846	443	400	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	28.6	0.0	24.8	19.1	0.0	31.6	40.1	36.8	54.0
Incr Delay (d2), s/veh	0.2	4.2	0.0	1.4	0.1	0.0	3.3	4.3	6.7	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	1.1	25.3	0.0	1.7	5.7	0.0	5.6	10.0	10.4	6.3
Unsig. Movement Delay, s/veh	17.8	32.8	0.0	26.3	19.1	0.0	31.9	42.3	41.2	60.7
LnGp Delay(d), s/veh	17.8	32.8	0.0	26.3	19.1	0.0	31.9	42.3	41.2	60.7
LnGp LOS	B	C	C	B	C	C	D	D	E	D
Approach Vol, veh/h	1789	1789	A	462	A	1016	D	D	E	D
Approach Delay, s/veh	29.9	29.9	20.2	20.2	39.1	39.1	45.8	45.8	45.8	45.8
Approach LOS	C	C	C	C	D	D	D	D	D	D
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	14.9	33.8	10.0	61.3	13.0	35.7	10.0	61.3		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	14.0	14.0	6.0	66.0	8.0	20.0	5.0	67.0		
Max Q Clear Time (g, c+1), s	9.7	18.3	4.3	46.2	9.7	10.4	7.0	10.1		
Green Ext Time (p, c), s	0.3	0.0	0.0	10.1	0.0	1.3	0.0	2.6		
Intersection Summary										
HCM 6th Ctrl Delay	33.6									
HCM 6th LOS	C									
Notes	User approved pedestrian interval to be less than phase max green. Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.									

2022 AM Peak BUILD Conditions - MITTIGATED Conditions  
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Timings  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
147	14	136	18	31	411	88	47	382	31
147	14	136	18	31	411	88	47	382	31
NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	NA
7	4	3	8	5	2	3	1	6	7
4	8	8	8	2	2	3	1	6	6
7	4	3	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
15.0	53.0	14.0	52.0	14.0	29.0	14.0	24.0	39.0	15.0
12.5%	44.2%	11.7%	43.3%	11.7%	24.2%	11.7%	20.0%	32.5%	12.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
25.5	11.3	23.3	10.2	75.1	68.7	86.9	76.0	69.2	88.4
0.21	0.09	0.19	0.08	0.63	0.57	0.72	0.63	0.58	0.74
0.61	0.48	0.54	0.80	0.06	0.23	0.08	0.09	0.21	0.03
46.3	19.0	43.0	21.3	9.2	14.4	1.4	9.1	14.0	0.6
46.3	19.0	43.0	21.3	9.2	14.4	1.4	9.1	14.0	0.6
D	B	D	C	A	B	A	A	B	A
35.1	27.8	27.8	12.0					12.6	
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 120									
Offset: 93.6 (78%). Referenced to phase 2:NBTL and 6:SBTL, Start of Green									
Natural Cycle: 65									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.80									
Intersection Signal Delay: 19.8									
Intersection Capacity Utilization 59.7%									
Analysis Period (min) 15									



2022 AM Peak BUILD Conditions  
Synchro 10 Report  
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HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
147	14	87	136	18	298	31	411	88	47
147	14	87	136	18	298	31	411	88	47
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
165	16	98	153	20	335	35	462	99	53
0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
3	3	3	3	3	3	3	3	3	3
241	58	357	448	22	374	487	1617	839	451
0.08	0.26	0.26	0.08	0.25	0.25	0.04	0.46	0.46	0.46
1767	226	1381	1767	89	1497	1767	3526	1572	1767
165	0	114	153	0	355	35	462	99	53
1767	0	1607	1767	0	1586	1767	1763	1572	1767
8.2	0.0	6.8	7.7	0.0	26.0	1.2	9.8	3.8	1.9
8.2	0.0	6.8	7.7	0.0	26.0	1.2	9.8	3.8	1.9
1.00	0.86	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00
241	0	415	448	0	396	487	1617	839	451
0.68	0.00	0.27	0.34	0.00	0.90	0.07	0.29	0.12	0.12
241	0	643	448	0	621	546	1617	839	657
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
32.8	0.0	35.5	30.1	0.0	43.5	15.6	20.2	13.9	15.9
7.7	0.0	0.4	0.4	0.0	10.5	0.1	0.4	0.3	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.0	0.0	4.8	5.8	0.0	16.4	0.9	7.1	2.4	1.3
40.5	0.0	35.9	30.6	0.0	54.0	15.7	20.7	14.2	16.0
D	A	D	C	A	D	B	C	B	C
279	38.6	508	46.9	596	19.3	517	19.5	517	19.5
D	D	D	D	B	B	B	B	B	B
1	2	3	4	5	6	7	8		
10.0	60.0	14.0	36.0	10.0	60.0	15.0	35.0		
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
19.0	24.0	9.0	48.0	9.0	34.0	10.0	47.0		
3.9	11.8	9.7	8.8	3.2	11.0	10.2	28.0		
0.1	2.4	0.0	0.6	0.0	2.6	0.0	2.0		
Intersection Summary									
HCM 6th Ctrl Delay 29.6									
HCM 6th LOS C									

2022 AM Peak BUILD Conditions  
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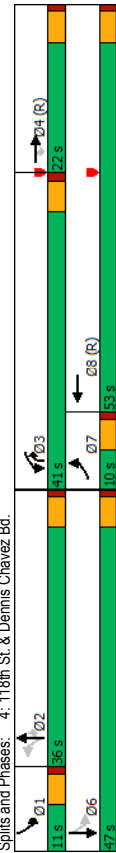




Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	6	80	142	712	138	38	106	627	153	369
Traffic Volume (vph)	6	80	142	712	138	38	106	627	153	369
Future Volume (vph)	6	80	142	712	138	38	106	627	153	369
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	4	3	8	2	2	3	1	6
Permitted Phases	7	4	4	3	8	2	2	3	1	6
Detector Phase										
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	10.0	10.0	21.0
Minimum Split (s)	10.0	22.0	22.0	41.0	53.0	36.0	36.0	41.0	11.0	47.0
Total Split (%)	9.1%	20.0%	20.0%	37.3%	48.2%	32.7%	32.7%	37.3%	10.0%	42.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	Min	C-Min	C-Min	Min	C-Min	Min	C-Min	Min	Min	Min
Act Effct Green (s)	5.1	12.5	12.5	36.7	44.1	31.4	31.4	73.1	45.8	45.8
Actuated g/C Ratio	0.05	0.11	0.11	0.33	0.40	0.29	0.29	0.66	0.42	0.42
v/c Ratio	0.11	0.59	0.66	0.97	0.33	0.87	0.31	0.83	0.51	0.93
Control Delay	53.5	57.0	22.5	47.1	22.9	119.8	33.0	16.1	27.5	50.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	57.0	22.5	47.1	22.9	119.8	33.0	16.1	27.5	50.8
LOS	D	E	C	D	C	F	C	B	C	D
Approach Delay		35.4			42.7			23.5		44.9
Approach LOS		D			D			C		D
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 25.3 (23%). Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 90										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.97										
Intersection Signal Delay: 36.6										
Intersection Capacity Utilization 66.9%										
Analysis Period (min) 15										



2022 AM Peak BUILD Conditions - MITIGATED Conditions  
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HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

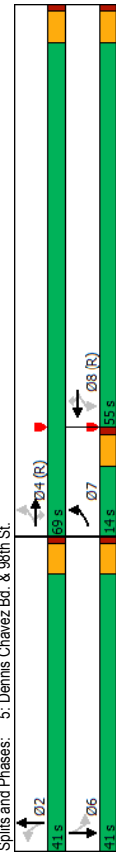
	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	6	80	142	712	138	38	106	627	153	369	85	
Traffic Volume (veh/h)	6	80	142	712	138	38	106	627	153	369	85	
Future Volume (veh/h)	6	80	142	712	138	38	106	627	153	369	85	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No	
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	
Adj Sat Flow, veh/h	9	123	218	1095	212	28	58	163	965	235	568	
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	
Cap, veh/h	80	287	243	1122	701	93	65	523	958	267	557	
Arrive On Green	0.05	0.15	0.15	0.33	0.44	0.44	0.28	0.28	0.28	0.05	0.38	
Sat Flow, veh/h	1767	1856	1572	3428	1605	212	741	1856	1572	1767	1459	
Grip Volume(v), veh/h	9	123	218	1095	0	240	58	163	965	235	0	
Grip Sat Flow(s), veh/h/in	1767	1856	1572	1714	0	1817	741	1856	1572	1767	0	
Q Serve(g.s), s	0.5	6.6	15.0	34.7	0.0	9.4	0.0	7.6	31.0	6.0	0.0	
Cycle Q Clear(g.c), s	0.5	6.6	15.0	34.7	0.0	9.4	0.0	7.6	31.0	6.0	0.0	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
VIC Ratio(X)	0.11	0.43	0.90	0.98	0.00	0.30	0.89	0.31	1.01	0.88	0.00	
Avail Cap(c.a), veh/h	80	287	243	1122	0	793	65	523	958	267	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay(d), s/veh	50.4	42.1	45.6	36.6	0.0	20.1	55.0	31.1	21.5	35.0	0.0	
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%), veh/h	0.4	5.9	12.7	19.9	0.0	6.0	5.2	6.0	37.8	9.2	0.0	
Unsig. Movement Delay, s/veh	51.0	46.7	81.9	49.1	0.0	20.6	127.7	31.4	52.4	61.7	0.0	
LnGrip Delay(d), s/veh	D	D	F	D	A	C	F	C	F	E	A	
LnGrip LOS	D	D	F	D	A	C	F	C	F	E	A	
Approach Vol, veh/h	360											
Approach Delay, s/veh	68.7											
Approach LOS	E											
Timer - Assigned Phis	1	2	3	4								8
Phis Duration (G+Y+Rc), s	11.0	36.0	41.0	22.0								53.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0								5.0
Max Green Setting (Gmax), s	6.0	31.0	36.0	17.0								48.0
Max Q Clear Time (g.c+H), s	8.0	33.0	36.7	17.0								44.0
Green Ext Time (p.c), s	0.0	0.0	0.0	0.0								0.0
Intersection Summary	55.6											
HCM 6th Ctrl Delay	E											
HCM 6th LOS	E											

2022 AM Peak BUILD Conditions - MITIGATED Conditions  
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Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	200	619	49	63	582	131	136	89	582	99
Traffic Volume (vph)	200	619	49	63	582	131	136	89	582	99
Future Volume (vph)	200	619	49	63	582	131	136	89	582	99
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	7	4								
Permitted Phases	4	4	4	8	8	8	2	2	6	6
Detector Phase	7	4	4	8	8	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	14.0	69.0	62.7%	50.0%	50.0%	50.0%	37.3%	37.3%	37.3%	37.3%
Total Split (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Total Lost Time (s)	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Min	C-Min	C-Min	C-Min	C-Min	C-Min	Min	Min	Min	Min
Recall Mode	64.0	64.0	50.0	50.0	50.0	36.0	36.0	36.0	36.0	36.0
Act Effct Green (s)	0.58	0.58	0.58	0.45	0.45	0.45	0.33	0.33	0.33	0.33
Actuated g/C Ratio	1.47	0.89	0.88	1.07	1.07	0.25	3.12	0.54	3.57	0.95
v/c Ratio	253.2	26.8	2.0	151.6	88.2	10.6	1008.6	27.6	1180.7	53.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	253.2	26.8	2.0	151.6	88.2	10.6	1008.6	27.6	1180.7	53.7
Total Delay	F	C	A	F	F	B	F	C	F	D
LOS	77.6	80.2	E	F	F	4159	F	F	714.0	F
Approach Delay	Intersection Summary									
Approach LOS	Cycle Length: 110									
	Actuated Cycle Length: 110									
	Offset: 36.3 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green									
	Natural Cycle: 130									
	Control Type: Actuated-Coordinated									
	Maximum v/c Ratio: 3.57									
	Intersection Signal Delay: 322.6									
	Intersection Capacity Utilization 100.9%									
	Analysis Period (min) 15									
	ICU Level of Service G									



2022 AM Peak BUILD Conditions  
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HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

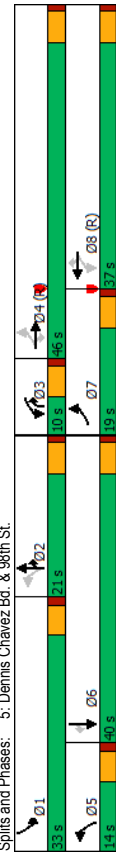
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	200	619	49	63	582	131	136	89	118	582	99
Traffic Volume (veh/h)	200	619	49	63	582	131	136	89	118	582	99
Future Volume (veh/h)	200	619	49	63	582	131	136	89	118	582	99
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	308	952	75	97	895	202	209	137	182	849	152
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	210	1080	915	142	843	715	65	237	314	244	136
Arrive On Green	0.08	0.58	0.58	0.91	0.91	0.91	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1767	1856	1572	545	1856	1572	812	723	960	1052	414
Grip Volume(v), veh/h	308	952	75	97	895	202	209	0	319	849	0
Grip Sat Flow(s), veh/h/ln	1767	1856	1572	545	1856	1572	812	0	1683	1052	0
Q Serve(g.s), s	9.0	48.5	2.3	15.5	50.0	1.7	0.0	0.0	17.3	18.7	0.0
Cycle Q Clear(g.c), s	9.0	48.5	2.3	50.0	50.0	1.7	36.0	0.0	17.3	36.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.57	1.00	1.00	0.75
Lane Grip Cap(c), veh/h	210	1080	915	142	843	715	65	0	551	244	0
VIC Ratio(X)	1.47	0.88	0.08	0.68	1.06	0.28	3.19	0.00	0.58	3.48	0.00
Avail Cap(c.a), veh/h	210	1080	915	142	843	715	65	0	551	244	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.61	0.61	0.61	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00
Uniform Delay(d), s/veh	33.8	19.8	10.1	23.8	5.0	2.8	55.0	0.0	30.7	48.2	0.0
Incr Delay(d2), s/veh	225.2	6.7	0.1	17.1	44.0	0.7	1025.4	0.0	1.5	1124.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/h	23.6	27.3	1.4	5.5	18.0	1.1	36.8	0.0	11.6	136.5	0.0
Unsig. Movement Delay, s/veh	259.0	26.5	10.2	41.0	49.0	3.5	1080.4	0.0	32.2	1172.6	0.0
LnGrip Delay(d), s/veh	F	C	B	D	F	A	F	A	C	F	A
LnGrip LOS	F	C	B	D	F	A	F	A	C	F	A
Approach Vol, veh/h	1336	79.2	1194	40.6	528	1449	734.1	1449	734.1	1449	734.1
Approach Delay, s/veh	79.2	40.6	1194	40.6	528	1449	734.1	1449	734.1	1449	734.1
Approach LOS	E	D	D	D	F	F	F	F	F	F	F
Timer - Assigned Phis	2	4	6	7	8	8	8	8	8	8	8
Phis Duration (G+Y+Rc), s	41.0	69.0	41.0	14.0	55.0	5.0	5.0	5.0	5.0	5.0	5.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	36.0	64.0	36.0	9.0	50.0	36.0	38.0	11.0	52.0	38.0	11.0
Max Q Clear Time (g_c+H1), s	38.0	50.5	38.0	38.0	50.5	38.0	11.0	52.0	38.0	50.5	11.0
Green Ext Time (p_c), s	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary	322.7 F										
HCM 6th Ctrl Delay	F										
HCM 6th LOS	F										

2022 AM Peak BUILD Conditions  
Synchro 10 Report  
2022ABX.syn

Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
200	619	49	63	582	131	136	89	118	552	99	291
200	619	49	63	582	131	136	89	118	552	99	291
7	4	4	3	8	8	5	2	2	3	1	6
4	4	4	3	8	8	5	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
19.0	46.0	46.0	10.0	37.0	37.0	14.0	21.0	33.0	40.0	40.0	40.0
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
56.2	43.8	43.8	38.8	31.5	31.5	19.5	10.4	22.7	28.4	29.7	29.7
0.51	0.40	0.40	0.35	0.29	0.29	0.18	0.09	0.21	0.26	0.27	0.27
0.81	0.68	0.10	0.41	0.89	0.33	0.81	0.42	0.26	0.97	0.16	0.74
42.7	34.6	0.7	28.6	60.2	14.3	51.4	49.9	7.5	64.2	30.5	23.4
42.7	34.6	0.7	28.6	60.2	14.3	51.4	49.9	7.5	64.2	30.5	23.4
34.6	34.6	34.6	49.9	49.9	35.9	35.9	35.9	35.9	48.1	48.1	48.1
C	C	C	D	D	D	D	D	D	D	D	D



2022 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2022AB\_MIT.syn

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

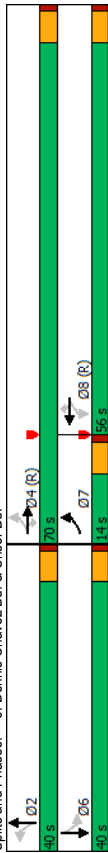
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
200	619	49	63	582	131	136	89	118	552	99	291
200	619	49	63	582	131	136	89	118	552	99	291
0	0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
308	952	75	97	895	202	209	137	182	849	152	448
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3	3	3
320	1369	611	234	1081	482	315	458	485	873	1067	476
0.13	0.39	0.39	0.02	0.10	0.10	0.08	0.13	0.13	0.25	0.30	0.30
1767	3526	1572	1767	3526	1572	1767	3526	2768	3428	3526	1572
308	952	75	97	895	202	209	137	182	849	152	448
1767	1763	1572	1767	1763	1572	1767	1763	1384	1714	1763	1572
13.1	24.9	3.4	4.1	27.4	13.3	9.0	3.9	6.4	27.0	3.5	30.6
13.1	24.9	3.4	4.1	27.4	13.3	9.0	3.9	6.4	27.0	3.5	30.6
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.96	0.70	0.12	0.41	0.83	0.42	0.66	0.30	0.38	0.97	0.14	0.94
320	1369	611	234	1081	482	315	513	528	873	1122	500
1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.58	0.58	0.58	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
26.7	28.2	21.6	26.7	46.6	40.2	39.1	43.3	40.0	40.6	28.0	37.4
29.2	1.7	0.2	1.1	7.1	2.6	5.1	0.4	0.5	23.9	0.1	25.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11.5	14.7	2.3	3.3	20.0	9.8	9.4	3.1	4.0	20.3	2.6	21.3
56.0	29.9	21.8	27.8	53.7	42.8	44.2	43.7	40.5	64.6	28.0	63.2
1336	35.5	35.5	1194	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7
1	2	3	4	5	6	7	8	8	8	8	8
33.0	19.3	10.0	47.7	14.0	38.3	19.0	38.7	38.7	38.7	38.7	38.7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
29.0	8.4	6.1	26.9	11.0	32.6	15.1	29.4	29.4	29.4	29.4	29.4
0.0	0.9	0.0	6.0	0.0	0.7	0.0	1.6	1.6	1.6	1.6	1.6
48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1
D	D	D	D	D	D	D	D	D	D	D	D

2022 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2022AB\_MIT.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
111	1213	14	180	548	359	37	85	665	42
111	1213	14	180	548	359	37	85	665	42
pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
7	4	4	8	8	8	2	2	6	6
4	4	4	8	8	8	2	2	6	6
7	4	4	8	8	8	2	2	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
14.0	70.0	70.0	56.0	56.0	40.0	40.0	40.0	40.0	40.0
12.7%	63.6%	63.6%	50.9%	50.9%	36.4%	36.4%	36.4%	36.4%	36.4%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
65.0	65.0	51.8	51.8	51.8	35.0	35.0	35.0	35.0	35.0
0.59	0.59	0.47	0.47	0.47	0.32	0.32	0.32	0.32	0.32
0.36	1.21	0.82	2.97	0.89	0.41	0.12	1.19	10.95	0.30
9.1	115.5	2.1	934.3	28.0	3.2	27.9	133.2	4514.6	9.7
9.1	115.5	2.1	934.3	28.0	3.2	27.9	133.2	4514.6	9.7
A	F	A	F	C	A	C	F	F	A
105.5	F	170.1	F	F	127.1	F	F	3596.8	F



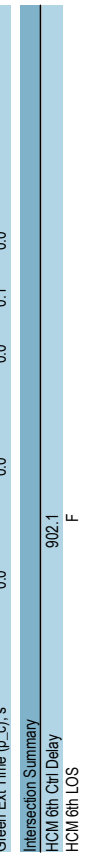
Splits and Phases: 6: Dennis Chavez Bd. & Unser Bd.

2022 AM Peak BUILD Conditions  
Synchro 10 Report  
2022ABX.syn

HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
111	1213	14	180	548	359	37	85	513	665	42
111	1213	14	180	548	359	37	85	513	665	42
0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
121	1318	15	196	596	390	40	92	558	723	46
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
3	3	3	3	3	3	3	3	3	3	3
300	1096	929	65	917	778	340	72	439	65	129
0.05	0.59	0.59	0.49	0.49	0.49	0.32	0.32	0.32	0.32	0.32
1767	1856	1572	407	1856	1572	1189	227	1380	775	406
121	1318	15	196	596	390	40	92	558	723	46
1767	1856	1572	407	1856	1572	1189	227	1380	775	406
3.5	65.0	0.4	0.0	26.3	18.3	2.9	0.0	35.0	0.0	0.0
3.5	65.0	0.4	54.4	26.3	18.3	12.5	0.0	35.0	0.0	0.0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
300	1096	929	65	917	778	340	0	511	65	0
0.40	1.20	0.02	2.99	0.65	0.50	0.12	0.00	1.27	11.05	0.00
335	1096	929	65	917	778	340	0	511	65	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15.9	22.5	9.3	55.0	20.7	18.7	33.6	0.0	37.5	55.0	0.0
0.1	91.8	0.0	937.0	3.6	2.3	0.2	0.0	136.7	4590.7	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.9	67.4	0.3	33.9	17.6	11.4	1.6	0.0	48.6	138.8	0.0
16.0	114.3	9.3	992.0	24.3	21.0	33.8	0.0	174.2	4605.7	0.0
1454	F	A	F	C	C	C	A	F	F	A
105.0	F	A	F	C	C	C	A	F	F	A
1182	F	A	F	C	C	C	A	F	F	A
183.7	F	A	F	C	C	C	A	F	F	A
2	4	4	6	7	8	8	8	8	8	8
40.0	70.0	70.0	40.0	40.0	10.6	59.4	5.0	5.0	5.0	5.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
35.0	65.0	65.0	35.0	35.0	9.0	51.0	37.0	37.0	37.0	37.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
902.1	F	A	F	C	C	C	A	F	F	A

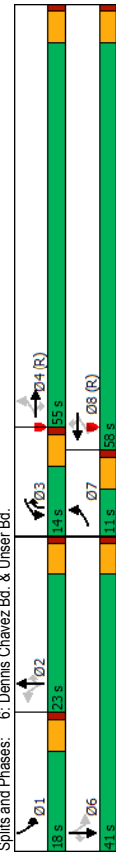


2022 AM Peak BUILD Conditions  
Synchro 10 Report  
2022ABX.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
111	1213	14	180	548	359	37	85	513	665	42	128
111	1213	14	180	548	359	37	85	513	665	42	128
pm+pt	NA	Perm	pm+pt	NA	Perm	pm+ov	pm+pt	NA	Perm	NA	Perm
7	4	4	3	8	8	2	2	3	1	6	6
4	4	4	3	8	8	2	2	3	1	6	6
7	4	4	3	8	8	2	2	3	1	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
11.0	55.0	55.0	14.0	58.0	58.0	23.0	23.0	14.0	18.0	41.0	41.0
10.0%	50.0%	50.0%	12.7%	52.7%	52.7%	20.9%	20.9%	12.7%	16.4%	37.3%	37.3%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Min	C-Min	C-Min	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
57.8	49.3	49.3	69.4	56.2	56.2	9.0	9.0	29.2	30.4	30.4	30.4
0.53	0.45	0.45	0.63	0.51	0.51	0.08	0.08	0.27	0.28	0.28	0.28
0.25	0.84	0.82	0.33	0.33	0.39	0.37	0.32	0.71	1.02	0.05	0.26
11.5	39.4	0.0	10.7	16.6	2.8	56.6	49.9	37.0	77.4	30.1	6.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11.5	39.4	0.0	10.7	16.6	2.8	56.6	49.9	37.0	77.4	30.1	6.5
B	D	A	B	B	A	E	D	D	E	C	A
36.7			11.1			39.9				64.2	
D			B			D				E	
Intersection Summary											
Cycle Length: 110											
Actuated Cycle Length: 110											
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green											
Neutral Cycle: 80											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 1.02											
Intersection Signal Delay: 36.0											
Intersection Capacity Utilization 82.9%											
Analysis Period (min) 15											



2022 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
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HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
111	1213	14	180	548	359	37	85	513	665	42	128
111	1213	14	180	548	359	37	85	513	665	42	128
0	0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
121	1318	15	196	596	390	40	92	558	723	46	139
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
3	3	3	3	3	3	3	3	3	3	3	3
372	1720	767	400	1708	762	260	577	587	749	1154	515
0.02	0.16	0.16	0.05	0.48	0.48	0.16	0.16	0.16	0.12	0.33	0.33
1767	3526	1572	3428	3526	1572	1189	3526	2768	3428	3526	1572
121	1318	15	196	596	390	40	92	558	723	46	139
1767	1763	1572	1714	1763	1572	1189	1763	1384	1714	1763	1572
3.7	39.4	0.9	3.1	11.5	18.7	3.2	2.5	18.0	13.0	1.0	7.2
3.7	39.4	0.9	3.1	11.5	18.7	3.2	2.5	18.0	13.0	1.0	7.2
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.33	0.77	0.02	0.49	0.35	0.51	0.15	0.16	0.95	0.97	0.04	0.27
377	1720	767	514	1708	762	260	577	587	749	1154	515
0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14.0	40.1	24.0	21.9	17.6	19.4	39.8	39.5	42.8	37.9	25.2	27.3
0.3	1.9	0.0	0.9	0.6	2.5	0.3	0.1	25.4	24.7	0.0	0.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.8	24.4	0.6	2.2	8.3	11.6	1.7	1.9	14.5	10.5	0.7	4.9
14.2	42.0	24.0	22.8	18.2	21.9	40.1	39.6	68.1	62.6	25.2	27.6
B	D	C	C	B	C	D	D	E	E	C	C
1454				1182		690				908	
39.5				20.2		62.7				55.3	
D				C		E				E	
1	2	3	4	6	7	8					
18.0	23.0	10.3	58.7	41.0	10.7	58.3					
5.0	5.0	5.0	5.0	5.0	5.0	5.0					
13.0	18.0	9.0	50.0	36.0	6.0	53.0					
15.0	20.0	5.1	41.4	9.2	5.7	20.7					
0.0	0.0	0.2	5.7	0.7	0.0	6.3					
Intersection Summary											
HCM 6th Ctrl Delay 41.3											
HCM 6th LOS D											

2022 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2022AB\_MIT.syn

Intersection												
Int Delay, s/veh	326.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	21	2296	38	24	1017	7	34	1	84	6	1	30
Future Vol, veh/h	21	2296	38	24	1017	7	34	1	84	6	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	2319	38	24	1027	7	34	1	85	6	1	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1034	0	0	2357	0	0	3474	3462	2338	3502	3478	1031
Stage 1	-	-	-	-	-	-	2380	2380	-	1079	1079	-
Stage 2	-	-	-	-	-	-	1094	1082	-	2423	2399	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	668	-	-	206	-	-	~4	7	~46	~4	6	282
Stage 1	-	-	-	-	-	-	46	66	-	263	293	-
Stage 2	-	-	-	-	-	-	258	292	-	43	65	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	668	-	-	206	-	-	~2	5	~46	-	4	282
Mov Cap-2 Maneuver	-	-	-	-	-	-	~2	5	-	-	4	-
Stage 1	-	-	-	-	-	-	46	66	-	263	213	-
Stage 2	-	-	-	-	-	-	166	212	-	-	65	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	\$ 9760.9	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)		6	668	-	-	206	-	-	282
HCM Lane V/C Ratio	20.034	0.032	-	-	0.118	-	-	-	0.107
HCM Control Delay (s)	\$ 9760.9	10.6	0	-	24.8	0	-	-	19.3
HCM Lane LOS	F	B	A	-	C	A	-	-	C
HCM 95th %tile Q(veh)	16.9	0.1	-	-	0.4	-	-	-	0.4

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↑↑	↑↑	↗
Traffic Vol, veh/h	5	9	28	900	575	23
Future Vol, veh/h	5	9	28	900	575	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	9	29	938	599	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1126	300	623	0	-	0
Stage 1	599	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	197	693	947	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	693	947	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	947	-	191	693	-	-
HCM Lane V/C Ratio	0.031	-	0.027	0.014	-	-
HCM Control Delay (s)	8.9	-	24.4	10.3	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-



Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	166	108	29	22	38	10	25	428	57	8	282	20
Future Vol, veh/h	166	108	29	22	38	10	25	428	57	8	282	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	202	132	35	27	46	12	30	522	70	10	344	24
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	15.6	12.2	21.4	16.2
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	71%	0%	100%	55%	0%	100%	56%	0%	100%
Vol Right, %	0%	0%	29%	0%	0%	45%	0%	0%	44%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	285	200	166	72	65	22	25	23	8	188
LT Vol	25	0	0	166	0	0	22	0	0	8	0
Through Vol	0	285	143	0	72	36	0	25	13	0	188
RT Vol	0	0	57	0	0	29	0	0	10	0	0
Lane Flow Rate	30	348	243	202	88	79	27	31	28	10	229
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.066	0.706	0.481	0.471	0.192	0.167	0.069	0.075	0.065	0.022	0.495
Departure Headway (Hd)	7.807	7.307	7.107	8.381	7.881	7.569	9.214	8.714	8.405	8.274	7.774
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	459	494	506	429	455	474	388	411	426	433	463
Service Time	5.551	5.051	4.851	6.131	5.631	5.318	6.974	6.474	6.165	6.024	5.524
HCM Lane V/C Ratio	0.065	0.704	0.48	0.471	0.193	0.167	0.07	0.075	0.066	0.023	0.495
HCM Control Delay	11.1	25.8	16.3	18.4	12.5	11.8	12.7	12.2	11.8	11.2	18
HCM Lane LOS	B	D	C	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.2	5.5	2.6	2.5	0.7	0.6	0.2	0.2	0.2	0.1	2.7

Intersection												
Intersection Delay, s/veh	14.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↕	
Traffic Vol, veh/h	22	20	71	29	19	30	30	417	31	23	306	3
Future Vol, veh/h	22	20	71	29	19	30	30	417	31	23	306	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	24	86	35	23	36	36	502	37	28	369	4
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	11.8	11.4	16.1	14.1
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	82%	0%	22%	0%	39%	0%	100%	97%
Vol Right, %	0%	0%	18%	0%	78%	0%	61%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	278	170	22	91	29	49	23	204	105
LT Vol	30	0	0	22	0	29	0	23	0	0
Through Vol	0	278	139	0	20	0	19	0	204	102
RT Vol	0	0	31	0	71	0	30	0	0	3
Lane Flow Rate	36	335	205	27	110	35	59	28	246	127
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.07	0.603	0.361	0.061	0.218	0.081	0.122	0.057	0.471	0.242
Departure Headway (Hd)	7.099	6.593	6.464	8.218	7.165	8.349	7.413	7.408	6.902	6.881
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	553	559	437	502	430	485	486	526	525
Service Time	4.799	4.293	4.164	5.939	4.886	6.072	5.136	5.108	4.602	4.581
HCM Lane V/C Ratio	0.071	0.606	0.367	0.062	0.219	0.081	0.122	0.058	0.468	0.242
HCM Control Delay	10.3	18.8	12.8	11.5	11.9	11.8	11.2	10.6	15.6	11.8
HCM Lane LOS	B	C	B	B	B	B	B	B	C	B
HCM 95th-tile Q	0.2	4	1.6	0.2	0.8	0.3	0.4	0.2	2.5	0.9

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	21	1	7	16	13	2	8	23	16	12	1
Future Vol, veh/h	3	21	1	7	16	13	2	8	23	16	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	26	1	9	20	16	2	10	28	20	15	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	27	0	0	85	85	27	96	77	28
Stage 1	-	-	-	-	-	-	31	31	-	46	46	-
Stage 2	-	-	-	-	-	-	54	54	-	50	31	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1568	-	-	1580	-	-	899	803	1046	884	811	1044
Stage 1	-	-	-	-	-	-	983	867	-	965	855	-
Stage 2	-	-	-	-	-	-	956	848	-	961	867	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1568	-	-	1580	-	-	881	797	1046	848	805	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	881	797	-	848	805	-
Stage 1	-	-	-	-	-	-	982	866	-	964	850	-
Stage 2	-	-	-	-	-	-	933	843	-	923	866	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			1.4			8.9			9.5		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	962	1568	-	-	1580	-	-	835
HCM Lane V/C Ratio	0.042	0.001	-	-	0.005	-	-	0.043
HCM Control Delay (s)	8.9	7.3	0	-	7.3	0	-	9.5
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↕	↖	↗	↗
Traffic Vol, veh/h	17	2	3	13	1	78	1	595	16	55	503	6
Future Vol, veh/h	17	2	3	13	1	78	1	595	16	55	503	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	100	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	2	3	14	1	87	1	661	16	61	559	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1014	1360	280	1066	1351	331	566	0	0	677	0	0
Stage 1	681	681	-	663	663	-	-	-	-	-	-	-
Stage 2	333	679	-	403	688	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	191	146	714	175	148	662	995	-	-	904	-	-
Stage 1	404	446	-	414	455	-	-	-	-	-	-	-
Stage 2	652	447	-	592	443	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	157	136	714	164	138	662	995	-	-	904	-	-
Mov Cap-2 Maneuver	275	245	-	288	260	-	-	-	-	-	-	-
Stage 1	404	416	-	414	455	-	-	-	-	-	-	-
Stage 2	565	447	-	547	413	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.9		12.4		0		0.9	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	995	-	-	275	404	288	649	904	-	-
HCM Lane V/C Ratio	0.001	-	-	0.034	0.014	0.05	0.135	0.068	-	-
HCM Control Delay (s)	8.6	-	-	18.6	14	18.2	11.4	9.3	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.2	0.5	0.2	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	18	20	20	25	1
Future Vol, veh/h	1	18	20	20	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	21	24	24	29	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	48	0	-	0	59 36
Stage 1	-	-	-	-	36 -
Stage 2	-	-	-	-	23 -
Critical Hdwy	4.13	-	-	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.227	-	-	-	3.527 3.327
Pot Cap-1 Maneuver	1553	-	-	-	945 1034
Stage 1	-	-	-	-	984 -
Stage 2	-	-	-	-	997 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1553	-	-	-	944 1034
Mov Cap-2 Maneuver	-	-	-	-	944 -
Stage 1	-	-	-	-	983 -
Stage 2	-	-	-	-	997 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1553	-	-	-	947
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1	5	90	50	1
Future Vol, veh/h	8	1	5	90	50	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	1	6	106	59	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	178	60	60	0	0
Stage 1	60	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	809	1003	1537	-	-
Stage 1	960	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	806	1003	1537	-	-
Mov Cap-2 Maneuver	806	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1537	-	824	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	8	1	5	90	50	1
Future Vol, veh/h	8	1	5	90	50	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	1	6	106	59	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	178	60	60	0	0
Stage 1	60	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	809	1003	1537	-	-
Stage 1	960	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	806	1003	1537	-	-
Mov Cap-2 Maneuver	806	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1537	-	824	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	107	37	102	43	167	47	827	50	200	888
Traffic Volume (vph)	107	37	102	43	167	47	827	50	200	888
Future Volume (vph)	107	37	102	43	167	47	827	50	200	888
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6		
Permitted Phases	4	4	3	8	8	2	2	6	6	6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Minimum Split (s)	17.0	39.0	13.0	35.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	15.5%	35.5%	11.8%	31.8%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

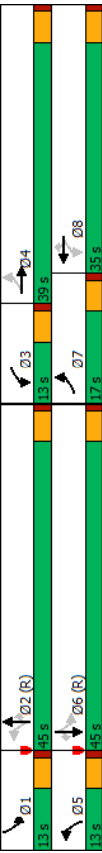
Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%); Referenced to phase 2:NBL and 6:SBTL. Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	107	37	55	102	43	167	47	827	50	200
Traffic Volume (veh/h)	107	37	55	102	43	167	47	827	50	200
Future Volume (veh/h)	107	37	55	102	43	167	47	827	50	200
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	111	39	57	106	45	174	49	861	52	208
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	316	90	132	291	245	208	371	1927	860	431
Arrive On Green	0.07	0.13	0.13	0.07	0.13	0.05	0.55	0.55	0.07	0.57
Sat Flow, veh/h	1767	681	985	1767	1856	1572	1767	3526	1572	1767
Gp Volume(v), veh/h	111	0	96	106	45	174	49	861	52	208
Gp Sat Flow(s)/veh/ln	1767	0	1676	1767	1856	1572	1767	3526	1572	1767
Q Serve(g.s), s	5.9	0.0	5.8	5.6	2.4	11.9	1.3	16.1	1.7	5.6
Cycle Q Clear(g.c), s	5.9	0.0	5.8	5.6	2.4	11.9	1.3	16.1	1.7	5.6
Prop In Lane	1.00	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	316	0	222	291	245	208	371	1927	860	431
VIC Ratio(X)	0.35	0.00	0.43	0.36	0.18	0.84	0.13	0.45	0.06	0.48
Avail Cap(c,a), veh/h	386	0	518	297	506	429	419	1927	860	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	43.9	37.5	42.5	46.6	10.4	15.0	11.7	11.0
Incr Delay (d2), s/veh	0.7	0.0	1.3	0.8	0.4	8.7	0.2	0.8	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.5	0.0	4.4	4.3	1.9	8.7	0.8	9.7	1.1	2.5
Unsig. Movement Delay, s/veh	38.1	0.0	45.2	38.3	42.8	55.3	10.6	15.7	11.8	11.1
LnGp Delay(d), s/veh	D	A	D	D	D	E	B	B	B	B
LnGp LOS	D	A	D	D	D	E	B	B	B	B
Approach Vol, veh/h	207						962			1247
Approach Delay, s/veh	41.4						15.2			13.1
Approach LOS	D						B			B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phs Duration (G+Y+Rc), s	12.7	65.1	12.6	19.6	10.0	67.8	12.7	19.5		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	8.0	40.0	8.0	34.0	8.0	40.0	12.0	30.0		
Max Q Clear Time (g_c+H1), s	7.6	18.1	7.6	7.8	3.3	18.8	7.9	13.9		
Green Ext Time (p_c), s	0.0	5.4	0.0	0.4	0.0	6.1	0.1	0.6		

Intersection Summary

HCM 6th Ctrl Delay: 20.1 C

HCM 6th LOS: 13.1

2022 PM Peak NOBUILD Conditions

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2022 PM Peak NOBUILD Conditions

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Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	83	313	152	689	412	397	987	91	196
Future Volume (vph)	83	313	152	689	412	397	987	91	196
Turn Type	pm+pt	NA	pm+pt	NA	perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode									

Intersection Summary

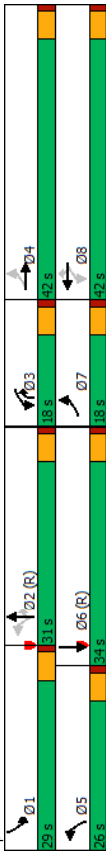
Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBLT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	83	313	471	152	689	412	397	987	91	196
Future Volume (veh/h)	83	313	471	152	689	412	397	987	91	196
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	87	329	0	160	725	0	418	1039	96	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	152	985	417	572	370	1386	745	274	934	122
Arrive On Green	0.05	0.28	0.00	0.08	0.31	0.00	0.17	0.39	0.08	0.30
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428
Grip Volume(v), veh/h	87	329	0	160	725	0	418	1039	96	206
Grip Sat Flow(s)/veh/ln	1767	1763	0	1767	1856	1572	1767	1763	1572	1714
Q Serve(g, s), s	4.2	8.9	0.0	7.6	37.0	0.0	21.0	30.4	4.1	7.1
Cycle Q Clear(g, c), s	4.2	8.9	0.0	7.6	37.0	0.0	21.0	30.4	4.1	7.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	152	985	417	572	370	1386	745	274	524	531
VIC Ratio(X)	0.57	0.33	0.38	1.27	1.13	0.75	0.13	0.75	1.00	1.00
Avail Cap(c, a), veh/h	251	1087	465	572	370	1386	745	686	525	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	34.4	0.0	27.1	41.5	0.0	37.8	31.3	17.7	54.0
Incr Delay (d2), s/veh	3.4	0.2	0.0	0.6	133.7	0.0	84.1	3.3	0.3	4.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	3.3	6.7	0.0	5.7	64.4	0.0	27.7	18.4	2.7	5.6
Unsig. Movement Delay, s/veh	363	34.6	0.0	27.7	175.2	0.0	121.9	34.6	18.0	58.2
LnGrip Delay(d), s/veh										
LnGrip LOS	D	C	C	F	F	F	C	B	E	F
Approach Vol, veh/h	416	A	A	885	A	1553				1260
Approach Delay, s/veh	34.9			148.5		57.1				77.0
Approach LOS	C	C	C	F	F	E				E
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	14.6	52.2	14.7	38.5	26.0	40.8	11.2	42.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g, c+11), s	9.1	32.4	9.6	10.9	23.0	37.7	6.2	39.0		
Green Ext Time (p, c), s	0.5	0.0	0.1	1.9	0.0	0.0	0.1	0.0		
Intersection Summary										
HCM 6th Ctrl Delay	80.6									
HCM 6th LOS	F									

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2022 PM Peak NOBUILD Conditions Synchro 10 Report 2022PNX.syn

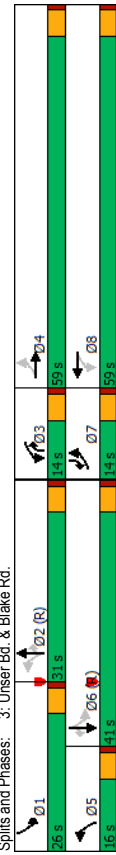
Timings  
3: Unser Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

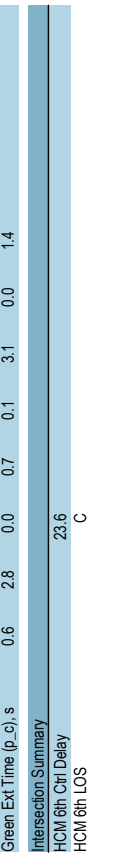
Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
82	49	101	25	137	394	151	278	387	137
82	49	101	25	137	394	151	278	387	137
pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
7	4	3	8	5	2	3	1	6	7
4	8	8	8	2	2	3	1	6	6
7	4	3	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
14.0	59.0	14.0	59.0	16.0	31.0	14.0	26.0	41.0	14.0
10.8%	45.4%	10.8%	45.4%	12.3%	23.8%	10.8%	20.0%	31.5%	10.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Min	Min	Min	Min	Min	Min	Min	Min	C-Min	Min
21.7	10.8	23.5	11.8	74.7	65.4	82.2	92.4	78.1	93.9
0.17	0.08	0.18	0.09	0.57	0.50	0.63	0.71	0.60	0.72
0.45	0.62	0.48	0.70	0.25	0.25	0.16	0.42	0.20	0.13
47.6	43.4	48.6	22.3	9.7	20.8	2.4	9.4	13.4	1.4
47.6	43.4	48.6	22.3	9.7	20.8	2.4	9.4	13.4	1.4
D	D	D	C	A	C	A	A	B	A
45.2	30.8			14.5				10.0	
Intersection Summary									
Cycle Length: 130									
Actuated Cycle Length: 130									
Offset: 80.6 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green									
Natural Cycle: 65									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.70									
Intersection Signal Delay: 18.2									
Intersection Capacity Utilization 60.2%									
Analysis Period (min) 15									



2022 PM Peak NOBUILD Conditions  
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EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
82	49	101	25	137	394	151	278	387	137
82	49	101	25	137	394	151	278	387	137
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	No	No	No	No	No	No	No	No	No
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
90	54	67	111	27	203	151	433	166	305
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3
187	118	146	289	31	234	575	1858	935	599
0.06	0.16	0.16	0.07	0.17	0.17	0.06	0.53	0.10	0.57
1767	753	934	1767	188	1413	1767	3526	1572	1767
90	0	121	111	0	230	151	433	166	305
1767	0	1687	1767	0	1601	1767	1767	1767	1767
5.5	0.0	8.5	6.8	0.0	18.2	5.1	8.6	6.2	9.8
5.5	0.0	8.5	6.8	0.0	18.2	5.1	8.6	6.2	9.8
1.00	0.55	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00
0.48	0.00	0.46	0.38	0.00	0.87	0.26	0.23	0.18	0.51
207	0	701	292	0	665	627	1858	935	715
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
43.5	0.0	49.9	42.1	0.0	52.8	12.4	16.6	12.0	11.0
1.9	0.0	1.2	0.8	0.0	8.3	0.2	0.3	0.4	0.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.4	0.0	6.5	5.3	0.0	12.3	3.5	6.1	3.9	6.5
45.4	0.0	51.1	42.9	0.0	61.1	12.7	16.9	12.4	11.7
D	A	D	D	A	E	B	B	B	B
211				341				750	
48.7				95.2				15.0	
D	D	D	E	E	B	B	B	B	B
1	2	3	4	5	6	7	8		
17.4	73.5	13.8	25.3	12.2	78.7	12.5	26.6		
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
21.0	26.0	9.0	54.0	11.0	36.0	9.0	54.0		
11.8	10.6	8.8	10.5	7.1	9.7	7.5	20.2		
0.6	2.8	0.0	0.7	0.1	3.1	0.0	1.4		
Intersection Summary									
HCM 6th Ctrl Delay 23.6									
HCM 6th LOS C									

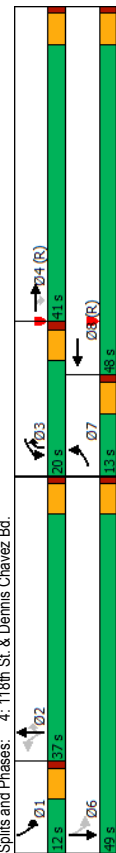


2022 PM Peak NOBUILD Conditions  
Synchro 10 Report  
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Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
21	97	21	173	73	42	98	400	68	79
21	97	21	173	73	42	98	400	68	79
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
13.0	41.0	41.0	20.0	48.0	37.0	37.0	20.0	12.0	49.0
11.8%	37.3%	37.3%	18.2%	43.6%	33.6%	33.6%	18.2%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
8.1	43.4	43.4	18.1	53.4	17.0	17.0	40.1	33.5	33.5
0.07	0.39	0.39	0.16	0.49	0.15	0.15	0.36	0.30	0.30
0.33	0.27	0.06	0.62	0.33	0.47	0.69	0.91	0.46	0.35
54.4	27.7	0.1	60.6	4.6	49.7	56.0	26.4	32.3	28.2
54.4	27.7	0.1	60.6	4.6	49.7	56.0	26.4	32.3	28.2
D	C	A	E	A	D	E	C	C	C
27.6			35.4		33.6				29.9
C			D		C				C



Splits and Phases: 4: 118th St. & Dennis Chavez Bd.

2022 PM Peak NOBUILD Conditions  
Synchro 10 Report  
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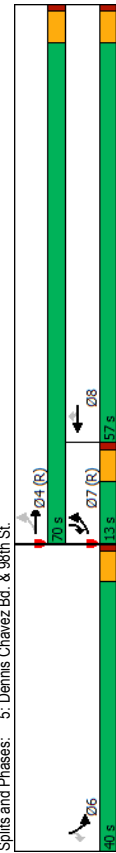
EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
21	97	21	173	73	69	42	98	400	68
21	97	21	173	73	69	42	98	400	68
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
42	194	42	346	146	138	84	196	800	136
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3	3	3	3	3	3	3	3	3	3
80	639	541	410	367	347	408	540	645	294
0.05	0.34	0.34	0.12	0.42	0.42	0.29	0.29	0.06	0.40
1767	1856	1572	3428	877	829	1177	1856	1572	1767
42	194	42	346	0	284	84	196	800	136
1767	1856	1572	1714	0	1706	1177	1856	1572	1767
2.6	8.4	2.0	10.9	0.0	12.8	6.0	9.2	32.0	5.8
2.6	8.4	2.0	10.9	0.0	12.8	6.0	9.2	32.0	5.8
1.00	1.00	1.00	1.00	0.49	1.00	1.00	1.00	1.00	0.19
80	639	541	410	0	714	408	540	645	294
0.52	0.30	0.08	0.84	0.00	0.40	0.21	0.36	1.24	0.46
129	639	541	467	0	714	408	540	645	294
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.69	0.00	0.69	1.00	1.00	1.00	1.00
51.3	26.4	24.3	47.4	0.0	22.3	29.8	30.9	32.4	24.2
5.2	1.2	0.3	8.7	0.0	1.1	0.2	0.4	120.7	1.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.2	6.8	1.4	8.0	0.0	8.1	3.0	7.3	53.9	4.3
66.5	27.6	24.6	56.1	0.0	23.5	30.0	31.3	153.1	25.3
E	C	C	E	A	C	C	C	F	C
278			630		1080				332
31.5			41.4		121.5				23.6
C			D		F				C
1	2	3	4	6	7	8			
12.0	37.0	18.1	42.9	49.0	10.0	51.0			
5.0	5.0	5.0	5.0	5.0	5.0	5.0			
7.0	32.0	15.0	36.0	44.0	8.0	43.0			
7.8	34.0	12.9	10.4	10.1	4.6	14.8			
0.0	0.0	0.3	1.1	1.0	0.0	1.6			
74.9			E						

2022 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2022PNX.syn

Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	189	338	304	240	210	103
Traffic Volume (vph)	189	338	304	240	210	103
Future Volume (vph)	pm+pt	NA	NA	Perm	Prot	pm+ov
Turn Type	4	8	8	8	6	7
Protected Phases	4				6	6
Permitted Phases	7	4	8	8	6	7
Detector Phase						
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	13.0	70.0	57.0	57.0	40.0	13.0
Total Split (%)	11.8%	63.6%	51.8%	51.8%	36.4%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	69.5	44.1	44.1	30.5	55.9	55.9
Actuated g/C Ratio	0.63	0.63	0.40	0.40	0.28	0.51
v/c Ratio	0.86	0.58	0.82	0.52	0.87	0.23
Control Delay	37.7	14.4	19.3	3.0	55.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	14.4	19.3	3.0	55.9	3.4
LOS	D	B	B	A	E	A
Approach Delay	22.7	12.1			38.6	
Approach LOS	C	B			D	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 7.7 (7%), Referenced to phase 4:EBTL and 7:EBL, Start of Green						
Natural Cycle: 80						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.87						
Intersection Signal Delay: 22.2						Intersection LOS: C
Intersection Capacity Utilization 50.6%						ICU Level of Service A
Analysis Period (min) 15						



2022 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2022PNX.syn

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	189	338	304	240	210	103
Traffic Volume (veh/h)	189	338	304	240	210	103
Future Volume (veh/h)	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	No	No	No	No	No	No
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach						
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	378	676	608	480	420	206
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	486	1203	711	602	461	756
Arrive On Green	0.22	0.65	0.13	0.13	0.26	0.26
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Grip Volume(v), veh/h	378	676	608	480	420	206
Grip Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	15.6	22.2	35.3	32.6	25.4	8.6
Cycle Q Clear(g, c), s	15.6	22.2	35.3	32.6	25.4	8.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	486	1203	711	602	461	756
V/C Ratio(X)	0.78	0.56	0.86	0.80	0.91	0.27
Avail Cap(c,a), veh/h	486	1203	877	743	562	846
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(l)	0.59	0.59	0.26	0.26	1.00	1.00
Uniform Delay (d), s/veh	26.5	10.7	45.1	43.9	39.4	17.1
Incr Delay (d2), s/veh	4.8	1.1	2.0	1.3	17.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.5	11.6	21.3	17.0	18.5	14.7
Unsig. Movement Delay, s/veh						
LnGrip Delay(d),s/veh	31.3	11.8	47.0	45.2	56.4	17.3
LnGrip LOS	C	B	D	D	E	B
Approach Vol, veh/h	1054	1088			626	
Approach Delay, s/veh	18.8	46.2			43.5	
Approach LOS	B	D			D	
Timer - Assigned Phis				4	6	7
Plus Duration (G+Y+Rc), s				76.3	33.7	47.1
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0	35.0	52.0
Max Q Clear Time (g, c+11), s				24.2	27.4	37.3
Green Ext Time (p, c), s				4.7	1.3	0.0
4.8						
Intersection Summary						
HCM 6th Ctrl Delay				35.2		
HCM 6th LOS				D		

2022 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2022PNX.syn

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group						
Lane Configurations	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	84	569	773	722	551	50
Future Volume (vph)	84	569	773	722	551	50
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0
Total Split (s)	13.0	69.0	56.0	56.0	41.0	13.0
Total Split (%)	11.8%	62.7%	50.9%	50.9%	37.3%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	64.0	64.0	51.6	51.6	36.0	48.4
Actuated g/C Ratio	0.58	0.58	0.47	0.47	0.33	0.44
v/c Ratio	0.49	0.58	0.98	0.69	1.06	0.08
Control Delay	21.1	20.0	56.5	4.8	90.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	20.0	56.5	4.8	90.0	5.0
LOS	C	C	E	A	F	A
Approach Delay		20.2	31.6			82.9
Approach LOS		C	C			F
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 78.1 (71%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 90						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.06						
Intersection Signal Delay: 40.1						Intersection LOS: D
Intersection Capacity Utilization 88.4%						ICU Level of Service E
Analysis Period (min) 15						
Splits and Phases:	6: Dennis Chavez Bd. & Unser Bd.					



Intersection												
Int Delay, s/veh	376.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	37	906	57	49	1480	18	48	1	39	4	1	85
Future Vol, veh/h	37	906	57	49	1480	18	48	1	39	4	1	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	38	934	59	51	1526	19	49	1	40	4	1	88

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1545	0	0	993	0	0	2722	2687	964	2698	2707	1536
Stage 1	-	-	-	-	-	-	1040	1040	-	1638	1638	-
Stage 2	-	-	-	-	-	-	1682	1647	-	1060	1069	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	427	-	-	693	-	-	~ 13	22	308	14	21	142
Stage 1	-	-	-	-	-	-	277	306	-	126	158	-
Stage 2	-	-	-	-	-	-	119	156	-	270	297	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	427	-	-	693	-	-	~ 2	8	308	6	8	142
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 2	8	-	6	8	-
Stage 1	-	-	-	-	-	-	221	244	-	101	75	-
Stage 2	-	-	-	-	-	-	~ 21	74	-	187	237	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.3			\$ 11526			119.6		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	427	-	-	693	-	-	6	142
HCM Lane V/C Ratio	22.68	0.089	-	-	0.073	-	-	0.859	0.617
HCM Control Delay (s)	\$ 11526	14.3	0	-	10.6	0	-	\$ 1056	64.5
HCM Lane LOS	F	B	A	-	B	A	-	F	F
HCM 95th %tile Q(veh)	13.4	0.3	-	-	0.2	-	-	1.3	3.3

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	110	80	1052	767	37
Future Vol, veh/h	46	110	80	1052	767	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	48	116	84	1107	807	39

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1529	404	846	0	-	0
Stage 1	807	-	-	-	-	-
Stage 2	722	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	107	593	780	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	593	780	-	-	-
Mov Cap-2 Maneuver	95	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.5	0.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	780	-	95	593	-	-
HCM Lane V/C Ratio	0.108	-	0.51	0.195	-	-
HCM Control Delay (s)	10.2	-	77	12.5	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	2.2	0.7	-	-

Intersection	
Intersection Delay, s/veh	20.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	119	64	32	38	139	32	50	331	36	38	495	126
Future Vol, veh/h	119	64	32	38	139	32	50	331	36	38	495	126
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	128	69	34	41	149	34	54	356	39	41	532	135
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14.8	13.9	17.4	25.8
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	75%	0%	100%	40%	0%	100%	59%	0%	100%
Vol Right, %	0%	0%	25%	0%	0%	60%	0%	0%	41%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	221	146	119	43	53	38	93	78	38	330
LT Vol	50	0	0	119	0	0	38	0	0	38	0
Through Vol	0	221	110	0	43	21	0	93	46	0	330
RT Vol	0	0	36	0	0	32	0	0	32	0	0
Lane Flow Rate	54	237	157	128	46	57	41	100	84	41	355
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.129	0.536	0.348	0.33	0.112	0.133	0.106	0.245	0.2	0.093	0.754
Departure Headway (Hd)	8.635	8.135	7.963	9.295	8.795	8.375	9.336	8.836	8.55	8.153	7.653
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	414	441	450	385	406	426	383	406	419	438	472
Service Time	6.409	5.909	5.737	7.081	6.581	6.161	7.119	6.619	6.333	5.921	5.421
HCM Lane V/C Ratio	0.13	0.537	0.349	0.332	0.113	0.134	0.107	0.246	0.2	0.094	0.752
HCM Control Delay	12.7	20	15	16.6	12.7	12.5	13.2	14.5	13.5	11.8	30.5
HCM Lane LOS	B	C	B	C	B	B	B	B	B	B	D
HCM 95th-tile Q	0.4	3.1	1.5	1.4	0.4	0.5	0.4	0.9	0.7	0.3	6.4



Intersection												
Intersection Delay, s/veh	13.8											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	18	21	42	74	28	60	60	381	26	69	369	32
Future Vol, veh/h	18	21	42	74	28	60	60	381	26	69	369	32
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	22	44	77	29	63	63	397	27	72	384	33
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	11.5	12.1	14.4	14.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	83%	0%	33%	0%	32%	0%	100%	79%
Vol Right, %	0%	0%	17%	0%	67%	0%	68%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	254	153	18	63	74	88	69	246	155
LT Vol	60	0	0	18	0	74	0	69	0	0
Through Vol	0	254	127	0	21	0	28	0	246	123
RT Vol	0	0	26	0	42	0	60	0	0	32
Lane Flow Rate	62	265	159	19	66	77	92	72	256	161
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.128	0.504	0.299	0.044	0.137	0.176	0.184	0.147	0.488	0.301
Departure Headway (Hd)	7.37	6.863	6.743	8.511	7.536	8.22	7.237	7.367	6.86	6.713
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	527	536	421	476	437	496	489	528	538
Service Time	5.087	4.579	4.459	6.257	5.281	5.961	4.977	5.084	4.577	4.431
HCM Lane V/C Ratio	0.127	0.503	0.297	0.045	0.139	0.176	0.185	0.147	0.485	0.299
HCM Control Delay	11.2	16.4	12.3	11.7	11.5	12.7	11.6	11.4	16	12.3
HCM Lane LOS	B	C	B	B	B	B	B	B	C	B
HCM 95th-tile Q	0.4	2.8	1.2	0.1	0.5	0.6	0.7	0.5	2.6	1.3

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	9	1	28	12	42	1	9	11	19	7	5
Future Vol, veh/h	2	9	1	28	12	42	1	9	11	19	7	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	10	1	31	13	47	1	10	12	21	8	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	60	0	0	11	0	0	121	137	11	125	114	37
Stage 1	-	-	-	-	-	-	15	15	-	99	99	-
Stage 2	-	-	-	-	-	-	106	122	-	26	15	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1537	-	-	1602	-	-	852	752	1067	847	774	1032
Stage 1	-	-	-	-	-	-	1002	881	-	905	811	-
Stage 2	-	-	-	-	-	-	897	793	-	989	881	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1537	-	-	1602	-	-	827	736	1067	816	758	1032
Mov Cap-2 Maneuver	-	-	-	-	-	-	827	736	-	816	758	-
Stage 1	-	-	-	-	-	-	1001	880	-	904	795	-
Stage 2	-	-	-	-	-	-	866	777	-	966	880	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			2.5			9.2			9.5		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	884	1537	-	-	1602	-	-	830
HCM Lane V/C Ratio	0.026	0.001	-	-	0.019	-	-	0.041
HCM Control Delay (s)	9.2	7.3	0	-	7.3	0	-	9.5
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑	↖	↖	↑↑	↖
Traffic Vol, veh/h	9	1	4	8	6	24	6	630	6	36	706	30
Future Vol, veh/h	9	1	4	8	6	24	6	630	6	36	706	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	10	1	4	9	7	27	7	708	7	40	793	34

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1245	1602	397	1199	1629	354	827	0	0	715	0	0
Stage 1	873	873	-	722	722	-	-	-	-	-	-	-
Stage 2	372	729	-	477	907	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	129	104	600	140	100	639	793	-	-	875	-	-
Stage 1	309	363	-	382	427	-	-	-	-	-	-	-
Stage 2	618	424	-	535	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	116	98	600	133	95	639	793	-	-	875	-	-
Mov Cap-2 Maneuver	225	210	-	256	211	-	-	-	-	-	-	-
Stage 1	306	346	-	379	423	-	-	-	-	-	-	-
Stage 2	577	420	-	505	334	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.8		14.8		0.1		0.4	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	793	-	-	225	438	256	455	875	-	-
HCM Lane V/C Ratio	0.009	-	-	0.045	0.013	0.035	0.074	0.046	-	-
HCM Control Delay (s)	9.6	-	-	21.8	13.3	19.6	13.5	9.3	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	0.2	0.1	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Timings  
1: Coors Bd. & Gun Club Rd.

HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	108	37	102	43	177	70	867	50	206	913
Traffic Volume (veh/h)	108	37	102	43	177	70	867	50	206	913
Future Volume (vph)	108	37	102	43	177	70	867	50	206	913
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	112	39	85	106	45	184	73	903	52	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	323	73	158	275	257	218	358	1895	845	414
Arrive On Green	0.07	0.14	0.14	0.07	0.14	0.14	0.05	0.54	0.54	0.56
Sat Flow, veh/h	1767	519	1132	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	112	0	124	106	45	184	73	903	52	215
Grip Sat Flow(s) veh/h/ln	1767	0	1662	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Cycle Q Clear(g, c), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Prop In Lane	1.00	0.00	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	323	0	231	275	257	218	358	1895	845	414
VIC Ratio(X)	0.35	0.00	0.54	0.39	0.18	0.85	0.20	0.48	0.06	0.52
Avail Cap(c, a), veh/h	392	0	511	282	506	429	406	1895	845	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	44.0	37.1	41.8	46.2	11.1	15.8	12.2	11.7
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.9	0.3	8.7	0.3	0.9	0.1	0.1
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	4.5	0.0	5.7	4.3	1.9	9.0	1.2	10.5	1.1	2.6
Unsig. Movement Delay, s/veh	37.5	0.0	46.0	37.9	42.2	55.0	11.4	16.7	12.3	11.9
LnGrip Delay(d) s/veh	D	A	D	D	D	D	D	D	B	B
LnGrip LOS	D	A	D	D	D	D	D	D	B	B
Approach Vol, veh/h	236				335				1280	
Approach Delay, s/veh	47.9				47.9				13.7	
Approach LOS	D				D				B	
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	12.9	64.1	12.6	20.4	10.0	67.1	12.7	20.2		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	80	40.0	8.0	34.0	8.0	40.0	12.0	30.0		
Max Q Clear Time (g, c+11), s	7.9	19.5	7.6	9.7	4.0	19.7	7.9	14.6		
Green Ext Time (p, c), s	0.0	5.6	0.0	0.6	0.0	6.2	0.1	0.7		
Intersection Summary										
HCM 6th Ctrl Delay	20.8									
HCM 6th LOS	C									

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	108	37	102	43	177	70	867	50	206	913
Traffic Volume (veh/h)	108	37	102	43	177	70	867	50	206	913
Future Volume (vph)	108	37	102	43	177	70	867	50	206	913
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	112	39	85	106	45	184	73	903	52	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	323	73	158	275	257	218	358	1895	845	414
Arrive On Green	0.07	0.14	0.14	0.07	0.14	0.14	0.05	0.54	0.54	0.56
Sat Flow, veh/h	1767	519	1132	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	112	0	124	106	45	184	73	903	52	215
Grip Sat Flow(s) veh/h/ln	1767	0	1662	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Cycle Q Clear(g, c), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Prop In Lane	1.00	0.00	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	323	0	231	275	257	218	358	1895	845	414
VIC Ratio(X)	0.35	0.00	0.54	0.39	0.18	0.85	0.20	0.48	0.06	0.52
Avail Cap(c, a), veh/h	392	0	511	282	506	429	406	1895	845	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	44.0	37.1	41.8	46.2	11.1	15.8	12.2	11.7
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.9	0.3	8.7	0.3	0.9	0.1	0.1
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	4.5	0.0	5.7	4.3	1.9	9.0	1.2	10.5	1.1	2.6
Unsig. Movement Delay, s/veh	37.5	0.0	46.0	37.9	42.2	55.0	11.4	16.7	12.3	11.9
LnGrip Delay(d) s/veh	D	A	D	D	D	D	D	D	B	B
LnGrip LOS	D	A	D	D	D	D	D	D	B	B
Approach Vol, veh/h	236				335				1280	
Approach Delay, s/veh	47.9				47.9				13.7	
Approach LOS	D				D				B	
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	12.9	64.1	12.6	20.4	10.0	67.1	12.7	20.2		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	80	40.0	8.0	34.0	8.0	40.0	12.0	30.0		
Max Q Clear Time (g, c+11), s	7.9	19.5	7.6	9.7	4.0	19.7	7.9	14.6		
Green Ext Time (p, c), s	0.0	5.6	0.0	0.6	0.0	6.2	0.1	0.7		
Intersection Summary										
HCM 6th Ctrl Delay	20.8									
HCM 6th LOS	C									

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	108	37	102	43	177	70	867	50	206	913
Traffic Volume (vph)	108	37	102	43	177	70	867	50	206	913
Future Volume (vph)	108	37	102	43	177	70	867	50	206	913
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	112	39	85	106	45	184	73	903	52	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	323	73	158	275	257	218	358	1895	845	414
Arrive On Green	0.07	0.14	0.14	0.07	0.14	0.14	0.05	0.54	0.54	0.56
Sat Flow, veh/h	1767	519	1132	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	112	0	124	106	45	184	73	903	52	215
Grip Sat Flow(s) veh/h/ln	1767	0	1662	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Cycle Q Clear(g, c), s	5.9	0.0	7.7	5.6	2.4	12.6	2.0	17.5	1.7	5.9
Prop In Lane	1.00	0.00	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	323	0	231	275	257	218	358	1895	845	414
VIC Ratio(X)	0.35	0.00	0.54	0.39	0.18	0.85	0.20	0.48	0.06	0.52
Avail Cap(c, a), veh/h	392	0	511	282	506	429	406	1895	845	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	44.0	37.1	41.8	46.2	11.1	15.8	12.2	11.7
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.9	0.3	8.7	0.3	0.9	0.1	0.1
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	4.5	0.0	5.7	4.						

Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	277	610	152	1173	412	453	987	91	196
Future Volume (vph)	277	610	152	1173	412	453	987	91	196
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	277	610	510	152	1173	412	453	987	91	196	885	428
Future Volume (veh/h)	277	610	510	152	1173	412	453	987	91	196	885	428
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	292	642	0	160	1235	0	477	1039	96	206	932	451
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1191	348	572	369	1187	653	274	560	267	677	290
Arrive On Green	0.11	0.34	0.00	0.08	0.31	0.00	0.17	0.34	0.34	0.08	0.24	0.24
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428	2315	1104
Grip Volume(v), veh/h	292	642	0	160	1235	0	477	1039	96	206	706	677
Grip Sat Flow(s)/veh/ln	1767	1763	0	1767	1856	1572	1767	1763	1572	1714	1763	1657
Q Serve(g, s)	13.0	17.7	0.0	7.3	37.0	0.0	21.0	33.3	4.6	7.1	29.0	29.0
Cycle Q Clear(g, c), s	13.0	17.7	0.0	7.3	37.0	0.0	21.0	33.3	4.6	7.1	29.0	29.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	251	1191	348	572	369	1187	653	274	426	400	677	400
VIC Ratio(X)	1.16	0.54	0.46	2.16	1.29	0.88	0.15	0.75	1.66	1.69	1.69	1.69
Avail Cap(c, a), veh/h	251	1191	400	572	369	1187	653	886	426	400	677	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	32.2	0.0	25.8	41.5	0.0	36.7	37.4	21.8	54.0	45.5	45.5
Incr Delay (d2), s/veh	107.4	0.5	0.0	0.9	527.2	0.0	147.4	7.8	0.4	4.1	306.4	321.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	19.9	11.8	0.0	5.5	157.5	0.0	35.1	20.8	3.1	5.6	74.8	73.4
Unsig. Movement Delay, s/veh	142.8	32.6	0.0	26.8	588.7	0.0	184.2	45.3	22.2	58.2	351.9	366.7
LnGrip Delay(d), s/veh	F	C	A	C	F	A	F	D	C	E	F	F
LnGrip LOS	F	C	A	C	F	A	F	D	C	E	F	F
Approach Vol, veh/h	934	1395	1395	506.5	1612	1589	320.1	1589	320.1	1589	320.1	1589
Approach Delay, s/veh	67.1	506.5	506.5	1612	1589	320.1	1589	320.1	1589	320.1	1589	320.1
Approach LOS	E	F	F	F	F	F	F	F	F	F	F	F
Timer - Assigned Phis	1	2	3	4	5	6	7	8				
Phis Duration (G+Y+Rc), s	14.6	45.4	14.4	45.6	26.0	34.0	18.0	42.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0				
Max Q Clear Time (g, c+11), s	9.1	35.3	9.3	19.7	23.0	31.0	15.0	39.0				
Green Ext Time (p, c), s	0.5	0.0	0.1	3.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	255.9											
HCM 6th LOS	F											

Notes  
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
2: Coors Bd. & Dennis Chavez Rd.

HCM 6th Signalized Intersection Summary  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	277	610	152	1173	412	453	987	91	196	885
Future Volume (vph)	277	610	152	1173	412	453	987	91	196	885
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/hln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	292	642	0	160	1235	0	477	1039	96	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	286	1263	346	1205	486	1205	642	229	940	550
Arrive On Green	0.08	0.36	0.00	0.07	0.34	0.00	0.14	0.34	0.07	0.27
Sat Flow, veh/h	3428	3618	0	1767	3526	1572	3428	3526	1572	3428
Grip Volume(v), veh/h	292	642	0	160	1235	0	477	1039	96	206
Grip Sat Flow(s), veh/hln	1714	1763	0	1767	1763	1572	1714	1763	1572	1714
Q Serve(g, s)	10.0	17.1	0.0	7.1	41.0	0.0	16.6	33.0	4.6	7.2
Cycle Q Clear(g, c), s	10.0	17.1	0.0	7.1	41.0	0.0	16.6	33.0	4.6	7.2
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	286	1263	346	1205	486	1205	642	229	940	550
VIC Ratio(X)	1.02	0.51	0.46	1.03	0.98	0.86	0.15	0.90	0.89	0.82
Avail Cap(c, a), veh/h	286	1263	346	1205	486	1205	642	229	940	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	0.00	1.00	0.00	0.84	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	55.0	30.2	0.0	24.3	39.5	0.0	51.3	36.9	22.4	55.6
Incr Delay (d2), s/veh	21.9	0.0	0.0	1.0	32.6	0.0	32.8	7.1	0.4	34.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/hln	6.2	8.3	0.0	5.3	30.5	0.0	13.7	20.5	3.1	7.4
Unsig. Movement Delay, s/veh	76.9	30.2	0.0	25.3	72.1	0.0	84.1	43.9	22.8	89.9
LnGrip Delay(d), s/veh	F	C	A	C	F	A	F	D	C	F
LnGrip LOS	F	C	A	C	F	A	F	D	C	F
Approach Vol, veh/h	934	302	0	1395	1612	0	1589	0	0	0
Approach Delay, s/veh	44.8	66.7	0	66.7	54.6	0	67.1	0	0	0
Approach LOS	D	D	E	E	D	D	E	D	D	E

Timer - Assigned Phis	1	2	3	4	5	6	7	8
Phis Duration (G+Y+Rc), s	13.0	46.0	13.0	48.0	22.0	37.0	15.0	46.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	41.0	8.0	43.0	17.0	32.0	10.0	41.0
Max Q Clear Time (g, c+11), s	9.2	35.0	9.1	19.1	18.6	33.6	12.0	43.0
Green Ext Time (p, c), s	0.0	3.4	0.0	4.1	0.0	0.0	0.0	0.0

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green

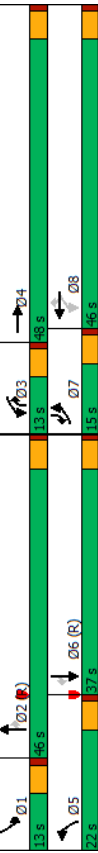
Natural Cycle: 110

Control Type: Actuated-Coordinated

Intersection Summary

HCM 6th Ctrl Delay: 59.6

HCM 6th LOS: E



Splits and Phases: 2: Coors Bd. & Dennis Chavez Rd.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

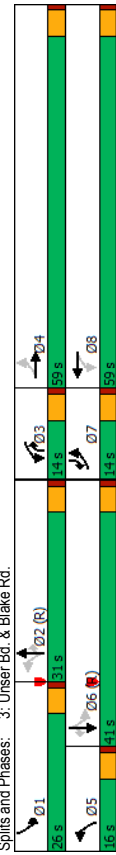
Timings  
3: Unser Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
82	49	137	25	142	483	189	278	509	137
82	49	137	25	142	483	189	278	509	137
pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
7	4	3	8	5	2	3	1	6	7
4	8	8	8	5	2	3	1	6	6
7	4	3	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
14.0	59.0	14.0	59.0	16.0	31.0	14.0	26.0	41.0	14.0
10.8%	45.4%	10.8%	45.4%	12.3%	23.8%	10.8%	20.0%	31.5%	10.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
20.8	10.9	25.5	13.2	72.6	63.2	80.4	91.8	77.4	92.4
0.16	0.08	0.20	0.10	0.56	0.49	0.62	0.71	0.60	0.71
0.47	0.63	0.85	0.67	0.30	0.31	0.20	0.45	0.27	0.13
49.3	43.3	57.2	20.2	10.4	22.4	2.3	9.6	13.9	1.4
49.3	43.3	57.2	20.2	10.4	22.4	2.3	9.6	13.9	1.4
D	D	E	C	B	C	A	A	B	A
45.8	34.9	34.9	15.6	15.6	15.6	15.6	15.6	15.6	15.6
D	C	C	B	B	B	B	B	B	B
130	130	130	130	130	130	130	130	130	130
80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6
65	65	65	65	65	65	65	65	65	65
Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated	Actuated-Coordinated
0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
62.7%	62.7%	62.7%	62.7%	62.7%	62.7%	62.7%	62.7%	62.7%	62.7%
15	15	15	15	15	15	15	15	15	15



2022 PM Peak BUILD Conditions  
Synchro 10 Report  
2022PBX.syn

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
82	49	137	25	142	483	189	278	509	137
82	49	137	25	142	483	189	278	509	137
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	No	No	No	No	No	No	No	No	No
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
90	54	71	151	27	203	156	531	208	305
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3
187	112	148	287	31	234	510	1857	937	540
0.06	0.15	0.15	0.07	0.17	0.06	0.53	0.53	0.10	0.57
1767	727	956	1767	188	1413	1767	3526	1572	1767
90	0	125	151	0	230	156	531	208	305
1767	0	1683	1767	0	1601	1767	1763	1572	1767
5.5	0.0	8.8	9.0	0.0	18.2	5.2	10.9	8.0	9.8
5.5	0.0	8.8	9.0	0.0	18.2	5.2	10.9	8.0	9.8
1.00	0.57	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00
0.48	0.00	0.48	0.53	0.00	0.87	0.31	0.29	0.22	0.56
207	0	689	287	0	665	560	1857	937	657
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
43.7	0.0	50.2	43.5	0.0	52.8	12.5	17.1	12.2	11.4
1.9	0.0	1.4	1.8	0.0	8.3	0.3	0.4	0.5	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.4	0.0	6.7	7.5	0.0	12.3	3.6	7.7	5.0	6.5
45.6	0.0	51.6	45.3	0.0	61.1	12.9	17.5	12.8	12.4
D	A	D	D	A	E	B	B	B	B
215	49.1	381	54.8	895	156	1015	13.5	13.5	13.5
D	D	D	D	D	D	D	D	D	D
1	2	3	4	5	6	7	8	8	8
17.4	73.5	14.0	25.1	12.4	78.5	12.5	26.6	26.6	26.6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
21.0	26.0	9.0	54.0	11.0	36.0	9.0	54.0	54.0	54.0
11.8	12.9	11.0	10.8	7.2	12.6	7.5	20.2	20.2	20.2
0.6	3.3	0.0	0.7	0.1	4.0	0.0	1.4	1.4	1.4
23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
C	C	C	C	C	C	C	C	C	C

2022 PM Peak BUILD Conditions  
Synchro 10 Report  
2022PBX.syn

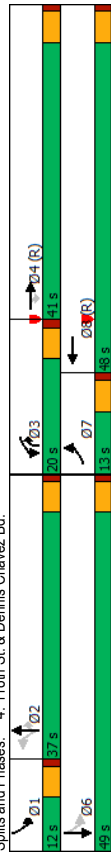
Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (vph)	21	109	22	446	83	42	98	673	75	79
Future Volume (vph)	21	109	22	446	83	42	98	673	75	79
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	4	3	8	2	2	3	1	6
Permitted Phases	7	4	4	3	8	2	2	3	1	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	10.0	10.0	21.0
Total Split (s)	13.0	41.0	41.0	20.0	48.0	37.0	20.0	12.0	49.0	44.5%
Total Split (%)	11.8%	37.3%	37.3%	18.2%	43.6%	33.6%	18.2%	10.9%	44.5%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
Act Effct Green (s)	8.1	18.4	42.9	53.2	17.0	17.0	64.9	33.7	33.7	
Actuated g/C Ratio	0.07	0.17	0.17	0.39	0.48	0.15	0.15	0.59	0.31	0.31
v/c Ratio	0.33	0.71	0.11	0.67	0.37	0.47	0.69	1.22	0.50	0.35
Control Delay	54.4	55.3	0.5	33.4	12.2	49.7	56.0	123.7	33.3	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	55.3	0.5	33.4	12.2	49.7	56.0	123.7	33.3	27.9
LOS	D	E	A	C	B	D	E	F	C	C
Approach Delay										
Approach LOS	D	E	A	C	B	D	E	F	C	C
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 120										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.22										
Intersection Signal Delay: 68.9										
Intersection Capacity Utilization 64.1%										
Analysis Period (min) 15										



2022 PM Peak BUILD Conditions  
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Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (veh/h)	21	109	22	446	83	77	42	98	673	75
Future Volume (veh/h)	21	109	22	446	83	77	42	98	673	75
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	218	44	892	166	154	84	196	1346	150
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	607	515	467	370	344	408	540	672	247
Arrive On Green	0.05	0.33	0.33	0.14	0.42	0.42	0.29	0.29	0.29	0.06
Sat Flow, veh/h	1767	1856	1572	3428	886	822	1177	1856	1572	1767
Grip Volume(v), veh/h	42	218	44	892	0	320	84	196	1346	150
Grip Sat Flow(s), veh/h/ln	1767	1856	1572	1714	0	1708	1177	1856	1572	1767
Q Serve(g.s), s	2.6	9.9	2.1	15.0	0.0	14.8	6.0	9.2	32.0	6.4
Cycle Q Clear(g.c), s	2.6	9.9	2.1	15.0	0.0	14.8	6.0	9.2	32.0	6.4
Prop In Lane	1.00	1.00	1.00	1.00	0.48	1.00	0.48	1.00	1.00	0.19
VIC Ratio(X)	0.52	0.36	0.09	1.91	0.00	0.45	0.21	0.36	2.00	0.61
Avail Cap(c.a), veh/h	129	607	515	467	0	714	408	540	672	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00
Uniform Delay(d), s/veh	51.3	28.2	25.6	47.5	0.0	22.9	29.8	30.9	31.5	24.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	2.2	7.9	1.5	45.2	0.0	6.8	3.0	7.3	157.7	5.1
Unsig. Movement Delay, s/veh	66.5	29.9	25.9	456.8	0.0	23.1	30.0	31.3	488.3	28.9
LnGrip Delay(d), s/veh										
LnGrip LOS	E	C	C	F	A	C	C	C	F	C
Approach Vol, veh/h	304				1212			1626		346
Approach Delay, s/veh	33.0				342.3			409.5		25.2
Approach LOS	C				F			F		C
Timer - Assigned Phis	1	2	3	4		6	7	8		
Phis Duration (G+Y+Rc), s	12.0	37.0	20.0	41.0		49.0	10.0	51.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	7.0	32.0	15.0	36.0		44.0	8.0	43.0		
Max Q Clear Time (g_c+11), s	8.4	34.0	17.0	11.9		10.1	4.6	16.8		
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2		1.0	0.0	1.8		
Intersection Summary										
HCM 6th Ctrl Delay	315.2									
HCM 6th LOS	F									

2022 PM Peak BUILD Conditions  
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Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	21	109	22	446	83	42	98	673	75	79
Traffic Volume (vph)	21	109	22	446	83	42	98	673	75	79
Future Volume (vph)	Prot	NA	Perm	Prot	NA	Perm	NA	pm+ov	pm+pt	NA
Turn Type	7	4	4	3	8	2	2	3	1	6
Protected Phases	7	4	4	3	8	2	2	3	1	6
Permitted Phases	7	4	4	3	8	2	2	3	1	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	21.0	21.0	58.0	68.0	21.0	21.0	58.0	10.0	31.0
Total Split (%)	10.0%	19.1%	19.1%	52.7%	61.8%	19.1%	19.1%	52.7%	9.1%	28.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	Min	Min
Act Effct Green (s)	6.1	15.4	15.4	54.2	63.5	14.8	14.8	74.0	25.5	25.5
Actuated g/C Ratio	0.06	0.14	0.14	0.49	0.58	0.13	0.13	0.67	0.23	0.23
v/c Ratio	0.44	0.84	0.12	0.53	0.31	0.53	0.79	1.22	0.85	0.46
Control Delay	64.7	74.3	0.7	10.8	3.1	57.0	68.4	126.8	76.6	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	74.3	0.7	10.8	3.1	57.0	68.4	126.8	76.6	38.5
LOS	E	E	A	B	A	E	E	F	E	D
Approach Delay	62.3			8.8			116.1			55.0
Approach LOS	E			A			F			E
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 0 (0%); Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 120										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.22										
Intersection Signal Delay: 68.1										
Intersection Capacity Utilization 64.1%										
Analysis Period (min) 15										



2022 PM Peak BUILD Conditions - MITIGATED Conditions  
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HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

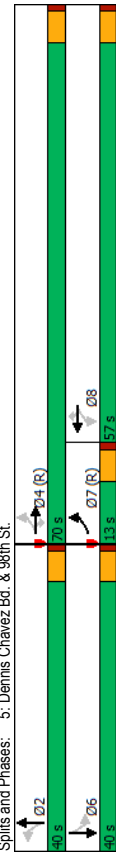
	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	21	109	22	446	83	42	98	673	75	79	19
Traffic Volume (veh/h)	21	109	22	446	83	42	98	673	75	79	19
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Obs), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	No	No	No	No	No	No	No	No	No	No	No
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach											
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	218	44	892	166	154	84	196	1346	150	158
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	613	520	1017	515	478	233	270	695	161	342
Arrive On Green	0.05	0.33	0.33	0.30	0.58	0.58	0.15	0.15	0.15	0.05	0.24
Sat Flow, veh/h	1767	1856	1572	3428	886	822	1177	1856	1572	1767	1445
Grip Volume(v), veh/h	42	218	44	892	0	320	84	196	1346	150	158
Grip Sat Flow(s), veh/h/ln	1767	1856	1572	1714	0	1708	1177	1856	1572	1767	0
Q Serve(g, s), s	2.6	9.8	2.1	27.2	0.0	10.6	7.2	11.1	16.0	5.0	0.0
Cycle Q Clear(g, c), s	2.6	9.8	2.1	27.2	0.0	10.6	7.6	11.1	16.0	5.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	0.48	1.00	1.00	1.00	1.00	1.00	0.19
VIC Ratio(X)	0.52	0.36	0.08	0.88	0.00	0.32	0.36	0.73	1.94	0.93	0.00
Avail Cap(c, a), veh/h	96	613	520	1652	0	994	233	270	695	161	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.61	0.00	0.61	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	27.9	25.4	36.8	0.0	11.8	43.5	44.9	30.7	43.8	0.0
Incr Delay (d2), s/veh	5.2	1.6	0.3	2.1	0.0	0.5	0.9	9.4	426.4	51.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	2.2	7.9	1.5	15.4	0.0	6.3	3.8	9.5	145.5	7.0	0.0
Unsig. Movement Delay, s/veh	66.5	29.5	25.7	38.8	0.0	12.4	44.5	54.3	457.1	95.5	0.0
LnGrip Delay(d), s/veh	E	C	C	D	A	B	D	D	F	F	A
LnGrip LOS	E	C	C	D	A	B	D	D	F	F	A
Approach Vol, veh/h	304			1212			1626				346
Approach Delay, s/veh	32.7			31.8			387.2				62.3
Approach LOS	C			C			F				E
Timer - Assigned Phs	1	2	3	4	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	21.0	37.6	41.4	31.0	10.0	69.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	16.0	53.0	16.0	26.0	6.0	63.0				
Max Q Clear Time (g, c+11), s	7.0	18.0	29.2	11.8	12.3	4.6	12.6				
Green Ext Time (p, c), s	0.0	0.0	3.4	0.4	0.8	0.0	2.0				
Intersection Summary											
HCM 6th Ctrl Delay	200.6 F										
HCM 6th LOS	F										

2022 PM Peak BUILD Conditions - MITIGATED Conditions  
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Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
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EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
195	473	151	164	489	240	94	217	210	209
195	473	151	164	489	240	94	217	210	209
7	4	4	8	8	8	2	2	6	6
4	4	4	8	8	8	2	2	6	6
7	4	4	8	8	8	2	2	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
13.0	70.0	70.0	57.0	57.0	40.0	40.0	40.0	40.0	40.0
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
65.0	65.0	52.0	52.0	52.0	35.0	35.0	35.0	35.0	35.0
0.59	0.59	0.59	0.47	0.47	0.47	0.32	0.32	0.32	0.32
2.01	0.87	0.30	3.07	1.12	0.59	2.85	1.21	6.36	1.12
478.3	18.7	3.6	955.3	82.0	8.2	890.2	143.5	2454.4	111.0
478.3	18.7	3.6	955.3	82.0	8.2	890.2	143.5	2454.4	111.0
125.3	F	F	222.6	F	F	302.7	F	1036.1	F
110									
7.7									
55									
6.36									
367.2									
15									



Splits and Phases: 5: Dennis Chavez Bd. & 98th St.

2022 PM Peak BUILD Conditions

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HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
195	473	151	164	489	240	94	217	210	209
195	473	151	164	489	240	94	217	210	209
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
390	946	302	328	978	480	188	434	260	418
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3	3	3	3	3	3	3	3	3	3
194	1096	929	139	877	743	65	346	207	65
0.07	0.59	0.59	0.47	0.47	0.47	0.32	0.32	0.32	0.32
1767	1856	1572	442	1856	1572	780	1087	651	1133
390	946	302	328	978	480	188	434	260	418
8.0	46.8	10.7	18.2	52.0	25.5	0.0	0.0	35.0	0.0
8.0	46.8	10.7	52.0	52.0	25.5	35.0	0.0	35.0	0.0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
194	1096	929	139	877	743	65	346	207	65
2.01	0.86	0.33	2.37	1.11	0.65	2.87	0.00	1.25	6.42
194	1096	929	139	877	743	65	346	207	65
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
33.5	18.8	11.4	50.2	29.0	22.0	55.0	0.0	37.5	55.0
496.4	0.9	0.1	617.4	53.5	0.2	882.8	0.0	128.9	2469.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36.2	20.9	4.5	43.8	41.7	10.7	32.1	0.0	50.3	79.5
489.9	19.7	11.5	667.6	82.5	22.2	937.8	0.0	166.4	2524.6
1638	F	B	F	F	F	C	F	F	A
130.1	F	B	F	F	F	C	F	F	A
1786	F	B	F	F	F	C	F	F	A
173.7	F	B	F	F	F	C	F	F	A
2	4	6	7	8					
40.0	70.0	40.0	13.0	57.0					
5.0	5.0	5.0	5.0	5.0					
35.0	65.0	35.0	8.0	52.0					
37.0	48.8	37.0	10.0	54.0					
0.0	7.9	0.0	0.0	0.0					
364.6	F								



2022 PM Peak BUILD Conditions

Synchro 10 Report  
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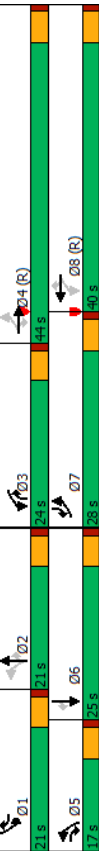
**Timings**

5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	195	473	151	164	489	240	94	217	130	210	209	113
Traffic Volume (vph)	195	473	151	164	489	240	94	217	130	210	209	113
Future Volume (vph)	195	473	151	164	489	240	94	217	130	210	209	113
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	4	3	8	1	5	2	3	1	6	7
Permitted Phases	4	4	5	3	8	1	5	2	3	1	6	7
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Minimum Split (s)	28.0	44.0	17.0	24.0	40.0	21.0	17.0	21.0	24.0	21.0	25.0	28.0
Total Split (%)	25.5%	40.0%	15.5%	21.8%	36.4%	19.1%	15.5%	19.1%	21.8%	19.1%	22.7%	25.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?												
Recall Mode	Min	C-Min	Min	Min	C-Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	62.5	40.5	57.0	54.5	36.5	57.3	27.2	15.7	38.7	15.7	20.0	47.0
Actuated g/C Ratio	0.57	0.37	0.52	0.50	0.33	0.52	0.25	0.14	0.35	0.14	0.18	0.43
v/c Ratio	0.94	0.73	0.35	0.86	0.84	0.56	0.65	0.87	0.26	0.86	0.66	0.32
Control Delay	38.4	31.3	9.1	56.7	30.5	5.3	39.9	64.5	18.7	64.7	47.4	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	31.3	9.1	56.7	30.5	5.3	39.9	64.5	18.7	64.7	47.4	14.4
LOS	D	C	A	E	C	A	D	E	B	E	D	B
Approach Delay	28.9											
Approach LOS	C											

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 7.7 (7%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 35.2
Intersection Capacity Utilization 53.0%
Analysis Period (min) 15



**Timings**

5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations	195	473	151	164	489	240	94	217	130	210	209	113			
Traffic Volume (veh/h)	195	473	151	164	489	240	94	217	130	210	209	113			
Future Volume (veh/h)	195	473	151	164	489	240	94	217	130	210	209	113			
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Parking Bus, Adj	No														
Work Zone On Approach	No														
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856			
Adj Flow Rate, veh/h	390	946	302	328	978	480	188	434	260	420	418	226			
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3	3	3			
Cap. veh/h	425	1399	793	391	1343	819	304	499	780	479	612	518			
Arrive On Green	0.16	0.40	0.40	0.28	0.76	0.76	0.11	0.14	0.14	0.14	0.17	0.17			
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	2768	3428	3526	1572			
Gp Volume(v), veh/h	390	946	302	328	978	480	188	434	260	420	418	226			
Gp Sat Flow(s), veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1384	1714	1763	1572			
Q Serve(g. s), s	14.4	24.3	13.0	13.0	16.3	15.9	9.8	13.3	8.2	13.2	12.2	12.4			
Cycle Q Clear(g. c), s	14.4	24.3	13.0	13.0	16.3	15.9	9.8	13.3	8.2	13.2	12.2	12.4			
Prop In Lane	1.00														
Line Cap(c. a), veh/h	425	1399	793	391	1343	819	304	499	780	479	612	518			
V/C Ratio(X)	0.92	0.68	0.38	0.84	0.73	0.59	0.62	0.87	0.33	0.88	0.68	0.44			
Avail Cap(c. a), veh/h	519	1399	793	448	1343	819	307	513	790	499	641	531			
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09														
Uniform Delay(d), s/veh	20.4	27.4	16.7	17.6	10.0	6.3	35.1	46.2	31.3	46.4	42.6	28.9			
Incr Delay (d2), s/veh	2.4	0.2	0.1	8.4	2.4	2.1	3.7	14.6	0.2	15.7	2.8	0.6			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%), veh/h	7.1	11.7	5.7	7.6	6.4	5.2	8.0	11.1	5.0	10.9	9.4	8.3			
Unsig. Movement Delay, s/veh	22.8														
LnGp Delay(d), s/veh	22.8			16.8			26.0			12.4			8.4		
LnGp LOS	C			C			B			A			D		
Approach Vol, veh/h	1638														
Approach Delay, s/veh	24.5														
Approach LOS	C														
Timer - Assigned Phis	1	2	3	4	5	6	7	8							
Phs Duration (G+Y+Rc), s	20.4	20.6	20.4	48.6	16.8	24.1	22.1	46.9							
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0							
Max Green Setting (Gmax), s	16.0	16.0	19.0	39.0	12.0	20.0	23.0	35.0							
Max Q Clear Time (g. c+H), s	15.2	15.3	15.0	26.3	11.8	14.4	16.4	18.3							
Green Ext Time (p. c), s	0.1	0.3	0.4	6.3	0.0	1.8	0.7	8.3							
Intersection Summary	29.5														
HCM 6th Chl Delay	C														
HCM 6th LOS	D														

**Timings**

5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

Condition	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	20.6	20.4	48.6	16.8	24.1	22.1	46.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	16.0	16.0	19.0	39.0	12.0	20.0	23.0	35.0
Max Q Clear Time (g. c+H), s	15.2	15.3	15.0	26.3	11.8	14.4	16.4	18.3
Green Ext Time (p. c), s	0.1	0.3	0.4	6.3	0.0	1.8	0.7	8.3

**2022 PM Peak BUILD Conditions - MITIGATED Conditions**

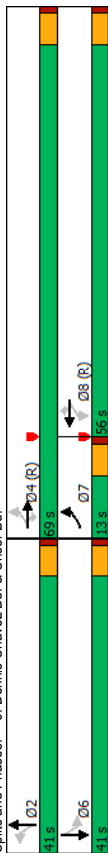
2022 PM Peak BUILD Conditions - MITIGATED Conditions

2022 PM Peak BUILD Conditions - MITIGATED Conditions

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Timings  
 6: Dennis Chavez Bd. & Unser Bd.  
 Terry O. Brown, PE  
 08/15/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
<b>Lane Group</b>	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
<b>Lane Configurations</b>	141	736	41	561	1040	722	26	86	551	113
<b>Traffic Volume (vph)</b>	141	736	41	561	1040	722	26	86	551	113
<b>Future Volume (vph)</b>	141	736	41	561	1040	722	26	86	551	113
<b>Turn Type</b>	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
<b>Protected Phases</b>	7	4	4	8	8	8	2	2	6	6
<b>Permitted Phases</b>	4	4	4	8	8	8	2	2	6	6
<b>Detector Phase</b>	7	4	4	8	8	8	2	2	6	6
<b>Switch Phase</b>	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
<b>Minimum Initial (s)</b>	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
<b>Minimum Split (s)</b>	13.0	69.0	62.7%	50.9%	50.9%	37.3%	37.3%	37.3%	37.3%	37.3%
<b>Total Split (%)</b>	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
<b>Yellow Time (s)</b>	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
<b>All-Red Time (s)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Lost Time Adjust (s)</b>	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
<b>Total Lost Time (s)</b>	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lag
<b>Lead-Lag Optimize?</b>	Min	C-Min	C-Min	C-Min	C-Min	C-Min	Min	Min	Min	Min
<b>Recall Mode</b>	64.0	64.0	51.0	51.0	51.0	51.0	36.0	36.0	36.0	36.0
<b>Act Effct Green (s)</b>	0.58	0.58	0.58	0.46	0.46	0.46	0.33	0.33	0.33	0.33
<b>Actuated g/C Ratio</b>	0.80	0.75	0.05	3.24	1.34	0.74	0.10	0.73	5.13	0.41
<b>v/c Ratio</b>	25.3	18.7	3.8	1038.1	187.3	9.0	27.0	27.9	1886.8	25.5
<b>Queue Delay</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Queue Delay</b>	25.3	18.7	3.8	1038.1	187.3	9.0	27.0	27.9	1886.8	25.5
<b>Total Delay</b>	C	B	A	F	F	A	C	C	F	C
<b>LOS</b>	C	B	A	F	F	A	C	C	F	C
<b>Approach Delay</b>	19.0			337.3	F				1355.0	F
<b>Approach LOS</b>	B			F					C	F
<b>Intersection Summary</b>										
<b>Cycle Length: 110</b>										
<b>Actuated Cycle Length: 110</b>										
<b>Offset: 78.1 (71%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green</b>										
<b>Natural Cycle: 90</b>										
<b>Control Type: Actuated-Coordinated</b>										
<b>Maximum v/c Ratio: 513</b>										
<b>Intersection Signal Delay: 415.6</b>										
<b>Intersection Capacity Utilization 142.9%</b>										
<b>Analysis Period (min) 15</b>										



Splits and Phases: 6: Dennis Chavez Bd. & Unser Bd.  
 2022 PM Peak BUILD Conditions  
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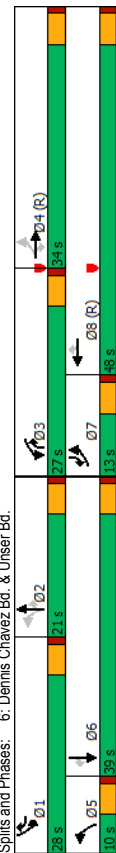
HCM 6th Signalized Intersection Summary  
 6: Dennis Chavez Bd. & Unser Bd.  
 Terry O. Brown, PE  
 08/15/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
<b>Movement</b>	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
<b>Lane Configurations</b>	141	736	41	561	1040	722	26	86	551	113	107
<b>Traffic Volume (veh/h)</b>	141	736	41	561	1040	722	26	86	551	113	107
<b>Future Volume (veh/h)</b>	141	736	41	561	1040	722	26	86	551	113	107
<b>Initial Q (Ob), veh</b>	0	0	0	0	0	0	0	0	0	0	0
<b>Ped-Bike Adj(A, pbT)</b>	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Parking Bus, Adj</b>	No	No	No	No	No	No	No	No	No	No	No
<b>Work Zone On Approach</b>	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
<b>Adj Sat Flow, veh/h/ln</b>	155	809	45	616	1143	793	29	95	381	605	124
<b>Adj Flow Rate, veh/h</b>	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
<b>Peak Hour Factor</b>	3	3	3	3	3	3	3	3	3	3	3
<b>Percent Heavy Veh, %</b>	182	1080	915	367	873	740	309	106	425	109	286
<b>Arrive On Green</b>	0.13	1.00	1.00	0.47	0.47	0.47	0.33	0.33	0.33	0.33	0.33
<b>Sat Flow, veh/h</b>	1767	1856	1572	641	1856	1572	1129	324	1288	911	874
<b>Grip Volume(v), veh/h</b>	155	809	45	616	1143	793	29	0	476	605	0
<b>Grip Sat Flow(s), veh/h/ln</b>	1767	1856	1572	641	1856	1572	1129	0	1622	911	0
<b>Q Serve(g, s), s</b>	5.2	0.0	0.0	51.8	51.8	51.8	2.3	0.0	30.7	5.3	0.0
<b>Cycle Q Clear(g, c), s</b>	5.2	0.0	0.0	51.8	51.8	51.8	14.5	0.0	30.7	36.0	0.0
<b>Prop In Lane</b>	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	1.00	0.49
<b>Lane Grip Cap(c), veh/h</b>	182	1080	915	367	873	740	309	0	531	109	0
<b>VIC Ratio(X)</b>	0.85	0.75	0.05	1.68	1.31	1.07	0.09	0.00	0.90	5.55	0.00
<b>Avail Cap(c, a), veh/h</b>	194	1080	915	367	873	740	309	0	531	109	0
<b>HCM Platoon Ratio</b>	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
<b>Upstream Filter(l)</b>	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Uniform Delay (d), s/veh</b>	25.1	0.0	0.0	33.7	29.1	29.1	34.7	0.0	35.2	53.9	0.0
<b>Incr Delay (d2), s/veh</b>	3.3	0.4	0.0	316.9	147.4	54.1	0.1	0.0	17.8	2067.4	0.0
<b>Initial Q Delay(d3), s/veh</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>%ile BackOfQ(95%), veh/ln</b>	2.7	0.2	0.0	69.7	84.1	40.7	1.1	0.0	20.8	109.6	0.0
<b>Unsig. Movement Delay, s/veh</b>	28.4	0.4	0.0	350.6	176.6	83.2	34.8	0.0	53.1	2121.3	0.0
<b>LnGrp Delay(d), s/veh</b>											
<b>LnGrp LOS</b>	C	A	A	F	F	F	C	A	D	F	A
<b>Approach Vol, veh/h</b>	1009			2552			505		847		
<b>Approach Delay, s/veh</b>	4.7			189.6			52.0		1523.7		
<b>Approach LOS</b>	A			F			D		F		
<b>Timer - Assigned Phis</b>	2			4			6		7		8
<b>Phis Duration (G+Y+Rc), s</b>	41.0			69.0			41.0		12.2		56.8
<b>Change Period (Y+Rc), s</b>	5.0			5.0			5.0		5.0		5.0
<b>Max Green Setting (Gmax), s</b>	36.0			64.0			36.0		8.0		51.0
<b>Max Q Clear Time (g, c+1), s</b>	32.7			2.0			38.0		7.2		53.8
<b>Green Ext Time (p, c), s</b>	1.0			7.9			0.0		0.0		0.0
<b>Intersection Summary</b>											
<b>HCM 6th Ctrl Delay</b>				367.5			F				
<b>HCM 6th LOS</b>				F							

2022 PM Peak BUILD Conditions  
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Timings Terry O. Brown, PE  
6: Dennis Chavez Bd. & Unser Bd. 08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
141	736	41	561	1040	722	26	86	347	551	113	107
141	736	41	561	1040	722	26	86	347	551	113	107
pm+pt	NA	Perm	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	6
7	4	4	3	8	1	5	2	3	1	6	7
7	4	4	3	8	1	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0
13.0	34.0	34.0	27.0	48.0	28.0	10.0	21.0	27.0	28.0	39.0	13.0
11.8%	30.9%	30.9%	24.5%	43.6%	25.5%	9.1%	19.1%	24.5%	25.5%	35.5%	11.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	Min	Min	Min	Min
44.5	33.1	33.1	25.8	47.6	75.3	13.5	8.4	39.2	22.7	25.9	42.2
0.40	0.30	0.30	0.23	0.43	0.68	0.12	0.08	0.36	0.21	0.24	0.38
0.88	0.77	0.07	0.77	0.75	0.67	0.16	0.36	0.36	0.86	0.15	0.17
36.9	39.8	0.2	44.9	28.8	4.1	29.1	51.6	17.9	55.9	33.2	4.2
36.9	39.8	0.2	44.9	28.8	4.1	29.1	51.6	17.9	55.9	33.2	4.2
D	D	A	D	C	A	C	D	B	E	C	A
37.6			25.0				24.9			45.3	
D			C				C			D	



2022 PM Peak BUILD Conditions - MITIGATED Conditions  
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HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
6: Dennis Chavez Bd. & Unser Bd. 08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
141	736	41	561	1040	722	26	86	347	551	113	107
141	736	41	561	1040	722	26	86	347	551	113	107
0	0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
155	809	45	616	1143	793	29	95	381	605	124	118
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3	3	3
241	1050	468	666	1478	967	293	460	899	671	990	556
0.10	0.40	0.40	0.32	0.70	0.70	0.05	0.13	0.13	0.20	0.28	0.28
1767	3526	1572	3428	3526	1572	1767	3526	2768	3428	3526	1572
155	809	45	616	1143	793	29	95	381	605	124	118
1767	1763	1572	1714	1763	1572	1767	1763	1384	1714	1763	1572
6.7	21.9	2.0	19.1	23.3	46.1	1.5	2.6	11.9	19.0	2.9	5.8
6.7	21.9	2.0	19.1	23.3	46.1	1.5	2.6	11.9	19.0	2.9	5.8
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.64	0.77	0.10	0.93	0.77	0.82	0.10	0.21	0.42	0.90	0.13	0.21
241	1050	468	666	1478	967	293	460	899	671	990	556
1.33	1.33	1.33	1.33	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
24.6	29.9	23.9	36.4	13.1	10.5	38.0	42.7	29.1	43.2	29.5	24.9
3.8	3.7	0.3	2.4	0.4	0.8	0.1	0.2	0.3	14.2	0.1	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.2	13.0	1.4	8.5	6.6	7.7	1.2	2.1	7.1	14.3	2.2	3.9
28.4	33.6	24.2	38.8	13.4	11.3	38.1	42.9	29.4	57.4	29.6	25.0
C	C	C	D	B	B	D	D	C	E	C	C
1009				2552			505		847		
32.4				18.9			32.5		488		
C				B			C		D		
1	2	3	4	5	6	7	8				
26.5	19.4	26.4	37.8	10.0	35.9	13.0	51.1				
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
23.0	16.0	22.0	29.0	5.0	34.0	8.0	43.0				
21.0	13.9	21.1	23.9	3.5	7.8	8.7	48.1				
0.6	0.5	0.3	2.5	0.0	1.1	0.0	0.0				
28.2											
C											

2022 PM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
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Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	44	1409	61	81	2294	18	48	1	62	4	1	92
Future Vol, veh/h	44	1409	61	81	2294	18	48	1	62	4	1	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	45	1453	63	84	2365	19	49	1	64	4	1	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2384	0	0	1516	0	0	4166	4127	1485	4150	4149	2375
Stage 1	-	-	-	-	-	-	1575	1575	-	2543	2543	-
Stage 2	-	-	-	-	-	-	2591	2552	-	1607	1606	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	201	-	-	438	-	-	~1	2	152	~1	2	~44
Stage 1	-	-	-	-	-	-	137	169	-	37	54	-
Stage 2	-	-	-	-	-	-	~34	54	-	131	163	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	201	-	-	438	-	-	-	0	152	-	0	~44
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	137	0	-	37	54	-
Stage 2	-	-	-	-	-	-	-	54	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	201	-	-	438	-	-	-	44
HCM Lane V/C Ratio	-	0.226	-	-	0.191	-	-	-	2.156
HCM Control Delay (s)	-	28.1	0	-	15.1	0	-	-	\$ 730.2
HCM Lane LOS	-	D	A	-	C	A	-	-	F
HCM 95th %tile Q(veh)	-	0.8	-	-	0.7	-	-	-	9.9

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	46	110	81	1246	1079	37
Future Vol, veh/h	46	110	81	1246	1079	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	48	116	85	1312	1136	39

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1962	568	1175	0	-	0
Stage 1	1136	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	55	464	585	-	-	-
Stage 1	266	-	-	-	-	-
Stage 2	388	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 47	464	585	-	-	-
Mov Cap-2 Maneuver	~ 47	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	92.5	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	585	-	47	464	-	-
HCM Lane V/C Ratio	0.146	-	1.03	0.25	-	-
HCM Control Delay (s)	12.2	-	277	15.3	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.5	-	4.4	1	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	49.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	119	64	52	61	139	32	72	474	62	38	642	126
Future Vol, veh/h	119	64	52	61	139	32	72	474	62	38	642	126
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	128	69	56	66	149	34	77	510	67	41	690	135
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	17.8	16.6	35.7	79.6
HCM LOS	C	C	E	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	72%	0%	100%	29%	0%	100%	59%	0%	100%
Vol Right, %	0%	0%	28%	0%	0%	71%	0%	0%	41%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	316	220	119	43	73	61	93	78	38	428
LT Vol	72	0	0	119	0	0	61	0	0	38	0
Through Vol	0	316	158	0	43	21	0	93	46	0	428
RT Vol	0	0	62	0	0	52	0	0	32	0	0
Lane Flow Rate	77	340	237	128	46	79	66	100	84	41	460
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.208	0.864	0.589	0.383	0.131	0.215	0.197	0.285	0.235	0.105	1.124
Departure Headway (Hd)	9.649	9.158	8.964	10.974	10.474	9.978	10.996	10.496	10.21	9.29	8.79
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	372	394	402	330	345	362	329	345	354	386	414
Service Time	7.42	6.92	6.723	8.674	8.174	7.678	8.696	8.196	7.91	7.04	6.54
HCM Lane V/C Ratio	0.207	0.863	0.59	0.388	0.133	0.218	0.201	0.29	0.237	0.106	1.111
HCM Control Delay	15	48.6	23.9	20.3	14.7	15.4	16.4	17.3	16	13.1	111.9
HCM Lane LOS	B	E	C	C	B	C	C	C	C	B	F
HCM 95th-tile Q	0.8	8.4	3.6	1.7	0.4	0.8	0.7	1.2	0.9	0.3	16.6



<b>Intersection</b>												
Intersection Delay, s/veh	26.3											
Intersection LOS	D											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	18	21	50	74	28	60	69	572	26	69	559	32
Future Vol, veh/h	18	21	50	74	28	60	69	572	26	69	559	32
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	22	52	77	29	63	72	596	27	72	582	33
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	13.6	14.3	29.3	27.9
HCM LOS	B	B	D	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	88%	0%	30%	0%	32%	0%	100%	85%
Vol Right, %	0%	0%	12%	0%	70%	0%	68%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	381	217	18	71	74	88	69	373	218
LT Vol	69	0	0	18	0	74	0	69	0	0
Through Vol	0	381	191	0	21	0	28	0	373	186
RT Vol	0	0	26	0	50	0	60	0	0	32
Lane Flow Rate	72	397	226	19	74	77	92	72	388	227
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.162	0.841	0.472	0.052	0.183	0.205	0.219	0.163	0.823	0.476
Departure Headway (Hd)	8.127	7.618	7.532	10.008	8.897	9.575	8.585	8.142	7.633	7.528
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	473	476	360	402	374	416	439	474	478
Service Time	5.896	5.387	5.301	7.708	6.697	7.369	6.378	5.912	5.402	5.298
HCM Lane V/C Ratio	0.163	0.839	0.475	0.053	0.184	0.206	0.221	0.164	0.819	0.475
HCM Control Delay	12.5	39.3	16.9	13.3	13.7	14.8	13.8	12.5	37.2	17
HCM Lane LOS	B	E	C	B	B	B	B	B	E	C
HCM 95th-tile Q	0.6	8.4	2.5	0.2	0.7	0.8	0.8	0.6	7.9	2.5

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	36	5	28	35	42	4	14	11	19	9	5
Future Vol, veh/h	2	36	5	28	35	42	4	14	11	19	9	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	40	6	31	39	47	4	16	12	21	10	6

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	86	0	0	46	0	0	180	195	43	186	175	63
Stage 1	-	-	-	-	-	-	47	47	-	125	125	-
Stage 2	-	-	-	-	-	-	133	148	-	61	50	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1504	-	-	1555	-	-	779	699	1025	772	717	999
Stage 1	-	-	-	-	-	-	964	854	-	877	791	-
Stage 2	-	-	-	-	-	-	868	773	-	948	851	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1504	-	-	1555	-	-	753	684	1025	737	701	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	753	684	-	737	701	-
Stage 1	-	-	-	-	-	-	963	853	-	876	774	-
Stage 2	-	-	-	-	-	-	834	757	-	919	850	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2	9.7	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	794	1504	-	-	1555	-	-	756
HCM Lane V/C Ratio	0.041	0.001	-	-	0.02	-	-	0.049
HCM Control Delay (s)	9.7	7.4	0	-	7.4	0	-	10
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕	↕	↵	↕	↵
Traffic Vol, veh/h	9	1	4	8	6	42	6	675	6	52	742	30
Future Vol, veh/h	9	1	4	8	6	42	6	675	6	52	742	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	10	1	4	9	7	47	7	758	7	58	834	34

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1347	1729	417	1306	1756	379	868	0	0	765	0	0
Stage 1	950	950	-	772	772	-	-	-	-	-	-	-
Stage 2	397	779	-	534	984	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	109	87	582	116	83	616	765	-	-	837	-	-
Stage 1	278	335	-	356	405	-	-	-	-	-	-	-
Stage 2	597	402	-	495	322	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	92	80	582	108	77	616	765	-	-	837	-	-
Mov Cap-2 Maneuver	197	185	-	229	189	-	-	-	-	-	-	-
Stage 1	275	312	-	353	401	-	-	-	-	-	-	-
Stage 2	537	398	-	455	300	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.6		14.5		0.1		0.6	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	765	-	-	197	407	229	480	837	-	-
HCM Lane V/C Ratio	0.009	-	-	0.051	0.014	0.039	0.112	0.07	-	-
HCM Control Delay (s)	9.7	-	-	24.3	14	21.4	13.4	9.6	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.1	0.4	0.2	-	-

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	11	31	46	43	1
Future Vol, veh/h	1	11	31	46	43	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	13	36	54	51	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	90	0	-	0	78 63
Stage 1	-	-	-	-	63 -
Stage 2	-	-	-	-	15 -
Critical Hdwy	4.13	-	-	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.227	-	-	-	3.527 3.327
Pot Cap-1 Maneuver	1499	-	-	-	922 999
Stage 1	-	-	-	-	957 -
Stage 2	-	-	-	-	1005 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1499	-	-	-	921 999
Mov Cap-2 Maneuver	-	-	-	-	921 -
Stage 1	-	-	-	-	956 -
Stage 2	-	-	-	-	1005 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1499	-	-	-	923
HCM Lane V/C Ratio	0.001	-	-	-	0.056
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1	13	100	100	1
Future Vol, veh/h	11	1	13	100	100	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	1	15	118	118	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	267	119	119	0	0
Stage 1	119	-	-	-	-
Stage 2	148	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	720	930	1463	-	-
Stage 1	904	-	-	-	-
Stage 2	877	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	712	930	1463	-	-
Mov Cap-2 Maneuver	712	-	-	-	-
Stage 1	894	-	-	-	-
Stage 2	877	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1463	-	726	-	-
HCM Lane V/C Ratio	0.01	-	0.019	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	11	1	13	100	110	1
Future Vol, veh/h	11	1	13	100	110	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	1	15	118	129	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	278	130	130	0	0
Stage 1	130	-	-	-	-
Stage 2	148	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	710	917	1449	-	-
Stage 1	894	-	-	-	-
Stage 2	877	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	702	917	1449	-	-
Mov Cap-2 Maneuver	702	-	-	-	-
Stage 1	884	-	-	-	-
Stage 2	877	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.9	0
HCM LOS	B		

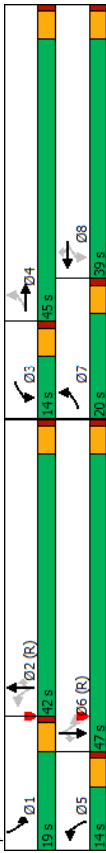
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1449	-	716	-	-
HCM Lane V/C Ratio	0.011	-	0.02	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
244	85	73	21	270	19	782	81	167	691
244	85	73	21	270	19	782	81	167	691
pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
7	4	3	8	5	2	2	1	6	6
7	4	3	8	8	2	2	1	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
20.0	45.0	14.0	39.0	14.0	42.0	42.0	19.0	47.0	47.0
16.7%	37.5%	11.7%	32.5%	11.7%	35.0%	35.0%	15.8%	39.2%	39.2%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
None	Min	Min	Min	Min	Min	C-Min	Min	C-Min	C-Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 36 (30%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
244	86	44	73	21	270	19	782	81	167
244	85	44	73	21	270	19	782	81	167
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
268	93	48	80	23	297	21	859	89	184
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3
489	324	167	409	385	326	340	1500	669	334
0.13	0.28	0.28	0.05	0.21	0.21	0.04	0.43	0.08	0.46
1767	1153	595	1767	1856	1572	1767	3526	1572	1767
268	0	141	80	23	297	21	859	89	184
1767	0	1748	1767	1856	1572	1767	3526	1572	1767
14.0	0.0	7.6	4.2	1.2	22.1	0.8	22.2	4.1	6.8
14.0	0.0	7.6	4.2	1.2	22.1	0.8	22.2	4.1	6.8
1.00	0.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.55	0.00	0.29	0.20	0.06	0.91	0.06	0.57	0.13	0.55
489	0	563	450	526	446	399	1500	669	407
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3.00	0.0	33.8	34.4	38.1	46.4	18.1	26.2	21.0	19.4
1.3	0.0	0.3	0.2	0.1	18.3	0.1	1.6	0.4	1.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9.9	0.0	5.7	3.2	1.0	15.2	0.5	13.8	2.8	4.8
313	0.0	34.1	34.7	38.2	64.7	18.1	27.8	21.4	20.7
C	A	C	C	D	E	B	C	C	C
409				400			969		1002
C				57.2			27.0		22.5
C				E			C		C
1	2	3	4	5	6	7	8		
14.0	56.0	11.2	38.7	10.0	60.1	20.0	29.9		
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0		
8.8	24.2	6.2	9.6	2.8	19.8	16.0	24.1		
0.2	4.4	0.0	0.7	0.0	4.7	0.0	0.8		
Intersection Summary									
HCM 6th Ctrl Delay 30.5 C									
HCM 6th LOS									

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

Timings  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	66	1323	67	238	147	316	709	267	276
Future Volume (vph)	66	1323	67	238	147	316	709	267	276
Turn Type	pm+pt	NA	pm+pt	NA	perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	C-Min

Intersection Summary

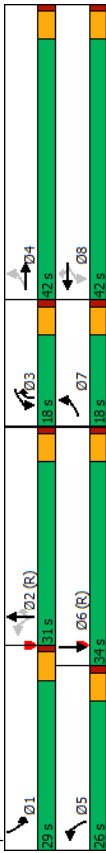
Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	66	1323	574	67	238	147	316	709	267	276
Future Volume (veh/h)	66	1323	574	67	238	147	316	709	267	276
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	69	1378	0	70	248	0	329	739	278	288
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	364	1087	138	573	595	1384	686	304	1111	119
Arrive On Green	0.04	0.31	0.00	0.04	0.31	0.00	0.14	0.39	0.09	0.35
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428
Grip Volume(v), veh/h	69	1378	0	70	248	0	329	739	278	288
Grip Sat Flow(s) veh/h/ln	1767	1763	0	1767	1856	1572	1767	1714	1763	1794
Q Serve(g, s), s	3.2	37.0	0.0	3.2	12.8	0.0	13.8	19.3	14.5	8.0
Cycle Q Clear(g, c), s	3.2	37.0	0.0	3.2	12.8	0.0	13.8	19.3	14.5	8.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	364	1087	138	573	595	1384	686	304	609	620
VIC Ratio(X)	0.19	1.27	0.51	0.43	0.55	0.53	0.41	0.77	0.26	0.26
Avail Cap(c, a), veh/h	478	1087	251	573	665	1384	686	686	609	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	41.5	0.0	31.9	33.1	0.0	19.2	28.0	23.1	53.5
Incr Delay (d2), s/veh	0.2	127.8	0.0	2.9	0.5	0.0	0.6	1.1	1.4	4.1
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/ln	2.4	50.8	0.0	2.6	9.6	0.0	8.7	12.1	8.7	6.4
Unsig. Movement Delay, s/veh	27.2	169.3	0.0	34.8	33.6	0.0	19.8	29.1	24.5	57.6
LnGrip Delay(d), s/veh	C	F	A	C	C	B	C	C	E	C
LnGrip LOS	C	F	A	C	C	B	C	C	E	C
Approach Vol, veh/h	1447	1626	318	339	1346	259	563	413		
Approach Delay, s/veh	162.6	33.9	318	33.9	1346	259	563	413		
Approach LOS	F	F	C	C	C	C	D	D		
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	15.6	52.1	10.3	42.0	21.3	46.5	10.2	42.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g, c+1), s	10.0	21.3	5.2	39.0	15.8	9.8	5.2	14.8		
Green Ext Time (p, c), s	0.6	2.3	0.1	0.0	0.5	1.5	0.1	1.2		

Intersection Summary  
HCM 6th Ctrl Delay: 82.9  
HCM 6th LOS: F

Notes  
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn



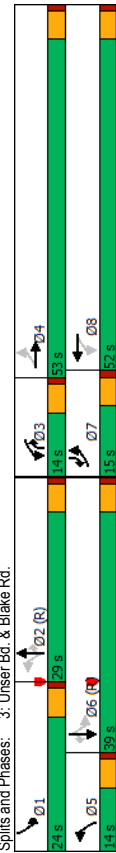
Timings  
3: Unser Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (vph)	181	18	168	26	43	447	105	52	374	35
Future Volume (vph)	181	18	168	26	43	447	105	52	374	35
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	5	2	3	1	6	7
Permitted Phases	4	4	8	8	2	2	3	1	6	6
Detector Phase	7	4	3	8	5	2	3	1	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0
Minimum Split (s)	15.0	53.0	14.0	52.0	14.0	29.0	14.0	24.0	39.0	15.0
Total Split (%)	12.5%	44.2%	11.7%	43.3%	11.7%	24.2%	11.7%	20.0%	32.5%	12.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	33.9	19.4	31.0	18.0	67.3	60.2	78.3	67.8	60.5	80.0
Act Effct Green (s)	0.28	0.16	0.26	0.15	0.56	0.50	0.65	0.56	0.50	0.67
Actuated g/C Ratio	0.75	0.38	0.53	0.89	0.09	0.29	0.11	0.12	0.24	0.04
Control Delay	48.5	12.2	36.0	29.2	13.5	20.2	2.7	13.4	19.5	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	12.2	36.0	29.2	13.5	20.2	2.7	13.4	19.5	1.4
LOS	D	B	D	C	B	C	A	B	B	A
Approach Delay	33.8	31.1	31.1	16.6	16.6	16.6	16.6	17.4	17.4	17.4
Approach LOS	C	C	C	B	B	B	B	B	B	B
Intersection Summary										
Cycle Length: 120										
Actuated Cycle Length: 120										
Offset: 93.6 (78%). Referenced to phase 2:NBTL and 6:SBTL, Start of Green										
Natural Cycle: 65										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.89										
Intersection Signal Delay: 24.0										
Intersection Capacity Utilization 70.7%										
Analysis Period (min) 15										



Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←
Traffic Volume (veh/h)	181	18	105	168	26	422	43	447	105	52
Future Volume (veh/h)	181	18	105	168	26	422	43	447	105	52
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	203	20	118	189	29	474	48	502	118	58
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	81	479	549	31	508	395	1299	697	344
Arrive On Green	0.08	0.35	0.35	0.08	0.34	0.34	0.04	0.37	0.04	0.37
Sat Flow, veh/h	1767	233	1375	1767	91	1495	1767	3526	1572	1767
Grip Volume(v), veh/h	203	0	138	189	0	503	48	502	118	58
Grip Sat Flow(s),veh/h/ln	1767	0	1608	1767	0	1586	1767	1763	1572	1763
Q Serve(g, s), s	9.0	0.0	7.3	8.4	0.0	36.8	2.0	12.6	5.4	2.4
Cycle Q Clear(g, c), s	9.0	0.0	7.3	8.4	0.0	36.8	2.0	12.6	5.4	2.4
Prop In Lane	1.00	0.86	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.86	0.00	0.25	0.34	0.00	0.93	0.12	0.39	0.17	0.17
Avail Cap(c, a), veh/h	237	0	643	549	0	621	454	1299	697	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	27.9	23.2	0.0	38.3	21.9	27.9	20.1	22.3
Incr Delay (d2), s/veh	25.2	0.0	0.2	0.4	0.0	19.7	0.1	0.9	0.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	9.0	0.0	5.0	6.2	0.0	23.2	1.5	9.0	3.6	1.8
Unsig. Movement Delay, s/veh	54.4	0.0	28.1	23.6	0.0	57.9	22.1	28.8	20.6	22.5
LnGrip Delay(d),s/veh	D	A	C	C	A	E	C	C	C	C
LnGrip LOS	D	A	C	C	A	E	C	C	C	C
Approach Vol, veh/h	341	438	692	48.6	668	26.9	517	26.5	517	26.5
Approach Delay, s/veh	43.8	48.6	692	48.6	26.9	517	26.5	517	26.5	26.5
Approach LOS	D	D	D	D	C	C	C	C	C	C
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	10.0	49.2	14.0	46.8	10.0	49.2	15.0	45.8		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	19.0	24.0	9.0	48.0	9.0	34.0	10.0	47.0		
Max Q Clear Time (g, c+11), s	4.4	14.6	10.4	9.3	4.0	12.3	11.0	38.8		
Green Ext Time (p, c), s	0.1	2.4	0.0	0.8	0.0	2.6	0.0	2.0		
Intersection Summary										
HCM 6th Ctrl Delay	36.2									
HCM 6th LOS	D									

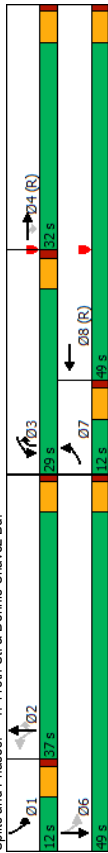
2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
6	78	149	521	138	40	111	431	196	484
6	78	149	521	138	40	111	431	196	484
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
12.0	32.0	29.0	49.0	37.0	37.0	29.0	12.0	49.0	32.0
10.9%	29.1%	29.1%	26.4%	33.6%	33.6%	26.4%	10.9%	44.5%	29.1%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
6.1	12.8	24.0	30.7	38.6	38.6	67.6	58.2	58.2	67.6
0.06	0.12	0.12	0.22	0.28	0.35	0.35	0.61	0.53	0.53
0.09	0.56	0.69	1.08	0.47	0.93	0.26	0.57	0.48	0.96
51.0	55.3	24.8	84.4	28.6	132.8	28.8	5.3	18.6	47.2
51.0	55.3	24.8	84.4	28.6	132.8	28.8	5.3	18.6	47.2
D	E	C	F	C	F	C	A	B	D
35.7			71.6			18.6			40.1
D			E			B			D



2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

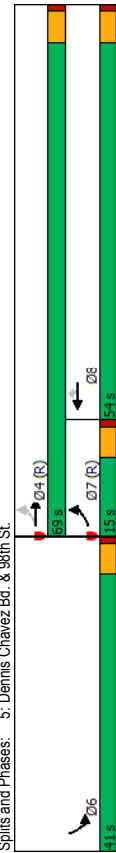
EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
6	78	149	521	138	40	111	431	196	484	112
6	78	149	521	138	40	111	431	196	484	112
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
9	120	229	802	212	26	62	171	663	302	745
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
80	455	386	748	678	83	65	540	801	321	583
0.05	0.25	0.25	0.22	0.42	0.42	0.29	0.29	0.29	0.06	0.40
1767	1856	1572	3428	1621	199	604	1856	1572	1767	1458
9	120	229	802	0	238	62	171	663	302	0
1767	1856	1572	1714	0	1820	604	1856	1572	1767	0
0.5	5.7	14.1	24.0	0.0	9.6	0.0	7.9	32.0	7.0	0.0
0.5	5.7	14.1	24.0	0.0	9.6	32.0	7.9	32.0	7.0	0.0
1.00	1.00	1.00	1.00	0.11	1.00	1.00	1.00	1.00	1.00	0.19
80	455	386	748	0	761	65	540	801	321	0
0.11	0.26	0.59	1.07	0.00	0.31	0.95	0.32	0.83	0.94	0.00
112	455	386	748	0	761	65	540	801	321	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50.4	33.5	36.7	43.0	0.0	21.4	55.0	30.5	22.9	35.3	0.0
0.6	1.4	6.6	35.4	0.0	0.1	92.5	0.3	7.2	35.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.4	4.8	9.9	15.9	0.0	4.9	6.0	6.2	21.0	12.4	0.0
51.0	34.9	43.2	78.4	0.0	21.5	147.5	30.8	30.2	70.4	0.0
358			1040			896			1219	
40.6			65.4			38.4			144.1	
D	C	D	F	A	C	F	C	C	E	A
D			E			D			F	
1	2	3	4	6	7	8				
12.0	37.0	29.0	32.0	49.0	10.0	51.0				
5.0	5.0	5.0	5.0	5.0	5.0	5.0				
7.0	32.0	24.0	27.0	44.0	7.0	44.0				
9.0	34.0	26.0	16.1	46.0	2.5	11.6				
0.0	0.0	0.0	1.0	0.0	0.0	1.3				
Intersection Summary										
HCM 6th Ctrl Delay 83.3										
HCM 6th LOS F										

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL
Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	←	←	←	←	←
Traffic Volume (vph)	200	474	688	184	790
Future Volume (vph)	200	474	688	184	790
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	7	4	8	8	6
Permitted Phases	4				
Detector Phase	7	4	8	8	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	69.0	54.0	54.0	41.0
Total Split (%)	13.6%	62.7%	49.1%	49.1%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	64.0	49.0	49.0	36.0	36.0
Actuated g/C Ratio	0.58	0.58	0.45	0.45	0.33
v/c Ratio	1.36	0.68	1.31	0.33	3.22
Control Delay	210.5	24.4	169.2	2.0	1020.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	210.5	24.4	169.2	2.0	1020.3
LOS	F	C	F	A	F
Approach Delay		79.7	134.3		
Approach LOS		E	F	F	F
Intersection Summary					
Cycle Length: 110					
Actuated Cycle Length: 110					
Offset: 36.3 (33%), Referenced to phase 4:EBTL and 7:EBL, Start of Green					
Natural Cycle: 130					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 3.22					
Intersection Signal Delay: 507.1					
Intersection Capacity Utilization 123.3%					
Analysis Period (min) 15					



2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

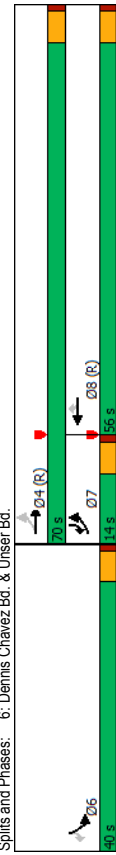
HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	200	474	688	184	790	412
Future Volume (veh/h)	200	474	688	184	790	412
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00					
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1900	1900
Adj Flow Rate, veh/h	308	729	1074	283	1215	634
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	226	1080	827	700	364	190
Arrive On Green	0.09	0.58	0.89	0.89	0.33	0.33
Sat Flow, veh/h	1767	1856	1856	1572	1113	581
Gp Volume(v), veh/h	308	729	1074	283	1850	0
Gp Sat Flow(s), veh/h/ln	1767	1856	1856	1572	1695	0
Q Serve(g, s), s	10.0	29.8	49.0	3.4	36.0	0.0
Cycle Q Clear(g, c), s	10.0	29.8	49.0	3.4	36.0	0.0
Prop In Lane	1.00					
Lane Gp Cap(c), veh/h	226	1080	827	700	555	0
V/C Ratio(X)	1.36	0.68	1.30	0.40	3.33	0.00
Avail Cap(c, a), veh/h	226	1080	827	700	555	0
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(l)	0.82	0.82	0.64	0.64	1.00	0.00
Uniform Delay (d), s/veh	34.4	15.8	6.0	3.5	37.0	0.0
Incr Delay (d2), s/veh	184.7	2.8	140.5	0.2	1055.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	22.0	17.0	50.4	1.5	280.2	0.0
Unsig. Movement Delay, s/veh						
LnGp Delay(d), s/veh	219.0	18.6	146.5	3.8	1092.1	0.0
LnGp LOS	F	B	F	A	F	A
Approach Vol, veh/h	1037	1357			1850	
Approach Delay, s/veh	78.1	116.7			1092.1	
Approach LOS	E	F			F	
Timer - Assigned Phis				4	6	7
Phis Duration (G+Y+Rc), s				69.0	41.0	15.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				64.0	36.0	10.0
Max Q Clear Time (g, c+1), s				31.8	38.0	12.0
Green Ext Time (p, c), s				5.2	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay	532.5					
HCM 6th LOS	F					

2032 AM Peak NOBUILD Conditions  
Synchro 10 Report  
2032ANX.syn

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	119	1372	650	507	941	145
Future Volume (vph)	119	1372	650	507	941	145
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	14.0	70.0	56.0	56.0	40.0	14.0
Total Split (%)	12.7%	63.6%	50.9%	50.9%	36.4%	12.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	65.0	65.0	51.7	51.7	35.0	48.3
Actuated g/C Ratio	0.59	0.59	0.47	0.47	0.32	0.44
v/c Ratio	0.50	1.37	0.82	0.54	1.84	0.21
Control Delay	14.7	186.1	34.6	3.6	409.4	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	186.1	34.6	3.6	409.4	8.2
LOS	B	F	C	A	F	A
Approach Delay		172.5	21.0		355.8	
Approach LOS		F	C		F	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 19.8 (18%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 130						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.84						
Intersection Signal Delay: 178.9						
Intersection Capacity Utilization 132.7%						
Analysis Period (min) 15						



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	119	1372	650	507	941	145
Future Volume (veh/h)	119	1372	650	507	941	145
Initial Q (Obs), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	129	1491	707	551	1023	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	238	1096	913	774	562	584
Arrive On Green	0.05	0.59	0.49	0.49	0.32	0.32
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	129	1491	707	551	1023	158
Gp Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	3.8	65.0	34.4	30.1	35.0	7.7
Cycle Q Clear(g, c), s	3.8	65.0	34.4	30.1	35.0	7.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	238	1096	913	774	562	584
V/C Ratio(X)	0.54	1.36	0.77	0.71	1.82	0.27
Avail Cap(c, a), veh/h	289	1096	913	774	562	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	22.5	22.9	21.8	37.5	24.2
Incr Delay (d2), s/veh	0.2	162.3	6.4	5.5	375.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	99.0	21.7	16.9	114.1	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.0	185.0	29.3	27.3	413.2	24.4
LnGrp LOS	C	F	C	C	F	C
Approach Vol, veh/h		1620	1258		1181	
Approach Delay, s/veh		171.8	28.4		361.2	
Approach LOS		F	C		F	
Timer - Assigned Phis				4	6	7
Phs Duration (G+Y+Rc), s				70.0	40.0	10.9
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0	35.0	51.0
Max Q Clear Time (g, c+11), s				67.0	37.0	36.4
Green Ext Time (p, c), s				0.0	0.0	0.1
5.8						
Intersection Summary						
HCM 6th Ctrl Delay	182.5					
HCM 6th LOS	F					

**Intersection**

Int Delay, s/veh 353.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	26	2195	44	15	1071	10	44	2	52	9	2	37
Future Vol, veh/h	26	2195	44	15	1071	10	44	2	52	9	2	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	2217	44	15	1082	10	44	2	53	9	2	37

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1092	0	0	2261
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.13	-	-	4.13
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227
Pot Cap-1 Maneuver	635	-	-	224
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	635	-	-	224
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	\$ 12458.8	\$ 366.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	635	-	-	224	-	-	6	261
HCM Lane V/C Ratio	24.747	0.041	-	-	0.068	-	-	1.852	0.143
HCM Control Delay (s)	\$ 12458.8	10.9	0	-	22.2	0	\$ 1529.3	21.1	
HCM Lane LOS	F	B	A	-	C	A	-	F	C
HCM 95th %tile Q(veh)	14.4	0.1	-	-	0.2	-	-	2.4	0.5

**Notes**  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕	↕	↗
Traffic Vol, veh/h	5	10	29	693	496	25
Future Vol, veh/h	5	10	29	693	496	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	10	30	722	517	26

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	938	259	543	0	-	0
Stage 1	517	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	261	737	1015	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	737	1015	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1015	-	253	737	-	-
HCM Lane V/C Ratio	0.03	-	0.021	0.014	-	-
HCM Control Delay (s)	8.7	-	19.5	10	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	18.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	205	134	25	13	42	11	21	404	57	9	256	23
Future Vol, veh/h	205	134	25	13	42	11	21	404	57	9	256	23
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	250	163	30	16	51	13	26	493	70	11	312	28
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	17.6	12.2	20.7	15.7
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	70%	0%	100%	64%	0%	100%	56%	0%	100%
Vol Right, %	0%	0%	30%	0%	0%	36%	0%	0%	44%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	269	192	205	89	70	13	28	25	9	171
LT Vol	21	0	0	205	0	0	13	0	0	9	0
Through Vol	0	269	135	0	89	45	0	28	14	0	171
RT Vol	0	0	57	0	0	25	0	0	11	0	0
Lane Flow Rate	26	328	234	250	109	85	16	34	30	11	208
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.057	0.679	0.47	0.574	0.235	0.177	0.041	0.083	0.072	0.026	0.458
Departure Headway (Hd)	7.946	7.446	7.238	8.26	7.76	7.509	9.288	8.788	8.48	8.42	7.92
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	486	498	438	463	477	385	407	422	425	454
Service Time	5.692	5.192	4.984	6.008	5.508	5.257	7.055	6.555	6.247	6.172	5.672
HCM Lane V/C Ratio	0.058	0.675	0.47	0.571	0.235	0.178	0.042	0.084	0.071	0.026	0.458
HCM Control Delay	11.2	24.6	16.3	21.6	12.9	11.9	12.5	12.4	11.9	11.4	17.2
HCM Lane LOS	B	C	C	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.2	5	2.5	3.5	0.9	0.6	0.1	0.3	0.2	0.1	2.4

Intersection												
Intersection Delay, s/veh	16.1											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↕	
Traffic Vol, veh/h	24	21	71	35	23	37	39	476	44	27	248	4
Future Vol, veh/h	24	21	71	35	23	37	39	476	44	27	248	4
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	25	86	42	28	45	47	573	53	33	299	5
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	12.1	11.8	19	13.4
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	78%	0%	23%	0%	38%	0%	100%	95%
Vol Right, %	0%	0%	22%	0%	77%	0%	62%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	317	203	24	92	35	60	27	165	87
LT Vol	39	0	0	24	0	35	0	27	0	0
Through Vol	0	317	159	0	21	0	23	0	165	83
RT Vol	0	0	44	0	71	0	37	0	0	4
Lane Flow Rate	47	382	244	29	111	42	72	33	199	104
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.093	0.7	0.436	0.067	0.225	0.099	0.151	0.07	0.398	0.208
Departure Headway (Hd)	7.095	6.588	6.434	8.366	7.318	8.443	7.504	7.697	7.189	7.156
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	551	564	428	490	425	478	466	500	501
Service Time	4.795	4.288	4.134	6.115	5.067	6.191	5.251	5.439	4.932	4.899
HCM Lane V/C Ratio	0.093	0.693	0.433	0.068	0.227	0.099	0.151	0.071	0.398	0.208
HCM Control Delay	10.5	23.2	14	11.7	12.2	12.1	11.6	11	14.6	11.8
HCM Lane LOS	B	C	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.3	5.5	2.2	0.2	0.9	0.3	0.5	0.2	1.9	0.8



Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	16	0	10	5	17	1	7	25	17	9	1
Future Vol, veh/h	3	16	0	10	5	17	1	7	25	17	9	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	20	0	12	6	21	1	9	31	21	11	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	20	0	0	75	79	20	89	69	17
Stage 1	-	-	-	-	-	-	28	28	-	41	41	-
Stage 2	-	-	-	-	-	-	47	51	-	48	28	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1580	-	-	1590	-	-	913	809	1055	894	820	1059
Stage 1	-	-	-	-	-	-	987	870	-	971	859	-
Stage 2	-	-	-	-	-	-	964	850	-	963	870	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1580	-	-	1590	-	-	895	800	1055	854	811	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	895	800	-	854	811	-
Stage 1	-	-	-	-	-	-	984	867	-	968	852	-
Stage 2	-	-	-	-	-	-	943	843	-	923	867	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			2.3			8.8			9.4		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	983	1580	-	-	1590	-	-	845
HCM Lane V/C Ratio	0.041	0.002	-	-	0.008	-	-	0.039
HCM Control Delay (s)	8.8	7.3	0	-	7.3	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕↕	↵	↵	↕↕	↵
Traffic Vol, veh/h	18	2	3	14	1	75	1	606	17	49	524	7
Future Vol, veh/h	18	2	3	14	1	75	1	606	17	49	524	7
Conflicting Peds, #/hr	1	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	100	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	2	3	16	1	83	1	673	17	54	582	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1030	1382	291	1075	1373	338	590	0	0	690	0	0
Stage 1	690	690	-	675	675	-	-	-	-	-	-	-
Stage 2	340	692	-	400	698	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	186	142	703	173	143	655	975	-	-	894	-	-
Stage 1	399	442	-	408	449	-	-	-	-	-	-	-
Stage 2	645	441	-	595	438	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	154	133	703	163	134	654	975	-	-	894	-	-
Mov Cap-2 Maneuver	272	243	-	286	257	-	-	-	-	-	-	-
Stage 1	399	415	-	408	449	-	-	-	-	-	-	-
Stage 2	560	441	-	553	412	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.2		12.6		0		0.8	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	975	-	-	272	400	286	641	894	-	-
HCM Lane V/C Ratio	0.001	-	-	0.074	0.014	0.054	0.132	0.061	-	-
HCM Control Delay (s)	8.7	-	-	19.3	14.1	18.3	11.5	9.3	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.2	0.5	0.2	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

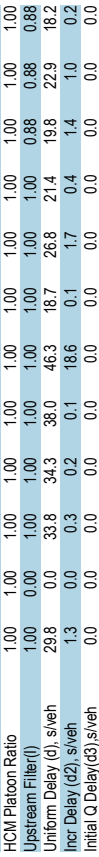
HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	244	85	73	21	273	31	794	81	176	731	44
Traffic Volume (vph)	244	85	73	21	273	31	794	81	176	731	44
Future Volume (vph)	244	85	73	21	273	31	794	81	176	731	44
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	268	93	55	80	23	300	34	873	89	193	803
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	490	309	183	409	389	329	325	1483	661	332	1612
Arrive On Green	0.13	0.28	0.28	0.05	0.21	0.21	0.04	0.42	0.42	0.08	0.46
Sat Flow, veh/h	1767	1093	646	1767	1856	1572	1767	3526	1572	1767	3526
Grip Volume(v), veh/h	268	0	148	80	23	300	34	873	89	193	803
Grip Sat Flow(s) veh/h/in	1767	0	1739	1767	1856	1572	1767	3526	1572	1767	3526
Q Serve(g, s)	13.9	0.0	8.0	4.2	1.2	22.4	1.3	22.9	4.2	7.2	19.2
Cycle Q Clear(g, c), s	13.9	0.0	8.0	4.2	1.2	22.4	1.3	22.9	4.2	7.2	19.2
Prop In Lane	1.00	0.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	490	0	491	409	389	329	325	1483	661	332	1612
VIC Ratio(X)	0.55	0.00	0.30	0.20	0.06	0.91	0.10	0.59	0.13	0.58	0.50
Avail Cap(c, a), veh/h	490	0	560	450	526	446	384	1483	661	399	1612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	33.8	34.3	38.0	46.3	18.7	26.8	21.4	19.8	22.9
Incr Delay (d2), s/veh	1.3	0.0	0.3	0.2	0.1	18.6	0.1	1.7	0.4	1.4	1.0
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	9.8	0.0	6.0	3.2	1.0	15.4	0.9	14.2	2.8	5.0	11.8
Unsig. Movement Delay, s/veh	31.1	0.0	34.1	34.5	38.0	64.9	18.8	28.5	21.8	21.2	23.9
LnGrip Delay(d) s/veh	C	A	C	C	D	E	B	C	C	C	C
LnGrip LOS	C	A	C	C	D	E	B	C	C	C	C
Approach Vol, veh/h	416				403			996			1044
Approach Delay, s/veh	32.2				57.4			27.6			23.1
Approach LOS	C				E			C			C
Timer - Assigned Phis	1	2	3	4	5	6	7	8			
Phis Duration (G+Y+Rc), s	14.4	55.5	11.2	38.9	10.0	59.9	20.0	30.1			
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0			
Max Q Clear Time (g_c+H1), s	9.2	24.9	6.2	10.0	3.3	21.2	15.9	24.4			
Green Ext Time (p_c), s	0.2	4.4	0.0	0.8	0.0	4.9	0.0	0.8			
Intersection Summary											
HCM 6th Ctrl Delay	30.8										
HCM 6th LOS	C										

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	244	85	73	21	273	31	794	81	176	731	
Traffic Volume (veh/h)	244	85	73	21	273	31	794	81	176	731	
Future Volume (veh/h)	244	85	73	21	273	31	794	81	176	731	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	268	93	55	80	23	300	34	873	89	193	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	
Cap, veh/h	490	309	183	409	389	329	325	1483	661	332	
Arrive On Green	0.13	0.28	0.28	0.05	0.21	0.21	0.04	0.42	0.42	0.08	
Sat Flow, veh/h	1767	1093	646	1767	1856	1572	1767	3526	1572	1767	
Grip Volume(v), veh/h	268	0	148	80	23	300	34	873	89	193	
Grip Sat Flow(s) veh/h/in	1767	0	1739	1767	1856	1572	1767	3526	1572	1767	
Q Serve(g, s)	13.9	0.0	8.0	4.2	1.2	22.4	1.3	22.9	4.2	7.2	
Cycle Q Clear(g, c), s	13.9	0.0	8.0	4.2	1.2	22.4	1.3	22.9	4.2	7.2	
Prop In Lane	1.00	0.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grip Cap(c), veh/h	490	0	491	409	389	329	325	1483	661	332	
VIC Ratio(X)	0.55	0.00	0.30	0.20	0.06	0.91	0.10	0.59	0.13	0.58	
Avail Cap(c, a), veh/h	490	0	560	450	526	446	384	1483	661	399	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	29.8	0.0	33.8	34.3	38.0	46.3	18.7	26.8	21.4	19.8	
Incr Delay (d2), s/veh	1.3	0.0	0.3	0.2	0.1	18.6	0.1	1.7	0.4	1.4	
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%) veh/h	9.8	0.0	6.0	3.2	1.0	15.4	0.9	14.2	2.8	5.0	
Unsig. Movement Delay, s/veh	31.1	0.0	34.1	34.5	38.0	64.9	18.8	28.5	21.8	21.2	
LnGrip Delay(d) s/veh	C	A	C	C	D	E	B	C	C	C	
LnGrip LOS	C	A	C	C	D	E	B	C	C	C	
Approach Vol, veh/h	416				403			996		1044	
Approach Delay, s/veh	32.2				57.4			27.6		23.1	
Approach LOS	C				E			C		C	
Timer - Assigned Phis	1	2	3	4	5	6	7	8			
Phis Duration (G+Y+Rc), s	14.4	55.5	11.2	38.9	10.0	59.9	20.0	30.1			
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Max Green Setting (Gmax), s	14.0	37.0	9.0	40.0	9.0	42.0	15.0	34.0			
Max Q Clear Time (g_c+H1), s	9.2	24.9	6.2	10.0	3.3	21.2	15.9	24.4			
Green Ext Time (p_c), s	0.2	4.4	0.0	0.8	0.0	4.9	0.0	0.8			
Intersection Summary											
HCM 6th Ctrl Delay	30.8										
HCM 6th LOS	C										



Splits and Phases: 1: Coors Bd. & Gun Club Rd.

Splits and Phases: 1: Coors Bd. & Gun Club Rd.

Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	350	1768	67	393	147	335	709	267	276
Future Volume (vph)	350	1768	67	393	147	335	709	267	276
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	7	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode									

Intersection Summary

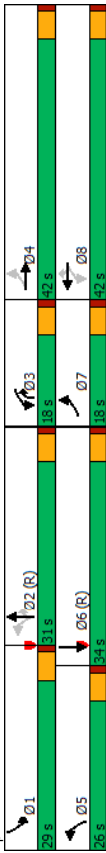
Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99.6 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	350	1768	625	67	393	147	335	709	267	276
Future Volume (veh/h)	350	1768	625	67	393	147	335	709	267	276
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	365	1842	0	70	409	0	349	739	278	234
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	284	1087	142	457	543	1375	686	304	784	361
Arrive On Green	0.11	0.31	0.00	0.05	0.25	0.00	0.14	0.39	0.09	0.33
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	1767
Grip Volume(v), veh/h	365	1842	0	70	409	0	349	739	278	234
Grip Sat Flow(s) veh/h/ln	1767	1763	0	1767	1856	1572	1767	1763	1572	1714
Q Serve(g, s)	13.0	37.0	0.0	3.5	25.6	0.0	14.9	19.4	14.5	8.0
Cycle Q Clear(g, c), s	13.0	37.0	0.0	3.5	25.6	0.0	14.9	19.4	14.5	8.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	284	1087	142	457	543	1375	686	304	589	555
VIC Ratio(X)	1.29	1.69	0.49	0.89	0.64	0.54	0.41	0.77	0.36	0.38
Avail Cap(c, a), veh/h	284	1087	251	572	597	1375	686	686	589	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	41.5	0.0	34.9	43.7	0.0	28.2	23.1	53.5	30.3
Incr Delay (d2), s/veh	153.0	316.5	0.0	2.6	14.2	0.0	1.5	1.1	1.3	4.1
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	27.4	97.8	0.0	2.8	19.1	0.0	9.5	12.1	8.7	6.4
Unsig. Movement Delay, s/veh	187.1	358.0	0.0	37.5	57.9	0.0	21.8	29.4	24.5	57.6
LnGrip Delay(d) s/veh	F	F	A	D	E	C	C	C	E	C
LnGrip LOS	F	F	A	D	E	C	C	C	E	C
Approach Vol, veh/h	2207	329.7	479	479	A	1366	26.4	668	412	
Approach Delay, s/veh	329.7	329.7	55.0	55.0	D	26.4	26.4	41.2	41.2	
Approach LOS	F	F	D	D	C	C	C	D	D	
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	15.6	51.8	10.6	42.0	22.3	45.1	18.0	34.6		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g, c+1), s	10.0	21.4	5.5	39.0	16.9	13.5	15.0	27.6		
Green Ext Time (p, c), s	0.6	2.3	0.1	0.0	0.4	2.0	0.0	1.5		
Intersection Summary										
HCM 6th Ctrl Delay	173.5									
HCM 6th LOS	F									

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2032 AM Peak BUILD Conditions Synchro 10 Report 2032ABX.syn

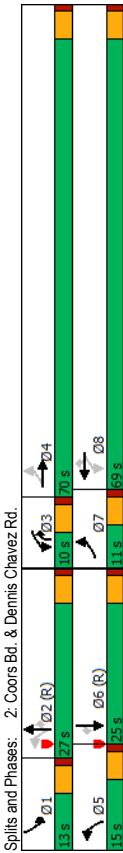
2032 AM Peak BUILD Conditions Synchro 10 Report 2032ABX.syn

Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	350	1768	67	393	147	335	709	267	225	276
Future Volume (vph)	350	1768	67	393	147	335	709	267	225	276
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4	3	8	8	5	2	3	1	6
Permitted Phases	4	4	3	8	8	2	2	3	1	6
Detector Phase	7	4	3	8	8	5	2	3	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	21.0
Minimum Split (s)	11.0	70.0	10.0	69.0	15.0	27.0	10.0	13.0	25.0	25.0
Total Split (%)	9.2%	58.3%	8.3%	57.5%	12.5%	22.5%	8.3%	10.8%	20.8%	20.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 99.6 (83%), Referenced to phase 2:NBLT and 6:SBT, Start of Green  
Natural Cycle: 130  
Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	350	1768	625	67	393	147	335	709	267	225
Future Volume (veh/h)	350	1768	625	67	393	147	335	709	267	225
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	365	1842	0	70	409	0	349	739	278	234
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1173	1900	142	1871	583	656	358	229	597	266
Arrive On Green	0.05	0.54	0.00	0.04	0.53	0.00	0.19	0.19	0.07	0.17
Sat Flow, veh/h	3428	3618	0	1767	3526	1572	3428	1572	3428	3526
Grip Volume(v), veh/h	365	1842	0	70	409	0	349	739	278	234
Grip Sat Flow(s), veh/h/in	1714	1763	0	1767	1763	1572	1714	1763	1572	1714
Q Serve(g, s), s	6.0	60.5	0.0	2.1	7.4	0.0	10.0	22.3	19.9	8.0
Cycle Q Clear(g, c), s	6.0	60.5	0.0	2.1	7.4	0.0	10.0	22.3	19.9	8.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	1173	1900	142	1871	583	656	358	229	597	266
VIC Ratio(X)	0.31	0.97	0.49	0.22	0.60	1.13	0.78	1.02	0.48	0.51
Avail Cap(c, a), veh/h	1173	1910	142	1880	583	656	358	229	597	266
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	26.7	0.0	28.1	14.9	0.0	37.9	48.8	43.5	56.0
Incr Delay (d2), s/veh	0.1	14.0	0.0	2.6	0.1	0.0	1.3	71.8	11.7	65.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/h	3.9	34.9	0.0	2.0	5.1	0.0	23.1	12.8	9.4	7.2
Unsig. Movement Delay, s/veh	12.2	40.7	0.0	30.7	15.0	0.0	39.1	120.7	55.2	121.8
LnGrip Delay(d), s/veh	B	D	A	C	B	D	F	E	F	D
LnGrip LOS	B	D	A	C	B	D	F	E	F	D
Approach Vol, veh/h	2207	360	479	17.3	1366	86.5	658	75.1	658	75.1
Approach Delay, s/veh	36.0	17.3	17.3	17.3	36.0	17.3	36.0	17.3	36.0	17.3
Approach LOS	D	D	B	B	D	D	F	E	F	D
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	13.0	27.3	10.0	69.7	15.0	25.3	11.0	68.7		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	8.0	22.0	5.0	65.0	10.0	20.0	6.0	64.0		
Max Q Clear Time (g, c+1), s	10.0	24.3	4.1	62.5	12.0	11.4	8.0	9.4		
Green Ext Time (p, c), s	0.0	0.0	0.0	2.2	0.0	1.4	0.0	2.7		

Intersection Summary  
HCM 6th Ctrl Delay: 54.2  
HCM 6th LOS: D  
Notes:  
User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2032 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2032AB\_MIT.syn

2032 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2032AB\_MIT.syn

Timings  
3: Unser Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/23/2019

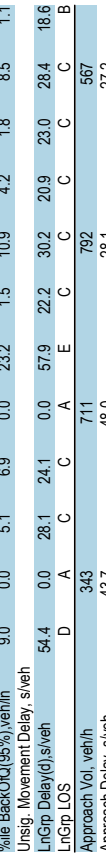
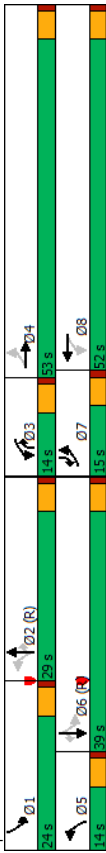
Terry O. Brown, PE  
08/23/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	181	18	185	26	44	542	119	52	418	35
Traffic Volume (vph)	181	18	185	26	44	542	119	52	418	35
Future Volume (vph)	181	18	185	26	44	542	119	52	418	35
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	5	2	3	1	6	7
Permitted Phases	4	4	8	8	2	2	3	1	6	6
Detector Phase	7	4	3	8	5	2	3	1	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
Minimum Split (s)	15.0	53.0	14.0	52.0	14.0	29.0	14.0	24.0	39.0	15.0
Total Split (%)	12.5%	44.2%	11.7%	43.3%	11.7%	24.2%	11.7%	20.0%	32.5%	12.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	181	18	185	26	44	542	119	52	418	35
Traffic Volume (veh/h)	181	18	185	26	44	542	119	52	418	35
Future Volume (veh/h)	181	18	185	26	44	542	119	52	418	35
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	203	20	120	208	29	474	49	609	134	58
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	80	480	547	31	508	373	1299	697	302
Arrive On Green	0.08	0.35	0.35	0.08	0.34	0.34	0.04	0.37	0.04	0.37
Sat Flow, veh/h	1767	230	1378	1767	91	1495	1767	3526	1572	1767
Grip Volume(v), veh/h	203	0	140	208	0	503	49	609	134	58
Grip Sat Flow(s), veh/h/ln	1767	0	1608	1767	0	1586	1767	3526	1572	1767
Q Serve(g, s), s	9.0	0.0	7.5	9.0	0.0	36.8	2.0	15.8	6.2	2.4
Cycle Q Clear(g, c), s	9.0	0.0	7.5	9.0	0.0	36.8	2.0	15.8	6.2	2.4
Prop In Lane	1.00	0.86	1.00	0.94	1.00	0.94	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	237	0	560	547	0	539	373	1299	697	302
VIC Ratio(X)	0.86	0.00	0.25	0.38	0.00	0.93	0.13	0.47	0.19	0.19
Avail Cap(c, a), veh/h	237	0	643	547	0	621	432	1299	697	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	27.9	23.7	0.0	38.3	22.1	28.9	20.3	22.7
Incr Delay (d2), s/veh	25.2	0.0	0.2	0.4	0.0	19.7	0.2	1.2	0.6	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	9.0	0.0	5.1	6.9	0.0	23.2	1.5	10.9	4.2	1.8
Unsig. Movement Delay, s/veh	54.4	0.0	28.1	24.1	0.0	57.9	22.2	30.2	20.9	28.4
LnGrip Delay(d), s/veh	D	A	C	C	A	E	C	C	C	C
LnGrip LOS	D	A	C	C	A	E	C	C	C	C
Approach Vol, veh/h	343			711			792		567	
Approach Delay, s/veh	43.7			48.0			28.1		27.2	
Approach LOS	D			D			C		C	

Timer - Assigned Phis	1	2	3	4	5	6	7	8
Phis Duration (G+Y+Rc), s	10.0	49.2	14.0	46.8	10.0	49.2	15.0	45.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	19.0	24.0	9.0	48.0	9.0	34.0	10.0	47.0
Max Q Clear Time (g, c+1), s	4.4	17.8	11.0	9.5	4.0	13.7	11.0	38.8
Green Ext Time (p, c), s	0.1	2.2	0.0	0.8	0.0	2.8	0.0	2.0

Intersection Summary	36.0									
HCM 6th Ctrl Delay	D									
HCM 6th LOS	D									



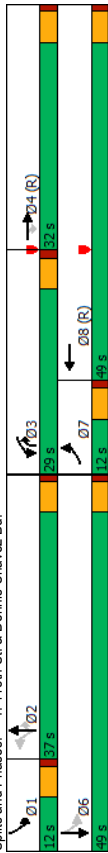
2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
6	83	149	736	145	40	111	647	200	484
6	83	149	736	145	40	111	647	200	484
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
12.0	32.0	29.0	49.0	37.0	37.0	29.0	12.0	49.0	37.0
10.9%	29.1%	29.1%	26.4%	33.6%	33.6%	26.4%	10.9%	44.5%	33.6%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
6.1	13.2	24.0	31.0	37.9	37.9	66.9	57.8	57.8	57.8
0.06	0.12	0.12	0.22	0.28	0.34	0.34	0.61	0.53	0.53
0.09	0.58	0.68	1.53	0.49	0.93	0.27	0.87	0.50	0.97
51.0	55.7	24.1	268.9	28.0	132.2	29.3	19.6	19.0	48.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51.0	55.7	24.1	268.9	28.0	132.2	29.3	19.6	19.0	48.8
D	E	C	F	C	F	C	B	B	D
35.8			225.1			26.7			41.3
D			F			C			D



2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
6	83	149	736	145	40	111	647	200	484	112
6	83	149	736	145	40	111	647	200	484	112
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
9	128	229	1132	223	29	62	171	995	308	745
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3	3
80	455	386	748	673	87	65	540	801	282	583
0.05	0.25	0.25	0.22	0.42	0.42	0.29	0.29	0.29	0.06	0.40
1767	1856	1572	3428	1609	209	604	1856	1572	1767	1458
9	128	229	1132	0	252	62	171	995	308	0
1767	1856	1572	1714	0	1818	604	1856	1572	1767	0
0.5	6.1	14.1	24.0	0.0	10.3	0.0	7.9	32.0	7.0	0.0
0.5	6.1	14.1	24.0	0.0	10.3	0.0	7.9	32.0	7.0	0.0
1.00	1.00	1.00	1.00	0.12	1.00	1.00	1.00	1.00	1.00	0.19
80	455	386	748	0	760	65	540	801	282	0
0.11	0.28	0.59	1.51	0.00	0.33	0.95	0.32	1.24	1.09	0.00
112	455	386	748	0	760	65	540	801	282	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00	0.00
50.4	33.6	36.7	43.0	0.0	21.6	55.0	30.5	27.0	35.6	0.0
0.6	1.5	6.6	231.7	0.0	0.1	92.5	0.3	119.8	79.8	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.4	5.2	9.9	45.5	0.0	5.2	6.0	6.2	64.2	16.2	0.0
51.0	35.2	43.2	274.7	0.0	21.7	147.5	30.8	146.8	115.4	0.0
D	D	D	F	A	C	F	C	F	F	A
366			1384			1228				1225
40.6			228.6			130.7				155.1
D			F			F				F
1	2	3	4	6	7	8				
12.0	37.0	29.0	32.0	49.0	10.0	51.0				
5.0	5.0	5.0	5.0	5.0	5.0	5.0				
7.0	32.0	24.0	27.0	44.0	7.0	44.0				
9.0	34.0	26.0	16.1	46.0	2.5	12.3				
0.0	0.0	0.0	1.0	0.0	0.0	1.4				
162.2			F							



2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group										
Lane Configurations	6	83	149	736	145	40	111	647	200	484
Traffic Volume (vph)	6	83	149	736	145	40	111	647	200	484
Future Volume (vph)	6	83	149	736	145	40	111	647	200	484
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	4	3	8	2	2	3	1	6
Permitted Phases	7	4	4	3	8	2	2	3	1	6
Detector Phase										
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
Minimum Split (s)	10.0	22.0	22.0	41.0	53.0	36.0	36.0	41.0	11.0	47.0
Total Split (%)	9.1%	20.0%	20.0%	37.3%	48.2%	32.7%	32.7%	37.3%	10.0%	42.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	Min	Min
Act Effct Green (s)	5.0	12.8	12.8	36.0	43.8	31.4	31.4	72.4	46.2	46.2
Actuated g/C Ratio	0.05	0.12	0.12	0.33	0.40	0.29	0.29	0.66	0.42	0.42
v/c Ratio	0.11	0.60	0.69	1.02	0.35	0.94	0.33	0.87	0.67	1.21
Control Delay	53.7	57.4	25.0	62.1	26.0	138.0	33.3	20.1	33.5	135.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	57.4	25.0	62.1	26.0	138.0	33.3	20.1	33.5	135.2
LOS	D	E	C	E	C	F	C	C	C	F
Approach Delay										
Approach LOS	D			E			C			F
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 25.3 (23%). Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 130										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.21										
Intersection Signal Delay: 61.6										
Intersection Capacity Utilization 75.0%										
Analysis Period (min) 15										
Splits and Phases: 4: 118th St. & Dennis Chavez Bd.										

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Movement											
Lane Configurations	6	83	149	736	145	40	111	647	200	484	112
Traffic Volume (veh/h)	6	83	149	736	145	40	111	647	200	484	112
Future Volume (veh/h)	6	83	149	736	145	40	111	647	200	484	112
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	128	229	1132	223	29	62	171	995	308	745
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	287	243	1122	702	91	65	523	958	262	557
Arrive On Green	0.05	0.15	0.15	0.33	0.44	0.44	0.28	0.28	0.28	0.05	0.38
Sat Flow, veh/h	1767	1856	1572	3428	1609	209	604	1856	1572	1767	1458
Grip Volume(v), veh/h	9	128	229	1132	223	29	62	171	995	308	745
Grip Sat Flow(s), veh/h/in	1767	1856	1572	1714	0	1818	604	1856	1572	1767	0
Q Serve(g.s), s	0.5	6.9	15.9	36.0	0.0	10.0	0.0	8.0	31.0	6.0	0.0
Cycle Q Clear(g.c), s	0.5	6.9	15.9	36.0	0.0	10.0	31.0	8.0	31.0	6.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	80	287	243	1122	0	793	65	523	958	262	0
VIC Ratio(X)	0.11	0.45	0.94	1.01	0.00	0.32	0.95	0.33	1.04	1.18	0.00
Avail Cap(c.a), veh/h	80	287	243	1122	0	793	65	523	958	262	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.54	0.00	0.54	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.4	42.2	46.0	37.0	0.0	20.3	55.0	31.2	21.5	37.4	0.0
Incr Delay (d2), s/veh	0.6	5.0	44.5	21.9	0.0	0.6	92.5	0.4	39.6	112.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.4	6.2	13.9	22.8	0.0	6.6	6.0	6.3	41.3	19.0	0.0
Unsig. Movement Delay, s/veh											
LnGrip Delay(d), s/veh	51.0	47.2	90.6	58.9	0.0	20.9	147.5	31.6	61.1	149.6	0.0
LnGrip LOS	D	D	F	F	A	C	F	C	F	F	A
Approach Vol, veh/h											
Approach Delay, s/veh											
Approach LOS											
Timer - Assigned Phs	1	2	3	4	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	36.0	41.0	22.0	47.0	10.0	53.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	6.0	31.0	36.0	17.0	42.0	5.0	48.0				
Max Q Clear Time (g.c+H), s	8.0	33.0	38.0	17.9	44.0	2.5	12.0				
Green Ext Time (p.c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary											
HCM 6th Ctrl Delay	95.2										
HCM 6th LOS	F										

2032 AM Peak BUILD Conditions - MITIGATED Conditions

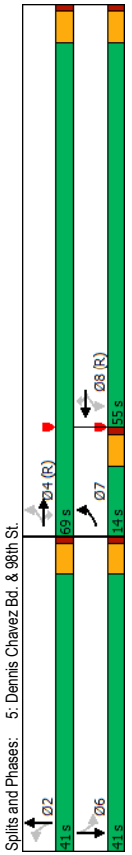
Synchro 10 Report  
2032AB\_MIT.syn



**Timings**  
**5: Dennis Chavez Bd. & 98th St.**

**Terry O. Brown, PE**  
**08/15/2019**

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
<b>Lane Group</b>									
<b>Lane Configurations</b>									
Traffic Volume (vph)	209	641	49	63	781	184	136	89	790
Future Volume (vph)	209	641	49	63	781	184	136	89	790
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8			2	6
Permitted Phases	4	4	4	8	8	2	2	6	6
<b>Detector Phase</b>									
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	14.0	69.0	62.7%	50.0%	50.0%	50.0%	37.3%	37.3%	37.3%
Total Split (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Total Lost Time (s)	Lead								
<b>Lead-Lag Optimize?</b>									
Recall Mode	Min	C-Min	C-Min	C-Min	C-Min	Min	Min	Min	Min
Act Effcd Green (s)	64.0	64.0	50.0	50.0	50.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.58	0.58	0.45	0.45	0.45	0.33	0.33	0.33	0.33
v/c Ratio	1.17	0.70	0.06	0.32	1.10	0.26	2.39	0.41	3.11
Control Delay	133.5	16.4	2.4	36.8	98.6	12.7	688.9	23.3	973.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	133.5	16.4	2.4	36.8	98.6	12.7	688.9	23.3	973.9
LOS	F	B	A	D	F	B	F	C	F
Approach Delay	42.9								
Approach LOS	D								
<b>Intersection Summary</b>									
Cycle Length: 110	D								
Actuated Cycle Length: 110	E								
Offset: 36.3 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	F								
Natural Cycle: 130	F								
Control Type: Actuated-Coordinated	F								
Maximum v/c Ratio: 3.11	F								
Intersection Signal Delay: 282.4	F								
Intersection Capacity Utilization 125.0%	F								
Analysis Period (min) 15	F								



**HCM 6th Signalized Intersection Summary**  
**5: Dennis Chavez Bd. & 98th St.**

**Terry O. Brown, PE**  
**08/15/2019**

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
<b>Movement</b>										
<b>Lane Configurations</b>										
Traffic Volume (veh/h)	209	641	49	63	781	184	136	89	790	89
Future Volume (veh/h)	209	641	49	63	781	184	136	89	790	89
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Work Zone On Approach</b>										
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	246	754	58	74	919	216	160	105	139	929
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	210	1080	915	263	843	715	65	237	314	306
Arrive On Green	0.08	0.58	0.58	0.60	0.60	0.60	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1767	1856	1572	667	1856	1572	809	724	989	1127
Grip Volume (v), veh/h	246	754	58	74	919	216	160	0	244	929
Grip Sat Flow (s), veh/h/ln	1767	1856	1572	667	1856	1572	809	0	1683	1127
Q Serve (g, s)	9.0	31.5	1.8	8.7	50.0	7.3	0.0	0.0	12.5	23.5
Cycle Q Clear (g, s)	9.0	31.5	1.8	26.2	50.0	7.3	36.0	0.0	12.5	36.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.57	1.00	0.81
VIC Ratio(X)	210	1080	915	263	843	715	65	0	551	306
Avail Cap (c, a), veh/h	1.17	0.70	0.06	0.28	1.09	0.30	2.44	0.00	0.44	3.04
HCM Platoon Ratio	210	1080	915	263	843	715	65	0	551	306
Upstream Filter(l)	0.66	0.56	0.56	0.32	0.32	0.32	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	16.2	10.0	23.3	21.8	13.3	55.0	0.0	29.1	45.8
Incr Delay (d2), s/veh	101.9	2.1	0.1	0.9	47.4	0.3	693.6	0.0	0.6	926.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/h	12.8	17.6	1.1	2.4	36.1	3.9	26.0	0.0	8.8	142.4
Unsig. Movement Delay, s/veh										
LnGrip Delay(d),s/veh	135.7	18.3	10.1	24.1	69.1	13.7	748.6	0.0	29.7	971.9
LnGrip LOS	F	B	B	C	F	B	F	A	C	F
Approach Vol, veh/h	1058									
Approach Delay, s/veh	45.2									
Approach LOS	D									
<b>Timer - Assigned Phis</b>										
Phis Duration (G+Y+Rc), s	41.0									
Change Period (Y+Rc), s	5.0									
Max Green Setting (Gmax), s	36.0									
Max Q Clear Time (g, c+11), s	38.0									
Green Ext Time (p, c), s	0.0									
<b>Intersection Summary</b>										
HCM 6th Ctrl Delay	289.9									
HCM 6th LOS	F									

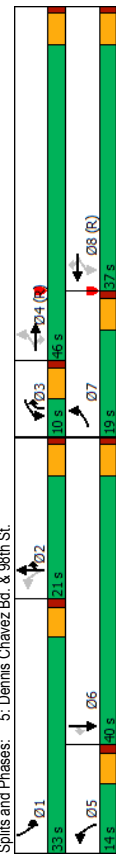
**2032 AM Peak BUILD Conditions**

**Synchro 10 Report**  
**2032ABX.syn**

Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
209	641	49	63	781	184	136	89	118	790	99	415
209	641	49	63	781	184	136	89	118	790	99	415
7	4	4	3	8	8	5	2	2	3	1	6
4	4	4	3	8	8	5	2	2	3	1	6
7	4	4	3	8	8	5	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
19.0	46.0	46.0	10.0	37.0	37.0	14.0	21.0	33.0	40.0	40.0	36.4%
17.3%	41.8%	41.8%	9.1%	33.6%	33.6%	12.7%	19.1%	30.0%	36.4%	36.4%	
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
55.9	44.1	44.1	42.9	36.0	36.0	18.9	10.1	22.0	28.9	30.2	30.2
0.51	0.40	0.40	0.39	0.33	0.33	0.17	0.09	0.20	0.26	0.27	0.27
0.80	0.54	0.08	0.25	0.80	0.33	0.63	0.33	0.20	1.04	0.12	0.78
39.2	32.6	0.1	23.8	51.8	18.0	36.6	48.3	3.5	81.1	29.8	25.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39.2	32.6	0.1	23.8	51.8	18.0	36.6	48.3	3.5	81.1	29.8	25.3
D	C	A	C	D	B	D	D	A	F	C	C
32.3				44.0			28.3				59.5
C				D			C				E
Intersection Summary											
Cycle Length: 110											
Actuated Cycle Length: 110											
Offset: 5 (5%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green											
Natural Cycle: 90											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 1.04											
Intersection Signal Delay: 45.2											
Intersection Capacity Utilization 74.9%											
Analysis Period (min) 15											



2032 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2032AB\_MIT.syn

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

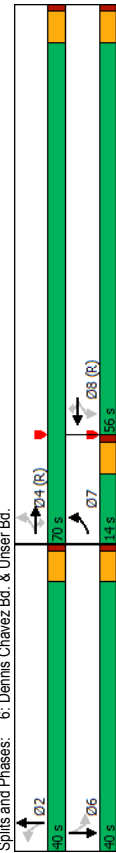
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
209	641	49	63	781	184	136	89	118	790	99	415
209	641	49	63	781	184	136	89	118	790	99	415
0	0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
246	754	58	74	919	216	160	105	139	929	116	488
0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
3	3	3	3	3	3	3	3	3	3	3	3
286	1314	586	281	1084	484	328	513	528	873	1122	500
0.11	0.37	0.37	0.02	0.10	0.10	0.08	0.15	0.15	0.25	0.32	0.32
1767	3526	1572	1767	3526	1572	1767	3526	2768	3428	3526	1572
246	754	58	74	919	216	160	105	139	929	116	488
1767	1763	1572	1767	1763	1572	1767	1763	1384	1714	1763	1572
10.0	18.8	2.6	3.1	28.2	14.2	8.5	2.9	4.7	28.0	2.6	33.7
10.0	18.8	2.6	3.1	28.2	14.2	8.5	2.9	4.7	28.0	2.6	33.7
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.86	0.57	0.10	0.26	0.85	0.45	0.49	0.20	0.26	1.06	0.10	0.98
316	1314	586	281	1084	484	328	513	528	873	1122	500
1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.50	0.50	0.50	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
25.8	27.5	22.5	25.5	46.9	40.6	36.1	41.4	37.9	41.0	26.4	37.1
10.8	0.9	0.2	0.5	7.6	2.7	1.1	0.2	0.3	49.2	0.0	33.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5	11.2	1.8	2.5	20.5	10.3	6.7	2.3	2.9	25.4	1.9	24.2
36.6	28.4	22.6	26.0	54.5	43.3	37.2	41.6	38.2	90.2	26.5	70.9
1068				1209			404				1533
30.0				50.8			38.7				79.2
C				D			D				E
1	2	3	4	5	6	7	8				
33.0	21.0	10.0	46.0	14.0	40.0	17.2	38.8				
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
28.0	16.0	5.0	41.0	9.0	35.0	14.0	32.0				
30.0	6.7	5.1	20.8	10.5	35.7	12.0	30.2				
0.0	0.7	0.0	5.5	0.0	0.0	0.1	1.2				
Intersection Summary											
HCM 6th Ctrl Delay 54.8											
HCM 6th LOS D											

2032 AM Peak BUILD Conditions - MITIGATED Conditions  
Synchro 10 Report  
2032AB\_MIT.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
146	1616	14	180	737	507	37	85	941	42
146	1616	14	180	737	507	37	85	941	42
7	4	4	8	8	8	2	2	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
14.0	70.0	70.0	56.0	56.0	56.0	40.0	40.0	40.0	40.0
12.7%	63.6%	63.6%	50.9%	50.9%	50.9%	36.4%	36.4%	36.4%	36.4%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	C-Min	C-Min	C-Min	Min	Min	Min	Min
65.0	65.0	51.2	51.2	51.2	35.0	35.0	35.0	35.0	35.0
0.59	0.59	0.59	0.47	0.47	0.47	0.32	0.32	0.32	0.32
0.77	1.61	0.82	2.97	0.93	0.54	1.24	1.24	15.50	0.36
30.6	296.7	2.6	934.3	47.1	3.7	28.4	156.7	6557.8	8.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.6	296.7	2.6	934.3	47.1	3.7	28.4	156.7	6557.8	8.7
C	F	A	F	D	A	C	F	F	A
272.5	F	F	144.0	F	F	149.2	F	5347.1	F

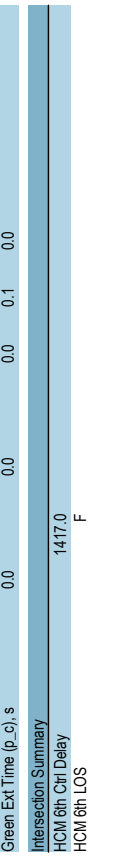


2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
146	1616	14	180	737	507	37	85	941	42	171
146	1616	14	180	737	507	37	85	941	42	171
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
159	1757	15	196	801	551	40	92	558	1023	46
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
3	3	3	3	3	3	3	3	3	3	3
212	1096	929	65	896	759	298	72	439	65	102
0.08	0.79	0.79	0.48	0.48	0.48	0.32	0.32	0.32	0.32	0.32
1767	1856	1572	267	1856	1572	1139	227	1380	775	322
159	1757	15	196	801	551	40	92	558	1023	46
1767	1856	1572	267	1856	1572	1139	227	1380	775	322
4.8	65.0	0.2	0.0	43.2	30.7	3.2	0.0	35.0	0.0	0.0
4.8	65.0	0.2	53.1	43.2	30.7	15.7	0.0	35.0	0.0	12.5
212	1096	929	65	896	759	298	72	439	65	102
0.75	1.60	0.02	2.99	0.89	0.73	0.13	0.00	1.27	15.63	0.00
246	1096	929	65	896	759	298	72	439	65	102
1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
23.6	11.8	4.8	55.0	25.9	22.6	36.1	0.0	37.5	55.0	0.0
1.0	271.5	0.0	937.0	13.3	6.0	0.2	0.0	136.7	6612.4	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.7	139.7	0.1	33.9	29.1	17.9	1.6	0.0	48.6	196.7	0.0
24.7	283.3	4.8	992.0	39.1	28.6	36.3	0.0	174.2	6667.4	0.0
1931	F	A	F	D	C	D	A	F	F	A
259.8	F	F	154.8	156.0	F	690	F	5440.5	F	F
2	4	4	6	7	8	8	8	8	8	8
40.0	70.0	70.0	40.0	40.0	11.9	58.1	5.0	5.0	5.0	5.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
35.0	65.0	65.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
37.0	67.0	67.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
1417.0	F	F	154.8	156.0	F	690	F	5440.5	F	F

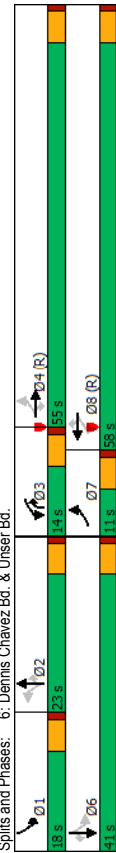


2032 AM Peak BUILD Conditions  
Synchro 10 Report  
2032ABX.syn

**Timings**  
**6: Dennis Chavez Bd. & Unser Bd.**

Terry O. Brown, PE  
 08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
146	1616	14	180	737	507	37	85	513	941	42	171
146	1616	14	180	737	507	37	85	513	941	42	171
7	4	4	3	8	8	2	2	3	1	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0	21.0
11.0	55.0	14.0	58.0	58.0	23.0	23.0	14.0	18.0	41.0	41.0	41.0
10.0%	50.0%	50.0%	12.7%	52.7%	20.9%	20.9%	16.4%	37.3%	37.3%	37.3%	37.3%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
61.7	52.6	52.6	72.6	58.9	9.0	9.0	29.4	27.0	27.0	27.0	27.0
0.56	0.48	0.48	0.66	0.54	0.08	0.08	0.27	0.25	0.25	0.25	0.25
0.37	1.05	0.02	0.32	0.43	0.50	0.37	0.32	0.71	1.69	0.05	0.35
13.0	69.7	0.0	10.6	16.9	3.1	56.6	49.9	36.8	347.6	30.9	6.6
13.0	69.7	0.0	10.6	16.9	3.1	56.6	49.9	36.8	347.6	30.9	6.6
64.5			11.2					39.7			285.5



Splits and Phases: 6: Dennis Chavez Bd. & Unser Bd.

2032 AM Peak BUILD Conditions - MITIGATED Conditions  
 Synchro 10 Report  
 2032AB\_MIT.syn

**HCM 6th Signalized Intersection Summary**  
**6: Dennis Chavez Bd. & Unser Bd.**

Terry O. Brown, PE  
 08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
146	1616	14	180	737	507	37	85	513	941	42	171
146	1616	14	180	737	507	37	85	513	941	42	171
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
159	1757	15	196	801	551	40	92	558	1023	46	186
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
3	3	3	3	3	3	3	3	3	3	3	3
294	1720	767	298	1699	758	252	577	587	749	1154	515
0.02	0.16	0.16	0.05	0.48	0.48	0.16	0.16	0.16	0.12	0.33	0.33
1767	3526	1572	3428	3526	1572	1139	3526	2768	3428	3526	1572
159	1757	15	196	801	551	40	92	558	1023	46	186
1767	1763	1572	1714	1763	1572	1139	1763	1384	1714	1763	1572
4.9	53.7	0.9	3.1	16.8	30.7	3.3	2.5	18.0	13.0	1.0	9.9
4.9	53.7	0.9	3.1	16.8	30.7	3.3	2.5	18.0	13.0	1.0	9.9
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
294	1720	767	298	1699	758	252	577	587	749	1154	515
0.54	1.02	0.02	0.66	0.47	0.73	0.16	0.16	0.95	1.37	0.04	0.36
294	1720	767	411	1699	758	252	577	587	749	1154	515
0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.55	0.55	0.55	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15.7	46.1	24.0	25.6	19.1	22.7	39.9	39.5	42.7	38.5	25.2	28.2
1.1	21.9	0.0	2.5	0.9	6.0	0.3	0.1	25.2	173.5	0.0	0.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.8	38.0	0.6	2.3	11.3	18.0	1.7	1.9	14.5	33.8	0.7	6.8
16.8	68.0	24.0	28.1	20.1	28.8	40.2	39.6	68.0	212.0	25.2	28.7
1931								690			1255
63.5								62.6			176.0
E				C		E					F
1	2	3	4	6	7	8					
18.0	23.0	10.3	58.7	41.0	11.0	58.0					
5.0	5.0	5.0	5.0	5.0	5.0	5.0					
13.0	18.0	9.0	50.0	36.0	6.0	53.0					
15.0	20.0	5.1	55.7	11.9	6.9	32.7					
0.0	0.0	0.2	0.0	0.9	0.0	8.1					

Intersection Summary  
 HCM 6th Ctrl Delay: 78.6 E  
 HCM 6th LOS: E

2032 AM Peak BUILD Conditions - MITIGATED Conditions  
 Synchro 10 Report  
 2032AB\_MIT.syn

Intersection												
Int Delay, s/veh	100											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	29	2942	50	25	1332	10	44	2	89	9	2	41
Future Vol, veh/h	29	2942	50	25	1332	10	44	2	89	9	2	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	2972	51	25	1345	10	44	2	90	9	2	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1355	0	0	3023	0	0	4478	4461	2998	4502	4481	1350
Stage 1	-	-	-	-	-	-	3056	3056	-	1400	1400	-
Stage 2	-	-	-	-	-	-	1422	1405	-	3102	3081	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	504	-	-	111	-	-	~1	~1	~18	~1	~1	183
Stage 1	-	-	-	-	-	-	~18	29	-	173	206	-
Stage 2	-	-	-	-	-	-	168	205	-	17	28	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	504	-	-	111	-	-	0	0	~18	-	0	183
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	0	-	-	0	-
Stage 1	-	-	-	-	-	-	~18	29	-	173	17	-
Stage 2	-	-	-	-	-	-	~10	17	-	-	28	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			\$ 3378.9					
HCM LOS							F			-		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	18	504	-	-	111	-	-	-	183
HCM Lane V/C Ratio	7.576	0.058	-	-	0.228	-	-	-	0.226
HCM Control Delay (s)	\$ 3378.9	12.6	0	-	46.7	0	-	-	30.3
HCM Lane LOS	F	B	A	-	E	A	-	-	D
HCM 95th %tile Q(veh)	17.7	0.2	-	-	0.8	-	-	-	0.8

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	5	10	29	977	597	25
Future Vol, veh/h	5	10	29	977	597	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	10	30	1018	622	26

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1191	311	648	0	-	0
Stage 1	622	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	179	682	927	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	682	927	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	927	-	173	682	-	-
HCM Lane V/C Ratio	0.033	-	0.03	0.015	-	-
HCM Control Delay (s)	9	-	26.5	10.4	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	205	134	34	24	42	11	28	478	64	9	323	23
Future Vol, veh/h	205	134	34	24	42	11	28	478	64	9	323	23
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	241	158	40	28	49	13	33	562	75	11	380	27
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	18.8	13	28.3	19.2
HCM LOS	C	B	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	71%	0%	100%	57%	0%	100%	56%	0%	100%
Vol Right, %	0%	0%	29%	0%	0%	43%	0%	0%	44%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	319	223	205	89	79	24	28	25	9	215
LT Vol	28	0	0	205	0	0	24	0	0	9	0
Through Vol	0	319	159	0	89	45	0	28	14	0	215
RT Vol	0	0	64	0	0	34	0	0	11	0	0
Lane Flow Rate	33	375	263	241	105	93	28	33	29	11	253
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.076	0.808	0.552	0.587	0.241	0.205	0.077	0.085	0.074	0.026	0.581
Departure Headway (Hd)	8.263	7.763	7.562	8.76	8.26	7.957	9.823	9.323	9.015	8.758	8.258
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	465	476	412	434	450	364	383	396	408	436
Service Time	6.025	5.525	5.324	6.528	6.028	5.725	7.614	7.114	6.806	6.53	6.03
HCM Lane V/C Ratio	0.076	0.806	0.553	0.585	0.242	0.207	0.077	0.086	0.073	0.027	0.58
HCM Control Delay	11.7	36	19.3	23.3	13.7	12.8	13.4	13	12.5	11.8	21.9
HCM Lane LOS	B	E	C	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.2	7.5	3.3	3.6	0.9	0.8	0.2	0.3	0.2	0.1	3.6

Intersection												
Intersection Delay, s/veh	22.2											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	24	21	75	35	23	37	42	565	44	27	337	4
Future Vol, veh/h	24	21	75	35	23	37	42	565	44	27	337	4
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	28	25	88	41	27	44	49	665	52	32	396	5
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	13.1	12.6	28.4	16.7
HCM LOS	B	B	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	81%	0%	22%	0%	38%	0%	100%	97%
Vol Right, %	0%	0%	19%	0%	78%	0%	62%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	377	232	24	96	35	60	27	225	116
LT Vol	42	0	0	24	0	35	0	27	0	0
Through Vol	0	377	188	0	21	0	23	0	225	112
RT Vol	0	0	44	0	75	0	37	0	0	4
Lane Flow Rate	49	443	273	28	113	41	71	32	264	137
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.102	0.851	0.515	0.07	0.248	0.104	0.159	0.071	0.551	0.285
Departure Headway (Hd)	7.42	6.912	6.777	8.965	7.907	9.067	8.125	8.019	7.511	7.486
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	523	533	399	454	395	440	447	481	480
Service Time	5.162	4.654	4.519	6.725	5.666	6.83	5.887	5.768	5.259	5.235
HCM Lane V/C Ratio	0.101	0.847	0.512	0.07	0.249	0.104	0.161	0.072	0.549	0.285
HCM Control Delay	11	37.7	16.5	12.4	13.3	12.9	12.4	11.4	19.1	13.2
HCM Lane LOS	B	E	C	B	B	B	B	B	C	B
HCM 95th-tile Q	0.3	8.9	2.9	0.2	1	0.3	0.6	0.2	3.3	1.2



Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	22	1	10	17	17	2	8	25	17	13	1
Future Vol, veh/h	3	22	1	10	17	17	2	8	25	17	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	26	1	12	20	20	2	9	29	20	15	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	40	0	0	27	0	0	97	99	27	108	89	30
Stage 1	-	-	-	-	-	-	35	35	-	54	54	-
Stage 2	-	-	-	-	-	-	62	64	-	54	35	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1563	-	-	1580	-	-	883	789	1046	869	799	1042
Stage 1	-	-	-	-	-	-	978	864	-	956	848	-
Stage 2	-	-	-	-	-	-	947	840	-	956	864	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1563	-	-	1580	-	-	862	780	1046	830	790	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	862	780	-	830	790	-
Stage 1	-	-	-	-	-	-	975	861	-	953	841	-
Stage 2	-	-	-	-	-	-	921	833	-	916	861	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.7	8.9	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	960	1563	-	-	1580	-	-	818
HCM Lane V/C Ratio	0.043	0.002	-	-	0.007	-	-	0.045
HCM Control Delay (s)	8.9	7.3	0	-	7.3	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↑↑	↵	↵	↑↑	↵
Traffic Vol, veh/h	18	2	3	14	1	82	1	624	17	60	556	7
Future Vol, veh/h	18	2	3	14	1	82	1	624	17	60	556	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	100	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	2	3	16	1	91	1	693	17	67	618	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1101	1464	309	1139	1455	347	626	0	0	710	0	0
Stage 1	752	752	-	695	695	-	-	-	-	-	-	-
Stage 2	349	712	-	444	760	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	165	126	684	155	128	646	945	-	-	878	-	-
Stage 1	366	414	-	396	439	-	-	-	-	-	-	-
Stage 2	638	432	-	560	410	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	133	116	684	144	118	646	945	-	-	878	-	-
Mov Cap-2 Maneuver	248	223	-	268	239	-	-	-	-	-	-	-
Stage 1	366	383	-	396	439	-	-	-	-	-	-	-
Stage 2	546	432	-	512	379	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.5		12.8		0		0.9	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	945	-	-	248	374	268	633	878	-	-
HCM Lane V/C Ratio	0.001	-	-	0.081	0.015	0.058	0.146	0.076	-	-
HCM Control Delay (s)	8.8	-	-	20.8	14.8	19.3	11.7	9.4	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0.2	0.5	0.2	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	19	22	20	25	1
Future Vol, veh/h	1	19	22	20	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	22	26	24	29	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	50	0	-	0	62 38
Stage 1	-	-	-	-	38 -
Stage 2	-	-	-	-	24 -
Critical Hdwy	4.13	-	-	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.227	-	-	-	3.527 3.327
Pot Cap-1 Maneuver	1550	-	-	-	942 1031
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	996 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1550	-	-	-	941 1031
Mov Cap-2 Maneuver	-	-	-	-	941 -
Stage 1	-	-	-	-	981 -
Stage 2	-	-	-	-	996 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1550	-	-	-	944
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1	5	90	50	1
Future Vol, veh/h	8	1	5	90	50	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	1	6	106	59	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	178	60	60	0	0
Stage 1	60	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	809	1003	1537	-	-
Stage 1	960	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	806	1003	1537	-	-
Mov Cap-2 Maneuver	806	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1537	-	824	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	8	1	5	90	50	1
Future Vol, veh/h	8	1	5	90	50	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	1	6	106	59	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	178	60	60	0	0
Stage 1	60	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	809	1003	1537	-	-
Stage 1	960	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	806	1003	1537	-	-
Mov Cap-2 Maneuver	806	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

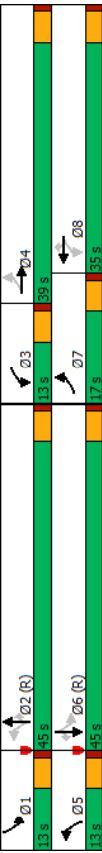
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1537	-	824	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	145	53	107	45	174	52	911	56	223
Traffic Volume (vph)	145	53	107	45	174	52	911	56	223
Future Volume (vph)	145	53	107	45	174	52	911	56	223
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8	8	2	2	1	6
Permitted Phases	4	4	3	8	8	2	2	1	6
Detector Phase	7	4	3	8	8	2	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0
Minimum Split (s)	17.0	39.0	13.0	35.0	13.0	35.0	13.0	35.0	13.0
Total Split (%)	15.5%	35.5%	11.8%	31.8%	11.8%	40.9%	40.9%	11.8%	40.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	None	Min	Min	Min	Min	Min	Min	Min	C-Min
Recall Mode	None	Min	Min	Min	Min	Min	Min	Min	C-Min

Intersection Summary  
Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 0 (0%); Referenced to phase 2:NBL and 6:SBTL. Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated



HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	145	53	76	107	45	174	52	911	56
Traffic Volume (veh/h)	145	53	76	107	45	174	52	911	56
Future Volume (veh/h)	145	53	76	107	45	174	52	911	56
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	No	No	No	No	No	No	No	No	No
Work Zone On Approach	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	151	55	79	111	47	181	54	949	58
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3
Cap, veh/h	355	107	154	294	253	322	1829	816	384
Arrive On Green	0.09	0.16	0.16	0.07	0.14	0.14	0.05	0.52	0.07
Sat Flow, veh/h	1767	689	989	1767	1856	1572	1767	3526	1572
Lane Vol, veh/h	151	0	134	111	47	181	54	949	58
Grip Sat Flow(s)/veh/ln	1767	0	1678	1767	1856	1572	1767	3526	1572
Q Serve(g, s)	7.9	0.0	8.1	5.8	2.5	12.4	1.5	19.5	2.0
Cycle Q Clear(g, c)	7.9	0.0	8.1	5.8	2.5	12.4	1.5	19.5	2.0
Prop In Lane	1.00	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	355	0	261	294	253	322	1829	816	384
VIC Ratio(X)	0.43	0.00	0.51	0.38	0.19	0.84	0.17	0.52	0.07
Avail Cap(c, a), veh/h	389	0	519	296	506	429	370	1829	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	42.6	37.0	42.1	46.3	12.3	17.4	13.2
Incr Delay (d2), s/veh	0.8	0.0	1.6	0.8	0.3	8.7	0.2	1.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	6.1	0.0	6.0	4.5	2.0	8.9	1.0	11.6	1.3
Unsig. Movement Delay, s/veh	368	0.0	44.2	37.8	42.4	55.0	12.5	18.5	13.4
LnGrip Delay(d), s/veh	D	A	D	D	D	E	B	B	B
LnGrip LOS	D	A	D	D	D	E	B	B	B
Approach Vol, veh/h	286				339			1061	1376
Approach Delay, s/veh	40.3				47.6			17.9	15.3
Approach LOS	D	D	D	D	D	B	B	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8	
Phis Duration (G+Y+Rc), s	13.0	62.1	12.8	22.1	10.0	65.1	14.9	20.0	
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Max Green Setting (Gmax), s	8.0	40.0	8.0	34.0	8.0	40.0	12.0	30.0	
Max Q Clear Time (g, c+11), s	8.8	21.5	7.8	10.1	3.5	22.3	9.9	14.4	
Green Ext Time (p, c), s	0.0	5.8	0.0	0.6	0.0	6.4	0.1	0.7	

Intersection Summary  
HCM 6th Ctrl Delay  
HCM 6th LOS

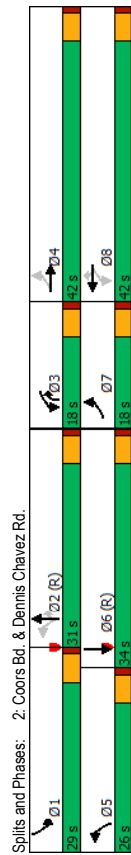
2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

Timings  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	117	437	160	728	436	1060	102	205	913
Future Volume (vph)	117	437	160	728	436	1060	102	205	913
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	7	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min



HCM 6th Signalized Intersection Summary  
2: Coors Bd. & Dennis Chavez Rd.

Terry O. Brown, PE  
08/25/2019

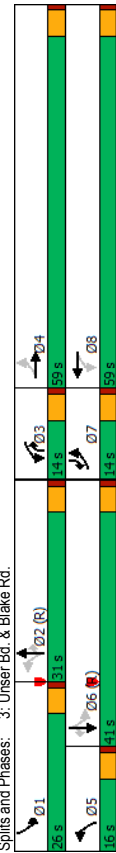
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	117	437	645	160	728	436	1060	102	205	913	121	121
Future Volume (veh/h)	117	437	645	160	728	436	1060	102	205	913	121	121
Initial Q (Obs.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	123	460	0	168	766	0	459	1116	107	216	961	127
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	176	1025	378	572	369	1326	723	285	890	118	318	118
Arrive On Green	0.07	0.29	0.00	0.08	0.31	0.00	0.17	0.38	0.38	0.08	0.28	0.28
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428	3130	414
Grip Volume(v), veh/h	123	460	0	168	766	0	459	1116	107	216	541	547
Grip Sat Flow(s)/veh/ln	1767	1763	0	1767	1856	1572	1767	1763	1572	1714	1763	1781
Q Serve(g. s), s	5.8	12.8	0.0	7.9	37.0	0.0	21.0	34.7	4.7	7.4	34.1	34.1
Cycle Q Clear(g. c), s	5.8	12.8	0.0	7.9	37.0	0.0	21.0	34.7	4.7	7.4	34.1	34.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	176	1025	378	572	369	1326	723	285	890	501	506	506
VIC Ratio(X)	0.70	0.45	0.44	1.34	0.44	1.34	0.84	0.15	0.76	1.08	1.08	1.08
Avail Cap(c. a), veh/h	251	1087	422	572	369	1326	723	285	890	501	506	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	34.7	0.0	26.8	41.5	0.0	37.6	34.2	18.8	53.8	42.9	42.9
Incr Delay (d2), s/veh	4.9	0.3	0.0	0.8	184.0	0.0	126.2	5.2	0.3	4.1	63.4	63.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.7	9.1	0.0	5.9	62.3	0.0	34.1	20.6	3.1	5.9	32.4	32.7
Unsig. Movement Delay, s/veh	36.7	35.0	0.0	27.6	205.5	0.0	163.8	39.4	19.1	58.0	106.4	106.4
LnGrip Delay(d), s/veh	D	D	D	C	F	F	D	D	B	E	F	F
LnGrip LOS	D	D	D	C	F	F	D	D	B	E	F	F
Approach Vol, veh/h	583	A	A	934	A	A	1682	721	984	1304	984	1304
Approach Delay, s/veh	35.4			173.5			72.1		98.4			
Approach LOS	D	D	D	F	F	F	E	E	F	F	F	F
Timer - Assigned Phis	1	2	3	4	5	6	7	8				
Phis Duration (G+Y+Rc), s	15.0	50.1	15.0	39.9	26.0	39.1	12.9	42.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0				
Max Q Clear Time (g. c+H1), s	9.4	36.7	9.9	14.8	23.0	36.1	7.8	39.0				
Green Ext Time (p. c), s	0.6	0.0	0.1	2.7	0.0	0.0	0.1	0.0				

Intersection Summary  
HCM 6th Ctrl Delay 96.0  
HCM 6th LOS F  
Notes  
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group									
Lane Configurations									
101	60	143	36	194	558	214	307	428	151
Traffic Volume (vph)									
101	60	143	36	194	558	214	307	428	151
Future Volume (vph)									
pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Turn Type									
7	4	3	8	5	2	3	1	6	7
Protected Phases									
Permitted Phases									
4	8	8	8	2	2	3	1	6	6
Detector Phase									
7	4	3	8	5	2	3	1	6	7
Switch Phase									
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)									
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
Minimum Split (s)									
14.0	59.0	14.0	59.0	16.0	31.0	14.0	26.0	41.0	14.0
Total Split (%)									
10.8%	45.4%	10.8%	45.4%	12.3%	23.8%	10.8%	20.0%	31.5%	10.8%
Yellow Time (s)									
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)									
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)									
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)									
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag									
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	22.8	13.1	24.6	14.0	68.1	57.0	72.6	91.3	75.2
Act Effct Green (s)	0.18	0.10	0.19	0.11	0.52	0.44	0.56	0.70	0.58
Actuated g/C Ratio	0.89	0.66	0.73	0.76	0.39	0.40	0.24	0.50	0.23
v/c Ratio	54.7	46.8	64.2	21.6	12.2	27.0	2.8	10.6	14.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	54.7	46.8	64.2	21.6	12.2	27.0	2.8	10.6	14.8
Total Delay	D	D	E	C	B	C	A	B	A
LOS	D	D	E	C	B	C	A	B	A
Approach Delay	50.2	35.4	35.4	18.7				11.1	
Approach LOS	D	D	D	B				B	
Intersection Summary									
Cycle Length: 130									
Actuated Cycle Length: 130									
Offset: 80.6 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green									
Natural Cycle: 65									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.76									
Intersection Signal Delay: 21.9									
Intersection LOS: C									
Intersection Capacity Utilization 72.8%									
Analysis Period (min) 15									



2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

HCM 6th Signalized Intersection Summary  
3: Unser Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Movement									
Lane Configurations									
101	60	75	143	36	262	194	558	214	307
Traffic Volume (veh/h)									
101	60	75	143	36	262	194	558	214	307
Future Volume (veh/h)									
0	0	0	0	0	0	0	0	0	0
Initial Q (Obs), veh									
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)									
Parking Bus, Adj									
Work Zone On Approach									
Adj Sat Flow, veh/h/in									
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h									
111	66	82	157	40	288	213	613	235	337
Peak Hour Factor									
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %									
3	3	3	3	3	3	3	3	3	3
Arrive On Green									
0.06	0.22	0.22	0.07	0.23	0.08	0.43	0.12	0.47	0.47
Sat Flow, veh/h									
1767	752	935	1767	195	1407	1767	3526	1572	1767
Grip Volume(v), veh/h									
111	0	148	157	0	328	213	613	235	337
Grip Sat Flow(s),veh/h/in									
1767	0	1687	1767	0	1602	1767	1767	1767	1767
Q Serve(g, s), s									
6.2	0.0	9.7	9.0	0.0	25.8	8.6	15.5	11.4	13.2
Cycle Q Clear(g, c), s									
6.2	0.0	9.7	9.0	0.0	25.8	8.6	15.5	11.4	13.2
Prop In Lane									
1.00	0.0	0.55	1.00	0.88	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)									
0.56	0.00	0.39	0.44	0.00	0.89	0.42	0.40	0.30	0.72
Avail Cap(c, a), veh/h									
210	0	701	360	0	666	512	1526	789	943
HCM Platoon Ratio									
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)									
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh									
38.0	0.0	43.0	36.1	0.0	48.6	17.6	25.3	19.0	17.4
Incr Delay (d2), s/veh									
2.9	0.0	0.7	0.8	0.0	7.7	0.6	0.8	1.0	3.8
Initial Q Delay(d3),s/veh									
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/h									
5.0	0.0	7.3	7.0	0.0	16.2	6.2	10.6	7.6	9.3
Unsig. Movement Delay, s/veh									
40.9	0.0	43.7	37.0	0.0	56.2	18.1	26.1	19.9	21.2
LnGrip Delay(d),s/veh									
D	A	D	D	A	E	B	C	B	C
LnGrip LOS									
D	A	D	D	A	E	B	C	B	C
Approach Vol, veh/h									
259				485				973	
Approach Delay, s/veh									
42.3				50.0				20.4	
Approach LOS									
D	D	D	D	D	C	C	C	C	C
Timer - Assigned Phis									
1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s									
20.7	61.3	14.0	34.0	15.7	66.3	13.2	34.8		
Change Period (Y+Rc), s									
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s									
21.0	26.0	9.0	54.0	11.0	36.0	9.0	54.0		
Max Q Clear Time (g, c+11), s									
15.2	17.5	11.0	11.7	10.6	12.6	8.2	27.8		
Green Ext Time (p, c), s									
0.5	3.0	0.0	0.8	0.0	3.4	0.0	2.0		
Intersection Summary									
HCM 6th Ctrl Delay									
HCM 6th LOS									
C									

2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn



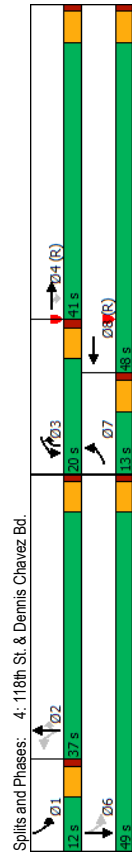
Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	102	22	182	76	44	103	419	89	104
22	102	22	182	76	44	103	419	89	104
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
13.0	41.0	41.0	20.0	48.0	37.0	37.0	20.0	12.0	49.0
11.8%	37.3%	37.3%	18.2%	43.6%	33.6%	33.6%	18.2%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
7.6	47.7	47.7	15.2	55.3	14.8	14.8	35.0	32.0	32.0
0.07	0.43	0.43	0.14	0.50	0.13	0.13	0.32	0.29	0.29
0.28	0.20	0.04	0.59	0.26	0.44	0.64	0.73	0.44	0.37
53.8	23.2	0.1	67.2	3.0	51.3	56.4	9.6	32.8	29.5
53.8	23.2	0.1	67.2	3.0	51.3	56.4	9.6	32.8	29.5
D	C	A	E	A	D	E	A	C	C
24.3			38.4		21.3				30.8
C			D		C				C
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 0 (0%), Referenced to phase 4:EFT and 8:WBT, Start of Green									
Natural Cycle: 65									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.73									
Intersection Signal Delay: 27.8									
Intersection Capacity Utilization 48.7%									
Analysis Period (min) 15									



2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	102	22	182	76	44	103	419	89	104
22	102	22	182	76	44	103	419	89	104
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
34	157	34	280	117	111	68	158	645	137
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3
80	672	570	348	366	347	407	540	617	329
0.05	0.36	0.36	0.10	0.42	0.42	0.29	0.29	0.06	0.40
1767	1856	1572	3428	875	831	1175	1856	1572	1767
34	157	34	280	0	228	68	158	645	137
1767	1856	1572	1714	0	1706	1175	1856	1572	1767
2.1	6.5	1.6	8.8	0.0	9.9	4.8	7.3	32.0	5.8
2.1	6.5	1.6	8.8	0.0	9.9	4.8	7.3	32.0	5.8
1.00	1.00	1.00	1.00	0.49	1.00	1.00	1.00	1.00	1.00
80	672	570	348	0	713	407	540	617	329
0.42	0.23	0.06	0.81	0.00	0.32	0.17	0.29	1.05	0.42
129	672	570	467	0	713	407	540	617	329
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.74	0.00	0.74	1.00	1.00	1.00	1.00
51.1	24.4	22.9	48.4	0.0	21.5	29.4	30.2	33.4	23.9
3.5	0.8	0.2	5.5	0.0	0.9	0.2	0.3	48.7	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.7	5.2	1.1	6.7	0.0	6.7	2.4	5.7	32.5	4.3
54.6	25.3	23.1	53.9	0.0	22.4	29.5	30.5	82.1	24.8
225			508		871				335
29.4			39.7		68.7				23.4
C			D		E				C
1	2	3	4	6	7	8			
12.0	37.0	16.2	44.8	49.0	10.0	51.0			
5.0	5.0	5.0	5.0	5.0	5.0	5.0			
7.0	32.0	15.0	36.0	44.0	8.0	43.0			
7.8	34.0	10.8	8.5	10.2	4.1	11.9			
0.0	0.0	0.4	0.9	1.1	0.0	1.3			
Intersection Summary									
HCM 6th Ctrl Delay 48.7									
HCM 6th LOS D									

2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

Timings  
5: Dennis Chavez Bd. & 98th St.

HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	198	355	425	336	301	148
Future Volume (vph)	198	355	425	336	301	148
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	13.0	70.0	57.0	57.0	40.0	13.0
Total Split (%)	11.8%	63.6%	51.8%	51.8%	36.4%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	72.6	72.6	38.1	38.1	27.4	61.9
Actuated g/C Ratio	0.66	0.66	0.35	0.35	0.25	0.56
v/c Ratio	0.39	0.34	0.78	0.49	0.81	0.18
Control Delay	12.7	10.9	11.4	1.8	53.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	10.9	11.4	1.8	53.2	2.9
LOS	B	B	B	A	D	A
Approach Delay	11.5	7.2			36.6	
Approach LOS	B	A			D	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 7.7 (7%), Referenced to phase 4:EBTL and 7:EBL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.81						
Intersection Signal Delay: 16.0						Intersection LOS: B
Intersection Capacity Utilization 62.5%						ICU Level of Service B
Analysis Period (min) 15						



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	198	355	425	336	301	148
Future Volume (veh/h)	198	355	425	336	301	148
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	233	418	500	395	354	174
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	662	1270	597	506	397	852
Arrive On Green	0.32	0.68	0.11	0.11	0.22	0.22
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	233	418	500	395	354	174
Gp Sat Flow(s),veh/h/ln	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	5.7	10.1	29.1	26.9	21.4	6.3
Cycle Q Clear(g, c), s	5.7	10.1	29.1	26.9	21.4	6.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	662	1270	597	506	397	852
V/C Ratio(X)	0.35	0.33	0.84	0.78	0.89	0.20
Avail Cap(c, a), veh/h	662	1270	877	743	562	1000
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(l)	0.77	0.77	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	13.3	7.1	46.4	45.4	41.4	13.0
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.3	12.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	6.1	16.3	13.0	15.6	12.3
Unsig. Movement Delay, s/veh	13.6	7.6	46.8	45.7	53.9	13.1
LnGp Delay(d),s/veh	B	A	D	D	D	B
LnGp LOS	B	A	D	D	D	B
Approach Vol, veh/h	651	895			528	
Approach Delay, s/veh	9.7	46.3			40.4	
Approach LOS	A	D			D	
Timer - Assigned Phis				4	6	7
Phis Duration (G+Y+Rc), s				80.3	29.7	39.9
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				65.0	35.0	52.0
Max Q Clear Time (g, c+11), s				12.1	23.4	7.7
Green Ext Time (p, c), s				2.5	1.3	0.0
4.3						
Intersection Summary						
HCM 6th Ctrl Delay				33.3		
HCM 6th LOS				C		

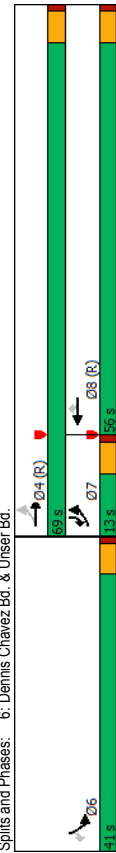
2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

2032 PM Peak NOBUILD Conditions  
Synchro 10 Report  
2032PNX.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	→	→	←	←	→	→
Traffic Volume (vph)	119	803	1094	1021	779	71
Future Volume (vph)	119	803	1094	1021	779	71
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	13.0	69.0	56.0	56.0	41.0	13.0
Total Split (%)	11.8%	62.7%	50.9%	50.9%	37.3%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	64.0	51.2	51.2	36.0	48.8	
Actuated g/C Ratio	0.58	0.58	0.47	0.47	0.33	0.44
v/c Ratio	0.89	0.82	1.40	0.92	1.49	0.11
Control Delay	38.9	25.4	214.7	18.1	261.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	25.4	214.7	18.1	261.2	11.5
LOS	D	C	F	B	F	B
Approach Delay		27.2	119.8		240.4	
Approach LOS		C	F		F	
Intersection Summary						
Cycle Length: 110						
Actuated Cycle Length: 110						
Offset: 78.1 (71%), Referenced to phase 4:EBTL and 8:WBT, Start of Green						
Natural Cycle: 130						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.49						
Intersection Signal Delay: 124.2						
Intersection Signal Delay: 124.2						
Intersection Capacity Utilization 119.8%						
Analysis Period (min) 15						



HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	→	→	←	←	→	→
Traffic Volume (veh/h)	119	803	1094	1021	779	71
Future Volume (veh/h)	119	803	1094	1021	779	71
Initial Q (Obs), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	131	882	1202	1122	856	78
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	163	1080	893	757	578	601
Arrive On Green	0.11	1.00	0.48	0.48	0.33	0.33
Sat Flow, veh/h	1767	1856	1856	1572	1767	1572
Gp Volume(v), veh/h	131	882	1202	1122	856	78
Gp Sat Flow(s), veh/h/in	1767	1856	1856	1572	1767	1572
Q Serve(g, s), s	4.0	0.0	52.9	52.9	36.0	3.5
Cycle Q Clear(g, c), s	4.0	0.0	52.9	52.9	36.0	3.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	163	1080	893	757	578	601
V/C Ratio(X)	0.80	0.82	1.35	1.48	1.48	0.13
Avail Cap(c, a), veh/h	194	1080	893	757	578	601
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.81	0.81	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	28.5	28.5	37.0	22.1
Incr Delay (d2), s/veh	15.3	5.6	163.3	224.3	225.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	3.8	3.0	90.8	99.7	77.1	7.0
Unsig. Movement Delay, s/veh						
LnGp Delay(d), s/veh	39.4	5.6	191.8	252.9	262.2	22.2
LnGp LOS	D	A	F	F	F	C
Approach Vol, veh/h		1013	2324		934	
Approach Delay, s/veh		10.0	221.3		242.2	
Approach LOS		B	F		F	
Timer - Assigned Phis			4		6	7
Phis Duration (G+Y+Rc), s			69.0		41.0	11.1
Change Period (Y+Rc), s			5.0		5.0	5.0
Max Green Setting (Gmax), s			64.0		36.0	51.0
Max Q Clear Time (g, c+11), s			2.0		38.0	6.0
Green Ext Time (p, c), s			7.6		0.0	0.1
Intersection Summary						
HCM 6th Ctrl Delay	175.8					
HCM 6th LOS	F					

2032 PM Peak NOBUILD Conditions

Terry O. Brown, PE  
08/15/2019

HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

2032 PM Peak NOBUILD Conditions

2032 PM Peak NOBUILD Conditions

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	53	1284	76	53	2096	26	66	1	46	5	1	121
Future Vol, veh/h	53	1284	76	53	2096	26	66	1	46	5	1	121
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	55	1324	78	55	2161	27	68	1	47	5	1	125

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2188	0	0	1402	0	0	3821	3771	1363	3782	3797	2175
Stage 1	-	-	-	-	-	-	1473	1473	-	2285	2285	-
Stage 2	-	-	-	-	-	-	2348	2298	-	1497	1512	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	240	-	-	484	-	-	~2	4	180	~2	4	~58
Stage 1	-	-	-	-	-	-	157	190	-	52	74	-
Stage 2	-	-	-	-	-	-	~48	73	-	152	182	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	240	-	-	484	-	-	-	0	180	-	0	~58
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	157	0	-	52	74	-
Stage 2	-	-	-	-	-	-	-	73	-	-	0	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.9		0.3					
HCM LOS					-		-	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	240	-	-	484	-	-	-	58
HCM Lane V/C Ratio	-	0.228	-	-	0.113	-	-	-	2.151
HCM Control Delay (s)	-	24.4	0	-	13.4	0	-	-	\$ 682.5
HCM Lane LOS	-	C	A	-	B	A	-	-	F
HCM 95th %tile Q(veh)	-	0.9	-	-	0.4	-	-	-	12.2

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	48	116	83	1180	803	39
Future Vol, veh/h	48	116	83	1180	803	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	122	87	1242	845	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1640	423	886	0	-	0
Stage 1	845	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	90	577	754	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	577	754	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.5	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	754	-	80	577	-	-
HCM Lane V/C Ratio	0.116	-	0.632	0.212	-	-
HCM Control Delay (s)	10.4	-	107.3	12.9	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	2.9	0.8	-	-

Intersection	
Intersection Delay, s/veh	36.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	147	79	40	42	153	35	57	378	41	45	591	150
Future Vol, veh/h	147	79	40	42	153	35	57	378	41	45	591	150
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	158	85	43	45	165	38	61	406	44	48	635	161
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	18.2	16.1	23.9	55.7
HCM LOS	C	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	75%	0%	100%	40%	0%	100%	59%	0%	100%
Vol Right, %	0%	0%	25%	0%	0%	60%	0%	0%	41%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	252	167	147	53	66	42	102	86	45	394
LT Vol	57	0	0	147	0	0	42	0	0	45	0
Through Vol	0	252	126	0	53	26	0	102	51	0	394
RT Vol	0	0	41	0	0	40	0	0	35	0	0
Lane Flow Rate	61	271	180	158	57	71	45	110	92	48	424
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.164	0.685	0.446	0.453	0.154	0.186	0.131	0.303	0.249	0.121	0.997
Departure Headway (Hd)	9.604	9.104	8.932	10.307	9.807	9.385	10.461	9.961	9.676	8.971	8.471
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	374	398	404	349	366	382	343	361	371	400	428
Service Time	7.359	6.859	6.687	8.069	7.569	7.147	8.225	7.725	7.44	6.722	6.222
HCM Lane V/C Ratio	0.163	0.681	0.446	0.453	0.156	0.186	0.131	0.305	0.248	0.12	0.991
HCM Control Delay	14.2	29.6	18.7	21.4	14.4	14.3	14.8	17	15.6	13	72.4
HCM Lane LOS	B	D	C	C	B	B	B	C	C	B	F
HCM 95th-tile Q	0.6	4.9	2.2	2.3	0.5	0.7	0.4	1.3	1	0.4	12.5

Intersection												
Intersection Delay, s/veh	20.8											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	19	22	44	91	34	74	87	552	37	79	421	36
Future Vol, veh/h	19	22	44	91	34	74	87	552	37	79	421	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	23	46	95	35	77	91	575	39	82	439	38
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	13.2	14.4	25.2	18.8
HCM LOS	B	B	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	83%	0%	33%	0%	31%	0%	100%	80%
Vol Right, %	0%	0%	17%	0%	67%	0%	69%	0%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	368	221	19	66	91	108	79	281	176
LT Vol	87	0	0	19	0	91	0	79	0	0
Through Vol	0	368	184	0	22	0	34	0	281	140
RT Vol	0	0	37	0	44	0	74	0	0	36
Lane Flow Rate	91	383	230	20	69	95	113	82	292	184
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.2	0.793	0.469	0.053	0.166	0.243	0.257	0.188	0.627	0.387
Departure Headway (Hd)	7.96	7.45	7.331	9.692	8.71	9.216	8.225	8.232	7.722	7.577
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	450	487	490	368	410	389	435	435	468	474
Service Time	5.721	5.211	5.092	7.484	6.501	6.995	6.004	5.997	5.487	5.341
HCM Lane V/C Ratio	0.202	0.786	0.469	0.054	0.168	0.244	0.26	0.189	0.624	0.388
HCM Control Delay	12.7	33.3	16.5	13	13.2	15	13.9	12.9	22.7	15.1
HCM Lane LOS	B	D	C	B	B	B	B	B	C	C
HCM 95th-tile Q	0.7	7.3	2.5	0.2	0.6	0.9	1	0.7	4.2	1.8

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	10	1	39	17	58	1	10	12	20	7	5
Future Vol, veh/h	2	10	1	39	17	58	1	10	12	20	7	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	11	1	43	19	64	1	11	13	22	8	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	12	0	0	160	185	12	165	153	51
Stage 1	-	-	-	-	-	-	16	16	-	137	137	-
Stage 2	-	-	-	-	-	-	144	169	-	28	16	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1508	-	-	1600	-	-	803	708	1066	797	737	1014
Stage 1	-	-	-	-	-	-	1001	880	-	864	781	-
Stage 2	-	-	-	-	-	-	856	757	-	987	880	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1508	-	-	1600	-	-	775	687	1066	760	716	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	775	687	-	760	716	-
Stage 1	-	-	-	-	-	-	1000	879	-	863	759	-
Stage 2	-	-	-	-	-	-	819	736	-	961	879	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			2.5			9.4			9.8		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	849	1508	-	-	1600	-	-	780
HCM Lane V/C Ratio	0.03	0.001	-	-	0.027	-	-	0.046
HCM Control Delay (s)	9.4	7.4	0	-	7.3	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↶↷	↶	↶	↶↷	↶
Traffic Vol, veh/h	10	1	4	9	6	26	6	661	6	40	787	37
Future Vol, veh/h	10	1	4	9	6	26	6	661	6	40	787	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	1	4	10	7	29	7	743	7	45	884	42

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1363	1738	442	1290	1773	372	926	0	0	750	0	0
Stage 1	974	974	-	757	757	-	-	-	-	-	-	-
Stage 2	389	764	-	533	1016	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	106	85	560	120	81	622	728	-	-	848	-	-
Stage 1	268	326	-	364	411	-	-	-	-	-	-	-
Stage 2	604	408	-	496	311	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	94	80	560	113	76	622	728	-	-	848	-	-
Mov Cap-2 Maneuver	197	188	-	234	187	-	-	-	-	-	-	-
Stage 1	265	309	-	360	407	-	-	-	-	-	-	-
Stage 2	561	404	-	464	295	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21		15.6		0.1		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	728	-	-	197	401	234	433	848	-	-
HCM Lane V/C Ratio	0.009	-	-	0.057	0.014	0.043	0.083	0.053	-	-
HCM Control Delay (s)	10	-	-	24.4	14.1	21.1	14.1	9.5	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.1	0.3	0.2	-	-

Timings  
1: Coors Bd. & Gun Club Rd.

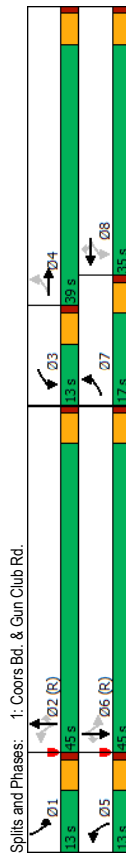
HCM 6th Signalized Intersection Summary  
1: Coors Bd. & Gun Club Rd.

Terry O. Brown, PE  
08/25/2019

Terry O. Brown, PE  
08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	146	53	107	45	184	75	951	56	229	1002
Future Volume (vph)	146	53	107	45	184	75	951	56	229	1002
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	2	1	6	6
Permitted Phases	4	4	3	8	8	2	2	1	6	6
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Minimum Split (s)	17.0	39.0	13.0	35.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	15.5%	35.5%	11.8%	31.8%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	None	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	None	Min	Min	Min	Min	Min	Min	Min	Min	Min

Intersection Summary  
Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 0 (0%); Referenced to phase 2:NBL and 6:SBTL. Start of Green  
Natural Cycle: 70  
Control Type: Actuated-Coordinated



Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	146	53	103	107	45	184	75	951	56	229
Future Volume (veh/h)	146	53	103	107	45	184	75	951	56	229
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	152	55	107	111	47	192	78	991	58	239
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	362	92	178	278	266	226	310	1805	805	365
Arrive On Green	0.09	0.16	0.16	0.07	0.14	0.14	0.05	0.51	0.51	0.07
Sat Flow, veh/h	1767	563	1095	1767	1856	1572	1767	3526	1572	1767
Gp Volume(v), veh/h	152	0	162	111	47	192	78	991	58	239
Gp Sat Flow(s) veh/h/ln	1767	0	1668	1767	1856	1572	1767	3526	1572	1767
Q Serve(g, s)	7.9	0.0	10.0	5.8	2.4	13.1	2.2	21.0	2.1	7.1
Cycle Q Clear(g, c), s	7.9	0.0	10.0	5.8	2.4	13.1	2.2	21.0	2.1	7.1
Prop In Lane	1.00	0.00	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Gp Cap(c), veh/h	362	0	270	278	266	226	310	1805	805	365
V/C Ratio(X)	0.42	0.00	0.60	0.40	0.18	0.85	0.25	0.55	0.07	0.65
Avail Cap(c, a), veh/h	396	0	513	281	506	429	358	1805	805	365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	0.0	42.7	36.5	41.4	46.0	13.1	18.2	13.6	14.6
Incr Delay (d2), s/veh	0.8	0.0	2.1	0.9	0.3	8.7	0.4	1.2	0.2	0.4
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%) veh/h	6.1	0.0	7.4	4.5	2.0	9.3	1.5	12.4	1.3	3.2
Unsig. Movement Delay, s/veh	362	0.0	44.9	37.5	41.7	54.7	13.5	19.4	13.8	15.0
LnGp Delay(d) s/veh	D	A	D	D	D	D	D	B	B	B
LnGp LOS	D	A	D	D	D	D	D	B	B	B
Approach Vol, veh/h	314	314	314	314	314	314	314	314	314	314
Approach Delay, s/veh	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
Approach LOS	D	D	D	D	D	D	D	B	B	B
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phs Duration (G+Y+Rc), s	13.0	61.3	12.8	22.9	10.0	64.3	14.9	20.8		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	8.0	40.0	8.0	34.0	8.0	40.0	12.0	30.0		
Max Q Clear Time (g, c+1), s	9.1	23.0	7.8	12.0	4.2	23.3	9.9	15.1		
Green Ext Time (p, c), s	0.0	5.8	0.0	0.8	0.0	6.4	0.1	0.7		

Intersection Summary  
HCM 6th Ctrl Delay: 22.8  
HCM 6th LOS: C

2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PBX.syn

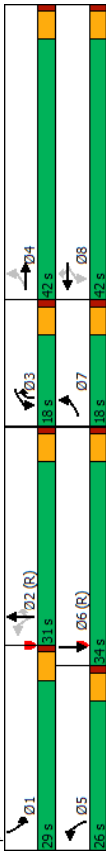
2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PBX.syn

Timings Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	311	734	160	1212	436	492	1060	102	205
Future Volume (vph)	311	734	160	1212	436	492	1060	102	205
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot
Protected Phases	7	4	3	8	8	5	2	3	1
Permitted Phases	4	4	3	8	8	2	2	3	1
Detector Phase	7	4	3	8	8	5	2	3	1
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	18.0	42.0	18.0	42.0	26.0	31.0	18.0	29.0	34.0
Total Split (%)	15.0%	35.0%	15.0%	35.0%	21.7%	25.8%	15.0%	24.2%	28.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode									

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 99.6 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Natural Cycle: 130  
Control Type: Actuated-Coordinated



2032 PM Peak BUILD Conditions Synchro 10 Report  
2032PBX.syn

HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
08/25/2019

2: Coors Bd. & Dennis Chavez Rd.

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	311	734	160	1212	436	492	1060	102	205	913
Future Volume (veh/h)	311	734	160	1212	436	492	1060	102	205	913
Initial Q (Obs.) veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	327	773	0	168	1276	0	518	1116	107	216
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	251	1181	307	572	369	1176	653	285	564	263
Arrive On Green	0.11	0.33	0.00	0.08	0.31	0.00	0.17	0.33	0.33	0.08
Sat Flow, veh/h	1767	3618	0	1767	1856	1572	1767	3526	1572	3428
Grip Volume(v), veh/h	327	773	0	168	1276	0	518	1116	107	216
Grip Sat Flow(s) veh/h/ln	1767	1763	0	1767	1856	1572	1767	1763	1572	1714
Q Serve(g.s), s	13.0	22.4	0.0	7.7	37.0	0.0	21.0	37.0	5.1	7.4
Cycle Q Clear(g.c), s	13.0	22.4	0.0	7.7	37.0	0.0	21.0	37.0	5.1	7.4
Prop In Lane	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	251	1181	307	572	369	1176	653	285	564	263
VIC Ratio(X)	1.30	0.65	0.55	2.23	1.40	0.95	0.16	0.76	1.69	1.73
Avail Cap(c.a), veh/h	251	1181	354	572	369	1176	653	285	564	263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	34.0	0.0	26.7	41.5	0.0	36.7	39.0	22.0	53.8
Incr Delay (d2), s/veh	161.2	1.3	0.0	1.5	599.3	0.0	192.9	13.2	0.4	4.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	25.7	14.5	0.0	5.8	165.8	0.0	41.9	23.2	3.4	5.9
Unsig. Movement Delay, s/veh	196.5	35.3	0.0	28.2	600.8	0.0	229.7	52.2	22.4	58.0
LnGrip Delay(d), s/veh	F	D	A	C	F	F	D	C	E	F
LnGrip LOS	F	D	A	C	F	F	D	C	E	F
Approach Vol, veh/h	1100	A	1444	A	1741	F	1741	F	1633	F
Approach Delay, s/veh	83.2	F	534.2	F	103.1	F	334.6	F	334.6	F
Approach LOS	F	F	F	F	F	F	F	F	F	F
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	15.0	45.0	14.8	45.2	26.0	34.0	18.0	42.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	24.0	26.0	13.0	37.0	21.0	29.0	13.0	37.0		
Max Q Clear Time (g.c+H), s	9.4	39.0	9.7	24.4	23.0	31.0	15.0	39.0		
Green Ext Time (p.c), s	0.6	0.0	0.1	3.9	0.0	0.0	0.0	0.0		
Intersection Summary										
HCM 6th Ctrl Delay	268.5									
HCM 6th LOS	F									

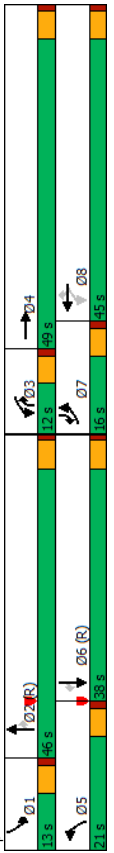
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2032 PM Peak BUILD Conditions Synchro 10 Report  
2032PBX.syn

Timings Terry O. Brown, PE  
2: Coors Bd. & Dennis Chavez Rd. 08/25/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	311	734	160	1212	436	492	1060	102	205	913
Future Volume (vph)	311	734	160	1212	436	492	1060	102	205	913
Turn Type	Prot	NA	pm+pt	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	8	5	2	3	1	6
Permitted Phases	7	4	3	8	8	5	2	3	1	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	16.0	49.0	12.0	45.0	21.0	46.0	12.0	13.0	38.0	16.0
Total Split (%)	13.3%	40.8%	10.0%	37.5%	17.5%	38.3%	10.0%	10.8%	31.7%	13.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode										

Intersection Summary  
Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 99.6 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Natural Cycle: 130  
Control Type: Actuated-Coordinated



2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PB\_MIT.syn

HCM 6th Signalized Intersection Summary Terry O. Brown, PE  
2: Coors Bd. & Dennis Chavez Rd. 08/25/2019

Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	311	734	160	1212	436	492	1060	102	205	913
Future Volume (veh/h)	311	734	160	1212	436	492	1060	102	205	913
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/in	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	327	773	0	168	1276	0	518	1116	107	216
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	314	1293	294	1175	457	1205	629	229	970	577
Arrive On Green	0.09	0.37	0.00	0.06	0.33	0.00	0.13	0.34	0.34	0.28
Sat Flow, veh/h	3428	3618	0	1767	3526	1572	3428	3526	1572	3428
Grip Volume(v), veh/h	327	773	0	168	1276	0	518	1116	107	216
Grip Sat Flow(s), veh/h/in	1714	1763	0	1767	1763	1572	1714	1763	1572	1714
Q Serve(g, s)	11.0	21.3	0.0	7.0	40.0	0.0	16.0	36.6	5.3	7.5
Cycle Q Clear(g, c), s	11.0	21.3	0.0	7.0	40.0	0.0	16.0	36.6	5.3	7.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grip Cap(c), veh/h	314	1293	294	1175	457	1205	629	229	970	577
VIC Ratio(X)	1.04	0.60	0.57	1.09	1.13	0.93	0.17	0.95	0.89	0.79
Avail Cap(c, a), veh/h	314	1293	294	1175	457	1205	629	229	970	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	0.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00
Uniform Delay (d), s/veh	54.5	30.8	0.0	27.4	40.0	0.0	52.0	38.0	23.2	55.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.7	52.8	0.0	78.6	10.4	0.4	44.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/h	7.1	10.1	0.0	6.0	35.1	0.0	17.4	22.5	3.5	8.1
Unsig. Movement Delay, s/veh	816	30.9	0.0	30.1	92.8	0.0	130.6	48.5	23.6	100.1
LnGrip Delay(d), s/veh	1100	A	C	F	A	F	D	C	F	E
LnGrip LOS	F	C	C	F	F	F	D	C	F	E
Approach Vol, veh/h	46.0	1444	A	1444	A	1444	1741	1633	67.0	1633
Approach Delay, s/veh	46.0	85.5	F	85.5	F	71.4	71.4	67.0	85.5	67.0
Approach LOS	D	D	F	F	F	E	E	E	F	E
Timer - Assigned Phis	1	2	3	4	5	6	7	8		
Phis Duration (G+Y+Rc), s	13.0	46.0	12.0	49.0	21.0	38.0	16.0	45.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	8.0	41.0	7.0	44.0	16.0	33.0	11.0	40.0		
Max Q Clear Time (g, c+1), s	9.5	38.6	9.0	23.3	18.0	34.6	13.0	42.0		
Green Ext Time (p, c), s	0.0	1.6	0.0	4.9	0.0	0.0	0.0	0.0		
Intersection Summary										
HCM 6th Ctrl Delay	68.9									
HCM 6th LOS	E									

Notes  
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PB\_MIT.syn

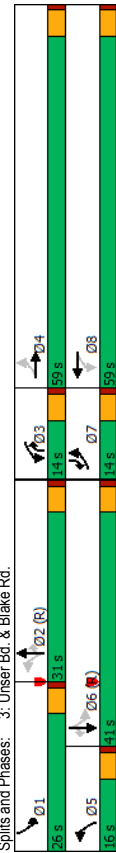
Timings  
3: Unsers Bd. & Blake Rd.

HCM 6th Signalized Intersection Summary  
3: Unsers Bd. & Blake Rd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
101	60	179	36	199	647	252	307	550	151
101	60	179	36	199	647	252	307	550	151
NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	NA
7	4	3	8	5	2	3	1	6	7
4	8	3	8	5	2	3	1	6	6
7	4	3	8	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0
14.0	59.0	14.0	59.0	16.0	31.0	14.0	26.0	41.0	14.0
10.8%	45.4%	10.8%	45.4%	12.3%	23.8%	10.8%	20.0%	31.5%	10.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
22.0	13.2	22.4	13.4	71.0	59.2	73.2	92.8	75.9	89.7
0.17	0.10	0.17	0.10	0.55	0.46	0.56	0.71	0.58	0.69
0.63	0.67	1.04	0.78	0.43	0.45	0.28	0.53	0.30	0.15
58.8	46.9	122.4	22.4	12.2	26.8	2.8	10.7	15.3	1.8
58.8	46.9	122.4	22.4	12.2	26.8	2.8	10.7	15.3	1.8
E	D	F	C	B	C	A	B	B	A
51.9	59.9	18.7						11.8	
Intersection Summary									
Cycle Length: 130									
Actuated Cycle Length: 130									
Offset: 80.6 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green									
Natural Cycle: 65									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 1.04									
Intersection Signal Delay: 26.0									
Intersection Capacity Utilization 75.2%									
Analysis Period (min) 15									



2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PBX.syn

EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
101	60	179	36	199	647	252	307	550	151
101	60	179	36	199	647	252	307	550	151
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	No	No	No	No	No	No	No	No	No
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
111	66	87	197	40	288	219	711	277	337
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3
199	162	214	356	45	322	453	1525	789	433
0.06	0.22	0.22	0.07	0.23	0.23	0.08	0.43	0.12	0.47
1767	726	957	1767	195	1407	1767	3526	1572	1767
111	0	153	197	0	328	219	711	277	337
1767	0	1683	1767	0	1602	1767	1763	1572	1763
6.2	0.0	10.1	9.0	0.0	25.8	8.9	18.6	13.8	13.2
6.2	0.0	10.1	9.0	0.0	25.8	8.9	18.6	13.8	13.2
1.00	0.0	0.7	1.00	0.88	1.00	0.88	1.00	1.00	1.00
199	0	376	356	0	367	453	1525	789	433
0.56	0.00	0.41	0.55	0.00	0.89	0.48	0.47	0.35	0.78
210	0	689	356	0	666	455	1525	789	504
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
38.0	0.0	43.1	39.1	0.0	48.6	17.9	26.2	19.6	19.0
2.9	0.0	0.7	1.9	0.0	7.7	0.8	1.0	1.2	6.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.0	7.6	2.4	0.0	16.2	6.4	12.3	8.8	9.7
40.9	0.0	43.8	40.9	0.0	56.2	18.6	27.2	20.8	25.6
D	A	D	D	A	E	B	C	C	C
264	42.6			525			1207		1107
42.6				50.5			24.2		22.6
D	D	D	D	D	C	C	C	C	C
1	2	3	4	5	6	7	8		
20.8	61.2	14.0	34.0	15.9	66.1	13.2	34.8		
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
21.0	26.0	9.0	54.0	11.0	36.0	9.0	54.0		
15.2	20.6	11.0	12.1	10.9	16.2	8.2	27.8		
0.5	2.5	0.0	0.9	0.0	4.1	0.0	2.0		
Intersection Summary									
HCM 6th Ctrl Delay 29.6									
HCM 6th LOS C									

2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PBX.syn

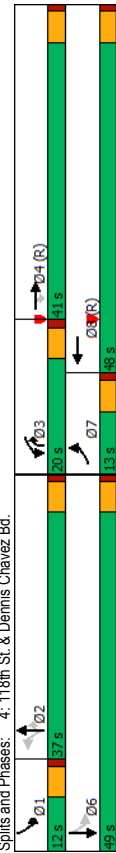
Timings  
4: 118th St. & Dennis Chavez Bd.

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

Terry O. Brown, PE  
08/15/2019

EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	114	23	455	86	44	103	692	96	104
22	114	23	455	86	44	103	692	96	104
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	21.0	21.0	21.0	10.0	10.0	21.0
13.0	41.0	41.0	20.0	48.0	37.0	37.0	20.0	12.0	49.0
11.8%	37.3%	37.3%	18.2%	43.6%	33.6%	33.6%	18.2%	10.9%	44.5%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	None	Min
7.6	15.8	15.8	47.6	55.8	14.8	14.8	67.4	31.6	31.6
0.07	0.14	0.14	0.43	0.51	0.13	0.13	0.61	0.29	0.29
0.28	0.66	0.66	0.09	0.48	0.29	0.44	0.64	0.92	0.49
53.8	56.0	56.0	0.5	27.9	10.5	51.3	56.4	24.1	34.5
53.8	56.0	56.0	0.5	27.9	10.5	51.3	56.4	24.1	34.5
D	E	A	C	B	D	E	C	C	C
47.8				23.2		29.5			31.9
D				C		C		C	C
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 0 (0%), Referenced to phase 4:EFT and 8:WBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.92									
Intersection Signal Delay: 29.3									
Intersection Capacity Utilization 66.7%									
Analysis Period (min) 15									



2032 PM Peak BUILD Conditions  
Synchro 10 Report  
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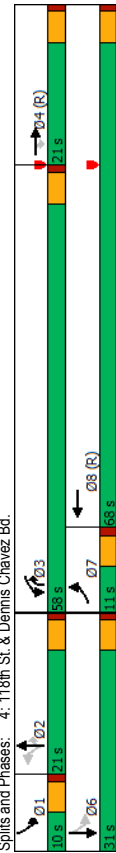
EBL	EFT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	114	23	455	86	44	103	692	96	104
22	114	23	455	86	44	103	692	96	104
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
34	175	35	700	132	123	68	158	1065	148
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3
80	607	515	467	370	344	407	540	672	280
0.05	0.33	0.33	0.14	0.42	0.42	0.29	0.29	0.06	0.40
1767	1856	1572	3428	884	824	1175	1856	1572	1767
34	175	35	700	0	255	68	158	1065	148
1767	1856	1572	1714	0	1707	1175	1856	1572	1767
2.1	7.7	1.7	15.0	0.0	11.2	4.8	7.3	32.0	6.3
2.1	7.7	1.7	15.0	0.0	11.2	4.8	7.3	32.0	6.3
1.00	1.00	1.00	1.00	0.48	1.00	1.00	1.00	1.00	0.19
80	607	515	467	0	714	407	540	672	280
0.42	0.29	0.07	1.50	0.00	0.36	0.17	0.29	1.59	0.53
129	607	515	467	0	714	407	540	672	280
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.42	0.00	0.42	1.00	1.00	1.00	1.00
51.1	27.5	25.5	47.5	0.0	21.9	29.4	30.2	31.5	24.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.7	6.3	1.2	30.5	0.0	6.6	2.4	5.7	100.9	4.8
54.6	28.7	25.7	276.1	0.0	22.5	29.5	30.5	301.9	26.1
D	C	C	F	A	C	C	C	F	C
244				955					346
31.9				208.4					24.0
C				F					C
1	2	3	4	6	7	8			
12.0	37.0	20.0	41.0	49.0	10.0	51.0			
5.0	5.0	5.0	5.0	5.0	5.0	5.0			
7.0	32.0	15.0	36.0	44.0	8.0	43.0			
8.3	34.0	17.0	9.7	10.2	4.1	13.2			
0.0	0.0	0.0	1.0	1.1	0.0	1.4			
Intersection Summary									
HCM 6th Ctrl Delay 191.6									
HCM 6th LOS F									

2032 PM Peak BUILD Conditions  
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Timings  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
22	114	23	455	86	44	103	692	96	104
22	114	23	455	86	44	103	692	96	104
7	4	4	3	8	2	2	3	1	6
7	4	4	3	8	2	2	3	1	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0
11.0	21.0	21.0	58.0	68.0	21.0	21.0	58.0	10.0	31.0
10.0%	19.1%	19.1%	52.7%	61.8%	19.1%	19.1%	52.7%	9.1%	28.2%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	Min	Min
6.3	15.4	15.4	63.7	13.7	13.7	73.2	25.0	25.0	25.0
0.06	0.14	0.14	0.58	0.12	0.12	0.67	0.23	0.23	0.23
0.34	0.68	0.10	0.42	0.25	0.47	0.69	0.95	0.72	0.48
59.7	58.9	0.5	10.0	5.8	55.1	61.8	32.4	58.6	39.1
59.7	58.9	0.5	10.0	5.8	55.1	61.8	32.4	58.6	39.1
E	E	A	A	A	E	E	C	E	D
50.6			8.9		37.2			47.4	
D			A		D			D	
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 0 (0%), Referenced to phase 4:E and 8:WBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.95									
Intersection Signal Delay: 30.0									
Intersection Capacity Utilization 66.7%									
Analysis Period (min) 15									



2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PB\_MIT.syn

HCM 6th Signalized Intersection Summary  
4: 118th St. & Dennis Chavez Bd.

Terry O. Brown, PE  
08/15/2019

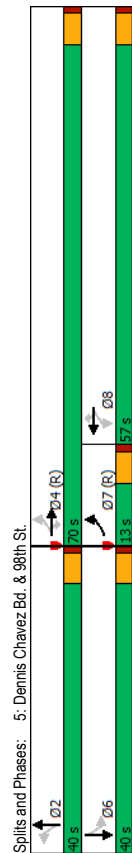
EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
22	114	23	455	86	44	103	692	96	104	25
22	114	23	455	86	44	103	692	96	104	25
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
34	175	35	700	132	123	68	158	1065	148	160
0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
3	3	3	3	3	3	3	3	3	3	3
80	723	613	815	514	479	232	270	602	176	343
0.05	0.39	0.24	0.24	0.58	0.58	0.15	0.15	0.15	0.05	0.24
1767	1856	1572	3428	884	824	1175	1856	1572	1767	1449
34	175	35	700	0	255	68	158	1065	148	0
1767	1856	1572	1714	0	1707	1175	1856	1572	1767	0
2.1	7.0	1.5	21.5	0.0	8.1	5.8	8.7	16.0	5.0	0.0
2.1	7.0	1.5	21.5	0.0	8.1	6.2	8.7	16.0	5.0	0.0
1.00	1.00	1.00	1.00	0.48	1.00	1.00	1.00	1.00	1.00	0.19
80	723	613	815	0	993	232	270	602	176	0
0.42	0.24	0.06	0.86	0.00	0.26	0.29	0.59	1.77	0.84	0.00
96	723	613	1652	0	993	232	270	602	176	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	0.91	0.00	0.91	1.00	1.00	1.00	1.00	1.00
51.1	22.6	21.0	40.2	0.0	11.3	43.0	43.9	33.9	43.1	0.0
3.5	0.8	0.2	2.6	0.0	0.6	0.7	3.2	352.4	29.3	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.7	5.5	1.0	13.6	0.0	5.3	3.0	7.4	108.7	5.3	0.0
54.6	23.4	21.1	42.7	0.0	11.9	43.7	47.1	386.3	72.4	0.0
D	C	C	D	A	B	D	D	F	E	A
244				955		1291				346
27.4				34.5		326.8				52.1
C				C		F				D
1	2	3	4	6	7	8				
10.0	21.0	31.1	47.9	31.0	10.0	69.0				
5.0	5.0	5.0	5.0	5.0	5.0	5.0				
5.0	16.0	53.0	16.0	26.0	6.0	63.0				
7.0	18.0	23.5	9.0	12.4	4.1	10.1				
0.0	0.0	2.6	0.5	0.8	0.0	1.5				
Intersection Summary										
HCM 6th Ctrl Delay 169.1 F										
HCM 6th LOS										

2032 PM Peak BUILD Conditions  
Synchro 10 Report  
2032PB\_MIT.syn

Timings  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	204	490	151	164	610	336	94	217	301	209
Traffic Volume (vph)	204	490	151	164	610	336	94	217	301	209
Future Volume (vph)	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Turn Type	7	4	4	8	8	8	2	2	6	6
Protected Phases	4	4	4	8	8	8	2	2	6	6
Permitted Phases	7	4	4	8	8	8	2	2	6	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	13.0	70.0	70.0	57.0	57.0	57.0	40.0	40.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	Min	Min	Min	None	None	Min	Min
Act Effct Green (s)	62.0	62.0	49.0	49.0	49.0	38.0	38.0	38.0	38.0	38.0
Actuated g/C Ratio	0.56	0.56	0.56	0.45	0.45	0.45	0.35	0.35	0.35	0.35
v/c Ratio	1.11	0.55	0.19	0.58	0.87	0.45	0.64	0.66	1.85	0.70
Control Delay	104.8	15.6	2.0	12.6	15.6	1.2	51.3	35.3	428.0	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.8	15.6	2.0	12.6	15.6	1.2	51.3	35.3	428.0	36.5
LOS	F	B	A	B	B	A	D	D	F	D
Approach Delay		34.7							38.7	212.8
Approach LOS		C							D	F
Intersection Summary										
Cycle Length: 110										
Actuated Cycle Length: 110										
Offset: 7.7 (7%), Referenced to phase 4:EBTL and 7:EBL, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.85										
Intersection Signal Delay: 65.4										
Intersection Capacity Utilization 96.1%										
Analysis Period (min) 15										



2032 PM Peak BUILD Conditions  
Synchro 10 Report  
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HCM 6th Signalized Intersection Summary  
5: Dennis Chavez Bd. & 98th St.

Terry O. Brown, PE  
08/15/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	204	490	151	164	610	336	94	217	130	301	209	158
Traffic Volume (veh/h)	204	490	151	164	610	336	94	217	130	301	209	158
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Obs), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	No	No	No	No	No	No	No	No	No	No	No	No
Work Zone On Approach												
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	240	576	178	193	718	395	111	255	153	354	246	186
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	305	1096	929	352	798	676	151	346	207	171	312	236
Arrive On Green	0.12	0.59	0.59	0.43	0.43	0.43	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1767	1856	1572	704	1856	1572	949	1086	652	970	981	741
Grip Volume(v), veh/h	240	576	178	193	718	395	111	255	153	354	246	186
Grip Sat Flow(s), veh/h/ln	1767	1856	1572	704	1856	1572	949	1086	652	970	981	741
Q Serve(g, s), s	8.0	20.3	5.7	24.7	39.6	21.0	9.9	0.0	23.0	12.0	0.0	25.1
Cycle Q Clear(g, c), s	8.0	20.3	5.7	24.7	39.6	21.0	9.9	0.0	23.0	12.0	0.0	25.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.79	0.53	0.19	0.55	0.90	0.58	0.74	0.00	0.74	2.07	0.00	0.79
Avail Cap(c, a), veh/h	305	1096	929	382	877	743	151	0	553	171	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.43	0.43	0.43	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	13.3	10.4	26.7	29.2	23.9	51.2	0.0	33.4	51.3	0.0	34.1
Incr Delay (d2), s/veh	5.9	0.8	0.2	0.1	1.3	0.1	17.1	0.0	5.2	500.0	0.0	7.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	5.7	11.3	3.5	5.1	19.4	9.1	6.8	0.0	15.6	48.9	0.0	17.1
Unsig. Movement Delay, s/veh												
LnGrip Delay(d), s/veh	30.1	14.1	10.6	26.8	30.4	24.0	68.3	0.0	38.6	551.3	0.0	41.7
LnGrip LOS	C	B	B	C	C	C	E	A	D	F	A	D
Approach Vol, veh/h	994				1306			519		786		
Approach Delay, s/veh	17.3				27.9			44.9		271.2		
Approach LOS	B				C			D		F		
Timer - Assigned Phis	2			4			6	7	8			
Phis Duration (G+Y+Rc), s	40.0			70.0			40.0	17.7	52.3			
Change Period (Y+Rc), s	5.0			5.0			5.0	5.0	5.0			
Max Green Setting (Gmax), s	35.0			65.0			35.0	8.0	52.0			
Max Q Clear Time (g, c+11), s	37.0			22.3			37.0	10.0	41.6			
Green Ext Time (p, c), s	0.0			5.1			0.0	0.0	5.7			
Intersection Summary												
HCM 6th Ctrl Delay										80.5		
HCM 6th LOS										F		

2032 PM Peak BUILD Conditions  
Synchro 10 Report  
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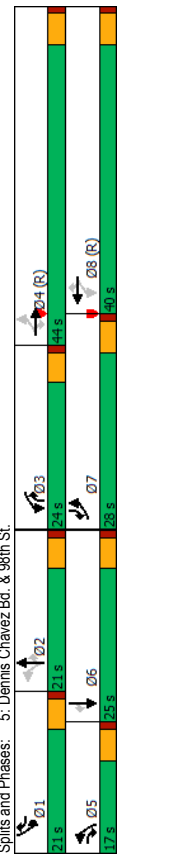
**Timings**  
**5: Dennis Chavez Bd. & 98th St.**

**HCM 6th Signalized Intersection Summary**  
**5: Dennis Chavez Bd. & 98th St.**

Terry O. Brown, PE  
 08/15/2019

Terry O. Brown, PE  
 08/15/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	204	490	151	164	610	336	94	217	130	301	209	158
Future Volume (vph)	204	490	151	164	610	336	94	217	130	301	209	158
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4	4	5	3	8	1	5	2	3	1	6	7
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	28.0	44.0	17.0	24.0	40.0	21.0	17.0	21.0	24.0	21.0	25.0	28.0
Total Split (%)	25.5%	40.0%	15.5%	21.8%	36.4%	19.1%	15.5%	19.1%	21.8%	19.1%	22.7%	25.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	C-Min	Min	Min	C-Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	62.7	49.7	64.9	59.2	48.0	68.9	23.2	13.1	29.3	16.0	18.9	36.9
Actuated g/C Ratio	0.57	0.45	0.59	0.54	0.44	0.63	0.21	0.12	0.27	0.15	0.17	0.34
v/c Ratio	0.85	0.36	0.18	0.40	0.47	0.37	0.38	0.61	0.18	0.72	0.41	0.29
Control Delay	14.2	21.9	1.9	18.0	28.6	0.6	31.4	52.3	4.9	53.6	42.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	21.9	1.9	18.0	28.6	0.6	31.4	52.3	4.9	53.6	42.3	5.2
LOS	B	C	A	B	C	A	C	D	A	D	D	A
Approach Delay	16.5				18.6				33.8			38.6
Approach LOS	B				B				C			D
Intersection Summary												
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 7.7 (7%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green												
Natural Cycle: 80												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.72												
Intersection Signal Delay: 24.6												
Intersection Capacity Utilization 59.4%												
Analysis Period (min) 15												



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	204	490	151	164	610	336	94	217	130	301	209	158
Future Volume (veh/h)	204	490	151	164	610	336	94	217	130	301	209	158
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	240	576	178	193	718	395	111	255	153	354	246	186
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	475	1838	937	499	1797	994	276	349	482	421	520	368
Arrive On Green	0.09	0.52	0.52	0.15	1.00	1.00	0.07	0.10	0.10	0.12	0.15	0.15
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	2768	3428	3526	1572
Gp Volume(v), veh/h	240	576	178	193	718	395	111	255	153	354	246	186
Gp Sat Flow(s), veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1384	1714	1763	1572
Q Serve(g, s)	7.0	10.3	5.7	5.9	0.0	0.0	6.1	7.7	5.3	11.1	7.0	11.3
Cycle Q Clear(g, c), s	7.0	10.3	5.7	5.9	0.0	0.0	6.1	7.7	5.3	11.1	7.0	11.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VIC Ratio(X)	0.51	0.31	0.19	0.39	0.40	0.40	0.40	0.73	0.32	0.84	0.47	0.51
Avail Cap(c, a), veh/h	691	1838	937	672	1797	994	337	513	610	499	641	422
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.33	0.15	0.15	0.15	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay(d), s/veh	10.4	15.1	10.1	10.3	0.0	0.0	40.1	48.1	39.7	47.2	43.0	36.6
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.1	0.1	0.2	0.9	2.9	0.4	10.8	0.7	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.2	6.0	3.2	2.8	0.0	0.1	4.9	6.4	3.3	9.1	5.6	7.9
Unsig. Movement Delay, s/veh	10.6	15.2	10.3	10.4	0.1	0.2	41.1	51.1	40.1	58.0	43.7	37.7
LnGp Delay(d), s/veh	B	B	B	B	A	A	D	D	D	E	D	D
LnGp LOS	B	B	B	B	A	A	D	D	D	E	D	D
Approach Vol, veh/h	994				1306				519			786
Approach Delay, s/veh	13.2				1.6				45.7			48.7
Approach LOS	B				A				D			D
Timer - Assigned Phis	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	15.9	13.3	62.4	13.2	21.2	14.6	61.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	16.0	16.0	19.0	39.0	12.0	20.0	23.0	35.0				
Max Q Clear Time (g, c+11), s	13.1	9.7	7.9	12.3	8.1	13.3	9.0	2.0				
Green Ext Time (p, c), s	0.4	1.2	0.4	4.9	0.1	1.2	0.6	7.6				
Intersection Summary												
HCM 6th Ctrl Delay	21.4											
HCM 6th LOS	C											

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Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
176	970	41	561	1361	1021	26	86	779	113
176	970	41	561	1361	1021	26	86	779	113
7	4	4	8	8	8	2	2	6	6
4	4	4	8	8	8	2	2	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
13.0	69.0	62.7%	50.9%	50.9%	50.9%	37.3%	37.3%	37.3%	37.3%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
64.0	64.0	51.0	51.0	51.0	36.0	36.0	36.0	36.0	36.0
0.58	0.58	0.46	0.46	0.46	0.33	0.33	0.33	0.33	0.33
0.89	0.99	0.05	9.33	1.75	1.05	0.80	7.25	0.45	0.45
73.5	47.9	5.4	3786.4	366.5	56.1	27.2	38.3	2839.8	25.6
73.5	47.9	5.4	3786.4	366.5	56.1	27.2	38.3	2839.8	25.6
50.2	910.2	F	F	F	F	F	F	2174.6	F
110	110	110	110	110	110	110	110	110	110
78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
75	75	75	75	75	75	75	75	75	75
9.33	9.33	9.33	9.33	9.33	9.33	9.33	9.33	9.33	9.33
167.9%	167.9%	167.9%	167.9%	167.9%	167.9%	167.9%	167.9%	167.9%	167.9%
15	15	15	15	15	15	15	15	15	15

6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
176	970	41	561	1361	1021	26	86	347	113
176	970	41	561	1361	1021	26	86	347	113
0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
193	1066	45	616	1496	1122	29	95	381	124
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
194	1080	915	299	860	729	289	106	425	109
0.15	1.00	1.00	0.46	0.46	0.46	0.33	0.33	0.33	0.33
1767	1856	1572	503	1856	1572	1106	324	1288	911
193	1066	45	616	1496	1122	29	95	381	124
7.9	0.0	0.0	51.0	51.0	51.0	2.4	0.0	30.7	5.3
7.9	0.0	0.0	51.0	51.0	51.0	16.1	0.0	30.7	5.3
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
194	1080	915	299	860	729	289	106	425	109
0.99	0.99	0.05	2.06	1.74	1.54	0.10	0.00	0.90	7.85
194	1080	915	299	860	729	289	106	425	109
0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
29.0	0.0	0.0	35.1	29.5	29.5	35.9	0.0	35.2	53.9
18.2	5.8	0.0	489.2	337.4	249.4	0.1	0.0	17.8	3102.3
4.0	2.4	0.0	82.9	160.2	106.3	1.2	0.0	20.8	158.4
47.2	5.8	0.0	524.3	366.9	278.9	36.1	0.0	53.1	3156.3
1304	A	A	F	F	F	D	A	D	F
11.7	3234	505	366.3	52.1	2417.3	505	52.1	2417.3	505
B	B	B	F	F	F	D	D	D	F
2	4	4	6	7	8	8	8	8	8
41.0	69.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
36.0	64.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
32.7	2.0	2.0	38.0	9.9	53.0	38.0	9.9	53.0	38.0
1.0	13.9	1.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0
638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6
F	F	F	F	F	F	F	F	F	F

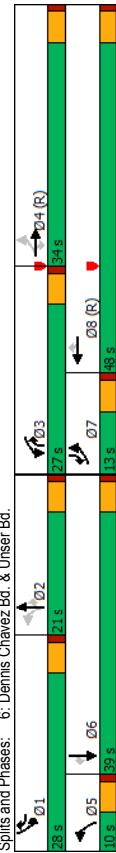
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Synchro 10 Report  
2032PBX.syn

Timings  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
08/15/2019

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
176	970	41	561	1361	1021	26	86	347	779	113	128
176	970	41	561	1361	1021	26	86	347	779	113	128
7	4	4	3	8	1	5	2	3	1	6	7
7	4	4	3	8	1	5	2	3	1	6	7
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0
13.0	34.0	34.0	27.0	48.0	28.0	10.0	21.0	27.0	28.0	39.0	13.0
11.8%	30.9%	30.9%	24.5%	43.6%	25.5%	9.1%	19.1%	24.5%	25.5%	35.5%	11.8%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Min	C-Min	C-Min	Min	C-Min	Min	Min	Min	Min	Min	Min	Min
47.4	32.8	25.8	44.1	72.1	13.4	8.4	39.2	23.0	26.4	45.9	
0.43	0.30	0.30	0.23	0.40	0.66	0.12	0.08	0.36	0.21	0.24	
0.85	1.02	0.07	0.77	1.07	0.98	0.17	0.36	0.36	1.21	0.15	
41.1	65.9	0.2	45.4	64.6	15.6	29.2	51.6	17.9	144.0	33.0	
41.1	65.9	0.2	45.4	64.6	15.6	29.2	51.6	17.9	144.0	33.0	
59.9	E	A	D	E	B	C	D	B	F	C	A
59.9	E	A	D	E	B	C	D	B	F	C	A
E	E	D	D	D	C	C	C	C	F	F	F
110	Intersection Summary										
110	Cycle Length: 110										
78.1 (71%)	Actuated Cycle Length: 110										
130	Offset: 78.1 (71%), Referenced to phase 4:EBTL and 8:WBT, Start of Green										
130	Natural Cycle: 130										
Actuated-Coordinated	Control Type: Actuated-Coordinated										
1.21	Maximum v/c Ratio: 1.21										
E	Intersection Signal Delay: 58.6										
89.6%	Intersection Capacity Utilization: 89.6%										
15	Analysis Period (min): 15										



HCM 6th Signalized Intersection Summary  
6: Dennis Chavez Bd. & Unser Bd.

Terry O. Brown, PE  
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EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
176	970	41	561	1361	1021	26	86	347	779	113	128
176	970	41	561	1361	1021	26	86	347	779	113	128
0	0	0	0	0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
193	1066	45	616	1496	1122	29	95	381	856	124	141
0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3	3	3	3	3	3	3	3	3	3	3	3
194	1003	447	666	1431	967	290	460	899	717	1037	577
0.15	0.57	0.57	0.32	0.68	0.68	0.05	0.13	0.13	0.21	0.29	0.29
1767	3526	1572	3428	3526	1572	1767	3526	2768	3428	3526	1572
193	1066	45	616	1496	1122	29	95	381	856	124	141
1767	1763	1572	1714	1763	1572	1767	1763	1384	1714	1763	1572
8.0	31.3	1.4	19.1	44.6	44.6	1.5	2.6	11.9	23.0	2.8	6.9
8.0	31.3	1.4	19.1	44.6	44.6	1.5	2.6	11.9	23.0	2.8	6.9
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
194	1003	447	666	1431	967	290	460	899	717	1037	577
0.99	1.06	0.10	0.93	1.05	1.16	0.10	0.21	0.42	1.19	0.12	0.24
194	1003	447	666	1431	967	290	460	899	717	1037	577
2.00	2.00	2.00	2.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
0.89	0.89	0.89	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
30.0	23.7	17.3	36.4	17.7	16.8	38.0	42.7	29.1	43.5	28.4	24.2
59.4	45.3	0.4	2.4	22.9	73.4	0.1	0.2	0.3	100.8	0.1	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.5	21.7	1.0	8.5	18.3	56.8	1.2	2.1	7.1	29.5	2.2	4.6
89.4	69.0	17.7	38.8	40.6	90.1	38.1	42.9	29.4	144.3	28.4	24.4
1304	F	F	B	D	F	D	D	C	F	C	C
70.3	E	E	E	E	E	E	E	E	F	F	F
3234	Approach Delay, s/veh										
57.4	Approach Delay, s/veh										
505	Approach LOS										
32.5	Approach LOS										
1	2	3	4	5	6	7	8				
28.0	19.4	26.4	36.3	10.0	37.4	13.0	49.6				
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
23.0	16.0	22.0	29.0	5.0	34.0	8.0	43.0				
25.0	13.9	21.1	33.3	3.5	8.9	10.0	46.6				
0.0	0.5	0.3	0.0	0.0	1.2	0.0	0.0				
68.8	Intersection Summary										
E	HCM 6th Ctrl Delay										
E	HCM 6th LOS										

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2032 PM Peak BUILD Conditions  
Synchro 10 Report  
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Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	60	1787	80	85	2910	26	66	1	69	5	1	128
Future Vol, veh/h	60	1787	80	85	2910	26	66	1	69	5	1	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	70
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	62	1842	82	88	3000	27	68	1	71	5	1	132

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3027	0	0	1924	0	0	5263	5210	1883	5233	5238	3014
Stage 1	-	-	-	-	-	-	2007	2007	-	3190	3190	-
Stage 2	-	-	-	-	-	-	3256	3203	-	2043	2048	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	111	-	-	304	-	-	0	0	88	0	0	~ 17
Stage 1	-	-	-	-	-	-	77	103	-	15	24	-
Stage 2	-	-	-	-	-	-	~ 13	24	-	73	98	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	111	-	-	304	-	-	0	88	0	0	0	~ 17
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	-	0	0	-	-
Stage 1	-	-	-	-	-	-	77	103	-	15	24	-
Stage 2	-	-	-	-	-	-	-	24	-	14	98	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	111	-	-	304	-	-	-	17
HCM Lane V/C Ratio	-	0.557	-	-	0.288	-	-	-	7.762
HCM Control Delay (s)	-	72.2	0	-	21.6	0	-	-	\$ 3486
HCM Lane LOS	-	F	A	-	C	A	-	-	F
HCM 95th %tile Q(veh)	-	2.6	-	-	1.2	-	-	-	17.2

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕↕	↕↕	↗
Traffic Vol, veh/h	48	116	84	1374	1115	39
Future Vol, veh/h	48	116	84	1374	1115	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	85	-	-	210
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	122	88	1446	1174	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2073	587	1215	0	-	0
Stage 1	1174	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	~ 46	450	564	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 39	450	564	-	-	-
Mov Cap-2 Maneuver	~ 39	-	-	-	-	-
Stage 1	214	-	-	-	-	-
Stage 2	355	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	129.9	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	564	-	39	450	-	-
HCM Lane V/C Ratio	0.157	-	1.296	0.271	-	-
HCM Control Delay (s)	12.6	-	\$ 405.1	16	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	5.1	1.1	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	97.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕↗		↵	↕↗	
Traffic Vol, veh/h	147	79	60	65	153	35	79	521	67	45	738	150
Future Vol, veh/h	147	79	60	65	153	35	79	521	67	45	738	150
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	158	85	65	70	165	38	85	560	72	48	794	161
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	22.5	19.4	60.8	168.5
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	72%	0%	100%	31%	0%	100%	59%	0%	100%
Vol Right, %	0%	0%	28%	0%	0%	69%	0%	0%	41%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	347	241	147	53	86	65	102	86	45	492
LT Vol	79	0	0	147	0	0	65	0	0	45	0
Through Vol	0	347	174	0	53	26	0	102	51	0	492
RT Vol	0	0	67	0	0	60	0	0	35	0	0
Lane Flow Rate	85	373	259	158	57	93	70	110	92	48	529
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.247	1.033	0.702	0.518	0.178	0.279	0.232	0.349	0.287	0.136	1.419
Departure Headway (Hd)	10.739	10.239	10.044	12.1	11.6	11.113	12.219	11.719	11.435	10.143	9.654
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	336	359	362	300	311	325	296	309	316	354	381
Service Time	8.439	7.939	7.744	9.8	9.3	8.813	9.919	9.419	9.135	7.905	7.405
HCM Lane V/C Ratio	0.253	1.039	0.715	0.527	0.183	0.286	0.236	0.356	0.291	0.136	1.388
HCM Control Delay	16.9	89.8	33.3	27.1	16.8	18.1	18.6	20.6	18.7	14.5	229.5
HCM Lane LOS	C	F	D	D	C	C	C	C	C	B	F
HCM 95th-tile Q	1	12.4	5.1	2.8	0.6	1.1	0.9	1.5	1.2	0.5	26.8

Intersection												
Intersection Delay, s/veh	58.8											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕		↵	↕	
Traffic Vol, veh/h	19	22	52	91	34	74	96	743	37	79	611	36
Future Vol, veh/h	19	22	52	91	34	74	96	743	37	79	611	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	23	54	95	35	77	100	774	39	82	636	38
Number of Lanes	1	1	0	1	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	15.6	17	82.9	46.7
HCM LOS	C	C	F	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	87%	0%	30%	0%	31%	0%	100%	85%
Vol Right, %	0%	0%	13%	0%	70%	0%	69%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	495	285	19	74	91	108	79	407	240
LT Vol	96	0	0	19	0	91	0	79	0	0
Through Vol	0	495	248	0	22	0	34	0	407	204
RT Vol	0	0	37	0	52	0	74	0	0	36
Lane Flow Rate	100	516	297	20	77	95	113	82	424	250
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.243	1.179	0.67	0.06	0.212	0.274	0.295	0.201	0.976	0.567
Departure Headway (Hd)	8.739	8.227	8.134	11.316	10.301	10.811	9.813	9.129	8.616	8.508
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	410	444	442	318	351	335	369	396	424	427
Service Time	6.515	6.003	5.91	9.016	8.001	8.511	7.513	6.829	6.316	6.208
HCM Lane V/C Ratio	0.244	1.162	0.672	0.063	0.219	0.284	0.306	0.207	1	0.585
HCM Control Delay	14.3	128.9	26	14.7	15.8	17.5	16.6	14.1	67.7	21.8
HCM Lane LOS	B	F	D	B	C	C	C	B	F	C
HCM 95th-tile Q	0.9	19.5	4.8	0.2	0.8	1.1	1.2	0.7	11.8	3.4

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	37	5	39	40	58	4	15	12	20	9	5
Future Vol, veh/h	2	37	5	39	40	58	4	15	12	20	9	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	41	6	43	44	64	4	17	13	22	10	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	47	0	0	218	242	44	225	213	76
Stage 1	-	-	-	-	-	-	48	48	-	162	162	-
Stage 2	-	-	-	-	-	-	170	194	-	63	51	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1476	-	-	1554	-	-	736	658	1023	728	683	982
Stage 1	-	-	-	-	-	-	963	853	-	838	762	-
Stage 2	-	-	-	-	-	-	830	738	-	945	850	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1476	-	-	1554	-	-	707	638	1023	688	662	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	707	638	-	688	662	-
Stage 1	-	-	-	-	-	-	962	852	-	837	739	-
Stage 2	-	-	-	-	-	-	790	716	-	914	849	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			2.1			10			10.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	758	1476	-	-	1554	-	-	712
HCM Lane V/C Ratio	0.045	0.002	-	-	0.028	-	-	0.053
HCM Control Delay (s)	10	7.4	0	-	7.4	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.2



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↕↕	↵	↵	↕↕	↵
Traffic Vol, veh/h	10	1	4	9	6	44	6	706	6	56	823	34
Future Vol, veh/h	10	1	4	9	6	44	6	706	6	56	823	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	290	-	-	130	-	-	110	-	45	110	-	350
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	1	4	10	7	49	7	793	7	63	925	38

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1465	1865	463	1396	1896	397	963	0	0	800	0	0
Stage 1	1051	1051	-	807	807	-	-	-	-	-	-	-
Stage 2	414	814	-	589	1089	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	89	71	543	100	68	600	704	-	-	812	-	-
Stage 1	241	300	-	339	390	-	-	-	-	-	-	-
Stage 2	584	387	-	459	288	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	74	65	543	92	62	600	704	-	-	812	-	-
Mov Cap-2 Maneuver	173	165	-	210	168	-	-	-	-	-	-	-
Stage 1	239	277	-	336	386	-	-	-	-	-	-	-
Stage 2	521	383	-	418	266	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	23.1		15.3		0.1			0.6		
HCM LOS	C		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	704	-	-	173	372	210	459	812	-	-
HCM Lane V/C Ratio	0.01	-	-	0.065	0.015	0.048	0.122	0.077	-	-
HCM Control Delay (s)	10.2	-	-	27.3	14.8	23	13.9	9.8	-	-
HCM Lane LOS	B	-	-	D	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.2	0.4	0.3	-	-

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	12	37	46	43	1
Future Vol, veh/h	1	12	37	46	43	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	14	44	54	51	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	98	0	-	0	87 71
Stage 1	-	-	-	-	71 -
Stage 2	-	-	-	-	16 -
Critical Hdwy	4.13	-	-	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.227	-	-	-	3.527 3.327
Pot Cap-1 Maneuver	1489	-	-	-	912 989
Stage 1	-	-	-	-	949 -
Stage 2	-	-	-	-	1004 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1489	-	-	-	911 989
Mov Cap-2 Maneuver	-	-	-	-	911 -
Stage 1	-	-	-	-	948 -
Stage 2	-	-	-	-	1004 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1489	-	-	-	913
HCM Lane V/C Ratio	0.001	-	-	-	0.057
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	11	1	13	100	110	1
Future Vol, veh/h	11	1	13	100	110	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	1	15	118	129	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	278	130	130	0	0
Stage 1	130	-	-	-	-
Stage 2	148	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	710	917	1449	-	-
Stage 1	894	-	-	-	-
Stage 2	877	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	702	917	1449	-	-
Mov Cap-2 Maneuver	702	-	-	-	-
Stage 1	884	-	-	-	-
Stage 2	877	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1449	-	716	-	-
HCM Lane V/C Ratio	0.011	-	0.02	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1	13	100	110	1
Future Vol, veh/h	11	1	13	100	110	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	1	15	118	129	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	278	130	130	0	-	0
Stage 1	130	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	710	917	1449	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	702	917	1449	-	-	-
Mov Cap-2 Maneuver	702	-	-	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1449	-	716	-	-
HCM Lane V/C Ratio	0.011	-	0.02	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

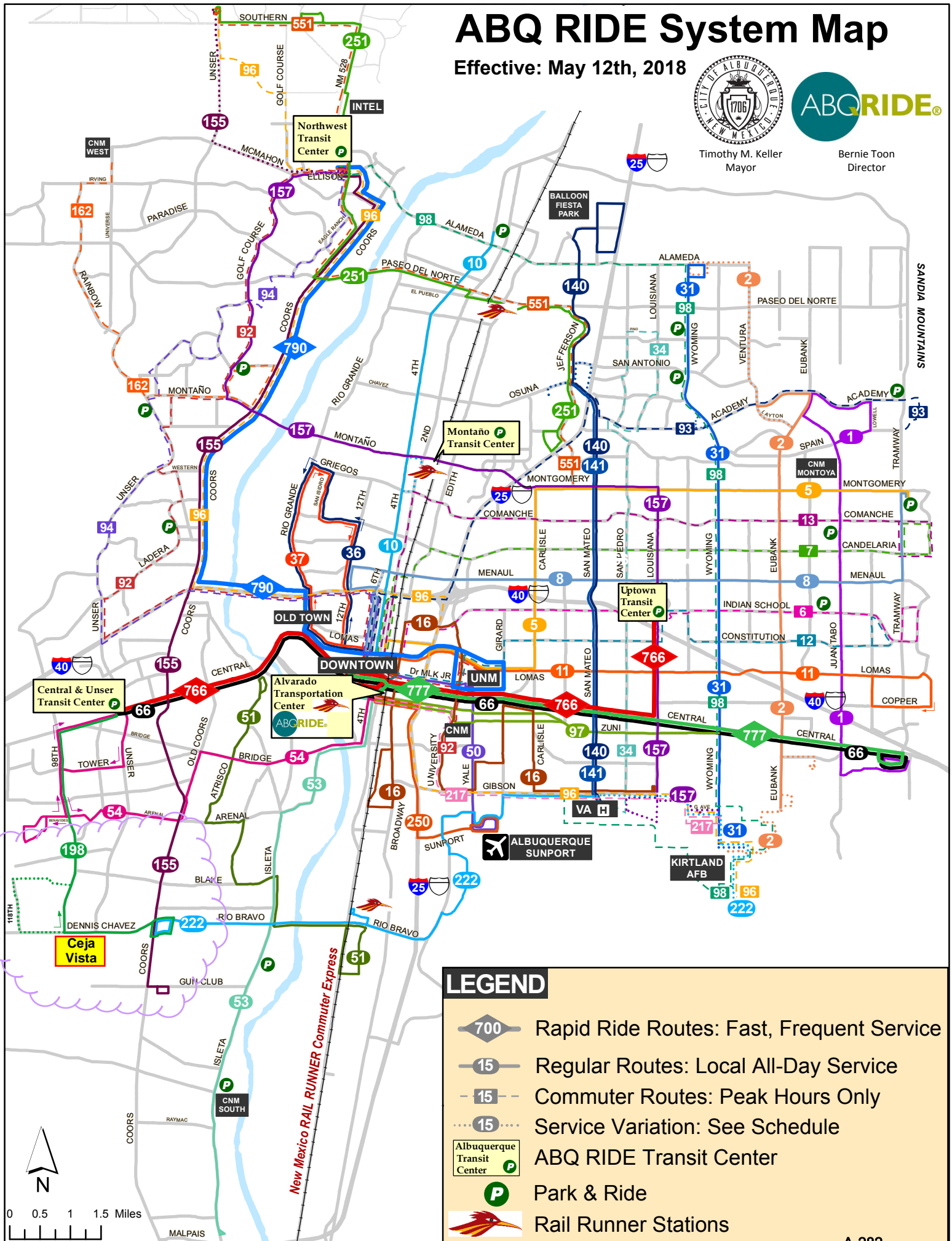
# ABQ RIDE System Map

Effective: May 12th, 2018



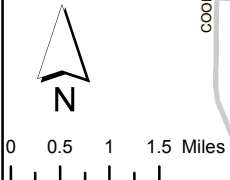
Timothy M. Keller  
Mayor

Bernie Toon  
Director



### LEGEND

- 700 Rapid Ride Routes: Fast, Frequent Service
- 15 Regular Routes: Local All-Day Service
- 15 Commuter Routes: Peak Hours Only
- 15 Service Variation: See Schedule
- Albuquerque Transit Center
- Park & Ride
- Rail Runner Stations



For more detailed information visit [www.myabqride.com](http://www.myabqride.com) or call 243-7433 (243-RIDE)

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Gun Club Rd.** Speed Limit (Gun Club Rd.)=**30** MPH  
 N-S Street: **Coors Blvd.** Speed Limit (Coors Blvd.)=**55** MPH  
**4/3/18**

Signalized

Begin Time	End Time	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	33	10	7	4	3	57	0	194	4	30	96	8
7:15 AM	7:30 AM	47	11	9	17	2	58	0	161	20	33	126	9
7:30 AM	7:45 AM	32	20	3	21	9	59	0	168	31	47	147	7
7:45 AM	8:00 AM	28	9	5	26	6	74	0	134	14	24	163	13
8:00 AM	8:15 AM	14	4	4	9	2	28	0	136	10	31	154	7
8:15 AM	8:30 AM	29	6	7	14	2	38	0	160	15	23	125	9
8:30 AM	8:45 AM	16	5	10	18	5	46	0	161	8	18	151	11
8:45 AM	9:00 AM	14	6	7	9	2	41	0	159	17	24	116	12
<b>AM Peak Hour Volumes</b>		<b>140</b>	<b>50</b>	<b>24</b>	<b>68</b>	<b>20</b>	<b>248</b>	<b>0</b>	<b>657</b>	<b>69</b>	<b>134</b>	<b>532</b>	<b>37</b>
% of Total Traffic		7.0%	2.5%	1.2%	3.4%	1.0%	12.4%	0	32.9%	3.5%	6.7%	26.7%	1.9%
% Directional		10.7%			16.8%				37.1%			35.2%	
AM Peak Hour Factor		Intersection <b>0.91</b>											
		<b>0.80</b>											

Begin Time	End Time	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	16	7	6	12	10	37	0	177	9	53	167	25
4:15 PM	4:30 PM	18	7	9	13	10	39	0	150	5	63	217	26
4:30 PM	4:45 PM	24	11	10	19	5	44	0	169	12	51	189	19
4:45 PM	5:00 PM	18	10	18	25	7	35	0	192	4	47	192	25
5:00 PM	5:15 PM	14	7	9	33	12	37	0	162	14	47	151	29
5:15 PM	5:30 PM	20	3	6	23	18	33	0	171	18	46	210	30
5:30 PM	5:45 PM	19	2	9	21	8	40	0	180	13	53	173	31
5:45 PM	6:00 PM	15	6	10	18	8	34	0	174	13	57	186	29
<b>PM Peak Hour Volumes</b>		<b>76</b>	<b>31</b>	<b>43</b>	<b>100</b>	<b>42</b>	<b>149</b>	<b>0</b>	<b>694</b>	<b>48</b>	<b>191</b>	<b>742</b>	<b>103</b>
% of Total Traffic		3.4%	1.4%	1.9%	4.4%	1.9%	6.6%	0	30.7%	2.1%	8.4%	32.8%	4.6%
% Directional		6.6%			12.9%				34.6%			45.8%	
PM Peak Hour Factor		Intersection <b>0.96</b>											
		<b>0.82</b>											

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Dennis Chavez Bd.** Speed Limit (Dennis Chavez Bd.)= **45** MPH  
 N-S Street: **Coors Bd.** Speed Limit (Coors Bd.)= **55** MPH  
**7/11/18**

Signalized

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)				
		L	T	R	L	T	R	L	T	R	L	T	R		
7:00 AM	7:15 AM	7	207	70	13	43	26	0	65	116	71	52	50	5	0
7:15 AM	7:30 AM	6	196	68	14	51	38	0	66	101	59	38	54	13	0
7:30 AM	7:45 AM	8	190	95	12	55	36	0	60	121	45	70	64	4	0
7:45 AM	8:00 AM	14	172	98	23	64	36	0	53	98	54	50	67	4	0
8:00 AM	8:15 AM	16	130	83	7	42	40	0	50	94	38	49	66	5	0
8:15 AM	8:30 AM	5	94	100	21	46	42	0	54	96	30	34	70	11	0
8:30 AM	8:45 AM	6	109	75	24	48	64	0	54	84	41	41	66	7	0
8:45 AM	9:00 AM	10	102	68	23	44	33	0	0	0	0	28	61	5	0
<b>AM Peak Hour Volumes</b>		<b>35</b>	<b>765</b>	<b>331</b>	<b>62</b>	<b>213</b>	<b>136</b>	<b>0</b>	<b>244</b>	<b>436</b>	<b>229</b>	<b>210</b>	<b>235</b>	<b>26</b>	<b>0</b>
% of Total Traffic		1.2%	26.1%	11.3%	2.1%	7.3%	4.6%	0	8.3%	14.9%	7.8%	7.2%	8.0%	0.9%	0
% Directional			38.6%			14.0%				31.1%			16.1%		
AM Peak Hour Factor			<b>0.97</b>			<b>0.84</b>				<b>0.90</b>			<b>0.85</b>		

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)				
		L	T	R	L	T	R	L	T	R	L	T	R		
4:00 PM	4:15 PM	14	68	79	61	124	62	0	72	111	28	50	133	18	0
4:15 PM	4:30 PM	14	65	60	48	141	100	0	91	146	32	39	132	18	0
4:30 PM	4:45 PM	22	68	84	37	142	86	0	80	104	20	48	133	30	0
4:45 PM	5:00 PM	20	67	97	42	169	91	0	91	157	23	43	138	18	0
5:00 PM	5:15 PM	18	61	87	39	156	102	0	86	135	20	43	133	33	1
5:15 PM	5:30 PM	18	47	92	30	164	104	0	86	149	24	54	126	21	0
5:30 PM	5:45 PM	15	64	78	37	180	84	0	70	160	16	47	149	27	0
5:45 PM	6:00 PM	16	77	90	42	149	112	1	86	164	27	48	146	26	0
<b>PM Peak Hour Volumes</b>		<b>67</b>	<b>249</b>	<b>347</b>	<b>148</b>	<b>649</b>	<b>402</b>	<b>1</b>	<b>328</b>	<b>608</b>	<b>87</b>	<b>192</b>	<b>554</b>	<b>107</b>	<b>1</b>
% of Total Traffic		1.8%	6.7%	9.3%	4.0%	17.3%	10.7%	0	8.8%	16.3%	2.3%	5.1%	14.8%	2.9%	0
% Directional			17.7%			32.1%				27.3%			22.8%		
PM Peak Hour Factor			<b>0.91</b>			<b>0.99</b>				<b>0.92</b>			<b>0.96</b>		

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Blake Rd.** Speed Limit (Blake Rd.)= **35** MPH  
 N-S Street: **Unser Bd.** Speed Limit (Unser Bd.)= **35** MPH  
**7/11/18**

Signalized

Begin Time	End Time	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	34	1	16	25	7	50	0	60	20	6	82	3
7:15 AM	7:30 AM	41	6	22	27	3	72	0	77	15	16	83	5
7:30 AM	7:45 AM	31	3	18	31	4	75	1	75	7	14	79	10
7:45 AM	8:00 AM	27	3	21	16	1	51	0	51	20	9	80	12
8:00 AM	8:15 AM	23	2	14	13	1	38	0	57	10	15	84	7
8:15 AM	8:30 AM	24	5	17	16	3	32	0	68	8	15	69	9
8:30 AM	8:45 AM	21	4	10	17	3	47	0	74	15	15	74	8
8:45 AM	9:00 AM	14	0	7	8	1	27	0	48	6	15	51	7
<b>AM Peak Hour Volumes</b>		<b>133</b>	<b>13</b>	<b>77</b>	<b>99</b>	<b>15</b>	<b>248</b>	<b>1</b>	<b>263</b>	<b>62</b>	<b>45</b>	<b>324</b>	<b>30</b>
% of Total Traffic		9.9%	1.0%	5.8%	7.4%	1.1%	18.5%	0.0%	19.7%	4.6%	3.4%	24.2%	2.2%
% Directional		16.7%	27.1%	0.82	Intersection	0.89	26.2%	29.8%	0.96				
AM Peak Hour Factor		0.81											

Begin Time	End Time	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (Unser Bd.)			Southbound (Unser Bd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	19	9	9	25	9	49	0	87	42	46	78	17
4:15 PM	4:30 PM	17	7	12	16	4	32	2	80	31	58	101	24
4:30 PM	4:45 PM	26	9	10	20	5	52	0	81	34	61	87	29
4:45 PM	5:00 PM	19	3	13	19	4	28	0	84	28	63	96	25
5:00 PM	5:15 PM	12	11	11	21	6	36	1	80	37	59	90	36
5:15 PM	5:30 PM	22	16	20	16	2	43	0	88	26	62	92	35
5:30 PM	5:45 PM	21	14	11	28	9	47	0	76	35	82	93	35
5:45 PM	6:00 PM	9	3	3	9	0	15	0	26	6	21	22	8
<b>PM Peak Hour Volumes</b>		<b>74</b>	<b>44</b>	<b>55</b>	<b>84</b>	<b>21</b>	<b>154</b>	<b>1</b>	<b>328</b>	<b>126</b>	<b>266</b>	<b>371</b>	<b>131</b>
% of Total Traffic		4.2%	2.5%	3.1%	4.7%	1.2%	8.7%	0.0%	18.5%	7.1%	15.0%	21.0%	7.4%
% Directional		9.8%	14.6%	0.77	Intersection	0.91	32.1%	43.4%	0.97				
PM Peak Hour Factor		0.75											



**Atrisco Heritage Academy High School Access  
Traffic Impact Study**

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**3.0 TRAFFIC VOLUMES**

Turning movement counts were collected on October 4, 2017. The data were collected from 6:15 to 7:45 am and from 2:00 to 3:15 pm. These time periods correspond with the AHAHS's bell times of 7:25 am and 2:25 pm. The counts were collected in 1-minute intervals and for analysis were aggregated into 5-minute intervals. School traffic reflects patterns of special events, with short, high volume concentrations; therefore, this data collection method was used. The existing (2017) AM and PM peak hour turning movement volumes are contained in Table 3.

**Table 3  
Existing (2017) AM and PM Peak Hour Turning Movement Volumes**

Intersection	Eastbound			Westbound			Northbound			Southbound		
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT
<i>AM Peak Hour (6:35 to 7:35)</i>												
Dennis Chavez @ 118 <sup>th</sup> St	6	73	139	485	128	16	37	103	401	126	311	72
Dennis Chavez @ 98 <sup>th</sup> St	186	441			399	105				433		226
118 <sup>th</sup> @ AHA Bus Access				0		37		504	0	33	897	
118 <sup>th</sup> @ AHA High Driveway				7		397		96	7	770	115	
<i>PM Peak Hour (2:15 to 3:15)</i>												
Dennis Chavez @ 118 <sup>th</sup> St	20	95	20	169	71	67	41	96	390	57	67	16
Dennis Chavez @ 98 <sup>th</sup> St	184	330			243	192				165		81
118 <sup>th</sup> @ AHA Bus Access				0		33		457	0	31	219	
118 <sup>th</sup> @ AHA High Driveway				5		399		49	2	139	83	

The site is existing and no growth is anticipated as a result of the additional access. Forecast volumes were not prepared for this assessment. The turning movement count sheets and raw counts are contained in Appendix B.

# High Mesa Consulting Group

6010 Midawy Park Blvd NE, Suite B

Albuquerque New Mexico 87109

(505) 345-4250

Counter: NH

File Name : 17-dcb-118th

Site Code : 0000222

Start Date : 10/4/2017

Page No : 1

## Groups Printed- Cars - Trucks - Buses

Start Time	Dennis Chavez Blvd Eastbound					Dennis Chavez Blvd Westbound					118th St SW Northbound					118th St SW Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:15 AM	0	6	0	0	6	12	0	0	0	12	2	7	13	0	22	10	8	3	0	21	61
06:20 AM	0	5	2	0	7	12	4	0	0	16	0	5	17	0	22	3	9	5	0	17	62
06:25 AM	1	6	4	0	11	7	10	3	0	20	1	6	9	1	17	9	6	3	0	18	66
06:30 AM	0	5	5	0	10	10	14	1	0	25	0	2	15	0	17	12	5	2	0	19	71
06:35 AM	0	7	3	0	10	20	14	3	0	37	0	0	12	1	13	12	5	5	0	22	82
06:40 AM	0	5	7	0	12	23	12	2	0	37	1	2	19	1	23	11	11	5	0	27	99
06:45 AM	0	3	9	0	12	41	9	0	0	50	3	2	26	0	31	6	15	6	0	27	120
06:50 AM	1	6	7	0	14	37	5	1	0	43	2	4	21	2	29	10	28	12	0	50	136
06:55 AM	0	4	17	0	21	73	5	2	0	80	2	10	29	3	44	14	35	2	0	51	196
<b>Total</b>	<b>2</b>	<b>47</b>	<b>54</b>	<b>0</b>	<b>103</b>	<b>235</b>	<b>73</b>	<b>12</b>	<b>0</b>	<b>320</b>	<b>11</b>	<b>38</b>	<b>161</b>	<b>8</b>	<b>218</b>	<b>87</b>	<b>122</b>	<b>43</b>	<b>0</b>	<b>252</b>	<b>893</b>
07:00 AM	0	5	15	0	20	51	6	2	0	59	2	17	48	5	72	5	48	5	0	58	209
07:05 AM	0	5	20	0	25	39	15	0	0	54	4	16	39	7	66	10	47	7	0	64	209
07:10 AM	0	8	30	0	38	79	20	2	0	101	3	9	34	6	52	13	41	3	0	57	248
07:15 AM	2	11	5	0	18	71	10	0	0	81	2	11	49	6	68	8	52	9	0	69	236
07:20 AM	1	4	14	0	19	28	8	0	0	36	11	11	48	0	70	19	20	5	0	44	169
07:25 AM	1	10	7	0	18	9	12	1	0	22	7	16	48	0	71	7	7	7	0	21	132
07:30 AM	1	5	5	0	11	14	12	3	0	29	0	5	28	0	33	11	2	6	0	19	92
07:35 AM	2	6	6	0	14	16	10	2	0	28	1	0	14	3	18	14	3	0	0	17	77
07:40 AM	0	10	6	0	16	15	4	2	0	21	0	1	5	0	6	4	0	1	0	5	48
*** BREAK ***																					
<b>Total</b>	<b>7</b>	<b>64</b>	<b>108</b>	<b>0</b>	<b>179</b>	<b>322</b>	<b>97</b>	<b>12</b>	<b>0</b>	<b>431</b>	<b>30</b>	<b>86</b>	<b>313</b>	<b>27</b>	<b>456</b>	<b>91</b>	<b>220</b>	<b>43</b>	<b>0</b>	<b>354</b>	<b>1420</b>
*** BREAK ***																					
01:45 PM	1	11	2	0	14	9	6	6	0	21	1	1	8	1	11	2	1	0	0	3	49
01:50 PM	2	4	1	0	7	12	6	6	0	24	0	0	10	0	10	3	1	0	0	4	45
01:55 PM	1	2	0	0	3	7	7	4	0	18	1	2	6	0	9	3	3	0	0	6	36
<b>Total</b>	<b>4</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>24</b>	<b>28</b>	<b>19</b>	<b>16</b>	<b>0</b>	<b>63</b>	<b>2</b>	<b>3</b>	<b>24</b>	<b>1</b>	<b>30</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>130</b>
02:00 PM	2	6	2	0	10	17	5	4	0	26	0	0	5	0	5	2	3	0	0	5	46
02:05 PM	0	11	2	0	13	24	7	5	0	36	3	0	5	0	8	2	5	0	0	7	64
02:10 PM	1	10	1	0	12	23	7	7	0	37	1	2	4	0	7	7	3	1	0	11	67
02:15 PM	1	6	2	0	9	8	5	4	0	17	1	1	7	0	9	5	7	0	0	12	47
02:20 PM	2	11	2	0	15	28	6	1	0	35	0	5	22	0	27	2	13	0	0	15	92
02:25 PM	2	9	3	0	14	11	4	7	0	22	4	3	33	2	42	7	7	3	0	17	95
02:30 PM	2	6	0	0	8	10	11	12	0	33	5	5	46	5	61	5	4	1	0	10	112
02:35 PM	0	9	5	0	14	19	5	6	4	34	7	22	58	38	125	3	2	2	0	7	180
02:40 PM	1	7	0	0	8	10	8	5	8	31	7	26	57	13	103	7	1	2	0	10	152
02:45 PM	1	9	1	0	11	12	3	9	0	24	4	15	48	0	67	7	0	2	0	9	111
02:50 PM	4	6	1	0	11	12	4	2	0	18	6	4	25	2	37	3	4	4	0	11	77
02:55 PM	2	10	2	0	14	16	7	5	0	28	3	3	19	2	27	5	6	0	0	11	80
<b>Total</b>	<b>18</b>	<b>100</b>	<b>21</b>	<b>0</b>	<b>139</b>	<b>190</b>	<b>72</b>	<b>67</b>	<b>12</b>	<b>341</b>	<b>41</b>	<b>86</b>	<b>329</b>	<b>62</b>	<b>518</b>	<b>55</b>	<b>55</b>	<b>15</b>	<b>0</b>	<b>125</b>	<b>1123</b>
03:00 PM	1	3	3	0	7	12	7	6	0	25	2	3	24	0	29	3	7	1	0	11	72
03:05 PM	1	8	0	0	9	10	8	5	0	23	1	6	11	0	18	7	8	0	0	15	65
03:10 PM	3	11	1	0	15	21	3	5	0	29	1	3	10	0	14	3	8	1	0	12	70
*** BREAK ***																					
<b>Grand Total</b>	<b>36</b>	<b>250</b>	<b>190</b>	<b>0</b>	<b>476</b>	<b>818</b>	<b>279</b>	<b>123</b>	<b>12</b>	<b>1232</b>	<b>88</b>	<b>225</b>	<b>872</b>	<b>98</b>	<b>1283</b>	<b>254</b>	<b>425</b>	<b>103</b>	<b>0</b>	<b>782</b>	<b>3773</b>
<b>Apprch %</b>	<b>7.6</b>	<b>52.5</b>	<b>39.9</b>	<b>0</b>		<b>66.4</b>	<b>22.6</b>	<b>10</b>	<b>1</b>		<b>6.9</b>	<b>17.5</b>	<b>68</b>	<b>7.6</b>		<b>32.5</b>	<b>54.3</b>	<b>13.2</b>	<b>0</b>		
<b>Total %</b>	<b>1</b>	<b>6.6</b>	<b>5</b>	<b>0</b>	<b>12.6</b>	<b>21.7</b>	<b>7.4</b>	<b>3.3</b>	<b>0.3</b>	<b>32.7</b>	<b>2.3</b>	<b>6</b>	<b>23.1</b>	<b>2.6</b>	<b>34</b>	<b>6.7</b>	<b>11.3</b>	<b>2.7</b>	<b>0</b>	<b>20.7</b>	
<b>Cars</b>	<b>36</b>	<b>232</b>	<b>186</b>	<b>0</b>	<b>454</b>	<b>788</b>	<b>263</b>	<b>123</b>	<b>12</b>	<b>1186</b>	<b>85</b>	<b>206</b>	<b>834</b>	<b>95</b>	<b>1220</b>	<b>250</b>	<b>403</b>	<b>103</b>	<b>0</b>	<b>756</b>	<b>3616</b>
<b>% Cars</b>	<b>100</b>	<b>92.8</b>	<b>97.9</b>	<b>0</b>	<b>95.4</b>	<b>96.3</b>	<b>94.3</b>	<b>100</b>	<b>100</b>	<b>96.3</b>	<b>96.6</b>	<b>91.6</b>	<b>95.6</b>	<b>96.9</b>	<b>95.1</b>	<b>98.4</b>	<b>94.8</b>	<b>100</b>	<b>0</b>	<b>96.7</b>	<b>95.8</b>
<b>Trucks</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>3</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>
<b>% Trucks</b>	<b>0</b>	<b>7.2</b>	<b>0</b>	<b>0</b>	<b>3.8</b>	<b>0.4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1.4</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>3.1</b>	<b>0.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.1</b>
<b>Buses</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>27</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>3</b>	<b>19</b>	<b>35</b>	<b>0</b>	<b>57</b>	<b>4</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>116</b>
<b>% Buses</b>	<b>0</b>	<b>0</b>	<b>2.1</b>	<b>0</b>	<b>0.8</b>	<b>3.3</b>	<b>0.7</b>	<b>0</b>	<b>0</b>	<b>2.4</b>	<b>3.4</b>	<b>8.4</b>	<b>4</b>	<b>0</b>	<b>4.4</b>	<b>1.6</b>	<b>5.2</b>	<b>0</b>	<b>0</b>	<b>3.3</b>	<b>3.1</b>

# High Mesa Consulting Group

6010 Midaway Park Blvd NE, Suite B

Albuquerque New Mexico 87109

(505) 345-4250

File Name : 17-dcb-118th

Site Code : 00000222

Start Date : 10/4/2017

Page No : 2

Start Time	Dennis Chavez Blvd Eastbound					Dennis Chavez Blvd Westbound					118th St SW Northbound					118th St SW Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 6:15:00 AM to 11:55:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:35:00 AM																					
6:35:00 AM	0	7	3	0	10	20	14	3	0	37	0	0	12	1	13	12	5	5	0	22	82
6:40:00 AM	0	5	7	0	12	23	12	2	0	37	1	2	19	1	23	11	11	5	0	27	99
6:45:00 AM	0	3	9	0	12	41	9	0	0	50	3	2	26	0	31	6	15	6	0	27	120
6:50:00 AM	1	6	7	0	14	37	5	1	0	43	2	4	21	2	29	10	28	12	0	50	136
6:55:00 AM	0	4	17	0	21	73	5	2	0	80	2	10	29	3	44	14	35	2	0	51	196
7:00:00 AM	0	5	15	0	20	51	6	2	0	59	2	17	48	5	72	5	48	5	0	58	209
7:05:00 AM	0	5	20	0	25	39	15	0	0	54	4	16	39	7	66	10	47	7	0	64	209
7:10:00 AM	0	8	30	0	38	79	20	2	0	101	3	9	34	6	52	13	41	3	0	57	248
7:15:00 AM	2	11	5	0	18	71	10	0	0	81	2	11	49	6	68	8	52	9	0	69	236
7:20:00 AM	1	4	14	0	19	28	8	0	0	36	11	11	48	0	70	19	20	5	0	44	169
7:25:00 AM	1	10	7	0	18	9	12	1	0	22	7	16	48	0	71	7	7	7	0	21	132
7:30:00 AM	1	5	5	0	11	14	12	3	0	29	0	5	28	0	33	11	2	6	0	19	92
<b>Total Volume</b>	<b>6</b>	<b>73</b>	<b>139</b>	<b>0</b>	<b>218</b>	<b>485</b>	<b>128</b>	<b>16</b>	<b>0</b>	<b>629</b>	<b>37</b>	<b>103</b>	<b>401</b>	<b>31</b>	<b>572</b>	<b>126</b>	<b>311</b>	<b>72</b>	<b>0</b>	<b>509</b>	<b>1928</b>
% App. Total	2.8	33.5	63.8	0		77.1	20.3	2.5	0		6.5	18	70.1	5.4		24.8	61.1	14.1	0		
PHF	.250	.553	.386	.000	.478	.512	.533	.444	.000	.519	.280	.505	.682	.369	.662	.553	.498	.500	.000	.615	.648
Cars	6	72	137	0	215	470	122	16	0	608	37	94	380	30	541	124	300	72	0	496	1860
% Cars	100	98.6	98.6	0	98.6	96.9	95.3	100	0	96.7	100	91.3	94.8	96.8	94.6	98.4	96.5	100	0	97.4	96.5
Trucks	0	1	0	0	1	1	6	0	0	7	0	0	1	1	2	0	0	0	0	0	10
% Trucks	0	1.4	0	0	0.5	0.2	4.7	0	0	1.1	0	0	0.2	3.2	0.3	0	0	0	0	0	0.5
Buses	0	0	2	0	2	14	0	0	0	14	0	9	20	0	29	2	11	0	0	13	58
% Buses	0	0	1.4	0	0.9	2.9	0	0	0	2.2	0	8.7	5.0	0	5.1	1.6	3.5	0	0	2.6	3.0

Peak Hour Analysis From 12:00:00 PM to 3:15:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 2:15:00 PM

2:15:00 PM	1	6	2	0	9	8	5	4	0	17	1	1	7	0	9	5	7	0	0	12	47
2:20:00 PM	2	11	2	0	15	28	6	1	0	35	0	5	22	0	27	2	13	0	0	15	92
2:25:00 PM	2	9	3	0	14	11	4	7	0	22	4	3	33	2	42	7	7	3	0	17	95
2:30:00 PM	2	6	0	0	8	10	11	12	0	33	5	5	46	5	61	5	4	1	0	10	112
2:35:00 PM	0	9	5	0	14	19	5	6	4	34	7	22	58	38	125	3	2	2	0	7	180
2:40:00 PM	1	7	0	0	8	10	8	5	8	31	7	26	57	13	103	7	1	2	0	10	152
2:45:00 PM	1	9	1	0	11	12	3	9	0	24	4	15	48	0	67	7	0	2	0	9	111
2:50:00 PM	4	6	1	0	11	12	4	2	0	18	6	4	25	2	37	3	4	4	0	11	77
2:55:00 PM	2	10	2	0	14	16	7	5	0	28	3	3	19	2	27	5	6	0	0	11	80
3:00:00 PM	1	3	3	0	7	12	7	6	0	25	2	3	24	0	29	3	7	1	0	11	72
3:05:00 PM	1	8	0	0	9	10	8	5	0	23	1	6	11	0	18	7	8	0	0	15	65
3:10:00 PM	3	11	1	0	15	21	3	5	0	29	1	3	10	0	14	3	8	1	0	12	70
<b>Total Volume</b>	<b>20</b>	<b>95</b>	<b>20</b>	<b>0</b>	<b>135</b>	<b>169</b>	<b>71</b>	<b>67</b>	<b>12</b>	<b>319</b>	<b>41</b>	<b>96</b>	<b>360</b>	<b>62</b>	<b>559</b>	<b>57</b>	<b>67</b>	<b>16</b>	<b>0</b>	<b>140</b>	<b>1153</b>
% App. Total	14.8	70.4	14.8	0		53	22.3	21	3.8		7.3	17.2	64.4	11.1		40.7	47.9	11.4	0		
PHF	.417	.720	.333	.000	.750	.503	.538	.465	.125	.760	.488	.308	.517	.136	.373	.679	.429	.333	.000	.686	.534
Cars	20	90	18	0	128	157	67	67	12	303	38	86	343	60	527	56	56	16	0	128	1086
% Cars	100	94.7	90.0	0	94.8	92.9	94.4	100	100	95.0	92.7	89.6	95.3	96.8	94.3	98.2	83.6	100	0	91.4	94.2
Trucks	0	5	0	0	5	2	4	0	0	6	0	0	2	2	4	0	0	0	0	0	15
% Trucks	0	5.3	0	0	3.7	1.2	5.6	0	0	1.9	0	0	0.6	3.2	0.7	0	0	0	0	0	1.3
Buses	0	0	2	0	2	10	0	0	0	10	3	10	15	0	28	1	11	0	0	12	52
% Buses	0	0	10.0	0	1.5	5.9	0	0	0	3.1	7.3	10.4	4.2	0	5.0	1.8	16.4	0	0	8.6	4.5

**Cleland Counts**  
**1441 Camino Cerritos S.E**  
**Albuquerque New Mexico 87123**  
**(505) 414-0465**

Counter: CS

File Name : 17-dcb-98th  
 Site Code : 00000111  
 Start Date : 10/4/2017  
 Page No : 1

**Groups Printed- Cars - Trucks - Buses**

Start Time	Dennis Chavez Blvd Eastbound					Dennis Chavez Blvd Westbound					Northbound					98th St Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:15 AM	6	16	6	0	28	0	7	6	0	13	0	0	0	0	0	19	0	8	0	27	68
06:20 AM	9	17	0	0	26	0	14	7	0	21	0	0	0	0	0	22	0	4	0	26	73
06:25 AM	3	22	0	0	25	0	19	12	0	31	0	0	0	0	0	21	0	7	0	28	84
06:30 AM	7	25	0	0	32	0	20	8	0	28	0	0	0	0	0	33	0	3	0	36	96
06:35 AM	2	28	0	0	30	0	28	12	0	40	0	0	0	0	0	23	1	12	0	36	106
06:40 AM	3	33	2	0	38	0	34	9	0	43	0	0	0	0	0	28	0	10	0	38	119
06:45 AM	11	25	0	0	36	0	29	5	0	34	0	0	0	0	0	37	1	21	1	60	130
06:50 AM	4	34	0	0	38	0	42	6	0	48	0	0	0	0	0	39	0	26	0	65	151
06:55 AM	7	37	0	0	44	0	45	14	0	59	0	0	0	0	0	31	0	25	0	56	159
Total	52	237	8	0	297	0	238	79	0	317	0	0	0	0	0	253	2	116	1	372	986
07:00 AM	19	43	0	0	62	0	51	6	0	57	0	0	0	0	0	39	0	24	0	63	182
07:05 AM	23	38	0	0	61	0	34	5	0	39	0	0	0	0	0	45	0	29	0	74	174
07:10 AM	23	33	0	0	56	0	37	9	0	46	0	0	0	0	0	33	0	36	0	69	171
07:15 AM	26	49	0	0	75	0	41	6	0	47	0	0	0	0	0	33	0	20	0	53	175
07:20 AM	27	45	0	0	72	0	17	12	0	29	0	0	0	0	0	48	0	12	0	60	161
07:25 AM	28	37	0	0	65	0	14	8	1	23	0	0	0	0	0	40	0	4	0	44	132
07:30 AM	13	39	0	0	52	0	27	13	0	40	0	0	0	0	0	37	0	7	0	44	136
07:35 AM	3	31	0	0	34	0	15	16	0	31	0	0	0	0	0	25	0	7	0	32	97
07:40 AM	6	13	0	0	19	0	8	12	0	20	0	0	0	0	0	31	0	11	0	42	81
*** BREAK ***																					
Total	168	328	0	0	496	0	244	87	1	332	0	0	0	0	0	331	0	150	0	481	1309
*** BREAK ***																					
02:00 PM	2	9	0	0	11	0	27	13	0	40	0	1	0	0	1	6	0	2	0	8	60
02:05 PM	2	16	0	0	18	0	19	15	0	34	0	0	0	0	0	10	0	11	1	22	74
02:10 PM	5	12	0	0	17	0	28	20	0	48	0	0	0	0	0	21	0	10	0	31	96
02:15 PM	1	16	0	0	17	0	23	19	0	42	0	0	0	0	0	13	0	10	0	23	82
02:20 PM	0	28	0	0	28	0	23	11	0	34	0	0	0	0	0	14	0	9	0	23	85
02:25 PM	14	31	0	0	45	0	22	16	0	38	0	0	0	0	0	10	0	3	0	13	96
02:30 PM	18	44	0	0	62	0	29	11	0	40	0	0	0	0	0	13	0	6	0	19	121
02:35 PM	30	44	0	0	74	0	23	18	2	43	0	0	0	0	0	15	0	7	0	22	139
02:40 PM	41	41	0	0	82	0	19	7	0	26	0	0	0	0	0	9	0	7	0	16	124
02:45 PM	28	33	0	0	61	0	18	20	0	38	0	0	0	0	0	15	0	5	0	20	119
02:50 PM	25	23	0	0	48	0	16	21	0	37	0	0	0	0	0	8	0	6	0	14	99
02:55 PM	17	26	0	0	43	0	21	20	0	41	0	0	0	0	0	12	0	6	0	18	102
Total	183	323	0	0	506	0	268	191	2	461	0	1	0	0	1	146	0	82	1	229	1197
03:00 PM	1	11	0	0	12	0	10	8	0	18	0	0	0	0	0	8	0	4	0	12	42
03:05 PM	4	21	0	0	25	0	11	21	1	33	0	0	0	0	0	27	0	8	0	35	93
03:10 PM	5	16	0	0	21	0	23	20	0	43	0	0	0	0	0	18	0	10	0	28	92
03:15 PM	8	18	0	0	26	0	11	15	0	26	0	0	0	0	0	14	0	3	0	17	69
Grand Total	421	954	8	0	1383	0	805	421	4	1230	0	1	0	0	1	797	2	373	2	1174	3788
Apprch %	30.4	69	0.6	0		0	65.4	34.2	0.3		0	100	0	0		67.9	0.2	31.8	0.2		
Total %	11.1	25.2	0.2	0	36.5	0	21.3	11.1	0.1	32.5	0	0	0	0	0	21	0.1	9.8	0.1	31	
Cars	393	920	8	0	1321	0	769	403	4	1176	0	1	0	0	1	775	1	356	1	1133	3631
% Cars	93.3	96.4	100	0	95.5	0	95.5	95.7	100	95.6	0	100	0	0	100	97.2	50	95.4	50	96.5	95.9
Trucks	1	14	0	0	15	0	16	2	0	18	0	0	0	0	0	9	0	0	0	9	42
% Trucks	0.2	1.5	0	0	1.1	0	2	0.5	0	1.5	0	0	0	0	0	1.1	0	0	0	0.8	1.1
Buses	27	20	0	0	47	0	20	16	0	36	0	0	0	0	0	13	1	17	1	32	115
% Buses	6.4	2.1	0	0	3.4	0	2.5	3.8	0	2.9	0	0	0	0	0	1.6	50	4.6	50	2.7	3

**Cleland Counts**  
**1441 Camino Cerritos S.E**  
**Albuquerque New Mexico 87123**  
**(505) 414-0465**

File Name : 17-dcb-98th  
 Site Code : 00000111  
 Start Date : 10/4/2017  
 Page No : 2

Start Time	Dennis Chavez Blvd Eastbound					Dennis Chavez Blvd Westbound					Northbound					98th St Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 6:15:00 AM to 11:55:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:35:00 AM																					
6:35:00 AM	2	28	0	0	30	0	28	12	0	40	0	0	0	0	0	23	1	12	0	36	106
6:40:00 AM	3	33	2	0	38	0	34	9	0	43	0	0	0	0	0	28	0	10	0	38	119
6:45:00 AM	11	25	0	0	36	0	29	5	0	34	0	0	0	0	0	37	1	21	1	60	130
6:50:00 AM	4	34	0	0	38	0	42	6	0	48	0	0	0	0	0	39	0	26	0	65	151
6:55:00 AM	7	37	0	0	44	0	45	14	0	59	0	0	0	0	0	31	0	25	0	56	159
7:00:00 AM	19	43	0	0	62	0	51	6	0	57	0	0	0	0	0	39	0	24	0	63	182
7:05:00 AM	23	38	0	0	61	0	34	5	0	39	0	0	0	0	0	45	0	29	0	74	174
7:10:00 AM	23	33	0	0	56	0	37	9	0	46	0	0	0	0	0	33	0	36	0	69	171
7:15:00 AM	26	49	0	0	75	0	41	6	0	47	0	0	0	0	0	33	0	20	0	53	175
7:20:00 AM	27	45	0	0	72	0	17	12	0	29	0	0	0	0	0	48	0	12	0	60	161
7:25:00 AM	28	37	0	0	65	0	14	8	1	23	0	0	0	0	0	40	0	4	0	44	132
7:30:00 AM	13	39	0	0	52	0	27	13	0	40	0	0	0	0	0	37	0	7	0	44	136
<b>Total Volume</b>	<b>186</b>	<b>441</b>	<b>2</b>	<b>0</b>	<b>629</b>	<b>0</b>	<b>399</b>	<b>105</b>	<b>1</b>	<b>505</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>433</b>	<b>2</b>	<b>226</b>	<b>1</b>	<b>662</b>	<b>1796</b>
% App. Total	29.6	70.1	0.3	0		0	79	20.8	0.2		0	0	0	0	0	65.4	0.3	34.1	0.2		
PHF	.554	.750	.083	.000	.699	.000	.652	.625	.083	.713	.000	.000	.000	.000	.000	.752	.167	.523	.083	.745	.822
Cars	174	426	2	0	602	0	389	97	1	487	0	0	0	0	0	424	1	215	0	640	1729
% Cars	93.5	96.6	100	0	95.7	0	97.5	92.4	100	96.4	0	0	0	0	0	97.9	50.0	95.1	0	96.7	96.3
Trucks	0	2	0	0	2	0	6	2	0	8	0	0	0	0	0	4	0	0	0	4	14
% Trucks	0	0.5	0	0	0.3	0	1.5	1.9	0	1.6	0	0	0	0	0	0.9	0	0	0	0.6	0.8
Buses	12	13	0	0	25	0	4	6	0	10	0	0	0	0	0	5	1	11	1	18	53
% Buses	6.5	2.9	0	0	4.0	0	1.0	5.7	0	2.0	0	0	0	0	0	1.2	50.0	4.9	100	2.7	3.0

Peak Hour Analysis From 12:00:00 PM to 3:15:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 2:10:00 PM																					
2:10:00 PM	5	12	0	0	17	0	28	20	0	48	0	0	0	0	0	21	0	10	0	31	96
2:15:00 PM	1	16	0	0	17	0	23	19	0	42	0	0	0	0	0	13	0	10	0	23	82
2:20:00 PM	0	28	0	0	28	0	23	11	0	34	0	0	0	0	0	14	0	9	0	23	85
2:25:00 PM	14	31	0	0	45	0	22	16	0	38	0	0	0	0	0	10	0	3	0	13	96
2:30:00 PM	18	44	0	0	62	0	29	11	0	40	0	0	0	0	0	13	0	6	0	19	121
2:35:00 PM	30	44	0	0	74	0	23	18	2	43	0	0	0	0	0	15	0	7	0	22	139
2:40:00 PM	41	41	0	0	82	0	19	7	0	26	0	0	0	0	0	9	0	7	0	16	124
2:45:00 PM	28	33	0	0	61	0	18	20	0	38	0	0	0	0	0	15	0	5	0	20	119
2:50:00 PM	25	23	0	0	48	0	16	21	0	37	0	0	0	0	0	8	0	6	0	14	99
2:55:00 PM	17	26	0	0	43	0	21	20	0	41	0	0	0	0	0	12	0	6	0	18	102
3:00:00 PM	1	11	0	0	12	0	10	8	0	18	0	0	0	0	0	8	0	4	0	12	42
3:05:00 PM	4	21	0	0	25	0	11	21	1	33	0	0	0	0	0	27	0	8	0	35	93
<b>Total Volume</b>	<b>184</b>	<b>330</b>	<b>0</b>	<b>0</b>	<b>514</b>	<b>0</b>	<b>243</b>	<b>192</b>	<b>3</b>	<b>438</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>165</b>	<b>0</b>	<b>81</b>	<b>0</b>	<b>246</b>	<b>1198</b>
% App. Total	35.8	64.2	0	0		0	55.5	43.8	0.7		0	0	0	0	0	67.1	0	32.9	0		
PHF	.374	.625	.000	.000	.522	.000	.698	.762	.125	.760	.000	.000	.000	.000	.000	.509	.000	.675	.000	.586	.718
Cars	169	320	0	0	489	0	226	190	3	419	0	0	0	0	0	154	0	77	0	231	1139
% Cars	91.8	97.0	0	0	95.1	0	93.0	99.0	100	95.7	0	0	0	0	0	93.3	0	95.1	0	93.9	95.1
Trucks	0	5	0	0	5	0	5	0	0	5	0	0	0	0	0	4	0	0	0	4	14
% Trucks	0	1.5	0	0	1.0	0	2.1	0	0	1.1	0	0	0	0	0	2.4	0	0	0	1.6	1.2
Buses	15	5	0	0	20	0	12	2	0	14	0	0	0	0	0	7	0	4	0	11	45
% Buses	8.2	1.5	0	0	3.9	0	4.9	1.0	0	3.2	0	0	0	0	0	4.2	0	4.9	0	4.5	3.8

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Dennis Chavez Bd.** Speed Limit (Dennis Chavez Bd.)=**45** MPH  
 N-S Street: **Unser Blvd.** Speed Limit (Unser Blvd.)=**40** MPH  
**4/3/18**

Signalized

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	27	195	0	0	127	57	0	0	0	133	0	50
7:15 AM	7:30 AM	26	200	0	0	91	72	0	0	0	144	0	13
7:30 AM	7:45 AM	8	226	0	0	82	70	0	0	0	126	0	9
7:45 AM	8:00 AM	9	185	0	0	79	97	0	0	0	150	0	13
8:00 AM	8:15 AM	4	147	0	0	86	74	0	0	0	119	0	17
8:15 AM	8:30 AM	11	145	0	0	89	70	0	0	0	109	0	25
8:30 AM	8:45 AM	29	146	0	0	102	84	0	0	0	97	0	37
8:45 AM	9:00 AM	29	162	0	0	56	82	0	0	0	79	0	8
<b>AM Peak Hour Volumes</b>		<b>70</b>	<b>806</b>	<b>0</b>	<b>0</b>	<b>379</b>	<b>296</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>553</b>	<b>0</b>	<b>85</b>
% of Total Traffic		3.2%	36.8%	0.0%	0.0%	17.3%	13.5%	0.0%	0.0%	0.0%	25.3%	0.0%	3.9%
% Directional		40.0%				30.8%					29.1%		
AM Peak Hour Factor		Intersection <b>0.93</b>											
		#DIV/0!											
		<b>0.94</b>											

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	29	156	0	0	157	145	0	0	0	122	0	15
4:15 PM	4:30 PM	18	106	0	0	144	157	0	0	0	139	0	13
4:30 PM	4:45 PM	15	98	0	0	178	149	0	0	0	95	0	8
4:45 PM	5:00 PM	8	108	0	0	163	148	0	0	0	100	0	6
5:00 PM	5:15 PM	15	95	0	0	185	161	0	0	0	86	0	7
5:15 PM	5:30 PM	10	104	0	0	187	143	0	0	0	112	0	10
5:30 PM	5:45 PM	11	96	0	0	183	158	0	0	0	117	0	8
5:45 PM	6:00 PM	29	106	0	0	145	165	0	0	0	116	0	18
<b>PM Peak Hour Volumes</b>		<b>70</b>	<b>468</b>	<b>0</b>	<b>0</b>	<b>642</b>	<b>599</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>456</b>	<b>0</b>	<b>42</b>
% of Total Traffic		3.1%	20.6%	0.0%	0.0%	28.2%	26.3%	0.0%	0.0%	0.0%	20.0%	0.0%	1.8%
% Directional		23.6%				54.5%					21.9%		
PM Peak Hour Factor		Intersection <b>0.91</b>											
		#DIV/0!											
		<b>0.73</b>											

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Dennis Chavez Bd.** Speed Limit (Dennis Chavez Bd.)=**45** MPH  
 N-S Street: **Condershire Dr.** Speed Limit (Condershire Dr.)=**30** MPH  
**4/3/18**

Signalized

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	8	312	6	0	170	1	0	3	0	1	1	8
7:15 AM	7:30 AM	1	331	7	0	152	1	0	8	1	3	0	6
7:30 AM	7:45 AM	3	340	8	0	137	0	0	5	0	4	0	5
7:45 AM	8:00 AM	3	308	3	0	171	4	0	4	0	2	0	3
8:00 AM	8:15 AM	5	278	3	0	136	4	0	7	1	3	0	10
8:15 AM	8:30 AM	6	237	9	0	143	2	0	4	0	2	0	11
8:30 AM	8:45 AM	6	231	2	0	170	2	0	11	0	2	1	6
8:45 AM	9:00 AM	7	229	3	0	124	3	0	4	0	4	0	3
<b>AM Peak Hour Volumes</b>		<b>15</b>	<b>1291</b>	<b>24</b>	<b>0</b>	<b>630</b>	<b>6</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>22</b>
% of Total Traffic		0.7%	63.7%	1.2%	0.1%	31.1%	0.3%	0.0%	1.0%	0.0%	0.5%	0.2%	1.1%
% Directional			65.6%			31.5%			1.0%	1.5%	1.4%		
AM Peak Hour Factor			<b>0.95</b>			<b>0.91</b>			<b>Intersection 0.99</b>		<b>0.65</b>		<b>0.70</b>

Begin Time	End Time	Eastbound (Dennis Chavez Bd.)			Westbound (Dennis Chavez Bd.)			Northbound (Condershire Dr.)			Southbound (Condershire Dr.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	7	259	10	0	282	2	0	7	1	10	0	11
4:15 PM	4:30 PM	14	223	6	0	284	0	0	4	1	3	0	9
4:30 PM	4:45 PM	1	173	8	0	304	3	0	10	1	2	0	10
4:45 PM	5:00 PM	8	194	7	0	293	5	0	11	0	0	0	14
5:00 PM	5:15 PM	10	162	7	0	327	3	0	9	0	2	0	15
5:15 PM	5:30 PM	6	195	11	0	303	4	0	10	0	4	0	16
5:30 PM	5:45 PM	6	197	8	0	320	3	0	9	0	4	0	17
5:45 PM	6:00 PM	9	201	12	0	283	5	0	7	0	4	0	23
<b>PM Peak Hour Volumes</b>		<b>31</b>	<b>755</b>	<b>38</b>	<b>0</b>	<b>1233</b>	<b>15</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>14</b>	<b>3</b>	<b>71</b>
% of Total Traffic		1.4%	34.3%	1.7%	0.4%	55.9%	0.7%	0.0%	1.6%	0.0%	0.6%	0.1%	3.2%
% Directional			37.4%			57.0%			2.2%	2.2%	3.4%		
PM Peak Hour Factor			<b>0.93</b>			<b>0.95</b>			<b>Intersection 0.97</b>		<b>0.88</b>		<b>0.78</b>

### Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Rio Bravo Sq. Driveway** Speed Limit (Rio Bravo Sq. Driveway)= **25** MPH  
 N-S Street: **Coors Bd.** Speed Limit (Coors Bd.)= **55** MPH  
**7/11/18**

Signalized

Begin Time	End Time	Eastbound (Rio Bravo Sq. Driveway)			Westbound (Rio Bravo Sq. Driveway)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	1	0	2	0	0	0	11	149	0	0	107	10
7:15 AM	7:30 AM	2	0	3	0	0	0	8	145	0	0	105	6
7:30 AM	7:45 AM	1	0	1	0	0	0	5	165	0	0	138	3
7:45 AM	8:00 AM	1	0	3	0	0	0	4	148	0	0	121	4
8:00 AM	8:15 AM	1	0	2	0	0	0	6	150	0	0	120	1
8:15 AM	8:30 AM	1	0	2	0	0	0	5	143	0	0	115	2
8:30 AM	8:45 AM	2	0	3	0	0	0	6	154	0	0	114	6
8:45 AM	9:00 AM	3	0	1	0	0	0	9	43	0	0	94	6
<b>AM Peak Hour Volumes</b>		<b>5</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>607</b>	<b>0</b>	<b>0</b>	<b>471</b>	<b>23</b>
% of Total Traffic		0.4%	0.0%	0.8%	0.0%	0.0%	0.0%	2.4%	53.1%	0.0%	0.0%	41.2%	2.0%
% Directional		1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	Intersection	55.6%	0.0%	0.0%	43.2%	
AM Peak Hour Factor		#DIV/0!											
		0.70											
		0.91											

Begin Time	End Time	Eastbound (Rio Bravo Sq. Driveway)			Westbound (Rio Bravo Sq. Driveway)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	11	0	30	0	0	0	18	187	0	0	201	11
4:15 PM	4:30 PM	12	0	25	0	0	0	14	260	0	0	189	12
4:30 PM	4:45 PM	10	0	28	0	0	0	19	212	0	0	211	7
4:45 PM	5:00 PM	13	0	25	0	0	0	22	268	0	0	199	8
5:00 PM	5:15 PM	12	0	29	0	0	0	24	255	0	0	209	7
5:15 PM	5:30 PM	14	0	31	0	0	0	16	271	0	0	201	9
5:30 PM	5:45 PM	9	0	25	0	0	0	22	259	0	0	223	9
5:45 PM	6:00 PM	10	0	23	0	0	0	16	292	0	0	220	11
<b>PM Peak Hour Volumes</b>		<b>45</b>	<b>0</b>	<b>108</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>	<b>1077</b>	<b>0</b>	<b>0</b>	<b>853</b>	<b>36</b>
% of Total Traffic		2.0%	0.0%	4.9%	0.0%	0.0%	0.0%	3.6%	49.0%	0.0%	0.0%	38.8%	1.6%
% Directional		7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Intersection	52.6%	0.0%	0.0%	40.5%	
PM Peak Hour Factor		#DIV/0!											
		0.85											
		0.96											



## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Gibson Blvd.** Speed Limit (Gibson Blvd.)=**40** MPH  
 N-S Street: **98th St.** Speed Limit (98th St.)=**35** MPH  
**7/11/18**

Unsignalized

Begin Time	End Time	Eastbound (Gibson Blvd.)			Westbound (Gibson Blvd.)			Northbound (98th St.)			Southbound (98th St.)					
		L	T	R	L	T	R	L	T	R	L	T	R			
7:00 AM	7:15 AM	40	22	6	4	9	2	0	6	75	21	0	2	40	2	0
7:15 AM	7:30 AM	52	33	5	2	9	4	0	4	96	8	0	3	65	6	0
7:30 AM	7:45 AM	21	18	4	4	11	1	0	4	91	10	0	1	53	5	0
7:45 AM	8:00 AM	37	25	3	1	8	3	0	3	72	8	0	1	40	5	0
8:00 AM	8:15 AM	35	23	5	0	11	0	0	1	68	6	0	1	41	10	0
8:15 AM	8:30 AM	23	15	2	0	0	0	0	0	72	4	0	1	46	11	0
8:30 AM	8:45 AM	25	22	3	2	5	0	0	4	51	6	0	0	33	10	0
8:45 AM	9:00 AM	19	8	2	4	7	2	0	4	53	4	0	0	40	4	0
<b>AM Peak Hour Volumes</b>		<b>150</b>	<b>98</b>	<b>18</b>	<b>11</b>	<b>37</b>	<b>10</b>	<b>0</b>	<b>17</b>	<b>334</b>	<b>47</b>	<b>0</b>	<b>7</b>	<b>198</b>	<b>18</b>	<b>0</b>
% of Total Traffic		15.8%	10.3%	1.9%	1.2%	3.9%	1.1%	0	1.8%	35.3%	5.0%	0	0.7%	20.9%	1.9%	0
% Directional		28.1%	28.1%	6.1%	14.4%	28.1%	0.91	Intersection	0.82	42.0%	0.92	Intersection	0.75	23.5%	0.75	0
AM Peak Hour Factor		0.74														

Begin Time	End Time	Eastbound (Gibson Blvd.)			Westbound (Gibson Blvd.)			Northbound (98th St.)			Southbound (98th St.)					
		L	T	R	L	T	R	L	T	R	L	T	R			
4:00 PM	4:15 PM	16	10	5	11	25	3	0	7	58	5	0	4	95	21	0
4:15 PM	4:30 PM	20	17	7	0	22	0	0	0	78	6	0	11	85	29	0
4:30 PM	4:45 PM	24	14	5	15	26	10	0	4	72	12	0	9	92	28	0
4:45 PM	5:00 PM	20	15	4	8	35	10	0	8	95	16	0	8	111	22	0
5:00 PM	5:15 PM	27	10	6	7	38	2	0	7	64	10	0	7	123	36	0
5:15 PM	5:30 PM	29	18	8	12	22	10	0	22	62	5	0	11	106	30	0
5:30 PM	5:45 PM	32	15	11	10	39	9	0	10	91	3	0	9	117	28	0
5:45 PM	6:00 PM	7	5	1	0	7	2	0	2	18	1	0	0	42	0	0
<b>PM Peak Hour Volumes</b>		<b>108</b>	<b>58</b>	<b>29</b>	<b>1</b>	<b>134</b>	<b>31</b>	<b>0</b>	<b>47</b>	<b>312</b>	<b>34</b>	<b>0</b>	<b>35</b>	<b>457</b>	<b>116</b>	<b>0</b>
% of Total Traffic		7.7%	4.1%	2.1%	0.2%	9.6%	2.2%	0	3.4%	22.3%	2.4%	0	2.5%	32.7%	8.3%	0
% Directional		13.9%	13.9%	14.4%	0.87	28.1%	0.83	Intersection	0.93	28.1%	0.83	Intersection	0.92	43.5%	0.92	0
PM Peak Hour Factor		0.84														

### Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Blake Rd.** MPH **35**  
 N-S Street: **98th St.** MPH **35**  
 Speed Limit (Blake Rd.)= **35**  
 Speed Limit (98th St.)= **7/11/18**

Unsignalized

Begin Time	End Time	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	2	5	24	3	3	3	0	69	13	3	44	1
7:15 AM	7:30 AM	10	7	15	7	4	11	1	81	7	7	65	0
7:30 AM	7:45 AM	4	4	13	9	6	5	1	62	3	2	53	0
7:45 AM	8:00 AM	6	4	14	7	4	8	1	57	2	6	43	2
8:00 AM	8:15 AM	4	2	13	7	1	5	0	62	13	0	35	2
8:15 AM	8:30 AM	2	4	12	6	0	8	0	59	8	0	40	1
8:30 AM	8:45 AM	3	2	16	4	4	4	0	38	6	0	31	2
8:45 AM	9:00 AM	6	2	10	3	2	8	0	44	3	0	38	2
<b>AM Peak Hour Volumes</b>		<b>22</b>	<b>20</b>	<b>66</b>	<b>26</b>	<b>17</b>	<b>27</b>	<b>3</b>	<b>269</b>	<b>25</b>	<b>3</b>	<b>205</b>	<b>3</b>
% of Total Traffic		3.0%	2.7%	9.1%	3.6%	2.3%	3.7%	3.0%	36.9%	3.4%	3.0%	28.1%	0.4%
% Directional		14.8%	14.8%	14.8%	9.6%	9.6%	9.6%	Intersection	43.3%	43.3%	Intersection	31.6%	31.6%
AM Peak Hour Factor		0.84											

Begin Time	End Time	Eastbound (Blake Rd.)			Westbound (Blake Rd.)			Northbound (98th St.)			Southbound (98th St.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	1	5	10	7	5	11	0	56	4	0	42	2
4:15 PM	4:30 PM	1	5	6	10	7	9	0	68	10	0	40	3
4:30 PM	4:45 PM	5	3	8	12	12	12	0	66	3	0	69	7
4:45 PM	5:00 PM	5	2	10	13	7	16	0	96	8	0	84	6
5:00 PM	5:15 PM	6	8	13	23	4	7	0	71	7	0	80	8
5:15 PM	5:30 PM	4	2	11	14	8	17	0	70	3	0	93	9
5:30 PM	5:45 PM	3	9	7	17	6	14	0	75	3	0	91	7
5:45 PM	6:00 PM	0	4	7	5	0	6	0	31	1	0	35	3
<b>PM Peak Hour Volumes</b>		<b>18</b>	<b>21</b>	<b>41</b>	<b>67</b>	<b>25</b>	<b>54</b>	<b>0</b>	<b>312</b>	<b>21</b>	<b>0</b>	<b>348</b>	<b>30</b>
% of Total Traffic		1.7%	2.0%	3.9%	6.4%	2.4%	5.1%	4.7%	29.7%	2.0%	6.2%	33.1%	2.9%
% Directional		7.6%	7.6%	7.6%	13.9%	13.9%	13.9%	Intersection	36.3%	36.3%	Intersection	42.2%	42.2%
PM Peak Hour Factor		0.74											

## Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Gun Club Rd.** Speed Limit (Gun Club Rd.)= **30** MPH  
 N-S Street: **Grace Vigil (Karrol St.)** Speed Limit (Grace Vigil)= **30** MPH  
**4/3/18** Signalized

Begin Time	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Grace Vigil)			Southbound (Grace Vigil)		
	L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	0	4	0	1	0	2	0	2	7	3	3	0
7:15 AM	1	3	0	2	1	2	0	3	6	2	4	0
7:30 AM	2	5	0	2	1	4	0	1	7	3	3	0
7:45 AM	0	3	0	1	1	1	0	1	3	4	3	0
8:00 AM	0	0	0	1	1	0	0	4	3	0	0	0
8:15 AM	1	6	0	2	1	5	0	3	4	5	0	0
8:30 AM	0	1	0	1	1	5	0	2	3	2	1	0
8:45 AM	0	1	0	2	1	2	0	1	3	2	1	0
<b>AM Peak Hour Volumes</b>	<b>3</b>	<b>15</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>23</b>	<b>12</b>	<b>13</b>	<b>0</b>
% of Total Traffic	3.3%	16.5%	0.0%	6.6%	3.3%	9.9%	0.0%	7.7%	25.3%	13.2%	14.3%	0.0%
% Directional	19.8%	19.8%	0.0%	19.8%	19.8%	33.0%	0.0%	33.0%	27.5%	27.5%	0.0%	0.0%
AM Peak Hour Factor	<b>Intersection 0.81</b>											
	<b>0.64</b>											

Begin Time	Eastbound (Gun Club Rd.)			Westbound (Gun Club Rd.)			Northbound (Grace Vigil)			Southbound (Grace Vigil)		
	L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	1	2	0	4	3	9	0	2	4	2	2	1
4:15 PM	1	3	0	3	0	8	0	2	2	6	1	1
4:30 PM	0	1	0	9	6	5	0	1	3	4	1	1
4:45 PM	0	3	0	7	1	9	0	4	2	3	3	2
5:00 PM	1	3	0	5	2	6	0	2	2	0	0	0
5:15 PM	0	1	0	7	1	5	0	1	2	1	0	0
5:30 PM	1	2	0	5	2	6	0	0	2	1	0	0
5:45 PM	0	1	0	5	1	5	0	0	2	1	0	0
<b>PM Peak Hour Volumes</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>23</b>	<b>10</b>	<b>31</b>	<b>0</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>7</b>	<b>5</b>
% of Total Traffic	1.6%	7.4%	0.0%	18.9%	8.2%	25.4%	0.0%	7.4%	9.0%	12.3%	5.7%	4.1%
% Directional	9.0%	9.0%	0.0%	52.5%	16.4%	22.1%	0.0%	16.4%	22.1%	22.1%	0.0%	0.0%
PM Peak Hour Factor	<b>Intersection 0.90</b>											
	<b>0.69</b>											

### Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Don Felipe Rd.** Speed Limit (Don Felipe Rd.)=**25** MPH  
 N-S Street: **Coors Bd.** Speed Limit (Coors Bd.)=**55** MPH  
**7/11/18**

Unsignalized

Begin Time	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7	7	7	7	0	13	0	0	0	0	0	0
7:15 AM	3	0	1	3	0	14	0	0	0	0	0	0
7:30 AM	6	1	1	2	1	14	0	0	0	0	0	0
7:45 AM	6	1	1	2	0	20	0	0	0	0	0	0
8:00 AM	2	0	0	6	0	22	0	0	0	0	0	0
8:15 AM	4	0	0	7	0	0	0	0	0	0	0	0
8:30 AM	3	7	7	0	0	13	0	0	0	0	0	0
8:45 AM	4	0	0	0	0	7	0	0	0	0	0	0
<b>AM Peak Hour Volumes</b>	<b>17</b>	<b>2</b>	<b>3</b>	<b>13</b>	<b>1</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>1</b>
% of Total Traffic	1.4%	0.2%	0.3%	1.1%	0.1%	5.9%	0.0%	0.0%	0.0%	1.4%	0.0%	0.5%
% Directional	1.9%	1.9%	7.1%	49.1%	0.88	Intersection	0.90	0.75	0.78	41.9%	37.9%	0.5%
AM Peak Hour Factor	0.69											

Begin Time	Eastbound (Don Felipe Rd.)			Westbound (Don Felipe Rd.)			Northbound (Coors Bd.)			Southbound (Coors Bd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	3	0	1	2	3	5	0	0	0	2	0	0
4:15 PM	0	0	2	2	1	6	0	0	0	0	0	0
4:30 PM	2	1	0	1	1	6	0	0	0	1	0	0
4:45 PM	4	0	1	3	1	7	0	0	0	3	0	0
5:00 PM	4	0	0	7	0	13	0	0	0	7	0	0
5:15 PM	4	7	7	2	0	7	0	0	0	7	0	0
5:30 PM	5	0	0	7	0	11	0	0	0	11	0	0
5:45 PM	0	0	0	0	0	3	0	0	0	0	0	0
<b>PM Peak Hour Volumes</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>
% of Total Traffic	0.6%	0.1%	0.3%	0.6%	0.4%	1.7%	0.4%	0.4%	0.4%	0.4%	0.4%	2.0%
% Directional	1.0%	1.0%	2.7%	44.4%	0.85	Intersection	0.89	0.86	0.70	51.9%	47.5%	2.0%
PM Peak Hour Factor	0.70											

**Gun club & Coors**

**COORDINATOR OPTIONS ( MM 3-1 )**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

**COORDINATION PATTERN 21 ( MM 3-2 )**

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	6,3		
CYCLE	120s	STD (COS)	111
OFFSET VAL	30%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	12	39	17	32	16	35	12	37

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

**COORDINATION PATTERN 23**

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	7,2		
CYCLE	100s	STD (COS)	131
OFFSET VAL	61%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	12	37	15	36	16	33	12	39

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

**ASC3 COORDINATION PLAN DATA**

8/24/2019 6:56 PM

<b><u>COORDINATION PATTERN 25</u></b>								
USE SPLIT PATTERN	25	SPLIT SUM	100%					
TS2 (PAT-OFF)	8,1							
CYCLE	110s	STD (COS)	251					
OFFSET VAL	0%							
ACTUATED COORD	YES	TIMING PLAN	0					
ACT WALK REST	NO	SEQUENCE	0					
PHASE RESRVCE	NO	ACTION PLAN	0					
PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	12	41	15	32	12	41	12	35
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

<b><u>CLOCK / CALENDAR DATA ( MM 5-1 )</u></b>			
CURRENT DATE	CURRENT DOW	CURRENT TOD	
ENA ACTION PLAN	0		
SYNC REF TIME	00:00	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

<b><u>ACTION PLAN 21 ( MM 5-2 )</u></b>			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b><u>ACTION PLAN 23</u></b>			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b><u>ACTION PLAN 25</u></b>			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

**ACTION PLAN 100**

**ASC3 COORDINATION PLAN DATA**

8/24/2019 6:56 PM

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

**DAY PLAN/EVENT 1 ( MM 5-3)**

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	18:30
3	0	00:00

**DAY PLAN/EVENT 2**

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	14:00
4	23	18:30
5	100	22:00
6	0	00:00
7	0	00:00

**DAY PLAN/EVENT 3**

EVENT	ACTION PLAN	START TIME
1	23	8:00
2	100	19:30
3	0	00:00

**SCHEDULE NUMBER 1 ( MM 5-4)**

SCHEDULE NUMBER	1											
DAY PLAN NO	1	CLEAR ALL FIELDS										
SELECT ALL MONTHS	DOW											
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**SCHEDULE NUMBER 2**

SCHEDULE NUMBER	2											
DAY PLAN NO	2	CLEAR ALL FIELDS										
SELECT ALL MONTHS	DOW											
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					

**ASC3 COORDINATION PLAN DATA**

8/24/2019 6:56 PM

	.	X	X	X	X	X	.				
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

<b>SCHEDULE NUMBER 3</b>												
SCHEDULE NUMBER		3										
DAY PLAN NO		3 CLEAR ALL FIELDS										
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**NOTES:** 4-3-18 Coord sheet created.

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**Rio Bravo - Dennis Chavez & Coors**

**COORDINATOR OPTIONS (MM 3-1)**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

**COORDINATION PATTERN 21 (MM 3-2)**

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	6,3		
CYCLE	120s	STD (COS)	111
OFFSET VAL	83%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	22	28	15	35	24	26	15	35

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

**COORDINATION PATTERN 23**

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	7,2		
CYCLE	100s	STD (COS)	131
OFFSET VAL	62%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	18	34	12	36	19	33	12	36

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

# ASC3 COORDINATION PLAN DATA

8/24/2019 7:02 PM

COORDINATION PATTERN 25								
USE SPLIT PATTERN	25		SPLIT SUM	100%				
TS2 (PAT-OFF)	8,1							
CYCLE	110s		STD (COS)	251				
OFFSET VAL	0%							
ACTUATED COORD	YES		TIMING PLAN	0				
ACT WALK REST	NO		SEQUENCE	0				
PHASE RESRVCE	NO		ACTION PLAN	0				
PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	22	32	12	34	19	35	14	32
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA ( MM 5-1 )			
CURRENT DATE	CURRENT DOW		CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	00:00	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME	3:30:00		

ACTION PLAN 21 ( MM 5-2 )			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

## ACTION PLAN 100

**ASC3 COORDINATION PLAN DATA**

8/24/2019 7:02 PM

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

**DAY PLAN/EVENT 1 ( MM 5-3)**

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	18:30:00 PM
3	0	00:00

**DAY PLAN/EVENT 2**

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	21	9:00
3	21	14:00
4	21	18:30
5	100	22:00
6	0	00:00
7	0	00:00

**DAY PLAN/EVENT 3**

EVENT	ACTION PLAN	START TIME
1	23	8:00
2	100	19:30
3	0	00:00

**SCHEDULE NUMBER 1 ( MM 5-4)**

SCHEDULE NUMBER	1											
DAY PLAN NO	1	CLEAR ALL FIELDS										
SELECT ALL MONTHS	DOW		DOM									
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**SCHEDULE NUMBER 2**

SCHEDULE NUMBER	2											
DAY PLAN NO	2	CLEAR ALL FIELDS										
SELECT ALL MONTHS	DOW		DOM									
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					

**ASC3 COORDINATION PLAN DATA**

8/24/2019 7:02 PM

	.	X	X	X	X	X	.				
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

<b>SCHEDULE NUMBER 3</b>												
SCHEDULE NUMBER		3										
DAY PLAN NO		3 CLEAR ALL FIELDS										
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**NOTES:** 2/28/2018 Coord sheet created. A.F.

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**431 - Unser Blvd & Blake Rd**

<b>COORDINATOR OPTIONS ( MM 3-1 )</b>			
MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

<b>COORDINATION PATTERN 21 ( MM 3-2 )</b>								
USE SPLIT PATTERN	21	SPLIT SUM	100%					
TS2 (PAT-OFF)	0-1							
CYCLE	120s	STD (COS)	111					
OFFSET VAL	78%							
ACTUATED COORD	YES	TIMING PLAN	0					
ACT WALK REST	NO	SEQUENCE	0					
PHASE RESRVCE	NO	ACTION PLAN	0					
PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	20	24	12	44	12	32	13	43
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

<b>COORDINATION PATTERN 23</b>								
USE SPLIT PATTERN	23	SPLIT SUM	100%					
TS2 (PAT-OFF)	0-3							
CYCLE	110s	STD (COS)	131					
OFFSET VAL	94%							
ACTUATED COORD	YES	TIMING PLAN	0					
ACT WALK REST	NO	SEQUENCE	0					
PHASE RESRVCE	NO	ACTION PLAN	0					
PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	15	28	12	45	11	32	12	45
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

# ASC3 COORDINATION PLAN DATA

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COORDINATION PATTERN 25								
USE SPLIT PATTERN	25	SPLIT SUM		100%				
TS2 (PAT-OFF)	0-5							
CYCLE	130s	STD (COS)		151				
OFFSET VAL	62%							
ACTUATED COORD	YES	TIMING PLAN		0				
ACT WALK REST	NO	SEQUENCE		0				
PHASE RESRVCE	NO	ACTION PLAN		0				
PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	20	24	11	45	12	32	11	45
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)			
CURRENT DATE	CURRENT DOW	CURRENT TOD	
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

# ASC3 COORDINATION PLAN DATA

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<b>ACTION PLAN 100</b>			
PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b>DAY PLAN/EVENT 1 ( MM 5-3)</b>		
EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	18:00
3	0	00:00

<b>DAY PLAN/EVENT 2</b>		
EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	15:00
4	23	18:30
5	100	22:00
6	0	00:00
7	0	00:00

<b>DAY PLAN/EVENT 3</b>		
EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

<b>SCHEDULE NUMBER 1 ( MM 5-4)</b>												
SCHEDULE NUMBER	1											
DAY PLAN NO	1 CLEAR ALL FIELDS											
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

# ASC3 COORDINATION PLAN DATA

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SCHEDULE NUMBER 2												
SCHEDULE NUMBER	2											
DAY PLAN NO	2		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

SCHEDULE NUMBER 3												
SCHEDULE NUMBER	3											
DAY PLAN NO	3		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
1. January 2010 - New Coordination - Lee Engineering
  2. Cycle lengths and offsets changed for corridor, 9/25/14
  3. New Coordination Patterns implemented 05-24-2017, Lee Engineering.



**434 - Dennis Chavez Blvd & 118th St**

**COORDINATOR OPTIONS ( MM 3-1 )**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

**COORDINATION PATTERN 21 ( MM 3-2 )**

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	110s	STD (COS)	111
OFFSET VAL	23%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB		SB
SPLITS	26	29	11	34	11	44		45

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

**COORDINATION PATTERN 23**

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	110s	STD (COS)	131
OFFSET VAL	8%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	2
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB		SB
SPLITS	18	37	11	34	11	44		45

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

# ASC3 COORDINATION PLAN DATA

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COORDINATION PATTERN 25								
USE SPLIT PATTERN	25	SPLIT SUM						100%
TS2 (PAT-OFF)	0-5							
CYCLE	110s	STD (COS)						151
OFFSET VAL	0%							
ACTUATED COORD	YES	TIMING PLAN						0
ACT WALK REST	NO	SEQUENCE						0
PHASE RESRVCE	NO	ACTION PLAN						0
PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB		SB
SPLITS	18	37	11	34	12	43		45
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)			
CURRENT DATE	CURRENT DOW	CURRENT TOD	
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0

**ASC3 COORDINATION PLAN DATA**

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DIMMING ENABLE	NO
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<b><u>ACTION PLAN 100</u></b>			
PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b><u>DAY PLAN/EVENT 1 ( MM 5-3)</u></b>		
EVENT	ACTION PLAN	START TIME
1	100	10:00
2	100	20:00
3	0	00:00

<b><u>DAY PLAN/EVENT 2</u></b>		
EVENT	ACTION PLAN	START TIME
1	21	6:00
2	100	9:00
3	100	14:15
3	25	16:15
3	100	19:00
5	100	22:00
6	0	00:00
7	0	00:00

<b><u>DAY PLAN/EVENT 3</u></b>		
EVENT	ACTION PLAN	START TIME
1	100	9:00
2	100	22:00
3	0	00:00

<b><u>SCHEDULE NUMBER 1 ( MM 5-4 )</u></b>												
SCHEDULE NUMBER	1											
DAY PLAN NO	1 CLEAR ALL FIELDS											
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**ASC3 COORDINATION PLAN DATA**

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<b>SCHEDULE NUMBER 2</b>												
SCHEDULE NUMBER	2											
DAY PLAN NO	2		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

<b>SCHEDULE NUMBER 3</b>												
SCHEDULE NUMBER	3											
DAY PLAN NO	3		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
- |    |   |
|----|---|
| 1. | Coordination sheet updated to ASC3 form 10-2016.                |
| 2. | New Coordination Patterns implemented 11-2016, Lee Engineering. |
| 3. | New offset for midday implemented 01-11-2017, Lee Engineering.  |
| 4. | Running signal free during day and weekends. 3-13-18            |

**433 - Dennis Chavez Blvd & 98th St**

**COORDINATOR OPTIONS ( MM 3-1 )**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

**COORDINATION PATTERN 21 ( MM 3-2 )**

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	110s	STD (COS)	111
OFFSET VAL	33%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB	N-W	SB
SPLITS		63			14	49		37

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

**COORDINATION PATTERN 23**

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	55s	STD (COS)	131
OFFSET VAL	22%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB	N-W	SB
SPLITS		63			18	45		37

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

# ASC3 COORDINATION PLAN DATA

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COORDINATION PATTERN 25								
USE SPLIT PATTERN	25	SPLIT SUM						100%
TS2 (PAT-OFF)	0-5							
CYCLE	110s	STD (COS)						151
OFFSET VAL	7%							
ACTUATED COORD	YES	TIMING PLAN						0
ACT WALK REST	NO	SEQUENCE						0
PHASE RESRVCE	NO	ACTION PLAN						0
PHASE	1	2	3	4	5	6	7	8
DIRECTION	W-S	EB	S-E	NB	E-N	WB	N-W	SB
SPLITS		64			12	52		36
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)			
CURRENT DATE	CURRENT DOW	CURRENT TOD	
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0

**ASC3 COORDINATION PLAN DATA**

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DIMMING ENABLE	NO
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<b><u>ACTION PLAN 100</u></b>			
PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b><u>DAY PLAN/EVENT 1 ( MM 5-3)</u></b>		
EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	20:00
3	0	00:00

<b><u>DAY PLAN/EVENT 2</u></b>		
EVENT	ACTION PLAN	START TIME
1	21	6:00
2	23	9:00
3	25	14:00
4	23	19:00
5	100	22:00
6	0	00:00
7	0	00:00

<b><u>DAY PLAN/EVENT 3</u></b>		
EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

<b><u>SCHEDULE NUMBER 1 ( MM 5-4 )</u></b>												
SCHEDULE NUMBER	1											
DAY PLAN NO	1 CLEAR ALL FIELDS											
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**ASC3 COORDINATION PLAN DATA**

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<b>SCHEDULE NUMBER 2</b>												
SCHEDULE NUMBER	2											
DAY PLAN NO	2		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

<b>SCHEDULE NUMBER 3</b>												
SCHEDULE NUMBER	3											
DAY PLAN NO	3		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
- |    |   |
|----|---|
| 1. | Coordination sheet updated to ASC3 form 10-2016.                              |
| 2. | New Coordination Patterns implemented 11-2016, Lee Engineering.               |
| 3. | New Coordination Patterns for midday implemented 01-11-2017, Lee Engineering. |



**131 - Dennis Chavez Blvd & Unser Blvd**

**COORDINATOR OPTIONS ( MM 3-1 )**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

**COORDINATION PATTERN 21 ( MM 3-2 )**

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	110s	STD (COS)	111
OFFSET VAL	18%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS				64		36	13	51

PHASE	1	2	3	4	5	6	7	8
COORD PHASE				X				X
VEH RECALL								
MAX RECALL				X				X

**COORDINATION PATTERN 23**

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	55s	STD (COS)	131
OFFSET VAL	73%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS				61		39	18	43

PHASE	1	2	3	4	5	6	7	8
COORD PHASE				X				X
VEH RECALL								
MAX RECALL				X				X

# ASC3 COORDINATION PLAN DATA

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<u>COORDINATION PATTERN 25</u>			
USE SPLIT PATTERN	25	SPLIT SUM	100%
TS2 (PAT-OFF)	0-5		
CYCLE	110s	STD (COS)	151
OFFSET VAL	71%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS				63		37	12	51

PHASE	1	2	3	4	5	6	7	8
COORD PHASE				X				X
VEH RECALL								
MAX RECALL				X				X

<u>CLOCK / CALENDAR DATA (MM 5-1)</u>			
CURRENT DATE	CURRENT DOW	CURRENT TOD	
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

<u>ACTION PLAN 21 (MM 5-2)</u>			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<u>ACTION PLAN 23</u>			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<u>ACTION PLAN 25</u>			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0

**ASC3 COORDINATION PLAN DATA**

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DIMMING ENABLE	NO
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<b><u>ACTION PLAN 100</u></b>			
PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<b><u>DAY PLAN/EVENT 1 ( MM 5-3)</u></b>		
EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	20:00
3	0	00:00

<b><u>DAY PLAN/EVENT 2</u></b>		
EVENT	ACTION PLAN	START TIME
1	21	6:00
2	23	9:00
3	25	14:00
4	23	19:00
5	100	22:00
6	0	00:00
7	0	00:00

<b><u>DAY PLAN/EVENT 3</u></b>		
EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

<b><u>SCHEDULE NUMBER 1 ( MM 5-4 )</u></b>												
SCHEDULE NUMBER	1											
DAY PLAN NO	1 CLEAR ALL FIELDS											
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

**ASC3 COORDINATION PLAN DATA**

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<b>SCHEDULE NUMBER 2</b>												
SCHEDULE NUMBER	2											
DAY PLAN NO	2		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

<b>SCHEDULE NUMBER 3</b>												
SCHEDULE NUMBER	3											
DAY PLAN NO	3		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
- |    |   |
|----|---|
| 1. | Coordination sheet updated to ASC3 form 10-2016.                              |
| 2. | New Coordination Patterns implemented 11-2016, Lee Engineering.               |
| 3. | New Coordination Patterns for midday implemented 01-11-2017, Lee Engineering. |

## SCOPE OF TRAFFIC IMPACT STUDY (TIS)

**TO:** Terry Brown

**MEETING DATE:** June 28, 2018

**ATTENDEES:** Consultant Team; COA Transportation Development Review; NMDOT; Bernalillo County

**PROJECT:** Ceja Vista, Zone Atlas # P-09

**REQUESTED CITY ACTION:**  Zone Change  Site Development Plan

Subdivision  Building Permit  Sector Plan  Sector Plan Amendment

Curb Cut Permit  Conditional Use  Annexation  Site Plan Amendment

**ASSOCIATED APPLICATION:** The first phase of a 430 acre development to include 240 apartments and 260 active senior living units south of NM 500 (Dennis Chavez Blvd.), between 98<sup>th</sup> and Unser.

### SCOPE OF REPORT:

The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 10th Edition.  
Local data may be used for certain land use types as determined by staff.  
Consultant to provide.
2. Appropriate study area:  
Signalized Intersections;
  - a. NM 500 / 98<sup>th</sup> St.
  - b. NM 500 / Unser Blvd.
  - c. NM 500 / 118<sup>th</sup> St.
  - d. NM 500 / Coors Blvd.(NM 45)
  - e. Coors Blvd. / Gun Club Rd.
  - f. Unser Blvd. / Blake Rd.

#### Unsignalized Intersections;

- a. 98<sup>th</sup> St. / Blake Rd.
- b. 98<sup>th</sup> St. / Gibson Blvd.
- c. NM 500 / Condershire Dr. (Meade Ave.)
- d. Grace Vigil Rd. / Gun Club Rd.
- e. Coors Blvd / Don Felipe

Driveway Intersections: all site drives, driveways to high school and middle school and driveway at Coors Blvd and Rio Bravo Square.

3. Intersection turning movement counts  
Study Time – 7-9 a.m. peak hour, 4-6 p.m. peak hour  
Consultant to provide for all intersections listed above.  
Counts on NM 500, 98<sup>th</sup> St., and Unser during school year.

4. Type of intersection progression and factors to be used.  
Type III arrival type (see “2010 Highway Capacity Manual” or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

5. Boundaries of area to be used for trip distribution.  
City Wide - residential, office or industrial;  
3 mile radius – commercial;  
Interstate or to be determined by consultant - motel/hotel  
APS district boundary mapping for each school and bus routes

6. Basis for trip distribution.

Residential – Use inverse relationship based upon distance and employment. Use employment data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Residential -  $T_s = (T_t) (S_e / D) / (S_e / D)$   
Ts = Development to Individual Subarea Trips  
Tt = Total Trips  
Se = Subarea Employment  
D = Distance from Development to Subarea

Office/Industrial -  $T_s = (T_t) (S_p / D) / (S_p / D)$   
Ts = Development to Individual Subarea Trips  
Tt = Total Trips  
Sp = Subarea Population  
D = Distance from Development to Subarea

Commercial -  
 $T_s = (T_t) (S_p) / (S_p)$   
Ts = Development to Individual Subarea Trips  
Tt = Total Trips  
Sp = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Method of intersection capacity analysis - planning or operational (see “2010 Highway Capacity Manual” or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.  
Implementation Year:

9. Traffic conditions for analysis:  
a. Existing analysis x yes \_\_\_ no - year 2018  
b. Phase implementation year(s) without proposed development – 2022  
c. Phase implementation year(s) with proposed development – 2022

- d. Project completion year without proposed development – 2032
  - e. Project completion year with proposed development – 2032
  - f. Other –
10. Background traffic growth.  
Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.
11. Planned (programmed) traffic improvements.  
List planned CIP improvements in study area and projected project implementation year:
- a. Project – Location (Implementation Year)
12. Items to be included in the study:
- a. Intersection analysis.
  - b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method:
  - c. Arterial LOS analysis;
  - d. Recommended street, intersection and signal improvements.
  - e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
  - f. Transportation system impacts.
  - g. Other mitigating measures.
  - h. Accident analyses  yes  no; Location(s):
  - i. Weaving analyses  yes  no; Location(s):
13. Other:

**SUBMITTAL REQUIREMENTS:**

- 1. Number of copies of report required
  - a. 1 paper copy
  - b. 1 digital copy
- 2. Submittal Fee – \$1300 for up to 3 reviews

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3933.

\_\_\_\_\_  
Ernest Armijo, P.E.  
Senior Engineer for  
Transportation Development Section

\_\_\_\_\_  
Date

via: email

C: TIS Task Force Attendees, file