THOMAS DEVELOPMENT

TRAFFIC IMPACT ANALYSIS

FINAL SUBMITTAL

JUNE 10, 2024

Prepared For:

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THOMAS DEVELOPMENT

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Date:

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I. INTRODUCTION AND SUMMARY

D.R. Horton proposes to develop approximately 54 acres, situated southwest of the intersection of Paseo Del Norte & Woodmont/Ventana West Parkway. The proposed development will include 270 single family residential units.

A. STUDY PURPOSE

The purpose of the traffic study is to determine the impacts of the proposed development on the surrounding roadway network, evaluate the operation of the proposed site entrances, and to recommend any mitigation measures that may be necessary to support additional traffic generated by the new development.

B. EXECUTIVE SUMMARY

1. SITE LOCATION AND STUDY AREA

The site is located southwest of Paseo del Norte and Woodmont Avenue intersection in Albuquerque, New Mexico. A vicinity map and site plan are shown in Figure 1, and the proposed site plan of the future development is shown in Figure 2.

The study area consists of the following intersections:

- Paseo del Norte and Rainbow (existing signalized intersection)
- Paseo del Norte and Ventana West (existing 3-way stop controlled intersection, future 4-way intersection)
- Girona and Woodmont (existing 3-way stop controlled intersection, future 4-way intersection)
- Paseo del Norte and North Entrance (future right-in, right-out intersection)

The intersection evaluations include analysis for the AM and PM peak hours for the following traffic conditions:

- Existing traffic (2023)
- 2027 Completion Year without proposed development (2027 No Build)
- 2027 Completion Year with buildout of the site (2027 Build)
- 2037 Horizon Year without proposed development (2037 No Build)
- 2037 Horizon Year with buildout of the site (2037 Build)

2. PRINCIPAL FINDINGS

The traffic analysis found that all intersections listed in the site development's scope operate under acceptable conditions, with all overall and individual movements operating at LOS D or better. This trend continues from the 2023 Existing conditions all the way through the 2027 No Build and 2027 Build conditions.

To meet the City of Albuquerque standards, a northbound left turn lane is required at the intersection of Girona and Woodmont prior to the full build out of the development.

Implementation into the 2037 No Build horizon year, the intersection of Paseo Del Norte & Rainbow begins to deteriorate with the northbound right in both the AM and PM peak hour and the northbound through in the PM peak hour operating at LOS E. Signal optimization will correct the serviceability issues at the individual movement level.

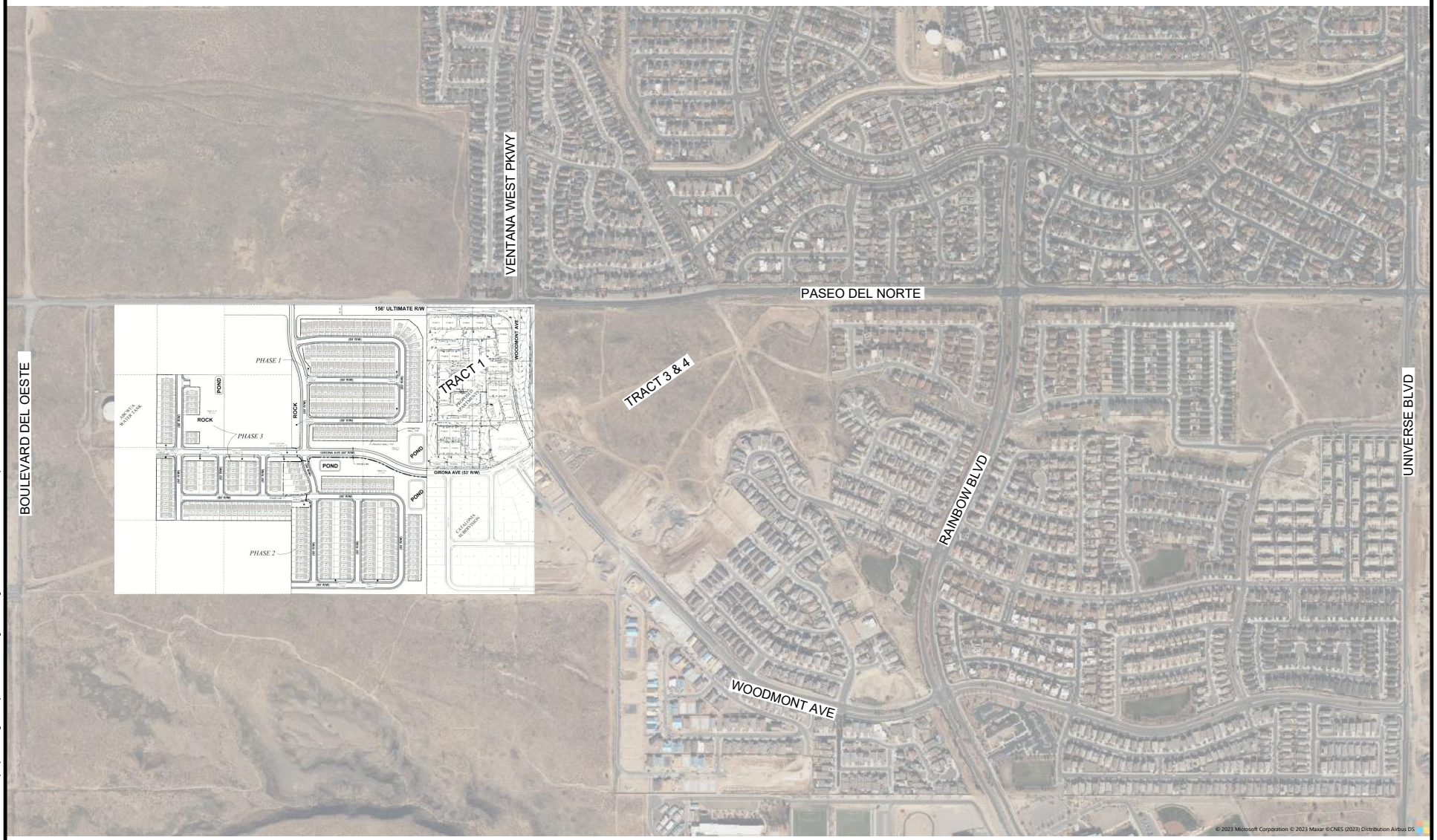
With the implementation of the build scenario into the 2037 horizon year, the same issues occurring with Paseo Del Norte & Rainbow from previous no build are again correctable with signal optimization. Individual movement operations worse than LOS D with the intersection of Paseo & Ventana West are guaranteed to be course corrected prior to the horizon year with the mitigation efforts of a 4-lane implementation occurring prior to the Thomas Development build out year.

Within all conditions from existing to the horizon year build scenario, both site driveways will operate at overall acceptable conditions, with no movement operating worse than LOS B.

3. RECOMMENDATIONS

- All designs shall satisfy the Manual on Uniform Traffic Control Devices (MUTCD) and City of Albuquerque requirements.
- Paseo and Rainbow will require signal optimization by the horizon year to maintain the individual movement operation at LOS D or better. As this occurs in the No Build scenario it is not resulting from the Thomas Development.
- The Paseo del Norte and Driveway access shall be built to accommodate a right-in and right-out to be utilized by the development.
- The internal intersection of the development may be built as either a stop-controlled intersection or roundabout as both will operate acceptably inside the development.

- The intersection of Woodmont and Girona will require a dedicated northbound left turn lane to be built. This turn lane should meet City of Albuquerque specifications for left turn lanes.
- A multi-use path will be required along the site frontage with Paseo Del Norte. This path is required to connect the development to the existing Paseo Del Norte trail.
- All roadways in the development will include sidewalks unless an HOA maintained multi-use path is provided along the street in lieu of a sidewalk. Additionally bicycle lanes are required on Girona Avenue and the north/south connection from the development to Paseo Del Norte.
- The Paseo del Norte and Ventana West/Woodmont intersection performs acceptably with all-way stop control through the 2027 build scenario so signal installation is not recommended at this time.
    - The neighboring Trail Tract developments will install eastbound and westbound left turn lanes at this intersection, prior to the 2027 Build scenario. These are included in the No Build scenario of this traffic study.
    - The neighboring Trails Tract development is expected to construct the full section of the 2-lane northbound approach prior to the 2027 Build scenario. This will provide a northbound left turn lane, a northbound through lane and a northbound right turn lane. The southbound approach will also be restriped to provide a single southbound through lane.
    - Since implementation of the 4-lane Paseo Del Norte & Ventana West intersection, the traffic signal alternative has been included where warranted, but is unnecessary to be implemented.



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ALBUQUERQUE, NEW MEXICO
SITE TRAFFIC ANALYSIS

FIGURE 1
VICINITY MAP

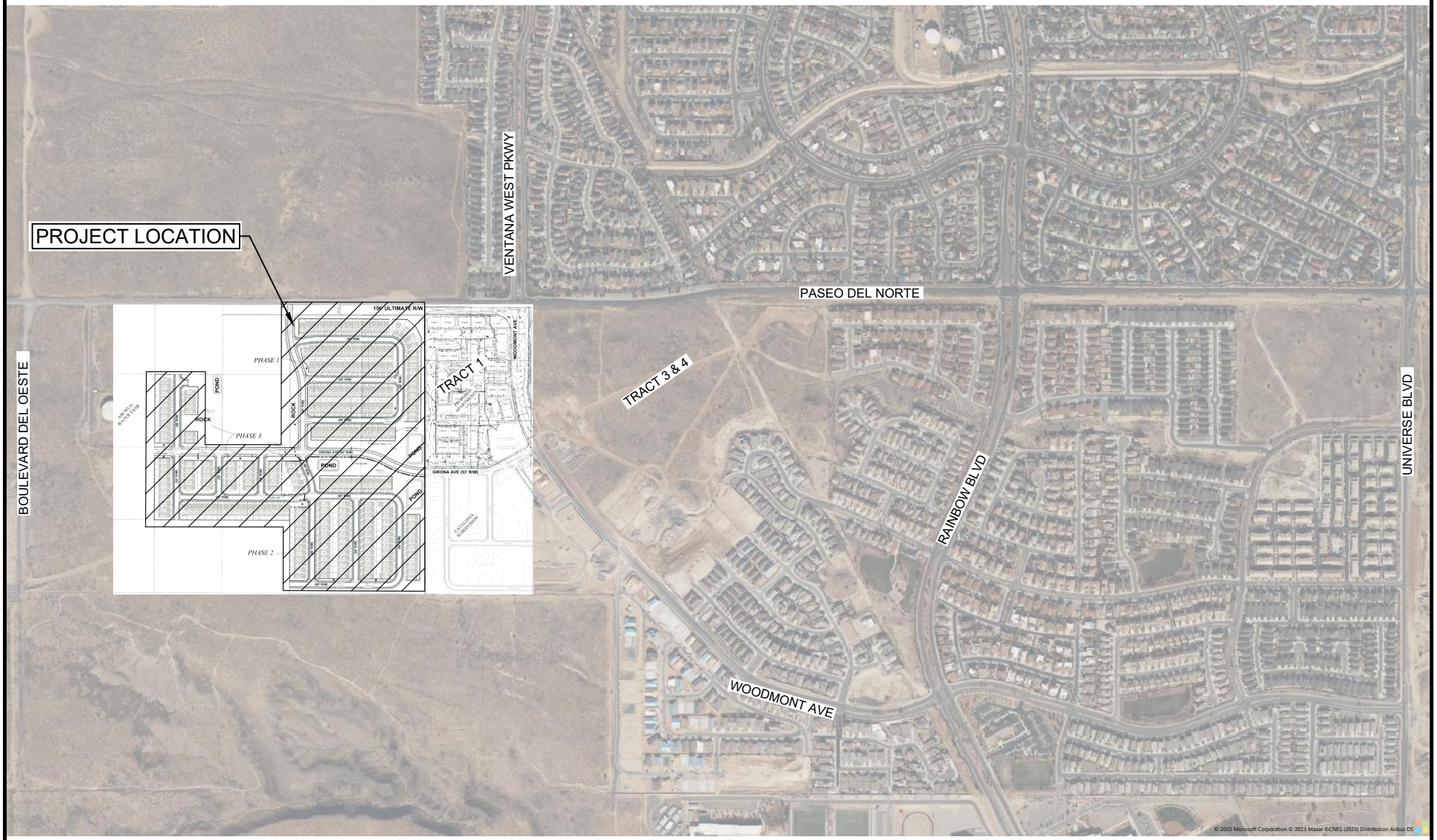

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FIGURE 2
SITE PLAN

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II. PROPOSED DEVELOPMENT

A. LAND USE AND INTENSITY

The proposed development is a 270-unit single family residential complex on approximately 54 acres. All units are expected to be detached housing.

The development is situated southwest the corner of Paseo del Norte and Ventana West Parkway/Woodmont Avenue. The study area is currently undergoing residential developments, especially east of the Thomas Development. The Trails Tract 1, 3 & 4 development is scheduled to be completed east of the Thomas development site, before 2027. There are also established residential neighborhoods in the surrounding area, particularly north of the development site.

B. DEVELOPMENT PHASING AND TIMING

The project is expected to be fully built out by 2027. Construction phasing is not anticipated.

III. STUDY AREA CONDITIONS

A. STUDY AREA

The study area consists of the following intersections:

- Paseo del Norte and Ventana West (existing 3-way unsignalized intersection, future 4-way intersection)
- Paseo del Norte and Rainbow (existing signalized intersection)
- Girona and Woodmont (existing 3-way stop controlled intersection, future 4-way intersection)
- Paseo del Norte and North Entrance (future right-in, right-out intersection)

B. SITE ACCESSIBILITY

The development will have access via two driveways to the site: a partial and full access driveway. The main full access point to the site will be on the east side of the site, extending Girona Avenue to the site development. A partial access point, a right-in, right out access will be provided onto Paseo Del Norte following the Paseo del Norte access management plan, which specifies a partial access is allowable with a spacing of 1,320 feet from the existing intersection of Paseo Del Norte and Woodmont and Paseo Del Norte and Del Oeste.

C. DATA SOURCES

The data used in this report consist of the traffic volumes described below, aerial photography and mapping from Google Earth®, information provided by the Trails Tract 3 & 4 TIA dated December 2022, Traffic Data collected by Cleland Counts, and information provided by DR Horton.

IV. EXISTING CONDITIONS ANALYSIS

A. BACKGROUND

Roadway federal classification is updated approximately every four years. The classification process involves local governments, the Mid Region Council of Governments (MRCOG), New Mexico Department of Transportation (NMDOT), and the Federal Highway Administration (FHWA). The MRCOG Roadway Functional Classification Map classifies roadways based on their function. Roadways are subject to design guidance based on their functional classification, design speed, or based on Comprehensive Plan corridor designations.

1. ADJACENT ROADWAYS

The following are roadways adjacent to the site:

- Paseo del Norte is a principal arterial along the relevant stretch of the development site. Paseo del Norte provides regional connectivity within Albuquerque, serving as a river crossing east of the study area. To the west, Paseo del Norte turns into Atrisco Vista and heads south to connect with I-40. Within the study area, Paseo del Norte is 35 miles per hour (MPH) with one lane in each direction and an undivided median. Sidewalks and bicycle lanes are not present on Paseo del Norte in this area.
- Rainbow is a minor arterial with 2 lanes in each direction. Rainbow has a posted speed limit of 40 MPH and a divided median. Rainbow has paved, separated multi-use facilities on both sides of the roadway, in addition to on-street bicycle lanes in both directions on the leg south of Paseo del Norte.
- Woodmont is a local road with 2 lanes in each direction, and in the future of the site may be classified as a major collector. Woodmont has a posted speed limit of 35 MPH and a divided median north of Paseo Del Norte, and south of the development. Woodmont has bicycle lanes on both sides of the roadway, sidewalk on the south side, and a paved, separated multi-use facility on the north side. This typical section loses the divided median by the Catalonia development, returning north of Paseo Del Norte. As part of outside development improvements, Woodmont will connect through to Paseo del Norte, allowing access to the site on Girona Avenue, and the south leg of the ultimate configuration of the Paseo del Norte/Woodmont/Ventana West intersection will be constructed before the Thomas Development construction year occurs.
- Ventana West Parkway is a major collector with 2 lanes in each direction. Ventana West has a posted speed limit of 40 MPH and a divided median.

Ventana West has paved, separated multi-use facilities on both sides of the roadway.

- Girona Avenue is not yet classified by the MRCOG but is expected to be a local road with undivided, single lanes in both directions at the time of the Thomas Development's completion.

2. MULTI-MODAL CONDITIONS

Sidewalks and bicycle lanes are not present on Paseo del Norte in this area. The City of Albuquerque Bike Map identifies future bicycle lanes on Paseo del Norte and a future paved trail on the north side of Paseo del Norte west of Ventana West. The future section of Woodmont is also identified to have bicycle lanes and a paved trail to tie in with existing facilities.

Rainbow, Woodmont, and Ventana West have paved, separated multi-use trails.

As part of this development Bernalillo county will require the installation of a multi-use path along the site frontage with Paseo Del Norte. This path is required to connect the development to the existing Paseo Del Norte trail.

All roadways in the development will include sidewalks unless an HOA maintained multi-use path is provided along the street in lieu of a sidewalk. Additionally bicycle lanes are required on Girona Avenue and the north/south connection from the development to Paseo Del Norte.

B. EXISTING TRAFFIC CONDITIONS

Existing 2023 traffic turning movement counts (TMC) for the intersections analyzed in the study area were collected on October 24, 2023, by Cleland Counts for 4-hr periods, given the peak hours were known from the previous TIA's from this area. Data was collected from 7:00 AM to 9:00 AM, and from 4:00 PM to 6:00 PM. Existing traffic counts are included in Appendix A. The counts provide the AM and PM peak hour counts used in the analysis.

1. SURROUNDING DEVELOPMENTS

The Thomas Development is adjacent to several residential neighborhoods currently under development. The Trails Tract 1, 3 & 4 is under development as a residential subdivision. Tract 1 includes a muti-family residential complex on the west side of Woodmont directly adjacent to the Tract 3 & 4 development. Woodmont is currently constructed to the extent of Girona Ave but is anticipated to be extended north and provide a connection to Paseo del Norte prior to the 2027 build year. The future section of Woodmont will serve the Thomas Development.

The Trails Tract 1, and Tracts 3 & 4 are assumed to be constructed by 2027, and as such, the total trips from these surrounding developments were included in the 2027 No Build volumes as approved development background traffic.

C. LEVEL OF SERVICE DEFINITIONS

The *Highway Capacity Manual Sixth Edition* (HCM) defines Level of Service (LOS) for un-signalized intersections in Table 1 as follows:

Table 1 | LOS Definitions

Level of Service	Definition	Signalized (sec/veh)	Unsignalized (sec/veh)
A	Most vehicles do not stop	<10	<10
B	Some vehicles stop	>10 and <20	>10 and <15
C	Significant numbers of vehicles stop	>20 and <35	>15 and <25
D	Many vehicles stop	>35 and <55	>25 and <35
E	Limit of acceptable delay	>55 and <80	>35 and <50
F	Unacceptable delay	>80	>50

The City of Albuquerque has established LOS D as the generally acceptable level of service in urban areas and when intersections operate below this level, improvements are considered, where feasible. Other critical movements are also desired to have LOS D or better if possible.

D. EXISTING INTERSECTION CAPACITY ANALYSIS

The existing intersections traffic volume were analyzed using Highway Capacity Software version 8 (HCS 2023), which uses the intersection methodology from the 7th Edition of the Highway Capacity Manual (HCM). Individual intersection output for the existing conditions analysis is included in Appendix B. The results are summarized in Table 2 and Table 3.

The signalized intersection of Paseo del Norte and Rainbow operates at acceptable levels of service in both the AM and PM peak hours, with no individual movement operating worse than LOS D. The eastbound right at Paseo del Norte and Rainbow experiences a 95th percentile queue of about 140 feet in the AM peak hour. The existing dedicated right turn lane storage is about 100 feet in length, so there is minimal queue spillage into the adjacent thru lane during periods of the peak hour.

Table 2 | Existing Signalized Intersection Results						
Intersection	2023 AM Peak			2023 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	28.2	C	0.621	28.9	C	0.672

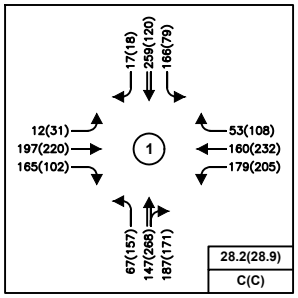
The all-way stop-controlled intersection of Paseo del Norte and Ventana West operates acceptably in both the AM and PM peak hour, with all individual movements operating at LOS C or better in the AM peak hour, and LOS B or better in the PM peak hour.

The future site driveway and existing intersection of Girona and Woodmont operates at an overall LOS A in both the AM and PM peak hours, with all individual movements operating at LOS A.

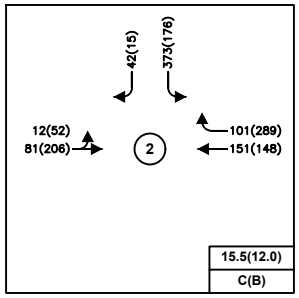
Table 3 | Existing Unsignalized Intersection Results								
	2023 AM Peak				2023 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont	15.5		-	C	12.0		-	B
Eastbound Left	10.5		25	B	13.1		75	B
Westbound Through	11.1	-	50	B	10.2	-	50	B
Westbound Right	9.2		25	A	11.3		75	B
Southbound Left	21.0		150	C	13.4		50	B
Southbound Right	7.9		25	A	8.5		25	A
Girona & Woodmont	8.4	-	-	A	8.4	-	-	A
Eastbound Left/Right	8.4	0.01	0	A	8.4	0.01	0	A
Northbound Left/Through	7.2	0.00	0	A	7.2	0.01	0	A
* – HCM 95th percentile queue rounded to next 25-foot increment								

LEGEND

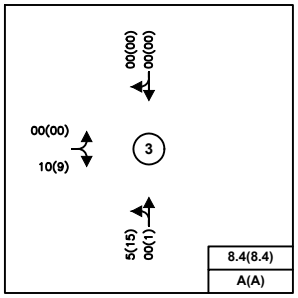
- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)



Rainbow / Paseo del Norte



Paseo / Ventana West / Woodmont



Girona / Woodmont

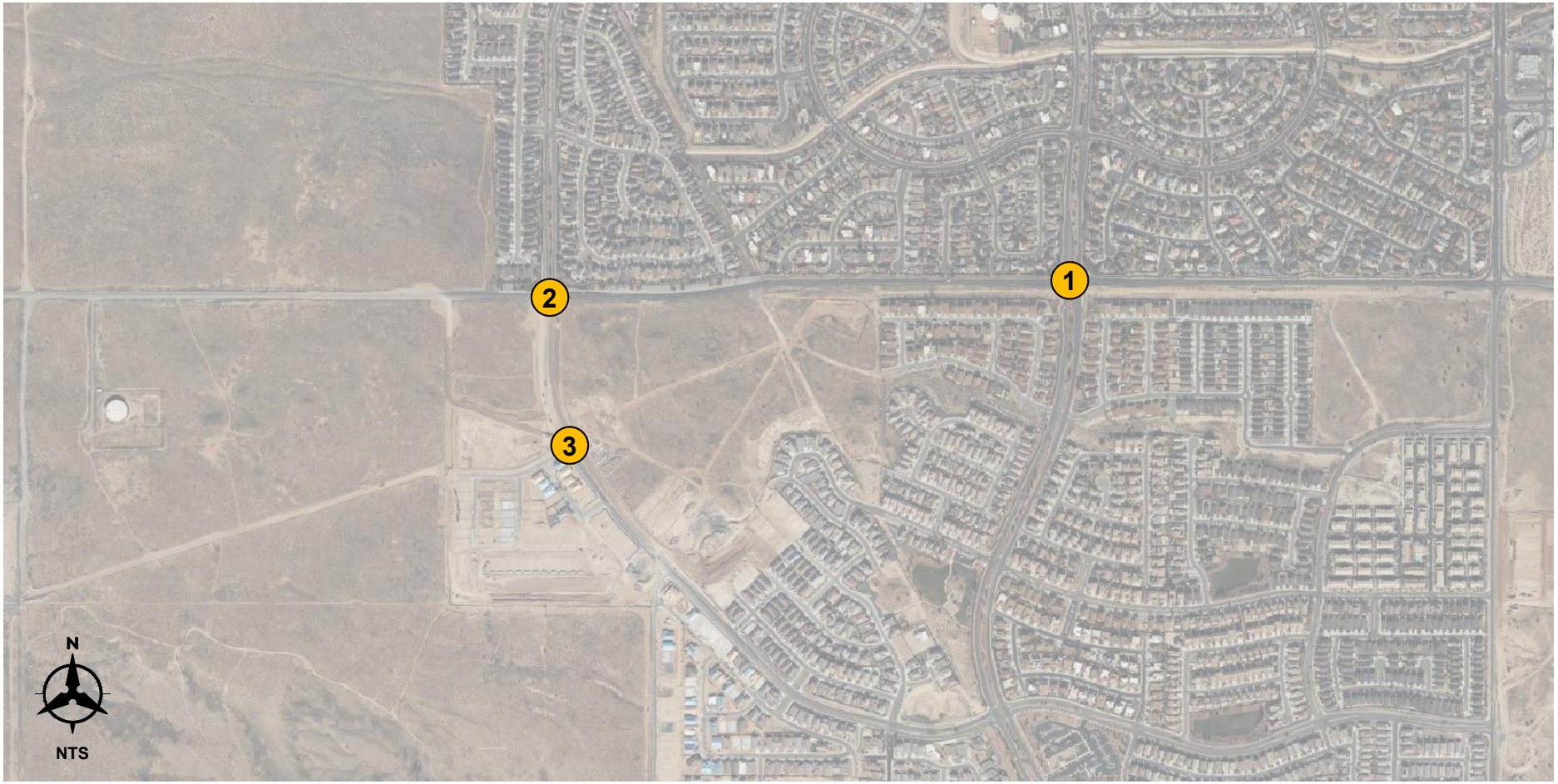


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FIGURE 3
2023 EXISTING
PEAK HOUR TRAFFIC VOLUMES

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V. PROJECTED TRAFFIC

A. SITE TRAFFIC FORECASTING

1. TRIP GENERATION

Generated trips are broken down into three types; 1) primary, 2) pass-by trips, and 3) diverted link. The Trip Generation report defines these trips as follows:

- **Primary Trips** – These trips are made for the specific purpose of visiting the generator. The stop at that generator is the primary reason for the trip. For example, a home to shopping to home combination of trips is a primary trip set.
- **Pass-by Trips** – These trips are made as intermediate stops on the way from an origin to a primary trip generation. Pass-by trips are attracted from the traffic passing the site on an adjacent street that contains direct access to the generator site. These trips do not require a diversion from another roadway. For example, stopping at the store on the way home from work is an example of a pass-by trip. No pass-by trips we used in this analysis.
- **Diverted Linked Trips –** These trips are attracted from the traffic volume on the roadway within the vicinity of the generator, but which require a diversion from that roadway to another roadway to gain access to the site. The roadways could include streets or freeways adjacent to the generator, but without access to the generator. For this study, the diverted link trips have been included in with the primary trips.

This study evaluates primary trips only.

The trip generation based on the 11th Edition of the Institute of Transportation engineer's (ITE) Trip Generation Manual is shown in Table 4 below with the following considerations. The trip generation is based on the peak hour of the adjacent street traffic. Single land use has been included as part of the Thomas Development's trip generation due to the intended single family detaching housing included in the site plan.

Table 4 | Trip Generation

Land Use	ITE Code	Size	Daily	AM Enter	AM Exit	PM Enter	PM Exit
Single-Family Detached Housing	210	270	2516	46	138	159	94

2. TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution was determined using a modified gravity model that considered a region-wide travel shed for employment trips. As the development is residential, standard traffic analysis assumes the trips in the peak hour to be primarily employment trips, so the destinations for the AM trips are employment locations, with the origins at the site. In the PM peak hour, the destination is the site, and the origins are the employment locations.

The gravity model uses the locations of employment, which are weighted by the number of jobs in the Subareas in the Albuquerque Metropolitan area divided by their distance from the site. This means that employment locations closer to the site are considered more likely, with those farther away to be less likely, depending on how many jobs are in each subarea.

The gravity model utilized socioeconomic data obtained from the Mid Region Council of Governments (MRCOG), which included population and employment estimates for each subarea within the Albuquerque Metropolitan Planning Area to develop the trip distribution.

Spreadsheets showing the development of the trip distribution are included in Appendix C. The trip distribution percentages and assigned traffic volumes is shown in Figure 4 and Figure 5.

3. TRAVEL DEMAND ADJUSTMENTS

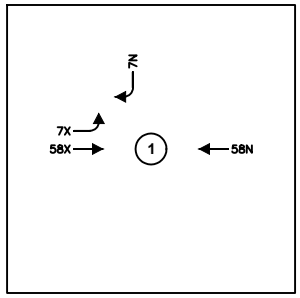
A section of Woodmont was constructed west of Rainbow to serve the Trails residential subdivision. As part of the off-site improvements for the surrounding developments, Woodmont will be constructed to connect with Paseo del Norte. When the connection is complete this will create an alternate route for trips going to and from the Ventana Ranch west residential area. The change in travel demand was accounted for in this study using adjustment factors applied to the No Build Scenario, as application is to occur prior to 2027.

4. TRAFFIC PROJECTIONS

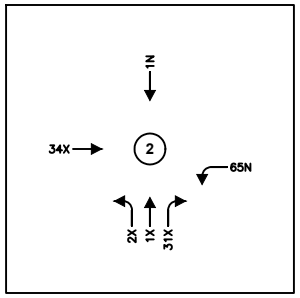
A background growth rate of 2% was applied to provide an estimate of potential future growth of traffic at all intersections evaluated. The growth rate determination and data are summarized in the spreadsheets included in Appendix C.

LEGEND

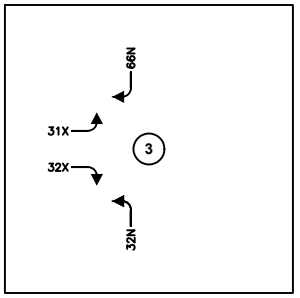
- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- N — Entering
- X — Exiting



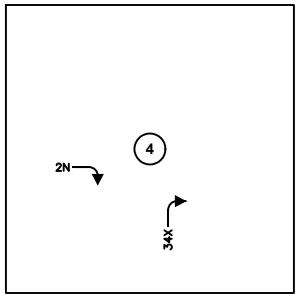
Rainbow / Paseo del Norte



Paseo / Ventana West / Woodmont



Girona / Woodmont



Paseo / North Entrance

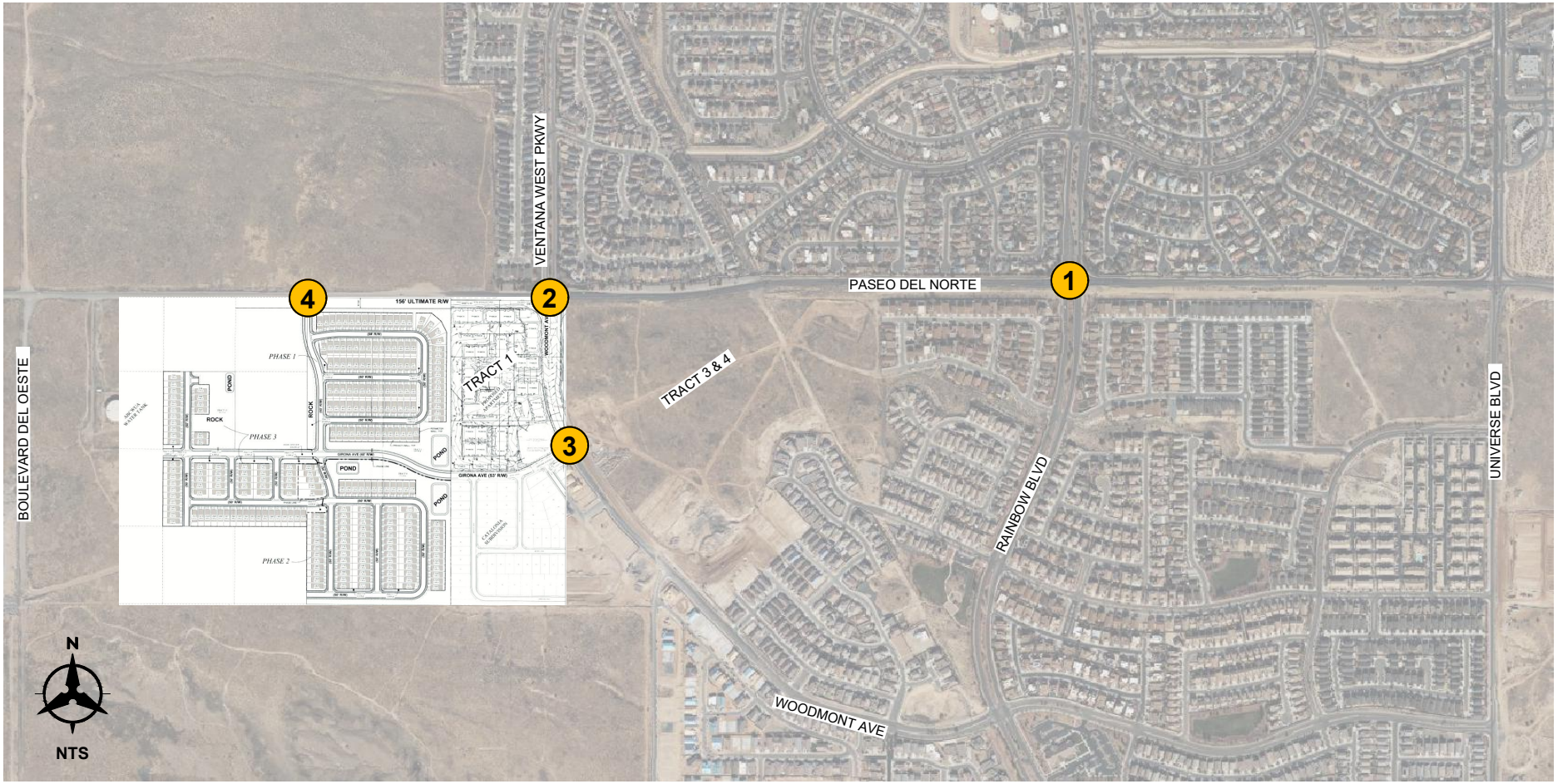


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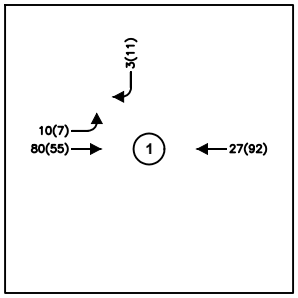
FIGURE 4
RESIDENTIAL TRIP DISTRIBUTION PERCENTAGES

LEGEND

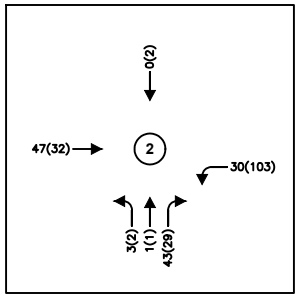
Thru Lanes (# as indicated)

Turning Lanes (# as indicated)

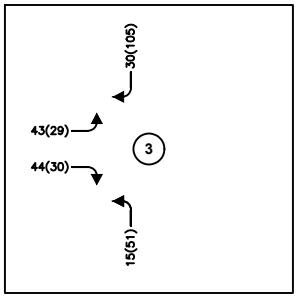
1234(1234) AM(PM) Trip Assignment Volumes



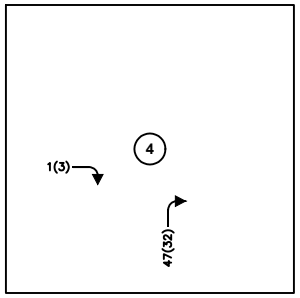
Rainbow / Paseo del Norte



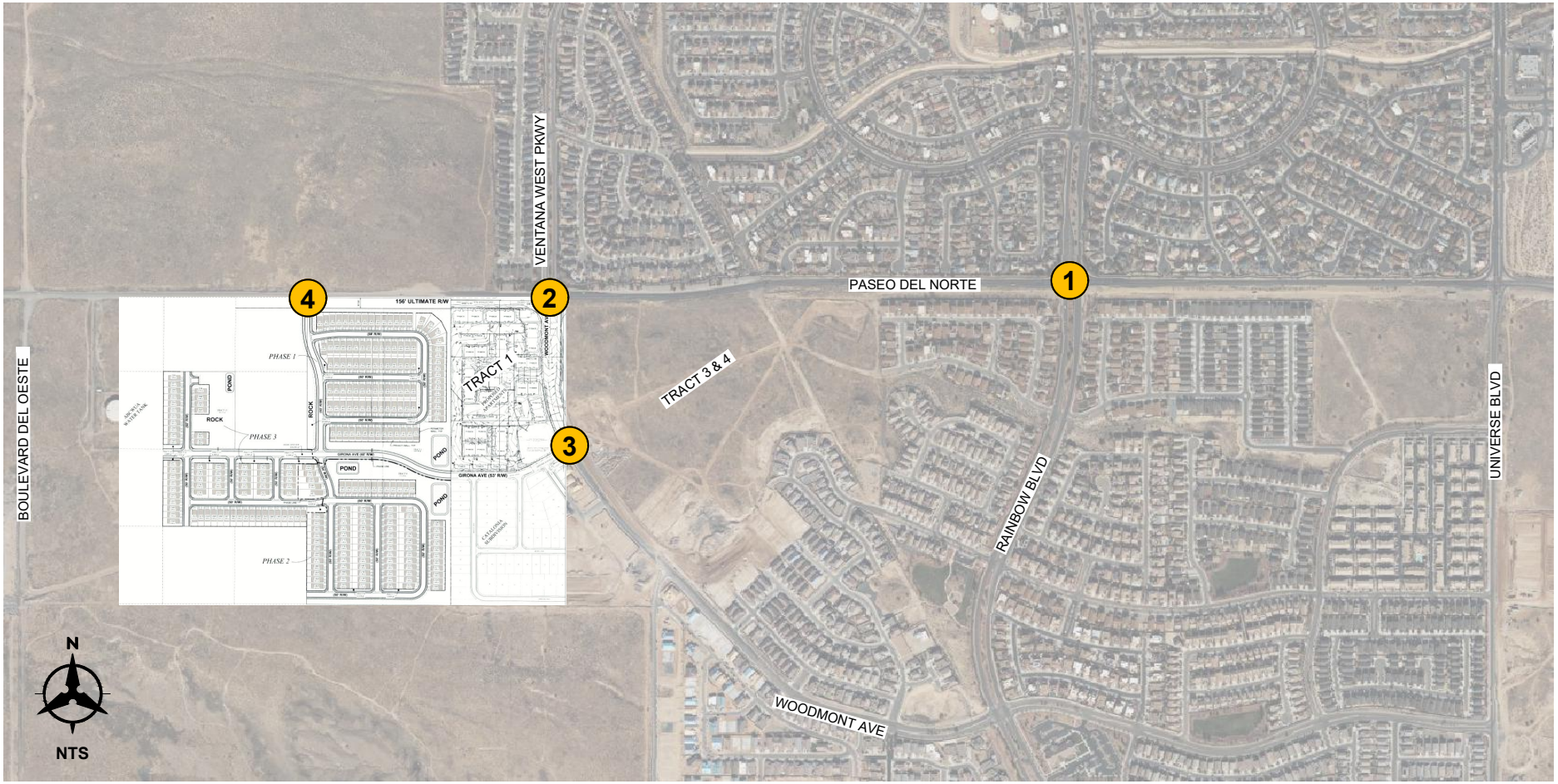
Paseo / Ventana West / Woodmont



Girona / Woodmont



Paseo / North Entrance



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SITE TRAFFIC ANALYSIS

FIGURE 5
RESIDENTIAL TRIP ASSIGNMENT VOLUMES AM (PM)

VI. TRAFFIC AND IMPROVEMENT ANALYSIS

A. TURN LANE REQUIREMENTS

The City of Albuquerque Development Process Manual (DPM) includes information for when turn lanes are warranted. Based on a design speed of 35 MPH turning volume for hour above 40 for left turning vehicles and 50 for right turning vehicles meets the thresholds to install dedicated turn lanes.

The intersection of Girard and Woodmont will see an increase during both peak hours with the PM being the largest volume. During the PM peak hour after the development is built, 67 northbound left turns and 105 southbound right turns will be present at this intersection. Both of these volumes exceed the warrants in the DPM. Due to right-of-way constraints at the intersection, only one of these dedicated turn lanes can be built without right-of-way acquisition. Since this constraint exists it is recommended to install the northbound left at Girard and Woodmont to create a safer left turn access into the development.

This intersection has been evaluated with this dedicated northbound left turn access in all build analysis scenarios.

B. TRAFFIC OPERATIONS

The following sections will discuss the results of the future year traffic analysis. The intersection capacity analysis was completed using HCS 2023 which implements the Highway Capacity Manual procedures.

1. 2027 NO BUILD INTERSECTION CAPACITY ANALYSIS

The 2027 No Build scenario assumed that the proposed Thomas development project will not be accomplished by this phase. The extension of Woodmont to Paseo del Norte was included in the No Build scenario, as neighboring developments, such as Trails Tract 1, denoted the connection by the year 2027. Table 5 and Table 6 shows the 2027 No Build results. The HCS output is included in Appendix D.

The analysis found that the signalized intersection of Paseo del Norte and Rainbow operates at overall acceptable levels of service, LOS C in both the AM and PM peak hour. Individual movements all operate at acceptable conditions, with the northbound through and right movements operating the worst at LOS D in both the AM and PM peak hours.

With the redirection of traffic through the Woodmont connection, the eastbound right at Paseo del Norte and Rainbow queuing returns to the acceptable available storage in the eastbound right turn lane that previously ran over capacity from the AM peak hour.

Table 5 | 2027 No Build Signalized Intersection Results						
Intersection	2027 AM Peak			2027 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	30.4	C	0.671	32.4	C	0.724

In the no build condition, the unsignalized intersection of Paseo del Norte and Ventana West/Woodmont was evaluated which included the Woodmont as a south leg and with all-way stop control, per the surrounding developments completion prior to 2027. Paseo del Norte is expected to be a 4-lane roadway in the future and was evaluated with the interim 2-lane condition and the future 4-lane condition. The intersection operates with an overall acceptable LOS B in the future condition as an all-way stop controlled intersection without mitigation, while the interim condition follows suite. The most notable changes between the 2-lane to the 4-lane condition occurs as individual movement improvements, with the westbound right improving from LOS B to LOS A in the AM peak hour, and the eastbound through/right improving from LOS C to LOS B in the PM peak hour.

A peak hour traffic signal warrant analysis was performed for the Paseo del Norte and Ventana West intersection but is not warranted in either the AM or PM peak hour, so installation of a traffic signal is not recommended at this time. The peak hour traffic signal warrant analysis is included in Appendix D.

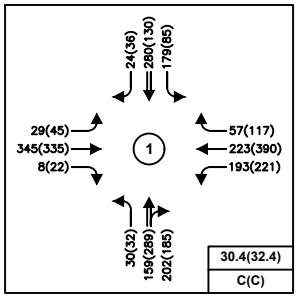
Note, the westbound left turn volumes at Paseo del Norte and Ventana West Parkway/Woodmont exceed the criteria defined in Table 7.5.62 of the Development Process Manual and a left turn lane is warranted. The minimum left turn lane transition length is a 300'-150' reverse curve as defined in Table 7.5.65 of the DPM. This dedicated turning lane is required to be implemented when the connection to Woodmont occurs which will be prior to the No Build scenario.

The future site driveway and existing intersection of Girona and Woodmont operates at an overall LOS A in both the AM and PM peak hours, with all individual movements operating at LOS A.

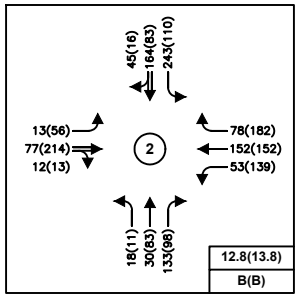
Table 6 | 2027 No Build Unsignalized Intersection Results								
	2027 AM Peak				2027 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont (2-lane)	12.8		-	B	13.8		-	B
Eastbound Left	10.9		25	B	11.8		25	B
Eastbound Thru/Right	11.8		25	B	17.4		75	C
Westbound Left	11.2		25	B	13.9		50	B
Westbound Thru	13.0	-	50	B	13.3	-	50	B
Westbound Right	10.1		25	B	12.6		50	B
Northbound Left	10.8		25	B	11.5		25	B
Northbound Thru	10.5		25	B	12.7		25	B
Northbound Right	11.5		50	B	12.0		25	B
Southbound Left	17.1		75	C	14.4		50	B
Southbound Thru	10.5		25	B	11.5		25	B
Northbound Thru/Right	11.0		25	B	11.6		25	B
Paseo & Ventana West/Woodmont (4-lane)	12.4		-	B	12.5		-	B
Eastbound Left	10.8		25	B	11.7		25	B
Eastbound Through	10.8		25	B	12.3		25	B
Eastbound Thru/Right	10.8		25	B	12.5		50	B
Westbound Left	11.1		25	B	13.5		50	B
Westbound Thru	12.8	-	50	B	12.9	-	50	B
Westbound Right	10.0		25	A	12.2		50	B
Northbound Left	10.6		25	B	11.1		25	B
Northbound Thru	10.3		25	B	12.2		25	B
Northbound Right	11.3		50	B	11.5		25	B
Southbound Left	16.6		75	C	13.8		50	B
Southbound Thru	10.4		25	B	11.1		25	B
Southbound Thru/Right	10.8		25	B	11.2		25	B
Girona & Woodmont	9.4	-	-	A	9.0	-	-	A
Eastbound Left/Right	9.4	0.01	0	A	9.0	0.01	0	A
Northbound Left/Through	7.6	0.00	0	A	7.5	0.01	0	A
* – HCM 95th percentile queue rounded to next 25-foot increment								

LEGEND

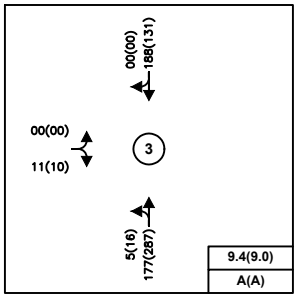
- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)



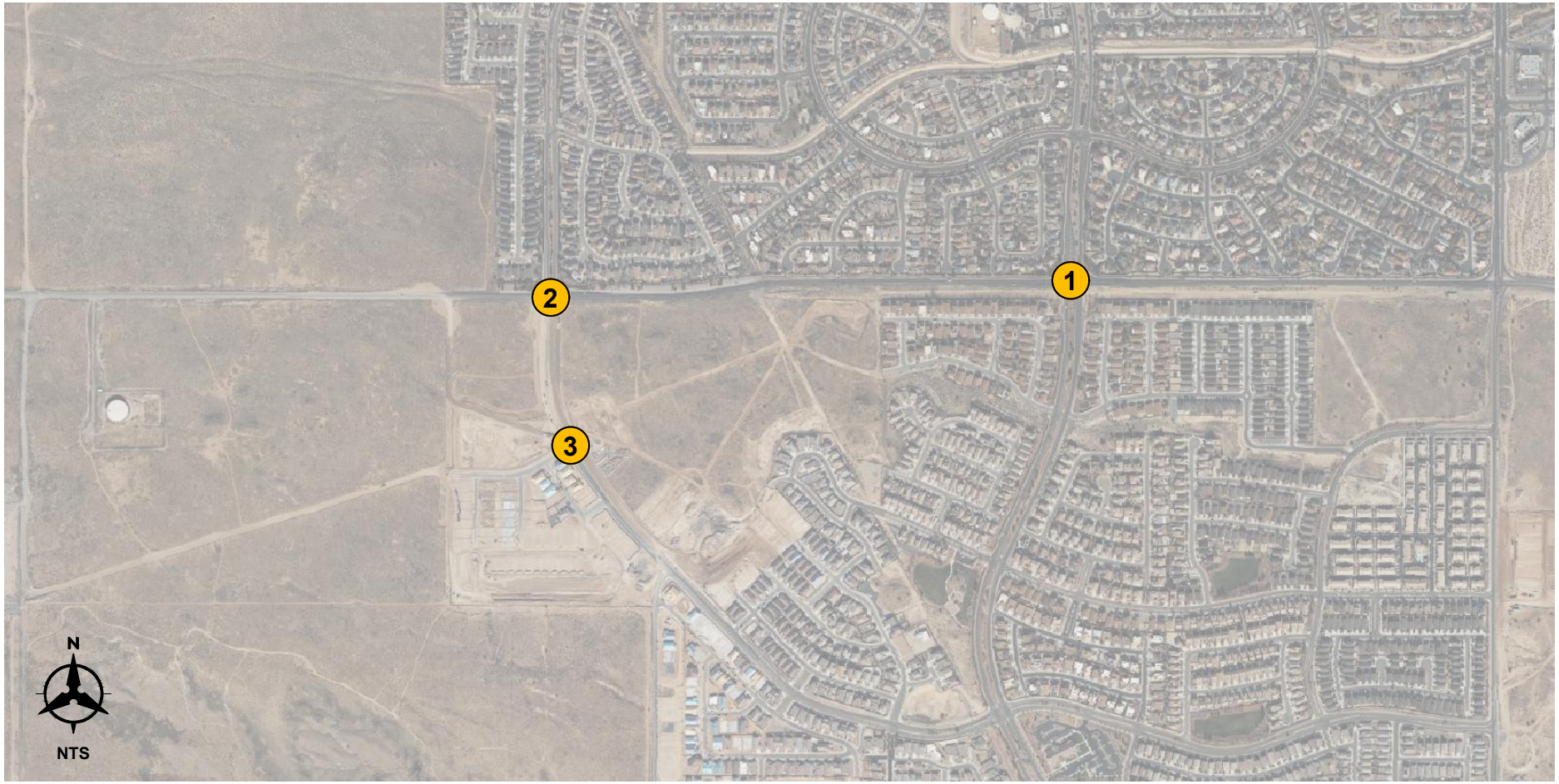
Rainbow / Paseo del Norte



Paseo / Ventana West / Woodmont



Girona / Woodmont



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THOMAS DEVELOPMENT
ALBUQUERQUE, NEW MEXICO
SITE TRAFFIC ANALYSIS

FIGURE 6
2027 AM(PM) NO BUILD
PEAK HOUR TRAFFIC VOLUMES

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2. 2027 BUILD INTERSECTION CAPACITY ANALYSIS

The trips generated by the Thomas Development (Table 4) were assigned to the intersections using the trip percentages and associated volumes shown in Figure 4 and Figure 5. These trips were added to the 2027 No Build traffic projections shown in Appendix C. The 2027 Build capacity analysis is shown in Table 7 and Table 8. The individual intersection output is included in Appendix E.

The signalized intersection of Paseo del Norte and Rainbow experiences overall LOS C in the AM peak hour and LOS D in the PM peak hour. In both the AM and PM peak hour, all movements operate under acceptable conditions at or above LOS D.

Table 7 | 2027 Build Signalized Intersection Results

Intersection	2027 AM Peak			2027 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	32.0	C	0.757	35.7	D	0.859

In the build condition the unsignalized intersection of Paseo del Norte and Ventana West/Woodmont was evaluated which included the Woodmont leg to the south and with all-way stop control. As in the No Build condition, Paseo del Norte is expected to be a 4-lane roadway in the future and was evaluated with both the interim 2-lane condition and the future 4-lane condition. The intersection continues to operate with an overall acceptable operations in the build condition as an all-way stop controlled intersection without mitigation in both 2-lane and 4-lane configuration. With the 2-lane condition, the intersection operates at a LOS B in the AM peak hour, and at a LOS C in the PM peak hour. In the 4-lane condition, the intersection operates at a LOS B in both peak hours.

A peak hour traffic signal warrant analysis was performed for the Paseo del Norte and Ventana West intersection and is not warranted in either the AM or PM peak hour for the 2027 build year, so installation of a traffic signal is not recommended at this intersection. The peak hour traffic signal warrant analysis is included in Appendix E.

Note, the westbound left turn volumes at Paseo del Norte and Ventana West Parkway/Woodmont exceed the criteria defined in Table 7.5.62 of the Development Process Manual and these left turn lanes are warranted. The minimum left turn lane transition length is a 300'-150' reverse curve as defined in Table 7.5.65 of the DPM. This dedicated turning lane is required to be implemented when the connection to Woodmont occurs which will be prior to the No Build scenario, therefore these dedicated turning lanes have been implemented into the build scenario analysis.

The intersection of Girona and Woodmont operates as the east site entrance in the build condition, with the majority of vehicles traveling to the site through this

intersection from Woodmont. The intersection operates at acceptable conditions in both peak hours, operating at an overall LOS B in both the AM and PM peak hours.

The right-in, right-out, driveway on Paseo Del Norte introduced in the build condition offers access to the site as a secondary driveway into the Thomas development. This access point will see similar trips utilize this access point as on Girona and Woodmont. This limited access driveway operates at acceptable conditions in both peak hours, operating at an overall LOS A in the AM peak hour, and at a LOS B in the PM peak hour.

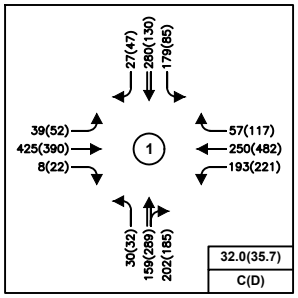
With the improvement of this development, all intersections are required to be evaluated for AASHTO sight distance requirements. Intersections shall be designed to meet or exceed the sight distance requirements.

An additional intersection inside the site development was included in the scope to help determine if the intersection could be stop controlled or a roundabout. Both of these options will operate acceptably with the number of units that are being developed. The development could proceed with either a stop-controlled intersection or a roundabout at this intersection. For traffic calming purposes the roundabout or all-way stop intersection could be implemented within the development with no operational issues.

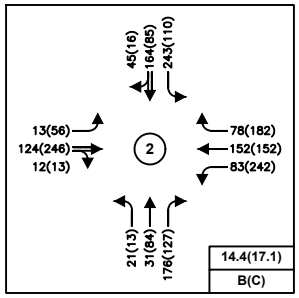
Table 8 | 2027 Build Unsignalized Intersection Results								
	2027 AM Peak				2027 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont (2-lane)	14.4		-	B	17.1		-	C
Eastbound Left	11.4		25	B	12.6		25	B
Eastbound Thru/Right	14.2		50	B	22.9		125	C
Westbound Left	12.8		25	B	21.9		100	C
Westbound Thru	14.2		50	B	14.3		50	B
Westbound Right	10.9	-	25	B	13.7	-	50	B
Northbound Left	11.5		25	B	12.2		25	B
Northbound Thru	11.1		25	B	13.8		25	B
Northbound Right	14.0		50	B	14.1		50	B
Southbound Left	19.8		100	C	15.9		50	C
Southbound Thru	11.4		25	B	12.5		25	B
Northbound Thru/Right	12.1		50	B	12.7		25	B
Paseo & Ventana West/Woodmont (4-lane)	13.6		-	B	14.7		-	C
Eastbound Left	11.3		25	B	12.7		25	B
Eastbound Through	11.8		25	B	13.8		50	B
Eastbound Thru/Right	12.0		25	B	14.1		50	B
Westbound Left	12.5		25	B	20.4		100	C
Westbound Thru	13.8	-	50	B	13.7	-	50	C
Westbound Right	10.6		25	B	13.0		50	B
Northbound Left	11.1		25	B	11.8		25	B
Northbound Thru	10.8		25	B	13.1		25	B
Northbound Right	13.3		50	B	13.3		50	B
Southbound Left	18.8		100	C	15.0		50	C
Southbound Thru	11.1		25	B	11.9		25	B
Southbound Thru/Right	11.7		50	B	12.1		25	B
Girona & Woodmont	11.3	-	-	B	12.1	-	-	B
Eastbound Left/Right	11.3	0.16	25	B	12.1	0.13	25	B
Northbound Left/Through	7.8	0.02	25	A	7.9	0.06	25	A
Paseo Del Norte & North Entrance	9.1	-	-	A	10.2	-	-	B
Northbound Right	9.1	0.05	25	A	10.2	0.05	25	B
* – HCM 95th percentile queue rounded to next 25-foot increment								

LEGEND

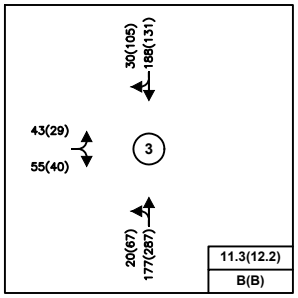
- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)



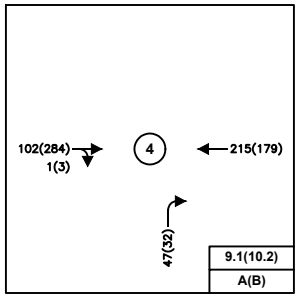
Rainbow / Paseo del Norte



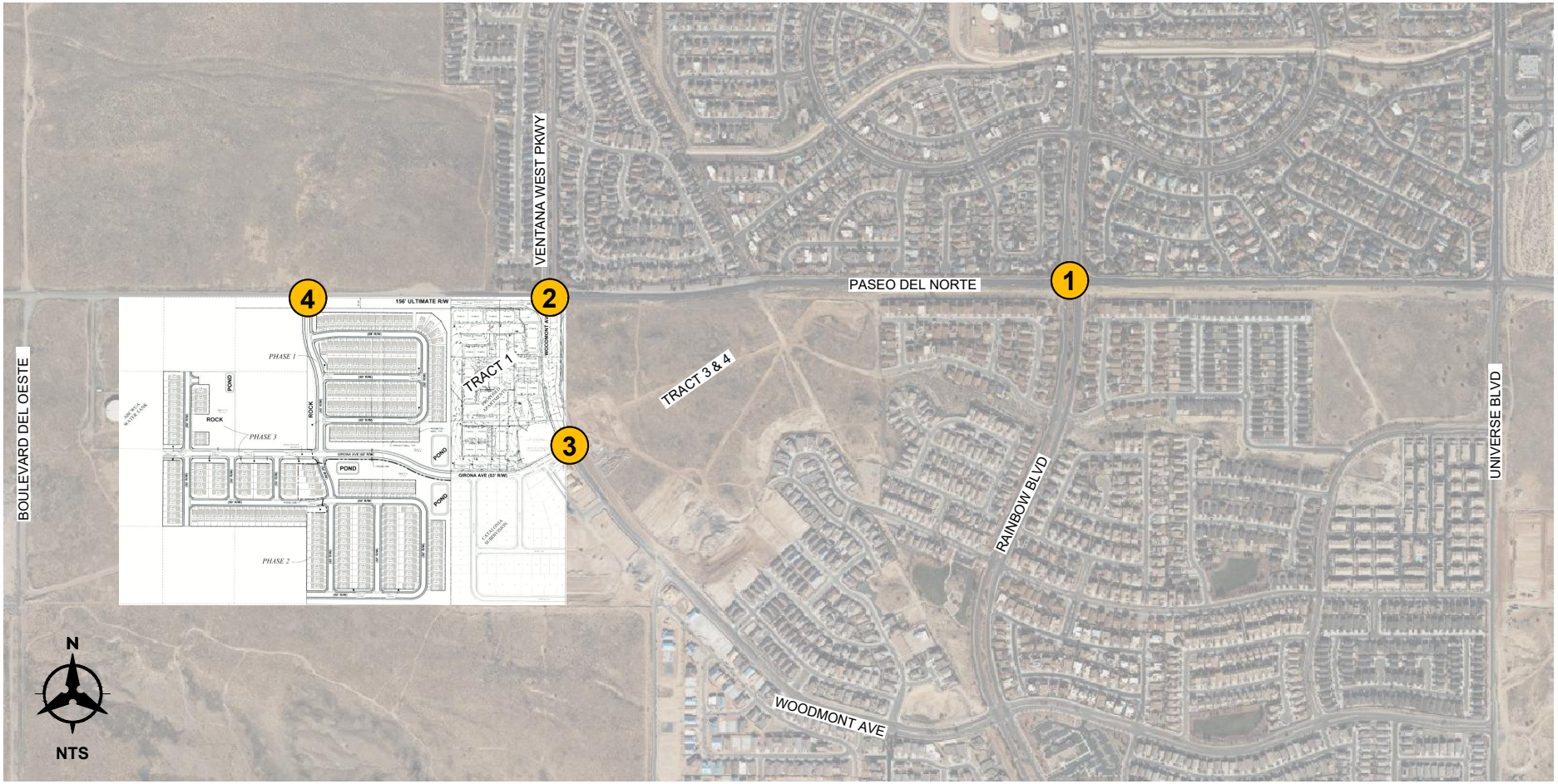
Paseo / Ventana West / Woodmont



Girona / Woodmont



Paseo / North Entrance



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THOMAS DEVELOPMENT
ALBUQUERQUE, NEW MEXICO
SITE TRAFFIC ANALYSIS

FIGURE 7
2027 AM(PM) BUILD
PEAK HOUR TRAFFIC VOLUMES

3. HORIZON YEAR 2037 NO BUILD INTERSECTION CAPACITY ANALYSIS

The City of Albuquerque required a 10-year Horizon capacity analysis for this development to determine long term traffic effects of newly established developments within the area for future network considerations.

The 2037 No Build scenario assumed that the proposed Thomas development project will not be accomplished by this phase. The extension of Woodmont to Paseo del Norte was included in the No Build scenario, as neighboring developments, such as Trails Tracts and Catalonia, denote the connection by the year 2027. Table 9 and Table 10 shows the 2037 No Build results. The HCS output is included in Appendix F.

The analysis found that the signalized intersection of Paseo del Norte and Rainbow operates at overall acceptable levels of service, LOS D in both the AM and PM peak hour. The northbound right in the both the AM and PM peak hour and the northbound through in the PM peak hour will operate at LOS E.

With the redirection of traffic through the Woodmont connection, the eastbound right at Paseo del Norte and Rainbow queuing returns to the acceptable available storage that previously ran over capacity during AM peak hour. In contrast, the westbound left movement, while operating at LOS C in the AM and PM, is over capacity in both peak hours with the addition of the background traffic redirection.

Optimizing the signal timing of Paseo Del Norte and Rainbow will resolve the serviceability of the intersection. With signal optimization, the intersection will operate at an overall LOS C in both the AM and PM peak hours, with all movements operating at LOS D or better.

Table 9 | 2037 No Build Signalized Intersection Results

Intersection	2037 AM Peak			2037 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	34.8	C*	0.843	39.7	D*	0.905
Optimized Signal Timing	25.4	C	0.755	25.8	C	0.781
*Movements of LOS E						

In the horizon year no build condition, the unsignalized intersection of Paseo del Norte and Ventana West/Woodmont was evaluated similarly to the 2027 condition, including the Woodmont as a south leg and with all-way stop control, per the surrounding developments completion prior to 2037. The 2-leg interim and 4-leg future lane geometry scenarios apply. The 2-lane condition operates at an overall LOS C in both the AM and PM peak hours. All individual movements operate at a LOS C or better in the AM peak hour, and all individual movements operate at LOS D or better in the PM peak hour. The 4-lane scenario operates similarly, with an overall LOS C in

both the AM and PM peak hour. Slight improvement occurs at the individual movement level, improving to the tone operations at LOS C or better.

A peak hour traffic signal warrant analysis was performed for the Paseo del Norte and Ventana West intersection and a traffic signal is only warranted in the AM peak hour. A traffic signal is not recommended to be installed although, the traffic volumes should be monitored to determine if and when a change to signalize this intersection is warranted and how best to accommodate the estimated traffic. The peak hour traffic signal warrant analysis is included in Appendix F.

Note, the westbound left turn volumes at Paseo del Norte and Ventana West Parkway/Woodmont exceed the criteria defined in Table 7.5.62 of the Development Process Manual and these left turn lanes are warranted. The minimum left turn lane transition length is a 300'-150' reverse curve as defined in Table 7.5.65 of the DPM. This dedicated turning lane is required to be implemented when the connection to Woodmont occurs which will be prior to the No Build scenario.

The future site driveway and existing intersection of Girona and Woodmont operates at an overall LOS A in both the AM and PM peak hours, with all individual movements operating at LOS A into the horizon year no build scenario.

Table 10 | 2037 No Build Unsignalized Intersection Results								
	2037 AM Peak				2037 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont (2-lane)	19.3		-	C	19.1		-	C
Eastbound Left	11.8		25	B	13.5		25	B
Eastbound Thru/Right	13.9		50	B	28.5		150	D
Westbound Left	12.2		25	B	15.8		50	C
Westbound Thru	16.6		75	C	17.4		75	C
Westbound Right	11.7	-	25	B	19.4	-	100	C
Northbound Left	11.8		25	B	12.8		25	B
Northbound Thru	11.5		25	B	14.7		25	B
Northbound Right	13.4		50	B	14.1		50	B
Southbound Left	34.4		200	D	19.6		75	C
Southbound Thru	11.4		25	B	12.7		25	B
Northbound Thru/Right	12.3		50	B	13.0		25	B
Paseo & Ventana West/Woodmont (4-lane)	18.1		-	C	15.4		-	C
Eastbound Left	11.7		25	B	13.2		25	B
Eastbound Through	12.0		25	B	14.7		50	B
Eastbound Thru/Right	12.1		25	B	15.1		50	C
Westbound Left	11.9		25	B	14.9		50	B
Westbound Thru	16.1	-	75	C	16.2	-	75	C
Westbound Right	11.4		25	B	17.6		100	C
Northbound Left	11.5		25	B	12.1		25	B
Northbound Thru	11.2		25	B	13.7		25	B
Northbound Right	12.8		50	B	13.1		25	B
Southbound Left	31.7		200	D	18.0		75	C
Southbound Thru	11.1		25	B	12.1		25	B
Southbound Thru/Right	11.9		50	B	12.3		25	B
Girona & Woodmont	9.4	-	-	A	9.0	-	-	A
Eastbound Left/Right	9.4	0.02	25	A	9.0	0.02	0	A
Northbound Left/Through	7.6	0.00	0	A	7.5	0.02	0	A
* – HCM 95th percentile queue rounded to next 25-foot increment								

LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
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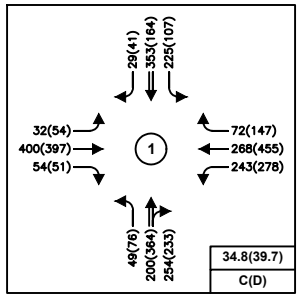
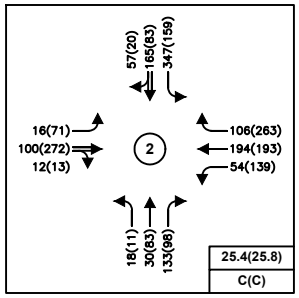
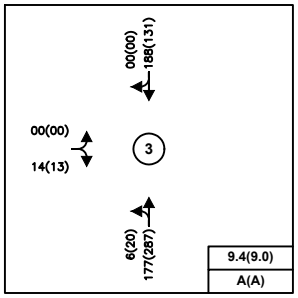


Rainbow / Paseo del Norte



Paseo / Ventana West / Woodmont



Girona / Woodmont

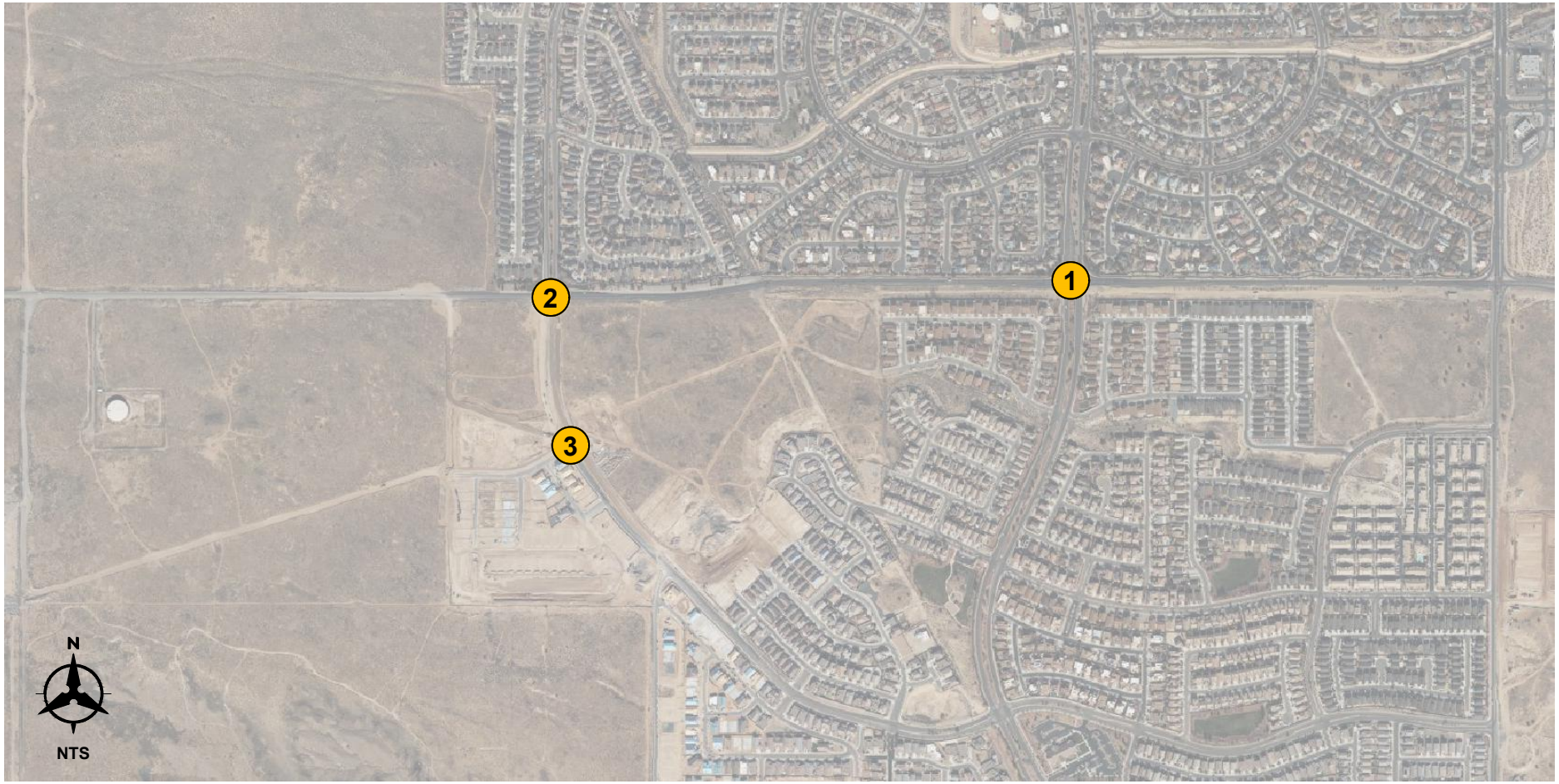


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FIGURE 8
2037 AM(PM) NO BUILD
PEAK HOUR TRAFFIC VOLUMES

4. HORIZON YEAR 2037 BUILD INTERSECTION CAPACITY ANALYSIS

The trips generated by the Thomas Development (Table 4) were assigned to the intersections using the trip percentages and associated volumes shown in Figure 4 and Figure 5. These trips were added to the 2037 No Build traffic projections shown in Appendix C. The 2037 Build capacity analysis is shown in Table 11 and Table 12. The individual intersection output is included in Appendix G.

The analysis found that the signalized intersection of Paseo del Norte and Rainbow operates at overall acceptable levels of service, LOS D in both the AM and PM peak hour. The northbound right in both the AM and PM peak hour and the northbound through and westbound through in the PM peak hour will operate at LOS E.

With the redirection of traffic through the Woodmont connection, the eastbound right at Paseo del Norte and Rainbow queuing returns to the acceptable available storage that previously ran over capacity during AM peak hour. In contrast, the westbound left movement, while operating at LOS C in the AM and LOS D in the PM, exceeds the available queue length in both peak hours with the addition of the background traffic redirection.

Optimizing the signal timing of Paseo Del Norte and Rainbow will resolve the serviceability of the intersection. With signal optimization, the intersection will operate at an overall LOS C in both the AM and PM peak hours, with all movements operating at LOS D or better.

Table 11 | 2037 Build Signalized Intersection Results

Intersection	2037 AM Peak			2037 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	37.4	D*	0.855	45.9	D*	0.975
Optimized Signal Timing	28.9	C	0.850	27.2	C	0.869
Paseo & Ventana/Woodmont Signalized Alternative	26.5	C	0.812	24.1	C	0.862

In the horizon year build condition, the unsignalized intersection of Paseo del Norte and Ventana West/Woodmont was evaluated which included the Woodmont leg to the south and with all-way stop control. As in the No Build condition, Paseo del Norte is expected to be a 4-lane roadway in the future and was evaluated with both the interim 2-lane condition and the future 4-lane condition. The intersection continues to operate with an overall acceptable LOS in the build condition as an all-way stop controlled intersection without mitigation in both 2-lane and 4-lane configuration. With the 2-lane condition, the intersection operates at a LOS C in the AM peak hour, and at a LOS D in the PM peak hour. At the individual movement level, the southbound left in the AM peak hour and the eastbound through/right movements

operate at a LOS E. This is rectified in the 4-lane condition, where the intersection operates at a LOS C in both the AM and PM peak hour. All individual movements operate at LOS C or better in this condition except for the southbound left in the AM peak hour which retains LOS E.

A peak hour traffic signal warrant analysis was performed for the Paseo del Norte and Ventana West intersection and a traffic signal is warranted in both the AM and PM peak hour for the horizon year scenario. As a signalized intersection, it operates at a LOS C in both the AM and PM peak hour, with all individual movements operating at LOS D or better. The peak hour traffic signal warrant analysis is included in Appendix G.

Note, the northbound and westbound left turn volumes at Paseo del Norte and Ventana West Parkway/Woodmont exceed the criteria defined in Table 7.5.62 of the Development Process Manual and these left turn lanes are warranted. The minimum left turn lane transition length is a 300'-150' reverse curve as defined in Table 7.5.65 of the DPM. As with the No Build scenario, these dedicated turning lanes have been implemented into the build scenario analysis.

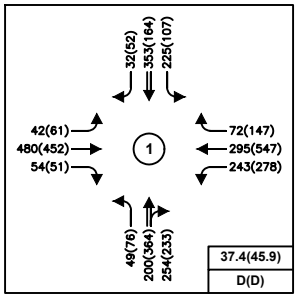
The intersection of Girona and Woodmont operates as the east site entrance in the build condition, with the majority of vehicles traveling to the site through this intersection from Woodmont. The intersection operates at acceptable conditions in both peak hours, operating at an overall LOS B in both the AM and PM peak hours. All individual movements operate at LOS B or better in both peak hours.

The right-in, right-out driveway on Paseo Del Norte introduced in the build condition offers access to the site, and as a secondary driveway into the Thomas development. This access point will see similar trips utilize this access point as on Girona and Woodmont, even into the horizon year. This limited access driveway operates at acceptable conditions in both peak hours, operating at an overall LOS A in the AM peak hour, and a LOS B in the PM peak hour. As this access point is included in the Access Management Concept for Paseo Del Norte, this access point will not be expanded to a full access in the future unless the request goes to the Roadway Access Committee.

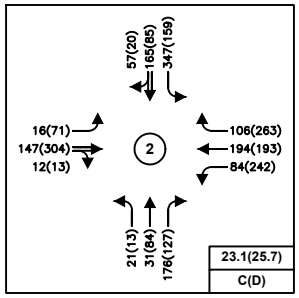
Table 12 | Build Unsignalized Intersection Results								
	2037 AM Peak				2037 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont (2-lane)	23.1		-	C	25.7		-	D
Eastbound Left	12.3		25	B	14.5		25	B
Eastbound Thru/Right	17.4		75	C	45.3		225	E
Westbound Left	14.0		25	B	27.5		125	D
Westbound Thru	18.6		75	C	19.3		75	C
Westbound Right	12.7	-	25	B	22.4	-	125	C
Northbound Left	12.6		25	B	13.7		25	B
Northbound Thru	12.3		25	B	16.0		50	C
Northbound Right	16.7		75	C	17.0		50	C
Southbound Left	45.5		225	E	22.5		75	C
Southbound Thru	12.3		25	B	13.8		25	B
Northbound Thru/Right	13.6		50	B	14.3		25	B
Paseo & Ventana West/Woodmont (4-lane)	20.7		-	C	18.4		-	C
Eastbound Left	12.2		25	B	14.1		25	B
Eastbound Through	13.3		25	B	17.1		50	C
Eastbound Thru/Right	13.5		25	B	17.7		75	C
Westbound Left	13.5		25	B	24.4		125	C
Westbound Thru	17.6	-	75	C	17.6	-	75	C
Westbound Right	12.2		25	B	19.8		100	C
Northbound Left	12.1		25	B	12.9		25	B
Northbound Thru	11.8		25	B	14.9		25	B
Northbound Right	15.5		75	C	15.5		50	C
Southbound Left	39.7		225	E	20.3		75	C
Southbound Thru	11.9		25	B	13.0		25	B
Southbound Thru/Right	13.0		50	B	13.4		25	BL
Girona & Woodmont	11.3	-	-	B	12.1	-	-	B
Eastbound Left/Right	11.3	0.16	25	B	12.1	0.13	25	B
Northbound Left/Through	7.8	0.02	25	A	7.9	0.06	25	A
Paseo Del Norte & North Entrance	9.2	-	-	A	10.8	-	-	B
Northbound Right	9.2	0.06	25	A	10.8	0.05	25	B
* – HCM 95th percentile queue rounded to next 25-foot increment								

LEGEND

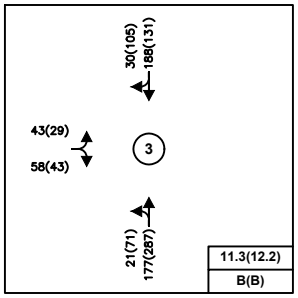
- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- 1234(1234) AM(PM) Traffic Counts
- X(X) AM(PM) Level of Service (LOS)



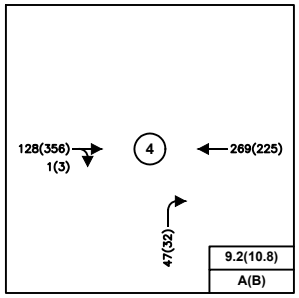
Rainbow / Paseo del Norte



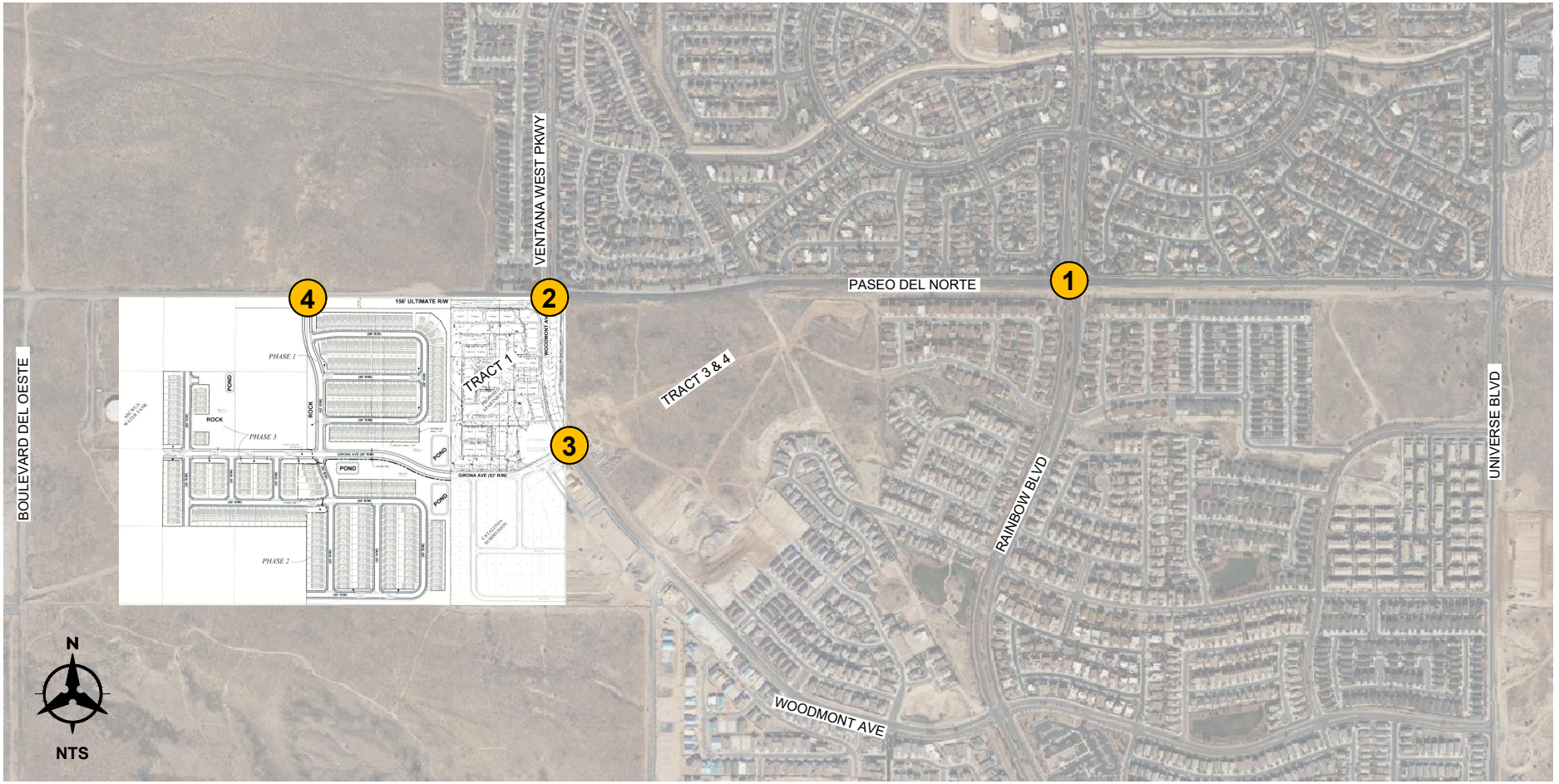
Paseo / Ventana West / Woodmont



Girona / Woodmont



Paseo / North Entrance



P:\20240271\TRANS\Study\Report-Production\Report Figures\20240271_Figures.dwg Jun 06, 2024 - 5:09pm

Bohannan Huston
www.bhinc.com 800.877.5332

THOMAS DEVELOPMENT
ALBUQUERQUE, NEW MEXICO
SITE TRAFFIC ANALYSIS

FIGURE 9
2037 AM(PM) BUILD
PEAK HOUR TRAFFIC VOLUMES

VII. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The traffic analysis found that all intersections listed in the site development's scope operate under acceptable conditions, with all overall and individual movements operating at LOS D or better. This trend continues from the 2023 Existing conditions all the way through the 2027 No Build and 2027 Build conditions.

Implementation into the 2037 No Build horizon year, the intersection of Paseo Del Norte & Rainbow begins to deteriorate with the northbound right in both the AM and PM peak hour and the northbound through in the PM peak hour operating at LOS E. Signal optimization will correct the serviceability issues at the individual movement level.

With the implementation of the build scenario into the 2037 horizon year, the same issues occurring with Paseo Del Norte & Rainbow from previous no build are again correctable with signal optimization. Individual movement operations worse than LOS D with the intersection of Paseo & Ventana are guaranteed to be course corrected prior to the horizon year with the mitigation efforts of a 4-lane implementation occurring prior to the Thomas Development build out year.

Within all conditions from existing to the horizon year build scenario, both site driveways will operate at overall acceptable conditions, with no movement operating worse than LOS B.

B. RECOMMENDATIONS

- All designs shall satisfy the Manual on Uniform Traffic Control Devices (MUTCD) and City of Albuquerque requirements.
- Paseo and Rainbow will require signal optimization by the horizon year to maintain the individual movement operation at LOS D or better. As this occurs in the No Build scenario it is not resulting from the Thomas Development.
- The Paseo del Norte and Driveway access shall be built to accommodate a right-in and right-out to be utilized by the development.
- The internal intersection of the development may be built as either a stop-controlled intersection or roundabout as both will operate acceptably inside the development.
- The intersection of Woodmont and Girona will require a dedicated northbound left turn lane to be built. This turn lane should meet City of Albuquerque specifications for left turn lanes.

- A multi-use path will be required along the site frontage with Paseo Del Norte. This path is required to connect the development to the existing Paseo Del Norte trail.
- All roadways in the development will include sidewalks unless an HOA maintained multi-use path is provided along the street in lieu of a sidewalk. Additionally bicycle lanes are required on Girona Avenue and the north/south connection from the development to Paseo Del Norte.
- The Paseo del Norte and Ventana West/Woodmont intersection performs acceptably with all-way stop control through the 2027 build scenario so signal installation is not recommended at this time.
  - The neighboring Trail Tract developments will install eastbound and westbound left turn lanes at this intersection, prior to the 2027 Build scenario. These are included in the No Build scenario of this traffic study.
  - The neighboring Trails Tract development is expected to construct the full section of the 2-lane northbound approach prior to the 2027 Build scenario. This will provide a northbound left turn lane, a northbound through lane and a northbound right turn lane. The southbound approach will also be restriped to provide a single southbound through lane.

    Since implementation of the 4-lane Paseo Del Norte & Ventana intersection, the traffic signal alternative has been included where warranted, but is unnecessary to be implemented.

APPENDIX A
EXISTING DATA

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

Counter R.C.

File Name : girona ave. and woodmont ave.
Site Code : 10242023
Start Date : 10/24/2023
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Girona Ave. Eastbound				Woodmont Ave. Northbound				Woodmont Ave. Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	2	0	2	2	0	0	2	0	0	0	0	4
07:15 AM	0	3	0	3	1	0	0	1	0	0	0	0	4
07:30 AM	0	3	0	3	1	0	0	1	0	0	0	0	4
07:45 AM	0	2	0	2	1	0	0	1	0	0	0	0	3
Total	0	10	0	10	5	0	0	5	0	0	0	0	15
08:00 AM	0	2	0	2	1	0	0	1	0	0	0	0	3
08:15 AM	0	1	0	1	3	0	0	3	0	0	0	0	4
08:30 AM	0	4	0	4	0	0	0	0	0	0	0	0	4
08:45 AM	0	1	0	1	2	0	0	2	0	0	0	0	3
Total	0	8	0	8	6	0	0	6	0	0	0	0	14
*** BREAK ***													
04:00 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
04:15 PM	0	1	0	1	4	0	0	4	0	0	0	0	5
04:30 PM	0	5	0	5	5	1	0	6	0	0	0	0	11
04:45 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	8	0	8	12	1	0	13	0	0	0	0	21
05:00 PM	0	2	0	2	5	0	0	5	0	0	0	0	7
05:15 PM	0	0	0	0	4	0	0	4	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	3	0	0	3	1	0	0	1	4
Total	0	3	0	3	12	0	0	12	1	0	0	1	16
Grand Total	0	29	0	29	35	1	0	36	1	0	0	1	66
Apprch %	0	100	0		97.2	2.8	0		100	0	0		
Total %	0	43.9	0	43.9	53	1.5	0	54.5	1.5	0	0	1.5	
Cars	0	29	0	29	35	1	0	36	1	0	0	1	66
% Cars	0	100	0	100	100	100	0	100	100	0	0	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

File Name : girona ave. and woodmont ave.
Site Code : 10242023
Start Date : 10/24/2023

	Girona Ave. Eastbound			Woodmont Ave. Northbound			Woodmont Ave. Southbound			
Start Time	Left	Right	App. Total	Left	Thru	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	2	0	2	0	0	0	4
07:15 AM	0	3	3	1	0	1	0	0	0	4
07:30 AM	0	3	3	1	0	1	0	0	0	4
07:45 AM	0	2	2	1	0	1	0	0	0	3
Total Volume	0	10	10	5	0	5	0	0	0	15
% App. Total	0	100		100	0		0	0		
PHF	.000	.833	.833	.625	.000	.625	.000	.000	.000	.938
Cars	0	10	10	5	0	5	0	0	0	15
% Cars	0	100	100	100	0	100	0	0	0	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	1	1	4	0	4	0	0	0	5
04:30 PM	0	5	5	5	1	6	0	0	0	11
04:45 PM	0	1	1	1	0	1	0	0	0	2
05:00 PM	0	2	2	5	0	5	0	0	0	7
Total Volume	0	9	9	15	1	16	0	0	0	25
% App. Total	0	100		93.8	6.2		0	0		
PHF	.000	.450	.450	.750	.250	.667	.000	.000	.000	.568
Cars	0	9	9	15	1	16	0	0	0	25
% Cars	0	100	100	100	100	100	0	0	0	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

Counter R.C.

File Name : Paseo Del Norte Blvd. and Rainbow Blvd.
Site Code : 10242023
Start Date : 10/24/2023
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Paseo Del Norte Blvd. Eastbound						Paseo Del Norte Blvd. Westbound						Rainbow Blvd. Northbound						Rainbow Blvd. Southbound						
Start Time	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Int. Total
07:00 AM	2	62	68	0	0	132	24	42	6	0	0	72	12	7	31	1	0	51	49	58	4	1	0	112	367
07:15 AM	1	65	78	0	0	144	40	33	4	0	0	77	29	15	45	0	0	89	39	49	1	1	0	90	400
07:30 AM	4	56	41	0	0	101	30	38	9	0	1	78	24	22	54	1	2	103	46	46	4	1	0	97	379
07:45 AM	7	51	27	0	0	85	44	48	13	0	0	105	12	33	30	2	2	79	44	58	6	1	1	110	379
Total	14	234	214	0	0	462	138	161	32	0	1	332	77	77	160	4	4	322	178	211	15	4	1	409	1525
08:00 AM	2	52	40	0	0	94	41	39	10	0	1	91	21	20	38	3	2	84	42	66	8	0	1	117	386
08:15 AM	1	50	63	0	0	114	57	38	12	2	2	111	18	45	52	3	2	120	41	82	3	2	2	130	475
08:30 AM	2	44	35	0	0	81	37	35	18	0	0	90	16	49	67	0	2	134	39	53	0	1	1	94	399
08:45 AM	0	47	28	0	0	75	53	33	9	0	0	95	13	40	40	1	1	95	28	55	1	1	4	89	354
Total	5	193	166	0	0	364	188	145	49	2	3	387	68	154	197	7	7	433	150	256	12	4	8	430	1614
*** BREAK ***																									
04:00 PM	7	43	28	0	1	79	60	49	25	1	5	140	50	55	56	1	9	171	25	38	6	0	4	73	463
04:15 PM	9	67	29	0	0	105	58	58	22	1	0	139	48	74	40	1	0	163	21	35	2	2	0	60	467
04:30 PM	7	49	25	0	0	81	40	59	38	2	0	139	35	87	52	0	2	176	16	25	4	2	2	49	445
04:45 PM	8	61	20	0	0	89	47	66	23	1	0	137	24	52	23	0	0	99	17	22	6	0	0	45	370
Total	31	220	102	0	1	354	205	232	108	5	5	555	157	268	171	2	11	609	79	120	18	4	6	227	1745
05:00 PM	9	49	21	0	1	80	45	69	25	0	0	139	32	40	33	1	0	106	19	16	6	1	0	42	367
05:15 PM	9	61	27	0	0	97	45	73	37	0	0	155	39	42	26	0	1	108	23	18	2	0	0	43	403
05:30 PM	4	70	31	1	0	106	52	70	26	0	2	150	39	51	42	0	0	132	15	34	3	0	0	52	440
05:45 PM	5	66	27	0	0	98	61	65	36	1	0	163	42	46	38	1	2	129	22	30	2	1	0	55	445
Total	27	246	106	1	1	381	203	277	124	1	2	607	152	179	139	2	3	475	79	98	13	2	0	192	1655
Grand Total	77	893	588	1	2	1561	734	815	313	8	11	1881	454	678	667	15	25	1839	486	685	58	14	15	1258	6539
Apprch %	4.9	57.2	37.7	0.1	0.1		39	43.3	16.6	0.4	0.6		24.7	36.9	36.3	0.8	1.4		38.6	54.5	4.6	1.1	1.2		
Total %	1.2	13.7	9	0	0	23.9	11.2	12.5	4.8	0.1	0.2	28.8	6.9	10.4	10.2	0.2	0.4	28.1	7.4	10.5	0.9	0.2	0.2	19.2	
Cars	76	885	574	1	2	1538	727	800	312	8	11	1858	443	663	657	15	25	1803	483	677	58	14	15	1247	6446
% Cars	98.7	99.1	97.6	100	100	98.5	99	98.2	99.7	100	100	98.8	97.6	97.8	98.5	100	100	98	99.4	98.8	100	100	100	99.1	98.6
Trucks	0	5	0	0	0	5	0	7	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0	13
% Trucks	0	0.6	0	0	0	0.3	0	0.9	0	0	0	0.4	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2
Buses	1	3	14	0	0	18	7	8	1	0	0	16	11	15	9	0	0	35	3	8	0	0	0	11	80
% Buses	1.3	0.3	2.4	0	0	1.2	1	1	0.3	0	0	0.9	2.4	2.2	1.3	0	0	1.9	0.6	1.2	0	0	0	0.9	1.2

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

File Name : Paseo Del Norte Blvd. and Rainbow Blvd.
Site Code : 10242023
Start Date : 10/24/2023
Page No : 2

	Paseo Del Norte Blvd. Eastbound				Paseo Del Norte Blvd. Westbound				Rainbow Blvd. Northbound				Rainbow Blvd. Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	51	27	85	44	48	13	105	12	33	30	75	44	58	6	108	373
08:00 AM	2	52	40	94	41	39	10	90	21	20	38	79	42	66	8	116	379
08:15 AM	1	50	63	114	57	38	12	107	18	45	52	115	41	82	3	126	462
08:30 AM	2	44	35	81	37	35	18	90	16	49	67	132	39	53	0	92	395
Total Volume	12	197	165	374	179	160	53	392	67	147	187	401	166	259	17	442	1609
% App. Total	3.2	52.7	44.1		45.7	40.8	13.5		16.7	36.7	46.6		37.6	58.6	3.8		
PHF	.429	.947	.655	.820	.785	.833	.736	.916	.798	.750	.698	.759	.943	.790	.531	.877	.871
Cars	12	192	163	367	177	152	53	382	63	142	183	388	164	259	17	440	1577
% Cars	100	97.5	98.8	98.1	98.9	95.0	100	97.4	94.0	96.6	97.9	96.8	98.8	100	100	99.5	98.0
Trucks	0	4	0	4	0	5	0	5	0	0	1	1	0	0	0	0	10
% Trucks	0	2.0	0	1.1	0	3.1	0	1.3	0	0	0.5	0.2	0	0	0	0	0.6
Buses	0	1	2	3	2	3	0	5	4	5	3	12	2	0	0	2	22
% Buses	0	0.5	1.2	0.8	1.1	1.9	0	1.3	6.0	3.4	1.6	3.0	1.2	0	0	0.5	1.4
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	7	43	28	78	60	49	25	134	50	55	56	161	25	38	6	69	442
04:15 PM	9	67	29	105	58	58	22	138	48	74	40	162	21	35	2	58	463
04:30 PM	7	49	25	81	40	59	38	137	35	87	52	174	16	25	4	45	437
04:45 PM	8	61	20	89	47	66	23	136	24	52	23	99	17	22	6	45	369
Total Volume	31	220	102	353	205	232	108	545	157	268	171	596	79	120	18	217	1711
% App. Total	8.8	62.3	28.9		37.6	42.6	19.8		26.3	45	28.7		36.4	55.3	8.3		
PHF	.861	.821	.879	.840	.854	.879	.711	.987	.785	.770	.763	.856	.790	.789	.750	.786	.924
Cars	31	218	98	347	203	228	108	539	153	264	167	584	79	115	18	212	1682
% Cars	100	99.1	96.1	98.3	99.0	98.3	100	98.9	97.5	98.5	97.7	98.0	100	95.8	100	97.7	98.3
Trucks	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
% Trucks	0	0.5	0	0.3	0	0.4	0	0.2	0	0	0	0	0	0	0	0	0.1
Buses	0	1	4	5	2	3	0	5	4	4	4	12	0	5	0	5	27
% Buses	0	0.5	3.9	1.4	1.0	1.3	0	0.9	2.5	1.5	2.3	2.0	0	4.2	0	2.3	1.6

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

Counter R.C.

File Name : Paseo Del Norte Blvd. and Ventana W Pkwy-Woodmont Ave.
Site Code : 10242023
Start Date : 10/24/2023
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Paseo Del Norte Blvd. Eastbound						Paseo Del Norte Blvd. Westbound						Woodmont Ave. Northbound						Ventana W. Pkwy Southbound						
Start Time	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Left	Thru	Right	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	10	0	0	0	11	1	41	16	0	0	58	0	0	1	0	0	1	122	1	11	0	0	134	204
07:15 AM	2	18	0	0	0	20	1	26	29	0	0	56	0	0	0	0	0	0	118	0	13	0	0	131	207
07:30 AM	4	30	0	0	0	34	0	41	31	0	0	72	0	0	0	0	0	0	74	1	11	0	0	86	192
07:45 AM	5	23	0	0	0	28	1	43	25	0	0	69	1	0	0	0	0	1	59	0	7	0	0	66	164
Total	12	81	0	0	0	93	3	151	101	0	0	255	1	0	1	0	0	2	373	2	42	0	0	417	767
08:00 AM	5	24	1	1	0	31	0	34	30	0	0	64	1	0	0	1	0	2	68	0	3	0	0	71	168
08:15 AM	4	15	0	0	0	19	0	24	34	0	3	61	1	0	1	0	0	2	95	0	6	0	0	101	183
08:30 AM	2	14	0	0	0	16	0	23	27	0	0	50	0	0	0	0	0	0	66	0	9	0	0	75	141
08:45 AM	0	10	2	0	0	12	1	22	24	0	0	47	1	0	1	0	0	2	66	0	5	0	0	71	132
Total	11	63	3	1	0	78	1	103	115	0	3	222	3	0	2	1	0	6	295	0	23	0	0	318	624
*** BREAK ***																									
04:00 PM	6	35	0	1	0	42	0	17	97	0	1	115	0	0	0	0	0	0	49	0	4	1	0	54	211
04:15 PM	13	63	0	0	0	76	0	38	69	0	0	107	0	0	0	0	0	0	32	0	2	0	0	34	217
04:30 PM	9	36	0	0	0	45	0	36	65	0	0	101	1	0	0	0	0	1	43	0	3	0	0	46	193
04:45 PM	10	44	0	0	0	54	0	35	63	0	1	99	0	0	0	0	0	0	47	0	1	0	0	48	201
Total	38	178	0	1	0	217	0	126	294	0	2	422	1	0	0	0	0	1	171	0	10	1	0	182	822
05:00 PM	24	40	0	0	0	64	0	33	64	0	0	97	0	0	0	0	0	0	39	0	6	0	0	45	206
05:15 PM	12	71	0	0	0	83	0	40	86	1	1	128	0	0	1	0	0	1	40	0	3	0	0	43	255
05:30 PM	8	46	0	1	0	55	0	40	66	0	0	106	0	0	0	0	0	0	45	0	4	0	0	49	210
05:45 PM	8	49	0	0	0	57	0	35	73	0	0	108	0	0	0	0	0	0	52	1	2	0	0	55	220
Total	52	206	0	1	0	259	0	148	289	1	1	439	0	0	1	0	0	1	176	1	15	0	0	192	891
Grand Total	113	528	3	3	0	647	4	528	799	1	6	1338	5	0	4	1	0	10	1015	3	90	1	0	1109	3104
Apprch %	17.5	81.6	0.5	0.5	0		0.3	39.5	59.7	0.1	0.4		50	0	40	10	0		91.5	0.3	8.1	0.1	0		
Total %	3.6	17	0.1	0.1	0	20.8	0.1	17	25.7	0	0.2	43.1	0.2	0	0.1	0	0	0.3	32.7	0.1	2.9	0	0	35.7	
Cars	112	523	3	3	0	641	4	516	785	1	6	1312	5	0	4	1	0	10	998	3	88	1	0	1090	3053
% Cars	99.1	99.1	100	100	0	99.1	100	97.7	98.2	100	100	98.1	100	0	100	100	0	100	98.3	100	97.8	100	0	98.3	98.4
Trucks	1	4	0	0	0	5	0	8	0	0	0	8	0	0	0	0	0	0	0	0	2	0	0	2	15
% Trucks	0.9	0.8	0	0	0	0.8	0	1.5	0	0	0	0.6	0	0	0	0	0	0	0	0	2.2	0	0	0.2	0.5
Buses	0	1	0	0	0	1	0	4	14	0	0	18	0	0	0	0	0	0	17	0	0	0	0	17	36
% Buses	0	0.2	0	0	0	0.2	0	0.8	1.8	0	0	1.3	0	0	0	0	0	0	1.7	0	0	0	0	1.5	1.2

Cleland Counts

1441 Camino Cerritos S.E.
Albuquerque, New Mexico 87123
(505) 414-0465

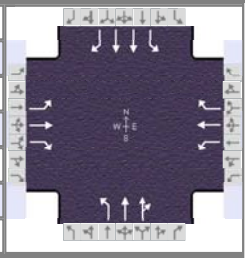
File Name : Paseo Del Norte Blvd. and Ventana W Pkwy-Woodmont Ave.
Site Code : 10242023
Start Date : 10/24/2023
Page No : 2

	Paseo Del Norte Blvd. Eastbound				Paseo Del Norte Blvd. Westbound				Woodmont Ave. Northbound				Ventana W. Pkwy Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	10	0	11	1	41	16	58	0	0	1	1	122	1	11	134	204
07:15 AM	2	18	0	20	1	26	29	56	0	0	0	0	118	0	13	131	207
07:30 AM	4	30	0	34	0	41	31	72	0	0	0	0	74	1	11	86	192
07:45 AM	5	23	0	28	1	43	25	69	1	0	0	1	59	0	7	66	164
Total Volume	12	81	0	93	3	151	101	255	1	0	1	2	373	2	42	417	767
% App. Total	12.9	87.1	0		1.2	59.2	39.6		50	0	50		89.4	0.5	10.1		
PHF	.600	.675	.000	.684	.750	.878	.815	.885	.250	.000	.250	.500	.764	.500	.808	.778	.926
Cars	12	81	0	93	3	148	99	250	1	0	1	2	368	2	41	411	756
% Cars	100	100	0	100	100	98.0	98.0	98.0	100	0	100	100	98.7	100	97.6	98.6	98.6
Trucks	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
% Trucks	0	0	0	0	0	2.0	0	1.2	0	0	0	0	0	0	2.4	0.2	0.5
Buses	0	0	0	0	0	0	2	2	0	0	0	0	5	0	0	5	7
% Buses	0	0	0	0	0	0	2.0	0.8	0	0	0	0	1.3	0	0	1.2	0.9
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	24	40	0	64	0	33	64	97	0	0	0	0	39	0	6	45	206
05:15 PM	12	71	0	83	0	40	86	126	0	0	1	1	40	0	3	43	253
05:30 PM	8	46	0	54	0	40	66	106	0	0	0	0	45	0	4	49	209
05:45 PM	8	49	0	57	0	35	73	108	0	0	0	0	52	1	2	55	220
Total Volume	52	206	0	258	0	148	289	437	0	0	1	1	176	1	15	192	888
% App. Total	20.2	79.8	0		0	33.9	66.1		0	0	100		91.7	0.5	7.8		
PHF	.542	.725	.000	.777	.000	.925	.840	.867	.000	.000	.250	.250	.846	.250	.625	.873	.877
Cars	52	206	0	258	0	146	289	435	0	0	1	1	176	1	15	192	886
% Cars	100	100	0	100	0	98.6	100	99.5	0	0	100	100	100	100	100	100	99.8
Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0.7	0	0.2	0	0	0	0	0	0	0	0	0.1
Buses	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Buses	0	0	0	0	0	0.7	0	0.2	0	0	0	0	0	0	0	0	0.1

APPENDIX B
2023 EXISTING INTERSECTION CAPACITY ANALYSIS

HCS Signalized Intersection Results Summary

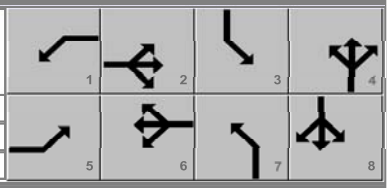
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Nov 13, 2023	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	EXAM Rainbow_Paseo.xus		
Project Description	Existing AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	197	165	179	160	53	67	147	187	166	259	17

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



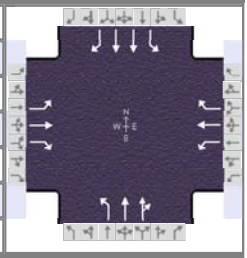
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.2	2.6	4.2	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	2.4	10.0	8.1	8.4	4.6	12.7	8.8	8.3
Green Extension Time (g_e), s	0.0	2.2	0.1	2.2	0.0	0.9	0.1	1.1
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.01	0.11	0.00	0.00	0.18	0.23	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	13	214	179	195	174	58	73	160	203	180	282	18
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	0.4	8.0	7.9	6.1	6.4	2.3	2.6	6.8	10.7	6.8	6.3	0.8
Cycle Queue Clearance Time (g_c), s	0.4	8.0	7.9	6.1	6.4	2.3	2.6	6.8	10.7	6.8	6.3	0.8
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	605	610	517	574	610	525	448	386	327	390	735	333
Volume-to-Capacity Ratio (*X*)	0.022	0.351	0.347	0.339	0.285	0.110	0.162	0.414	0.621	0.463	0.383	0.056
Back of Queue (*Q*), ft/ln (95 th percentile)	6.9	168.1	142.4	117.4	132.8	40.6	51	151.1	207.1	142.7	125.2	15.6
Back of Queue (*Q*), veh/ln (95 th percentile)	0.3	6.6	5.6	4.6	5.2	1.6	2.0	5.9	8.3	5.6	4.9	0.6
Queue Storage Ratio (*RQ*) (95 th percentile)	0.07	0.08	1.42	0.67	0.07	0.00	0.15	0.20	0.28	0.41	0.15	0.00
Uniform Delay (d_1), s/veh	13.8	23.6	23.6	15.6	23.0	21.7	21.1	31.7	33.2	23.2	31.4	29.3
Incremental Delay (d_2), s/veh	0.1	1.6	1.8	1.6	1.2	0.4	0.8	3.2	8.6	3.9	1.5	0.3
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	13.9	25.2	25.4	17.2	24.2	22.1	21.9	34.9	41.8	27.1	33.0	29.6
Level of Service (LOS)	B	C	C	B	C	C	C	C	D	C	C	C
Approach Delay, s/veh / LOS	24.9	C		20.7	C		36.0	D		30.6	C	
Intersection Delay, s/veh / LOS	28.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.16	A	1.19	A	0.85	A	0.88	A

HCS Signalized Intersection Results Summary

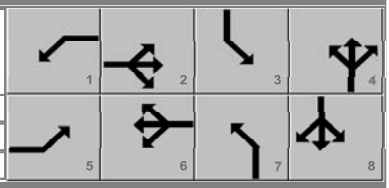
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Nov 13, 2023	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	EXPM Rainbow_Paseo.xus		
Project Description	Existing PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	31	220	102	205	232	108	157	268	171	79	120	18

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.0	11.1	9.1	11.7	8.4	13.8	5.1	4.8
Green Extension Time (g_e), s	0.0	2.5	0.1	2.5	0.1	0.7	0.0	1.1
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.01	0.39	0.02	0.13	0.31	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	34	239	111	223	252	117	171	251	226	86	130	20
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1629	1781	1781	1610
Queue Service Time (g_s), s	1.0	9.1	4.7	7.1	9.7	4.9	6.4	11.3	11.8	3.1	2.8	0.9
Cycle Queue Clearance Time (g_c), s	1.0	9.1	4.7	7.1	9.7	4.9	6.4	11.3	11.8	3.1	2.8	0.9
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	545	610	517	555	610	525	515	386	337	372	735	333
Volume-to-Capacity Ratio (*X*)	0.062	0.392	0.215	0.402	0.413	0.224	0.331	0.650	0.672	0.231	0.177	0.059
Back of Queue (*Q*), ft/ln (95 th percentile)	18.2	191.4	83.1	138.6	201.3	86.7	127.2	247.3	230.3	62.2	54.8	16.5
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	7.5	3.3	5.5	7.9	3.5	5.0	9.7	9.2	2.4	2.2	0.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.18	0.10	0.83	0.79	0.10	0.00	0.36	0.33	0.31	0.18	0.06	0.00
Uniform Delay (d_1), s/veh	14.3	24.0	22.5	16.1	24.1	22.5	22.1	33.5	33.6	22.0	30.1	29.3
Incremental Delay (d_2), s/veh	0.2	1.9	0.9	2.2	2.1	1.0	1.7	8.2	10.3	1.4	0.5	0.3
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	14.6	25.8	23.4	18.2	26.2	23.5	23.9	41.7	43.9	23.5	30.6	29.7
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	24.1	C		22.7	C		37.8	D		27.9	C	
Intersection Delay, s/veh / LOS	28.9						C					

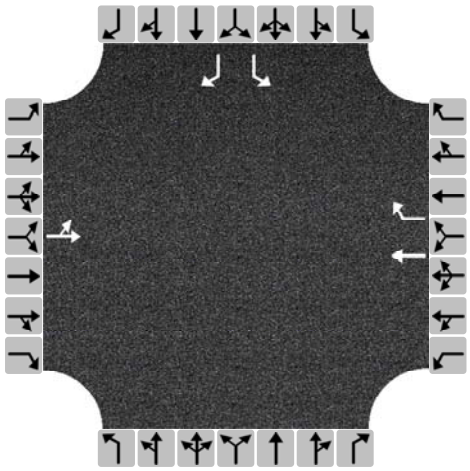
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.12	A	1.47	A	1.02	A	0.68	A

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	11/13/2023
Analysis Year	2023
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	12	81			151	101				373		42
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	101			164	110					405	46	
Percent Heavy Vehicles	2			2	2					2	2	
Initial Departure Headway, h_d (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.090			0.146	0.098					0.360	0.041	
Final Departure Headway, h_d (s)	6.18			6.10	5.39					6.09	4.89	
Final Degree of Utilization, x	0.174			0.278	0.164					0.686	0.062	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, t_s (s)	4.18			3.80	3.09					3.79	2.59	

Capacity, Delay and Level of Service

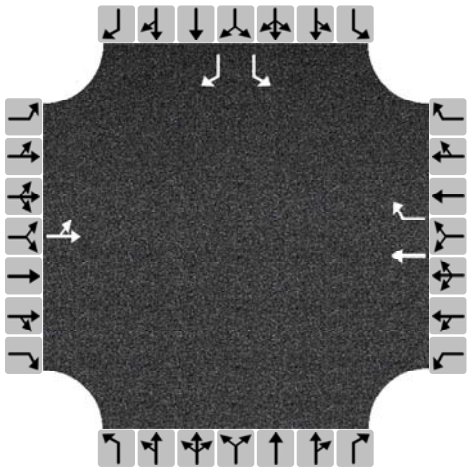
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	101			164	110					405	46	
Capacity (veh/h)	583			590	668					591	736	
95% Queue Length, Q_{95} (veh)	0.6			1.1	0.6					5.3	0.2	
Control Delay (s/veh)	10.5			11.1	9.2					21.0	7.9	
Level of Service, LOS	B			B	A					C	A	
Approach Delay (s/veh) | LOS	10.5	B		10.3	B					19.7	C	
Intersection Delay (s/veh) | LOS	15.5						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	11/13/2023
Analysis Year	2023
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	52	206			148	289				176		15
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	280			161	314					191	16	
Percent Heavy Vehicles	2			2	2					2	2	
Initial Departure Headway, h_d (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.249			0.143	0.279					0.170	0.014	
Final Departure Headway, h_d (s)	5.67			5.63	4.92					6.86	5.65	
Final Degree of Utilization, x	0.442			0.252	0.430					0.364	0.026	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, t_s (s)	3.67			3.33	2.62					4.56	3.35	

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	280			161	314					191	16	
Capacity (veh/h)	635			639	731					525	637	
95% Queue Length, Q_{95} (veh)	2.3			1.0	2.2					1.7	0.1	
Control Delay (s/veh)	13.1			10.2	11.3					13.4	8.5	
Level of Service, LOS	B			B	B					B	A	
Approach Delay (s/veh) | LOS	13.1		B	10.9		B				13.0		B
Intersection Delay (s/veh) | LOS	12.0						B					

HCS Two-Way Stop-Control Report

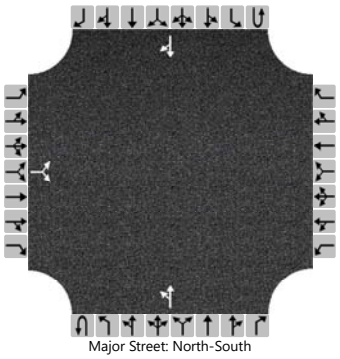
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	11/13/2023
Analysis Year	2023
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona Avenue
North/South Street	Woodmont Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		10						5	0				0	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			11							5						
Capacity, c (veh/h)			1082							1617						
v/c Ratio			0.01							0.00						
95% Queue Length, Q_{95} (veh)			0.0							0.0						
Control Delay (s/veh)			8.4							7.2	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		8.4								7.2						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

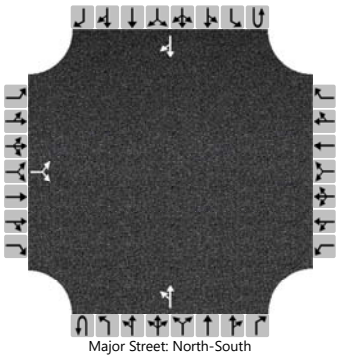
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	11/13/2023
Analysis Year	2023
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona Avenue
North/South Street	Woodmont Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		9						15	1				0	0
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			10							16						
Capacity, c (veh/h)			1082							1617						
v/c Ratio			0.01							0.01						
95% Queue Length, Q_{95} (veh)			0.0							0.0						
Control Delay (s/veh)			8.4							7.2	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		8.4								6.8						
Approach LOS		A								A						

APPENDIX C
TURNING MOVEMENT COUNTS DEVELOPMENT

THOMAS DEVELOPMENT
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: PASEO DEL NORTE & RAINBOW BOULEVARD

AM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Rainbow Blvd			Southbound Rainbow Blvd		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	12	197	165	179	160	53	67	147	187	166	259	17
Background Growth	1	16	13	14	13	4	5	12	15	13	21	1
Trails Tract 1 Development	6	48	0	0	17	0	0	0	0	0	0	2
Trails Tract 3-4 Development	10	84	0	0	33	0	0	0	0	0	0	4
Woodmont Rerouting			-170				-42					
2027 No Build	29	345	8	193	223	57	30	159	202	179	280	24
Entering	0	0	0	0	27	0	0	0	0	0	0	3
Exiting	10	80	0	0	0	0	0	0	0	0	0	0
2027 Build	39	425	8	193	250	57	30	159	202	179	280	27
Horizon Year Background Growth	3	55	46	50	45	15	19	41	52	46	73	5
2037 Horizon Year No Build	32	400	54	243	268	72	49	200	254	225	353	29
2037 Horizon Year Build	42	480	54	243	295	72	49	200	254	225	353	32
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Rainbow Blvd			Southbound Rainbow Blvd		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	31	220	102	205	232	108	157	268	171	79	120	18
Background Growth	2	18	8	16	19	9	13	21	14	6	10	1
Trails Tract 1 Development	4	32	0	0	50	0	0	0	0	0	0	6
Trails Tract 3-4 Development	8	65	0	0	89	0	0	0	0	0	0	11
Woodmont Rerouting			-88			0	-138					
2027 No Build	45	335	22	221	390	117	32	289	185	85	130	36
Entering	0	0	0	0	92	0	0	0	0	0	0	11
Exiting	7	55	0	0	0	0	0	0	0	0	0	0
2027 Build	52	390	22	221	482	117	32	289	185	85	130	47
Horizon Year Background Growth	9	62	29	57	65	30	44	75	48	22	34	5
2037 Horizon Year No Build	54	397	51	278	455	147	76	364	233	107	164	41
2037 Horizon Year Build	61	452	51	278	547	147	76	364	233	107	164	52
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Trip Distribution % Enter					58.0%							7.0%
Trip Distribution % Exit	7.0%	58.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

THOMAS DEVELOPMENT
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: PASEO DEL NORTE & VENTANA WEST PARKWAY / WOODMONT

AM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Woodmont Ave			Southbound Ventana W Pkwy		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	12	81	0	3	151	101	1	0	1	373	2	42
Background Growth	1	6	0	0	12	8	0	0	0	30	0	3
Trails Tract 1 Development	0	0	1	17	0	0	2	0	48	0	1	0
Trails Tract 3-4 Development	0	0	1	33	0	0	3	1	84	0	1	0
Woodmont Rerouting		-10	10		-11	-31	12	29		-160	160	
2027 No Build	13	77	12	53	152	78	18	30	133	243	164	45
Entering	0	0	0	30	0	0	0	0	0	0	0	0
Exiting	0	47	0	0	0	0	3	1	43	0	0	0
2027 Build	13	124	12	83	152	78	21	31	176	243	164	45
Horizon Year Background Growth	3	23	0	1	42	28	0	0	0	104	1	12
2037 Horizon Year No Build	16	100	12	54	194	106	18	30	133	347	165	57
2037 Horizon Year Build	16	147	12	84	194	106	21	31	176	347	165	57
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Woodmont Ave			Southbound Ventana W Pkwy		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	52	206	0	0	148	289	0	0	1	176	1	15
Background Growth	4	16	0	0	12	23	0	0	0	14	0	1
Trails Tract 1 Development	0	0	2	50	0	0	1	1	32	0	1	0
Trails Tract 3-4 Development	0	0	3	89	0	0	2	2	65	0	1	0
Woodmont Rerouting		-8	8		-8	-130	8	80		-80	80	
2027 No Build	56	214	13	139	152	182	11	83	98	110	83	16
Entering	0	0	0	103	0	0	0	0	0	0	2	0
Exiting	0	32	0	0	0	0	2	1	29	0	0	0
2027 Build	56	246	13	242	152	182	13	84	127	110	85	16
Horizon Year Background Growth	15	58	0	0	41	81	0	0	0	49	0	4
2037 Horizon Year No Build	71	272	13	139	193	263	11	83	98	159	83	20
2037 Horizon Year Build	71	304	13	242	193	263	13	84	127	159	85	20
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Trip Distribution % Enter				65.0%							1.0%	
Trip Distribution % Exit	0.0%	34.0%	0.0%	0.0%	0.0%	0.0%	2.0%	1.0%	31.0%	0.0%	0.0%	0.0%

THOMAS DEVELOPMENT
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: GIRONA AVENUE & WOODMONT AVENUE

AM Peak Hour

	Eastbound Girona Ave			Westbound			Northbound Woodmont Ave			Southbound Woodmont Ave		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	0		10				5	0			0	0
Background Growth	0	0	1	0	0	0	0	0	0	0	0	0
Trails Tract 1 Development								39			18	
Trails Tract 3-4 Development								96				
Woodmont Rerouting								42			170	
2027 No Build	0	0	11	0	0	0	5	177	0	0	188	0
Entering	0	0	0	0	0	0	15	0	0	0	0	30
Exiting	43	0	44	0	0	0	0	0	0	0	0	0
2027 Build	43	0	55	0	0	0	20	177	0	0	188	30
Horizon Year Background Growth	0	0	3	0	0	0	1	0	0	0	0	0
2037 Horizon Year No Build	0	0	14	0	0	0	6	177	0	0	188	0
2037 Horizon Year Build	43	0	58	0	0	0	21	177	0	0	188	30
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound Girona Ave			Westbound			Northbound Woodmont Ave			Southbound Woodmont Ave		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)	0		9				15	1			0	0
Background Growth	0	0	1	0	0	0	1	0	0	0	0	0
Trails Tract 1 Development								30			43	
Trails Tract 3-4 Development								118				
Woodmont Rerouting								138			88	
2027 No Build	0	0	10	0	0	0	16	287	0	0	131	0
Entering	0	0	0	0	0	0	51	0	0	0	0	105
Exiting	29	0	30	0	0	0	0	0	0	0	0	0
2027 Build	29	0	40	0	0	0	67	287	0	0	131	105
Horizon Year Background Growth	0	0	3	0	0	0	4	0	0	0	0	0
2037 Horizon Year No Build	0	0	13	0	0	0	20	287	0	0	131	0
2037 Horizon Year Build	29	0	43	0	0	0	71	287	0	0	131	105
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Trip Distribution % Enter							32.0%					66.0%
Trip Distribution % Exit	31.0%	0.0%	32.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

THOMAS DEVELOPMENT
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: PASEO DEL NORTE & UNIT 1 ACCESS POINT (NORTH SITE DRIVEWAY)

AM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Site Entrance			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)		93			194							
Background Growth	0	7	0	0	16	0	0	0	0	0	0	0
Trails Tract 1 Development		1			2							
Trails Tract 3-4 Development		1			3							
Woodmont Rerouting												
2027 No Build	0	102	0	0	215	0	0	0	0	0	0	0
Entering	0	0	1	0	0	0	0	0	0	0	0	0
Exiting	0	0	0	0	0	0	0	0	47	0	0	0
2027 Build	0	102	1	0	215	0	0	0	47	0	0	0
Horizon Year Background Growth	0	26	0	0	54	0	0	0	0	0	0	0
2037 Horizon Year No Build	0	128	0	0	269	0	0	0	0	0	0	0
2037 Horizon Year Build	0	128	1	0	269	0	0	0	47	0	0	0
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound Paseo Del Norte			Westbound Paseo Del Norte			Northbound Site Entrance			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes (2023)		258			163							
Background Growth	0	21	0	0	13	0	0	0	0	0	0	0
Trails Tract 1 Development		2			1							
Trails Tract 3-4 Development		3			2							
Woodmont Rerouting												
2027 No Build	0	284	0	0	179	0	0	0	0	0	0	0
Entering	0	0	3	0	0	0	0	0	0	0	0	0
Exiting	0	0	0	0	0	0	0	0	32	0	0	0
2027 Build	0	284	3	0	179	0	0	0	32	0	0	0
Horizon Year Background Growth	0	72	0	0	46	0	0	0	0	0	0	0
2037 Horizon Year No Build	0	356	0	0	225	0	0	0	0	0	0	0
2037 Horizon Year Build	0	356	3	0	225	0	0	0	32	0	0	0
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Trip Distribution % Enter			2.0%									
Trip Distribution % Exit		0.0%							34.0%	0.0%		0.0%

Thomas Development - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Paseo to/from East % Emp/ Dist.			Paseo to/from West % Emp/ Dist.		
							% Utililizing	Utilizing	Emp	% Utililizing	Utilizing	Emp
1	8,373	11,695	9,619	6.86	1,402	3.10%	90%	2.79%	8,657		0.00%	0
2	16,177	19,251	17,330	1.49	11,609	25.65%	90%	23.08%	15,597		0.00%	0
3	1,579	1,775	1,653	6.84	242	0.53%	90%	0.48%	1,487		0.00%	0
4	3,725	4,083	3,859	15.40	251	0.55%	90%	0.50%	3,473		0.00%	0
5	14,923	16,730	15,601	4.39	3,553	7.85%	35%	2.75%	5,460		0.00%	0
6	2,051	5,205	3,234	12.35	262	0.58%	25%	0.14%	808	25%	0.14%	808
7	9,234	11,922	10,242	7.20	1,422	3.14%	35%	1.10%	3,585	25%	0.79%	2,561
8	9,101	12,837	10,502	11.87	885	1.95%	10%	0.20%	1,050	25%	0.49%	2,626
9	671	970	783	20.51	38	0.08%		0.00%	0	75%	0.06%	587
10	3,409	5,486	4,188	16.63	252	0.56%	5%	0.03%	209	30%	0.17%	1,256
11	5,699	6,882	6,143	16.79	366	0.81%	5%	0.04%	307	30%	0.24%	1,843
12	6,287	7,474	6,732	7.90	852	1.88%	66%	1.24%	4,443		0.00%	0
13	38,387	42,986	40,112	9.47	4,233	9.35%	66%	6.17%	26,474		0.00%	0
14	37,516	41,146	38,877	14.35	2,708	5.98%	66%	3.95%	25,659		0.00%	0
15	17,358	20,784	18,643	10.03	1,858	4.10%	50%	2.05%	9,321		0.00%	0
16	54,135	60,416	56,490	15.10	3,742	8.27%	40%	3.31%	22,596		0.00%	0
17	39,647	47,495	42,590	12.01	3,546	7.83%	40%	3.13%	17,036		0.00%	0
18	47,403	53,720	49,772	13.67	3,641	8.04%	40%	3.22%	19,909		0.00%	0
19	26,057	30,705	27,800	18.26	1,522	3.36%	40%	1.35%	11,120		0.00%	0
20	5,978	8,831	7,048	17.50	403	0.89%	40%	0.36%	2,819		0.00%	0
21	1,755	4,714	2,865	20.06	143	0.32%	40%	0.13%	1,146		0.00%	0
22	28,349	31,083	29,374	20.64	1,423	3.14%	40%	1.26%	11,750		0.00%	0
23	2,923	3,349	3,083	27.58	112	0.25%	40%	0.10%	1,233		0.00%	0
24	1,271	1,266	1,269	23.41	54	0.12%	50%	0.06%	635		0.00%	0
25	112	112	112	28.66	4	0.01%	50%	0.00%	56		0.00%	0
26	18,011	21,494	19,317	38.75	499	1.10%	35%	0.39%	6,761	10%	0.11%	1,932
27	5,846	6,024	5,913	34.25	173	0.38%	80%	0.31%	4,730		0.00%	0
28	4,322	5,118	4,621	65.66	70	0.16%	50%	0.08%	2,310		0.00%	0
29	1,784	2,111	1,907	42.78	45	0.10%	50%	0.05%	953		0.00%	0
Total	412,083	485,664			45,266	100.00%		58.24%			2.00%	
								58.00%			**2.00%**	

* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Thomas Development - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Woodmont to/from North % Emp/ Dist.			Woodmont to/from South % Emp/ Dist.		
							% Utililizing	Utilizing	Emp	% Utililizing	Utilizing	Emp
1	8,373	11,695	9,619	6.86	1,402	3.10%		0.00%	0		0.00%	0
2	16,177	19,251	17,330	1.49	11,609	25.65%		0.00%	0		0.00%	0
3	1,579	1,775	1,653	6.84	242	0.53%		0.00%	0		0.00%	0
4	3,725	4,083	3,859	15.40	251	0.55%		0.00%	0		0.00%	0
5	14,923	16,730	15,601	4.39	3,553	7.85%	5%	0.39%	780	10%	0.78%	1,560
6	2,051	5,205	3,234	12.35	262	0.58%	5%	0.03%	162	45%	0.26%	1,455
7	9,234	11,922	10,242	7.20	1,422	3.14%		0.00%	0	40%	1.26%	4,097
8	9,101	12,837	10,502	11.87	885	1.95%		0.00%	0	65%	1.27%	6,826
9	671	970	783	20.51	38	0.08%		0.00%	0	25%	0.02%	196
10	3,409	5,486	4,188	16.63	252	0.56%		0.00%	0	65%	0.36%	2,722
11	5,699	6,882	6,143	16.79	366	0.81%		0.00%	0	65%	0.53%	3,993
12	6,287	7,474	6,732	7.90	852	1.88%		0.00%	0	34%	0.64%	2,289
13	38,387	42,986	40,112	9.47	4,233	9.35%		0.00%	0	34%	3.18%	13,638
14	37,516	41,146	38,877	14.35	2,708	5.98%		0.00%	0	34%	2.03%	13,218
15	17,358	20,784	18,643	10.03	1,858	4.10%		0.00%	0	50%	2.05%	9,321
16	54,135	60,416	56,490	15.10	3,742	8.27%		0.00%	0	60%	4.96%	33,894
17	39,647	47,495	42,590	12.01	3,546	7.83%		0.00%	0	60%	4.70%	25,554
18	47,403	53,720	49,772	13.67	3,641	8.04%		0.00%	0	60%	4.83%	29,863
19	26,057	30,705	27,800	18.26	1,522	3.36%		0.00%	0	60%	2.02%	16,680
20	5,978	8,831	7,048	17.50	403	0.89%		0.00%	0	60%	0.53%	4,229
21	1,755	4,714	2,865	20.06	143	0.32%		0.00%	0	60%	0.19%	1,719
22	28,349	31,083	29,374	20.64	1,423	3.14%		0.00%	0	60%	1.89%	17,625
23	2,923	3,349	3,083	27.58	112	0.25%		0.00%	0	60%	0.15%	1,850
24	1,271	1,266	1,269	23.41	54	0.12%		0.00%	0	50%	0.06%	635
25	112	112	112	28.66	4	0.01%		0.00%	0	50%	0.00%	56
26	18,011	21,494	19,317	38.75	499	1.10%		0.00%	0	55%	0.61%	10,624
27	5,846	6,024	5,913	34.25	173	0.38%		0.00%	0		0.00%	0
28	4,322	5,118	4,621	65.66	70	0.16%		0.00%	0	50%	0.08%	2,310
29	1,784	2,111	1,907	42.78	45	0.10%		0.00%	0	50%	0.05%	953
Total	412,083	485,664			45,266	100.00%		0.42%			32.45%	
								1.00%			**32.00%**	

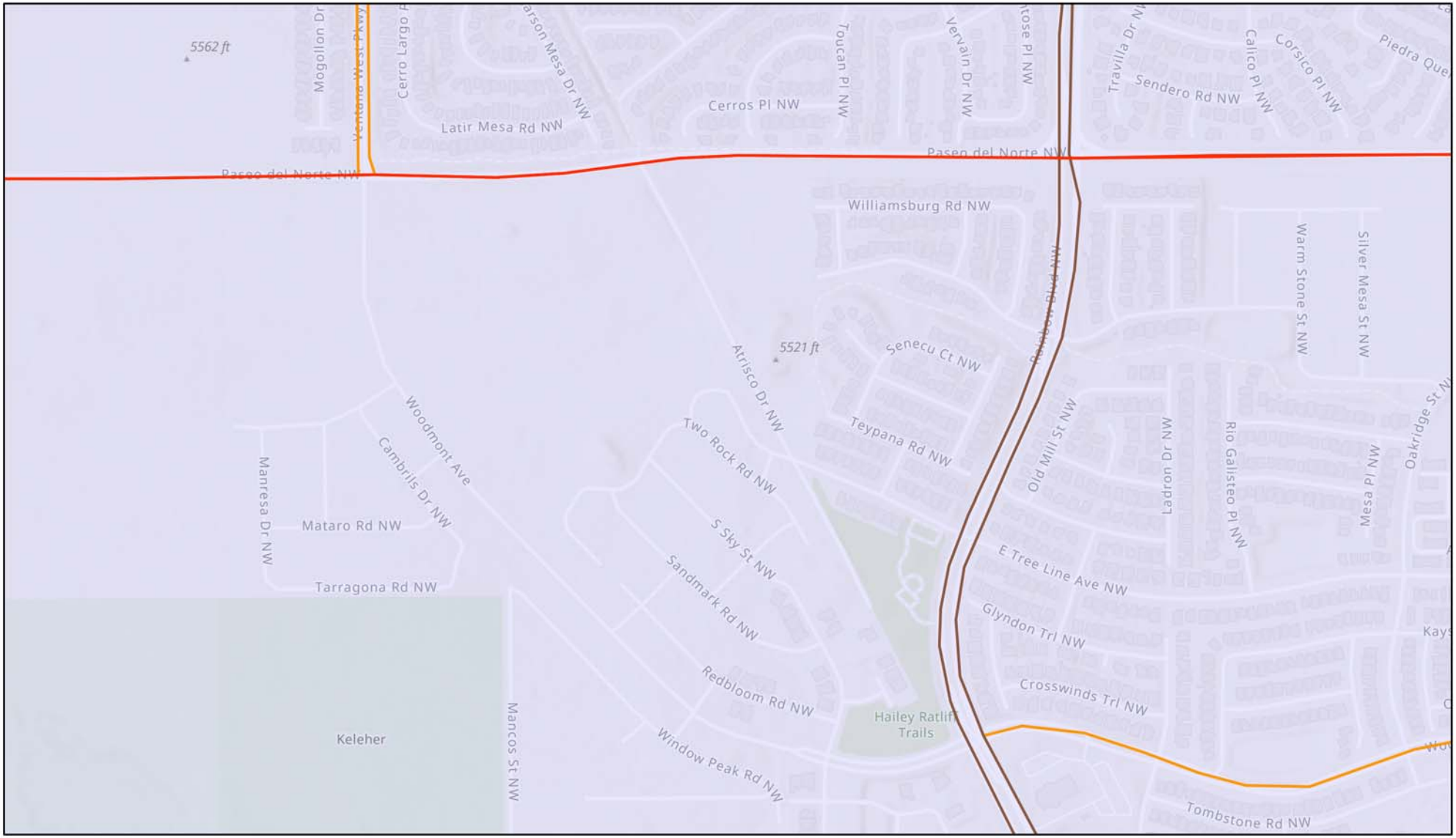
* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Thomas Development - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Rainbow to/from North % Emp/ Dist. % Utililizing	Utilizing	Emp	zone	% utilizing sum
1	8,373	11,695	9,619	6.86	1,402	3.10%	10%	0.31%	962	1	100.0000%
2	16,177	19,251	17,330	1.49	11,609	25.65%	10%	2.56%	1,733	2	100.0000%
3	1,579	1,775	1,653	6.84	242	0.53%	10%	0.05%	165	3	100.0000%
4	3,725	4,083	3,859	15.40	251	0.55%	10%	0.06%	386	4	100.0000%
5	14,923	16,730	15,601	4.39	3,553	7.85%	50%	3.92%	7,800	5	100.0000%
6	2,051	5,205	3,234	12.35	262	0.58%		0.00%	0	6	100.0000%
7	9,234	11,922	10,242	7.20	1,422	3.14%		0.00%	0	7	100.0000%
8	9,101	12,837	10,502	11.87	885	1.95%		0.00%	0	8	100.0000%
9	671	970	783	20.51	38	0.08%		0.00%	0	9	100.0000%
10	3,409	5,486	4,188	16.63	252	0.56%		0.00%	0	10	100.0000%
11	5,699	6,882	6,143	16.79	366	0.81%		0.00%	0	11	100.0000%
12	6,287	7,474	6,732	7.90	852	1.88%		0.00%	0	12	100.0000%
13	38,387	42,986	40,112	9.47	4,233	9.35%		0.00%	0	13	100.0000%
14	37,516	41,146	38,877	14.35	2,708	5.98%		0.00%	0	14	100.0000%
15	17,358	20,784	18,643	10.03	1,858	4.10%		0.00%	0	15	100.0000%
16	54,135	60,416	56,490	15.10	3,742	8.27%		0.00%	0	16	100.0000%
17	39,647	47,495	42,590	12.01	3,546	7.83%		0.00%	0	17	100.0000%
18	47,403	53,720	49,772	13.67	3,641	8.04%		0.00%	0	18	100.0000%
19	26,057	30,705	27,800	18.26	1,522	3.36%		0.00%	0	19	100.0000%
20	5,978	8,831	7,048	17.50	403	0.89%		0.00%	0	20	100.0000%
21	1,755	4,714	2,865	20.06	143	0.32%		0.00%	0	21	100.0000%
22	28,349	31,083	29,374	20.64	1,423	3.14%		0.00%	0	22	100.0000%
23	2,923	3,349	3,083	27.58	112	0.25%		0.00%	0	23	100.0000%
24	1,271	1,266	1,269	23.41	54	0.12%		0.00%	0	24	100.0000%
25	112	112	112	28.66	4	0.01%		0.00%	0	25	100.0000%
26	18,011	21,494	19,317	38.75	499	1.10%		0.00%	0	26	100.0000%
27	5,846	6,024	5,913	34.25	173	0.38%	20%	0.08%	1,183	27	100.0000%
28	4,322	5,118	4,621	65.66	70	0.16%		0.00%	0	28	100.0000%
29	1,784	2,111	1,907	42.78	45	0.10%		0.00%	0	29	100.0000%
Total	412,083	485,664			45,266	100.00%		6.98%			100.10%
								7.00%			**100.00%**

* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Roadway Functional Class



11/15/2023, 4:24:25 PM

NMDOT Functional Class

- 3 - Principal Arterial - Other
- 4 - Minor Arterial
- 5 - Major Collector
- Urban_Area_Boundaries

1:9,028

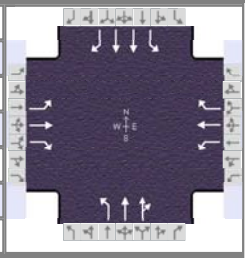
0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

APPENDIX D
2027 NO BUILD INTERSECTION CAPACITY & WARRANT ANALYSIS

HCS Signalized Intersection Results Summary

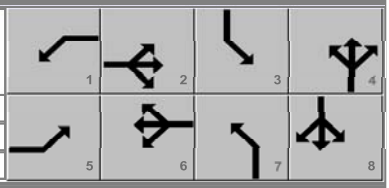
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2027	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2027 NBAM Rainbow & Paseo.xus		
Project Description	No Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	29	345	8	193	223	57	30	159	202	179	280	24

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



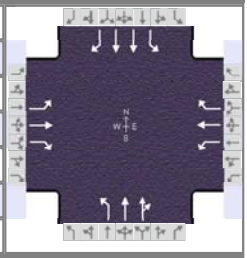
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	2.9	17.5	8.6	11.2	3.1	13.7	9.4	8.8
Green Extension Time (g_e), s	0.0	2.1	0.1	2.4	0.0	0.9	0.1	1.2
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.08	0.22	0.01	0.00	0.34	0.52	0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	32	375	9	210	242	62	33	173	220	195	304	26
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	0.9	15.5	0.3	6.6	9.2	2.5	1.1	7.4	11.7	7.4	6.8	1.2
Cycle Queue Clearance Time (g_c), s	0.9	15.5	0.3	6.6	9.2	2.5	1.1	7.4	11.7	7.4	6.8	1.2
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	552	610	517	457	610	525	439	386	327	377	735	333
Volume-to-Capacity Ratio (*X*)	0.057	0.615	0.017	0.459	0.397	0.118	0.074	0.447	0.671	0.516	0.414	0.078
Back of Queue (*Q*), ft/ln (95 th percentile)	16.9	301	6	134.3	193.9	43.9	22.2	165.7	225.9	158	136.7	22.1
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	11.9	0.2	5.3	7.6	1.8	0.9	6.5	9.0	6.2	5.4	0.9
Queue Storage Ratio (*RQ*) (95 th percentile)	0.17	0.15	0.06	0.77	0.10	0.00	0.06	0.22	0.31	0.45	0.16	0.00
Uniform Delay (d_1), s/veh	14.3	26.1	21.0	17.2	24.0	21.7	20.7	31.9	33.6	23.6	31.7	29.4
Incremental Delay (d_2), s/veh	0.2	4.6	0.1	3.3	1.9	0.5	0.3	3.7	10.5	5.0	1.7	0.5
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	14.5	30.7	21.1	20.5	25.9	22.2	21.0	35.6	44.1	28.6	33.4	29.9
Level of Service (LOS)	B	C	C	C	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	29.3	C		23.3	C		38.9	D		31.4	C	
Intersection Delay, s/veh / LOS	30.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.17	A	1.34	A	0.84	A	0.92	A

HCS Signalized Intersection Results Summary

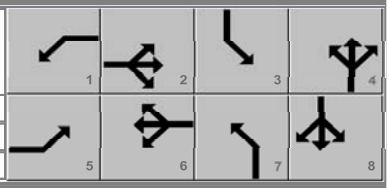
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2027	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2027 NBPM Rainbow & Paseo.xus		
Project Description	No Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	45	335	22	221	390	117	32	289	185	85	130	36

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.4	17.0	9.7	20.2	3.2	14.8	5.3	5.0
Green Extension Time (g_e), s	0.0	3.1	0.1	2.7	0.0	0.7	0.0	1.2
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.15	0.83	0.29	0.00	0.59	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	49	364	24	240	424	127	35	272	244	92	141	39
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1628	1781	1781	1610
Queue Service Time (g_s), s	1.4	15.0	0.9	7.7	18.2	5.3	1.2	12.4	12.8	3.3	3.0	1.8
Cycle Queue Clearance Time (g_c), s	1.4	15.0	0.9	7.7	18.2	5.3	1.2	12.4	12.8	3.3	3.0	1.8
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	423	610	517	464	610	525	510	386	336	360	735	333
Volume-to-Capacity Ratio (*X*)	0.116	0.597	0.046	0.517	0.695	0.242	0.068	0.703	0.724	0.256	0.192	0.118
Back of Queue (*Q*), ft/ln (95 th percentile)	27.3	291.2	16.7	158.6	347.5	94.8	23.5	270.5	251.8	67.7	59.7	33.6
Back of Queue (*Q*), veh/ln (95 th percentile)	1.1	11.5	0.7	6.2	13.7	3.8	0.9	10.6	10.1	2.7	2.4	1.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.27	0.15	0.17	0.91	0.17	0.00	0.07	0.36	0.34	0.19	0.07	0.00
Uniform Delay (d_1), s/veh	16.0	25.9	21.2	17.4	27.0	22.7	20.4	33.9	34.1	22.3	30.2	29.7
Incremental Delay (d_2), s/veh	0.6	4.3	0.2	4.1	6.4	1.1	0.3	10.3	12.7	1.7	0.6	0.7
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	16.6	30.2	21.4	21.5	33.4	23.8	20.7	44.1	46.8	24.0	30.7	30.4
Level of Service (LOS)	B	C	C	C	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	28.2	C		28.3	C		43.8	D		28.4	C	
Intersection Delay, s/veh / LOS	32.4						C					

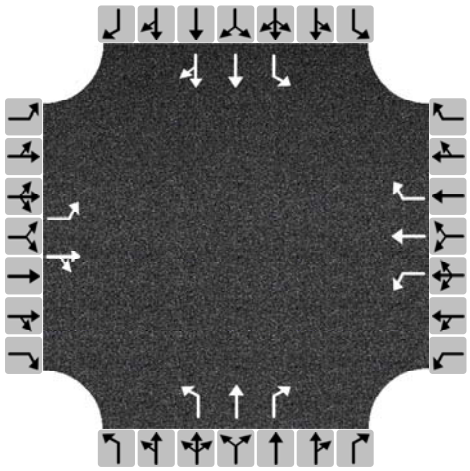
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.21	A	1.79	B	0.94	A	0.71	A

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	13	77	12	53	152	78	18	30	133	243	164	45
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	97		58	165	85	20	33	145	264	89	138
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.013	0.086		0.051	0.147	0.075	0.017	0.029	0.129	0.235	0.079	0.123
Final Departure Headway, h_d (s)	7.91	7.31		7.51	7.01	6.30	7.75	7.24	6.54	7.06	6.56	6.31
Final Degree of Utilization, x	0.031	0.196		0.120	0.322	0.148	0.042	0.066	0.262	0.518	0.162	0.242
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.61	5.01		5.21	4.71	4.00	5.45	4.94	4.24	4.76	4.26	4.01

Capacity, Delay and Level of Service

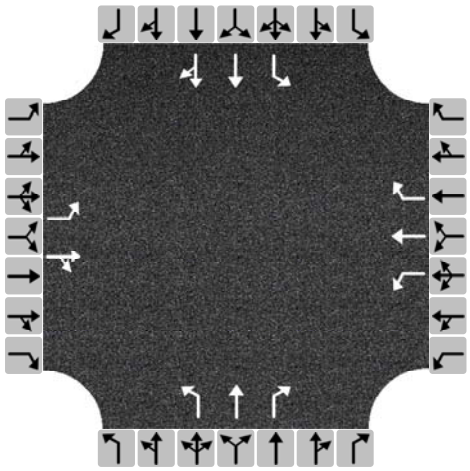
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	97		58	165	85	20	33	145	264	89	138
Capacity (veh/h)	455	492		480	514	571	465	497	551	510	549	571
95% Queue Length, Q_{95} (veh)	0.1	0.7		0.4	1.4	0.5	0.1	0.2	1.0	2.9	0.6	0.9
Control Delay (s/veh)	10.9	11.8		11.2	13.0	10.1	10.8	10.5	11.5	17.1	10.5	11.0
Level of Service, LOS	B	B		B	B	B	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	11.7	B		11.9	B		11.3	B		14.2	B	
Intersection Delay (s/veh) | LOS	12.8						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	56	214	13	139	152	182	11	83	98	110	83	16
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	247		151	165	198	12	90	107	120	45	63
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.054	0.219		0.134	0.147	0.176	0.011	0.080	0.095	0.106	0.040	0.056
Final Departure Headway, h_d (s)	7.92	7.37		7.65	7.15	6.44	8.52	8.01	7.30	8.42	7.91	7.72
Final Degree of Utilization, x	0.134	0.505		0.321	0.328	0.354	0.028	0.201	0.216	0.280	0.099	0.134
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.62	5.07		5.35	4.85	4.14	6.22	5.71	5.00	6.12	5.61	5.42

Capacity, Delay and Level of Service

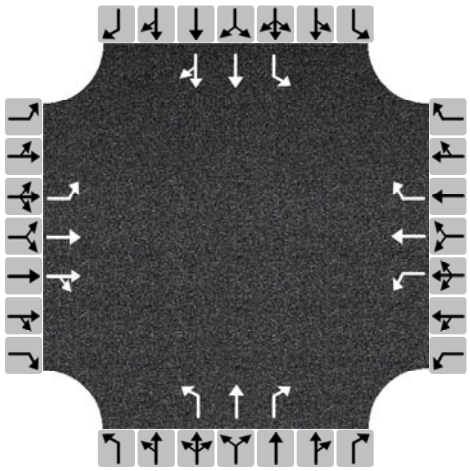
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	247		151	165	198	12	90	107	120	45	63
Capacity (veh/h)	455	488		470	504	559	422	449	493	427	455	467
95% Queue Length, Q_{95} (veh)	0.5	2.8		1.4	1.4	1.6	0.1	0.7	0.8	1.1	0.3	0.5
Control Delay (s/veh)	11.8	17.4		13.9	13.3	12.6	11.5	12.7	12.0	14.4	11.5	11.6
Level of Service, LOS	B	C		B	B	B	B	B	B	B	B	B
Approach Delay (s/veh) | LOS	16.3	C		13.2	B		12.3	B		13.0	B	
Intersection Delay (s/veh) | LOS	13.8						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	13	77	12	53	152	78	18	30	133	243	164	45
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	42	55	58	165	85	20	33	145	264	89	138
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.013	0.037	0.049	0.051	0.147	0.075	0.017	0.029	0.129	0.235	0.079	0.123
Final Departure Headway, h_d (s)	7.87	7.37	7.20	7.41	6.91	6.21	7.58	7.08	6.38	6.93	6.43	6.19
Final Degree of Utilization, x	0.031	0.086	0.110	0.119	0.317	0.146	0.041	0.064	0.256	0.509	0.159	0.237
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.57	5.07	4.90	5.11	4.61	3.91	5.28	4.78	4.08	4.63	4.13	3.89

Capacity, Delay and Level of Service

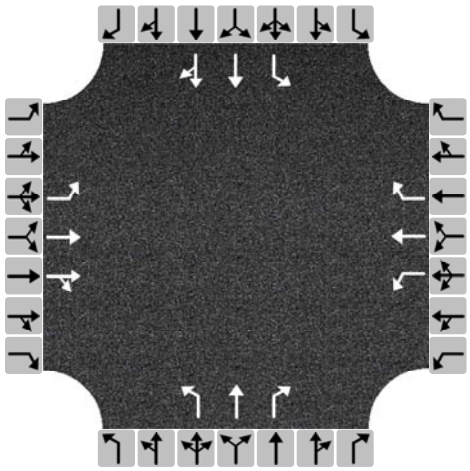
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	42	55	58	165	85	20	33	145	264	89	138
Capacity (veh/h)	458	489	500	486	521	580	475	509	565	519	559	582
95% Queue Length, Q_{95} (veh)	0.1	0.3	0.4	0.4	1.4	0.5	0.1	0.2	1.0	2.9	0.6	0.9
Control Delay (s/veh)	10.8	10.8	10.8	11.1	12.8	10.0	10.6	10.3	11.3	16.6	10.4	10.8
Level of Service, LOS	B	B	B	B	B	A	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	10.8	B		11.7	B		11.0	B		13.8	B	
Intersection Delay (s/veh) | LOS	12.4						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	56	214	13	139	152	182	11	83	98	110	83	16
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	116	130	151	165	198	12	90	107	120	45	63
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.054	0.103	0.116	0.134	0.147	0.176	0.011	0.080	0.095	0.106	0.040	0.056
Final Departure Headway, h_d (s)	7.84	7.34	7.26	7.45	6.95	6.25	8.20	7.70	7.00	8.11	7.61	7.42
Final Degree of Utilization, x	0.133	0.237	0.263	0.313	0.319	0.343	0.027	0.193	0.207	0.269	0.095	0.129
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.54	5.04	4.96	5.15	4.65	3.95	5.90	5.40	4.70	5.81	5.31	5.12

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	116	130	151	165	198	12	90	107	120	45	63
Capacity (veh/h)	459	491	496	483	518	576	439	468	514	444	473	485
95% Queue Length, Q_{95} (veh)	0.5	0.9	1.0	1.3	1.4	1.5	0.1	0.7	0.8	1.1	0.3	0.4
Control Delay (s/veh)	11.7	12.3	12.5	13.5	12.9	12.2	11.1	12.2	11.5	13.8	11.1	11.2
Level of Service, LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Delay (s/veh) | LOS	12.3	B		12.8	B		11.8	B		12.5	B	
Intersection Delay (s/veh) | LOS	12.5						B					

HCS Two-Way Stop-Control Report

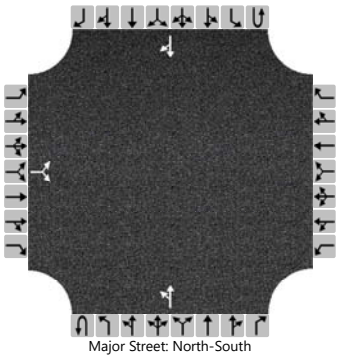
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Time Analyzed	No Build AM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		11						5	177				188	0
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			12							5						
Capacity, c (veh/h)			836							1367						
v/c Ratio			0.01							0.00						
95% Queue Length, Q_{95} (veh)			0.0							0.0						
Control Delay (s/veh)			9.4							7.6	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.4								0.2						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

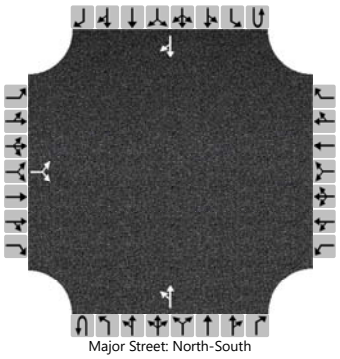
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2027
Time Analyzed	No Build PM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		10						16	287				131	0
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			11							17						
Capacity, c (veh/h)			905							1440						
v/c Ratio			0.01							0.01						
95% Queue Length, Q_{95} (veh)			0.0							0.0						
Control Delay (s/veh)			9.0							7.5	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.0								0.5						
Approach LOS		A								A						

PEAK HOUR VOLUME SIGNAL WARRANT ANALYSIS

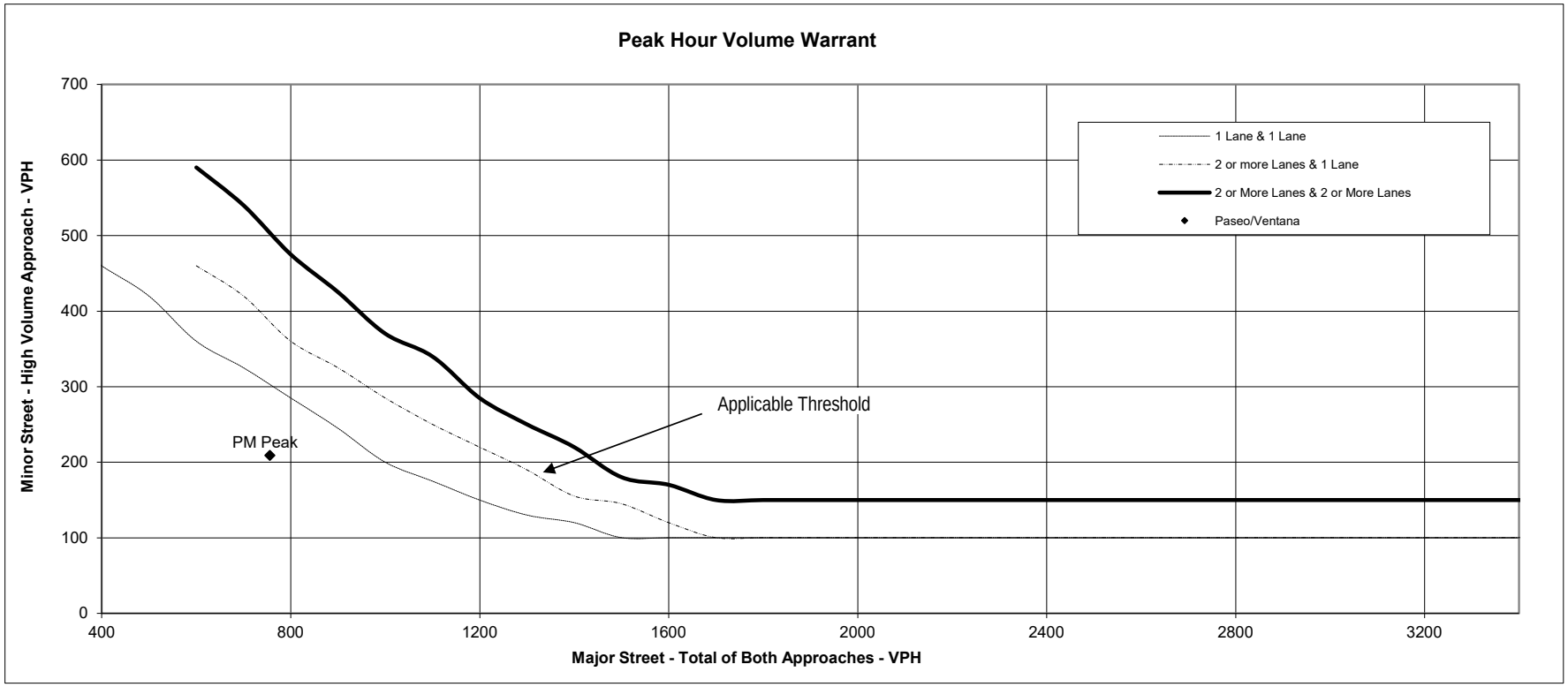
***USE THIS TAB IF MAJOR RD MPH<40

Satisfies Warrant 3A NO

Peak Hour Delay (Criteria 4 Hours if 1-lane, 5 hrs if 2-lane approach)		TotalIntersection Voume > 800	Minor Approach > 100
1.78 Hours in AM	NO	YES	YES
0.75 Hours in PM	NO	YES	YES

Scenario: 2027 No Build
Intersection: Paseo/Ventana
Type: 1 Lane/2 Lane
Major Street (Orientation): Paseo (E/W)
Minor Street (Orientation): Ventana/Woodmont (N/S)

	Minor Street Approach Volume			Major Street Approach Volume			Satisfies Warrant 3B
Time	NB	SB	High Vol	EB	WB	EB + WB	
AM Peak	181	452	452	102	283	385	NO
PM Peak	192	209	209	283	473	756	NO

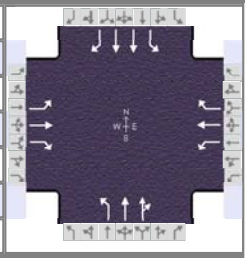


Note: 150 VPH applies as the lower threshold for minor street approach with 2 or more lanes & 100 VPH as the threshold for a minor street approach with one lane

APPENDIX E
2027 BUILD INTERSECTION CAPACITY & WARRANT ANALYSIS

HCS Signalized Intersection Results Summary

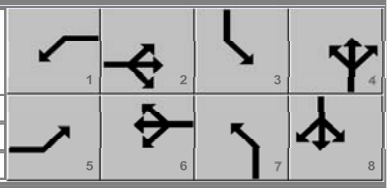
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2027	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2027 BAM Rainbow & Paseo.xus		
Project Description	Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	39	425	8	193	250	57	30	159	202	179	280	27

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



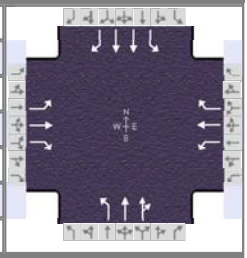
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.2	22.3	8.6	12.5	3.1	13.7	9.4	8.8
Green Extension Time (g_e), s	0.0	2.0	0.1	2.8	0.0	0.9	0.1	1.2
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.40	0.22	0.03	0.00	0.34	0.52	0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	42	462	9	210	272	62	33	173	220	195	304	29
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	1.2	20.3	0.3	6.6	10.5	2.5	1.1	7.4	11.7	7.4	6.8	1.4
Cycle Queue Clearance Time (g_c), s	1.2	20.3	0.3	6.6	10.5	2.5	1.1	7.4	11.7	7.4	6.8	1.4
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	530	610	517	398	610	525	439	386	327	377	735	333
Volume-to-Capacity Ratio (*X*)	0.080	0.757	0.017	0.527	0.446	0.118	0.074	0.447	0.671	0.516	0.414	0.088
Back of Queue (*Q*), ft/ln (95 th percentile)	23	388.8	6	140	216	43.9	22.2	165.7	225.9	158	136.7	25
Back of Queue (*Q*), veh/ln (95 th percentile)	0.9	15.3	0.2	5.5	8.5	1.8	0.9	6.5	9.0	6.2	5.4	1.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.23	0.19	0.06	0.80	0.11	0.00	0.06	0.22	0.31	0.45	0.16	0.00
Uniform Delay (d_1), s/veh	14.5	27.7	21.0	18.6	24.4	21.7	20.7	31.9	33.6	23.6	31.7	29.5
Incremental Delay (d_2), s/veh	0.3	8.5	0.1	4.9	2.3	0.5	0.3	3.7	10.5	5.0	1.7	0.5
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	14.8	36.3	21.1	23.5	26.8	22.2	21.0	35.6	44.1	28.6	33.4	30.0
Level of Service (LOS)	B	D	C	C	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	34.3	C		25.0	C		38.9	D		31.4	C	
Intersection Delay, s/veh / LOS	32.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.33	A	1.38	A	0.84	A	0.92	A

HCS Signalized Intersection Results Summary

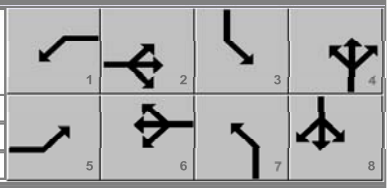
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2027	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2027 BPM Rainbow & Paseo.xus		
Project Description	Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	52	390	22	221	482	117	32	289	185	85	130	47

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.6	20.2	9.7	26.1	3.2	14.8	5.3	5.0
Green Extension Time (g_e), s	0.0	3.2	0.1	1.7	0.0	0.7	0.0	1.3
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.36	0.83	1.00	0.00	0.59	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	57	424	24	240	524	127	35	272	244	92	141	51
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1628	1781	1781	1610
Queue Service Time (g_s), s	1.6	18.2	0.9	7.7	24.1	5.3	1.2	12.4	12.8	3.3	3.0	2.4
Cycle Queue Clearance Time (g_c), s	1.6	18.2	0.9	7.7	24.1	5.3	1.2	12.4	12.8	3.3	3.0	2.4
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	357	610	517	423	610	525	510	386	336	360	735	333
Volume-to-Capacity Ratio (*X*)	0.158	0.695	0.046	0.568	0.859	0.242	0.068	0.703	0.724	0.256	0.192	0.154
Back of Queue (*Q*), ft/ln (95 th percentile)	32.6	347.5	16.7	163.7	472.2	94.8	23.5	270.5	251.8	67.7	59.7	44.2
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	13.7	0.7	6.4	18.6	3.8	0.9	10.6	10.1	2.7	2.4	1.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.33	0.17	0.17	0.94	0.24	0.00	0.07	0.36	0.34	0.19	0.07	0.00
Uniform Delay (d_1), s/veh	17.7	27.0	21.2	18.3	29.0	22.7	20.4	33.9	34.1	22.3	30.2	29.9
Incremental Delay (d_2), s/veh	0.9	6.4	0.2	5.4	14.6	1.1	0.3	10.3	12.7	1.7	0.6	1.0
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	18.7	33.4	21.4	23.8	43.6	23.8	20.7	44.1	46.8	24.0	30.7	30.9
Level of Service (LOS)	B	C	C	C	D	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	31.2	C		35.4	D		43.8	D		28.6	C	
Intersection Delay, s/veh / LOS	35.7						D					

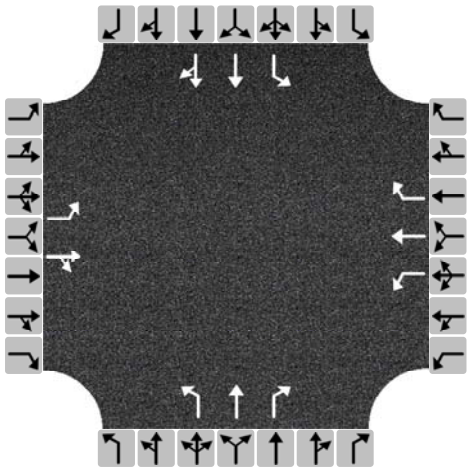
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.32	A	1.96	B	0.94	A	0.72	A

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	13	124	12	83	152	78	21	31	176	243	164	45
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	148		90	165	85	23	34	191	264	89	138
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.013	0.131		0.080	0.147	0.075	0.020	0.030	0.170	0.235	0.079	0.123
Final Departure Headway, h_d (s)	8.38	7.82		8.06	7.56	6.85	8.30	7.79	7.08	7.68	7.17	6.92
Final Degree of Utilization, x	0.033	0.321		0.202	0.347	0.161	0.053	0.073	0.376	0.563	0.178	0.265
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.08	5.52		5.76	5.26	4.55	6.00	5.49	4.78	5.38	4.87	4.62

Capacity, Delay and Level of Service

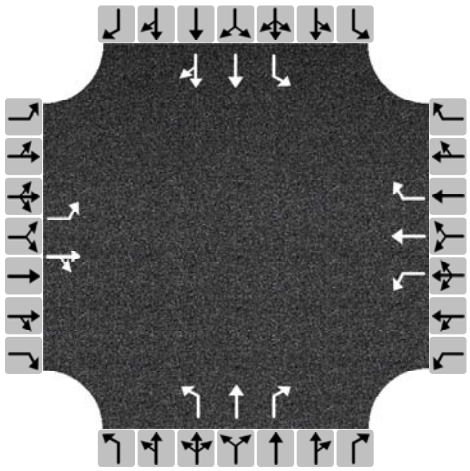
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	148		90	165	85	23	34	191	264	89	138
Capacity (veh/h)	430	460		447	476	525	434	462	508	469	502	520
95% Queue Length, Q_{95} (veh)	0.1	1.4		0.7	1.5	0.6	0.2	0.2	1.7	3.4	0.6	1.1
95% Queue Length, Q_{95} (ft)	2.5	35.6		17.8	38.1	15.2	5.1	5.1	43.2	86.4	15.2	27.9
Control Delay (s/veh)	11.4	14.2		12.8	14.2	10.9	11.5	11.1	14.0	19.8	11.4	12.1
Level of Service, LOS	B	B		B	B	B	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	13.9	B		13.0	B		13.4	B		16.1	C	
Intersection Delay (s/veh) | LOS	14.4						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	56	246	13	242	152	182	13	84	127	110	85	16
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	282		263	165	198	14	91	138	120	46	64
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.054	0.250		0.234	0.147	0.176	0.013	0.081	0.123	0.106	0.041	0.057
Final Departure Headway, h_d (s)	8.49	7.96		8.10	7.59	6.89	9.18	8.67	7.96	9.18	8.67	8.47
Final Degree of Utilization, x	0.144	0.622		0.592	0.349	0.378	0.036	0.220	0.305	0.305	0.111	0.150
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.19	5.66		5.80	5.29	4.59	6.88	6.37	5.66	6.88	6.37	6.17

Capacity, Delay and Level of Service

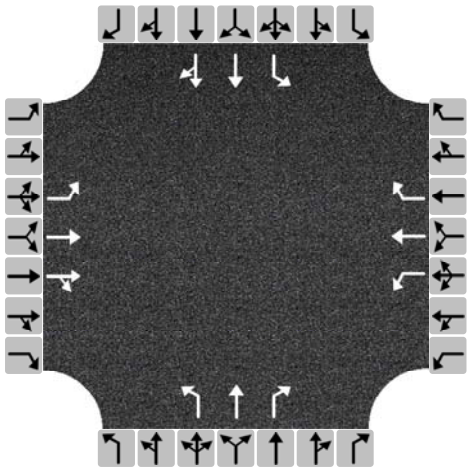
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	282		263	165	198	14	91	138	120	46	64
Capacity (veh/h)	424	453		444	474	523	392	415	452	392	415	425
95% Queue Length, Q_{95} (veh)	0.5	4.1		3.7	1.5	1.8	0.1	0.8	1.3	1.3	0.4	0.5
95% Queue Length, Q_{95} (ft)	12.7	104.1		94.0	38.1	45.7	2.5	20.3	33.0	33.0	10.2	12.7
Control Delay (s/veh)	12.6	22.9		21.9	14.3	13.7	12.2	13.8	14.1	15.9	12.5	12.7
Level of Service, LOS	B	C		C	B	B	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	21.0	C		17.3	C		13.9	B		14.3	B	
Intersection Delay (s/veh) | LOS	17.1						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	13	124	12	83	152	78	21	31	176	243	164	45
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	67	80	90	165	85	23	34	191	264	89	138
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.013	0.060	0.071	0.080	0.147	0.075	0.020	0.030	0.170	0.235	0.079	0.123
Final Departure Headway, h_d (s)	8.29	7.79	7.67	7.86	7.36	6.66	8.02	7.52	6.82	7.45	6.95	6.70
Final Degree of Utilization, x	0.033	0.146	0.171	0.197	0.338	0.157	0.051	0.070	0.362	0.547	0.172	0.257
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.99	5.49	5.37	5.56	5.06	4.36	5.72	5.22	4.52	5.15	4.65	4.40

Capacity, Delay and Level of Service

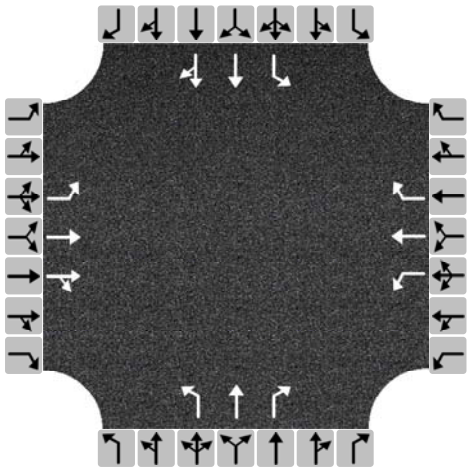
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	14	67	80	90	165	85	23	34	191	264	89	138
Capacity (veh/h)	434	462	469	458	489	541	449	479	528	483	518	537
95% Queue Length, Q_{95} (veh)	0.1	0.5	0.6	0.7	1.5	0.6	0.2	0.2	1.6	3.2	0.6	1.0
95% Queue Length, Q_{95} (ft)	2.5	12.7	15.2	17.8	38.1	15.2	5.1	5.1	40.6	81.3	15.2	25.4
Control Delay (s/veh)	11.3	11.8	12.0	12.5	13.8	10.6	11.1	10.8	13.3	18.8	11.1	11.7
Level of Service, LOS	B	B	B	B	B	B	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	11.8	B		12.6	B		12.8	B		15.4	C	
Intersection Delay (s/veh) | LOS	13.6						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Analysis Time Period (hrs)	0.25
Time Analyzed	Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	56	246	13	242	152	182	13	84	127	110	85	16
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	134	148	263	165	198	14	91	138	120	46	64
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.054	0.119	0.131	0.234	0.147	0.176	0.013	0.081	0.123	0.106	0.041	0.057
Final Departure Headway, h_d (s)	8.37	7.87	7.80	7.81	7.31	6.61	8.75	8.25	7.55	8.75	8.25	8.05
Final Degree of Utilization, x	0.141	0.292	0.320	0.571	0.336	0.363	0.034	0.209	0.290	0.290	0.106	0.142
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.07	5.57	5.50	5.51	5.01	4.31	6.45	5.95	5.25	6.45	5.95	5.75

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	61	134	148	263	165	198	14	91	138	120	46	64
Capacity (veh/h)	430	458	462	461	492	544	411	436	477	412	437	447
95% Queue Length, Q_{95} (veh)	0.5	1.2	1.4	3.5	1.5	1.6	0.1	0.8	1.2	1.2	0.4	0.5
95% Queue Length, Q_{95} (ft)	12.7	30.5	35.6	88.9	38.1	40.6	2.5	20.3	30.5	30.5	10.2	12.7
Control Delay (s/veh)	12.4	13.8	14.1	20.4	13.7	13.0	11.8	13.1	13.3	15.0	11.9	12.1
Level of Service, LOS	B	B	B	C	B	B	B	B	B	B	B	B
Approach Delay (s/veh) | LOS	13.7	B		16.3	C		13.1	B		13.6	B	
Intersection Delay (s/veh) | LOS	14.7						B					

HCS Two-Way Stop-Control Report

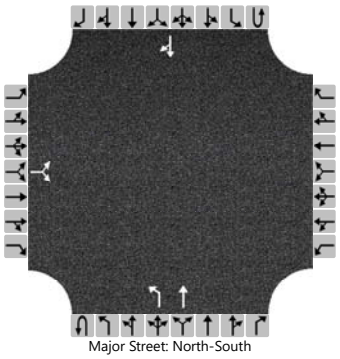
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		43		55						20	177				188	30
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			107							22						
Capacity, c (veh/h)			676							1330						
v/c Ratio			0.16							0.02						
95% Queue Length, Q_{95} (veh)			0.6							0.0						
95% Queue Length, Q_{95} (ft)			15.2							0.0						
Control Delay (s/veh)			11.3							7.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		11.3								0.8						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

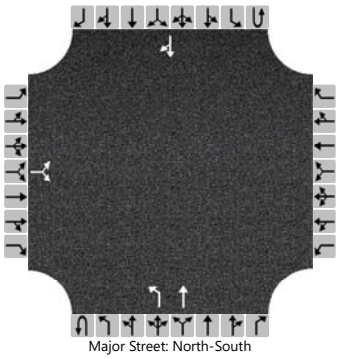
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2027
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		29		40						67	287				131	105
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			75							73						
Capacity, c (veh/h)			580							1308						
v/c Ratio			0.13							0.06						
95% Queue Length, Q_{95} (veh)			0.4							0.2						
95% Queue Length, Q_{95} (ft)			10.2							5.1						
Control Delay (s/veh)			12.1							7.9						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		12.1								1.5						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

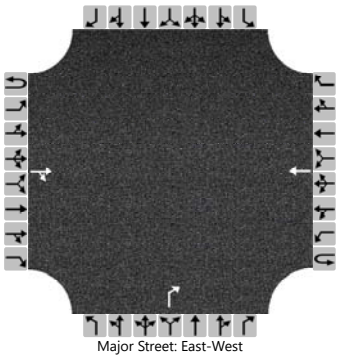
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	6/6/2024
Analysis Year	2027
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	Thomas Development

Site Information

Intersection	Paseo & North Entrance
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	North Site Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			102	1			215					47				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												51				
Capacity, c (veh/h)												939				
v/c Ratio												0.05				
95% Queue Length, Q_{95} (veh)												0.2				
95% Queue Length, Q_{95} (ft)												5.1				
Control Delay (s/veh)												9.1				
Level of Service (LOS)												A				
Approach Delay (s/veh)										9.1						
Approach LOS										A						

HCS Two-Way Stop-Control Report

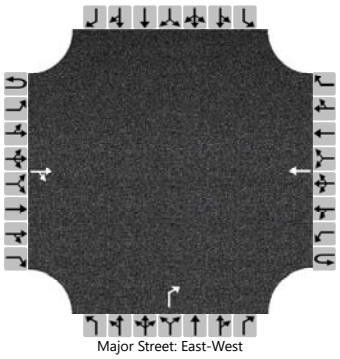
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	6/6/2024
Analysis Year	2027
Time Analyzed	Build PM
Intersection Orientation	East-West
Project Description	Thomas Development

Site Information

Intersection	Paseo & North Entrance
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	North Site Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			284	3			179					32				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												35				
Capacity, c (veh/h)												727				
v/c Ratio												0.05				
95% Queue Length, Q_{95} (veh)												0.2				
95% Queue Length, Q_{95} (ft)												5.1				
Control Delay (s/veh)												10.2				
Level of Service (LOS)												B				
Approach Delay (s/veh)										10.2						
Approach LOS										B						

PEAK HOUR VOLUME SIGNAL WARRANT ANALYSIS

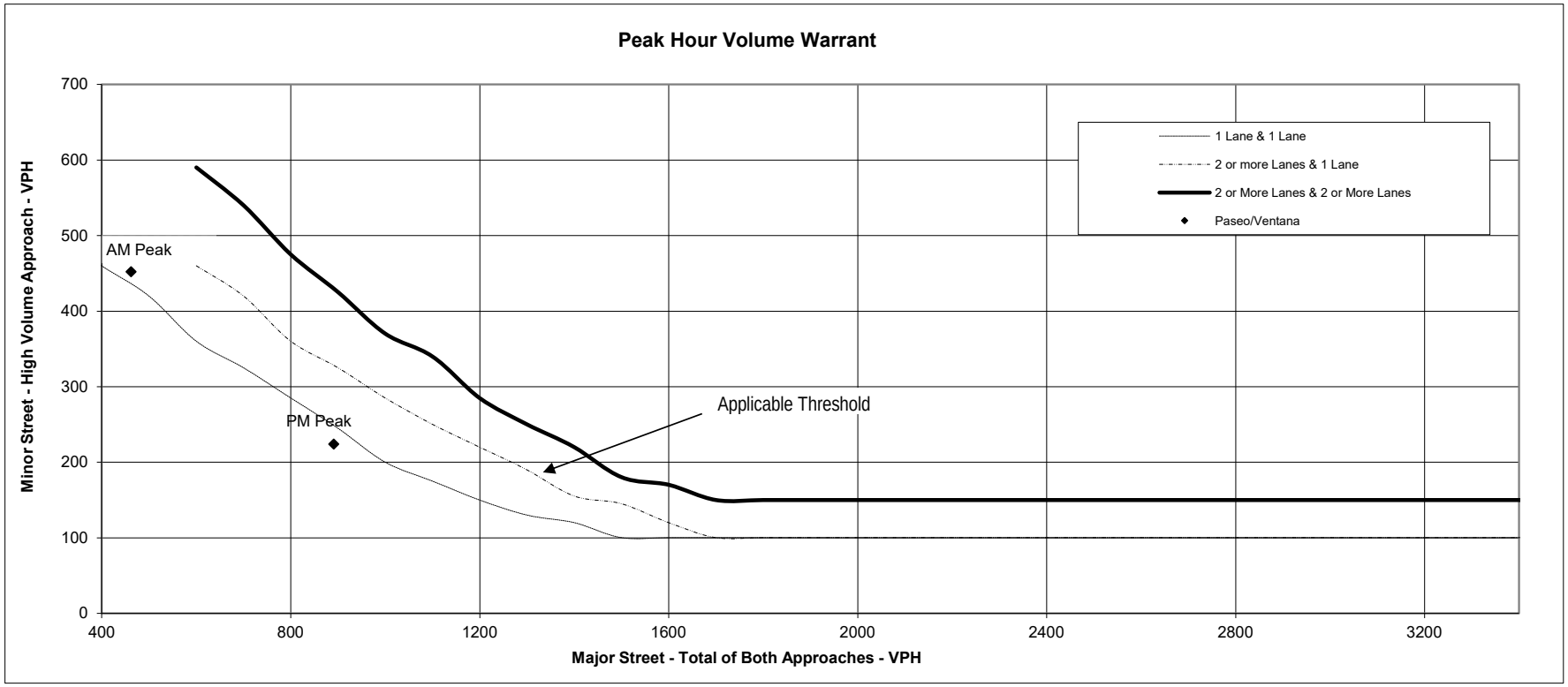
***USE THIS TAB IF MAJOR RD MPH<40

Satisfies Warrant 3A NO

Peak Hour Delay (Criteria 4 Hours if 1-lane, 5 hrs if 2-lane approach)		TotalIntersection Voume > 800	Minor Approach > 100
2.02 Hours in AM	NO	YES	YES
0.86 Hours in PM	NO	YES	YES

Scenario: 2027 Build
Intersection: Paseo/Ventana
Type: 1 Lane/2 Lane
Major Street (Orientation): Paseo (E/W)
Minor Street (Orientation): Ventana/Woodmont (N/S)

	Minor Street Approach Volume			Major Street Approach Volume			Satisfies Warrant 3B
Time	NB	SB	High Vol	EB	WB	EB + WB	
AM Peak	228	452	452	149	313	462	NO
PM Peak	224	211	224	315	576	891	NO

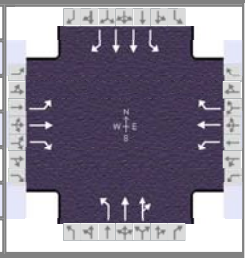


Note: 150 VPH applies as the lower threshold for minor street approach with 2 or more lanes & 100 VPH as the threshold for a minor street approach with one lane

APPENDIX F
2037 NO BUILD INTERSECTION CAPACITY & WARRANT ANALYSIS

HCS Signalized Intersection Results Summary

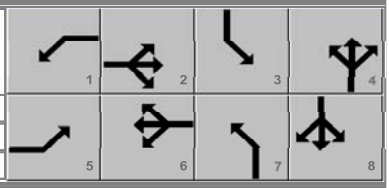
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 NBAM Rainbow & Paseo.xus		
Project Description	No Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	32	400	54	243	268	72	49	200	254	225	353	29

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



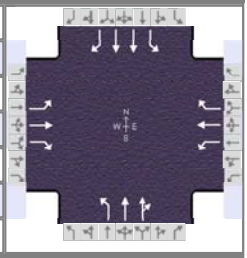
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	3.0	20.8	10.6	13.4	3.9	17.4	11.6	10.8
Green Extension Time (*g e*), s	0.0	2.4	0.1	3.0	0.0	0.5	0.0	1.5
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.29	1.00	0.05	0.00	1.00	1.00	0.13

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	35	435	59	264	291	78	53	217	276	245	384	32
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (*g s*), s	1.0	18.8	2.4	8.6	11.4	3.2	1.9	9.6	15.4	9.6	8.8	1.5
Cycle Queue Clearance Time (*g c*), s	1.0	18.8	2.4	8.6	11.4	3.2	1.9	9.6	15.4	9.6	8.8	1.5
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	516	610	517	416	610	525	409	386	327	336	735	333
Volume-to-Capacity Ratio (*X*)	0.067	0.713	0.114	0.635	0.478	0.149	0.130	0.563	0.843	0.728	0.522	0.095
Back of Queue (*Q*), ft/ln (95 th percentile)	18.8	358.8	42.2	188.4	231	56.1	37.1	212.9	306.1	220.8	178.5	26.9
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	14.1	1.7	7.4	9.1	2.2	1.5	8.4	12.2	8.7	7.0	1.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.19	0.18	0.42	1.08	0.12	0.00	0.11	0.28	0.41	0.63	0.21	0.00
Uniform Delay (*d 1*), s/veh	14.6	27.2	21.7	18.9	24.7	22.0	21.2	32.8	35.1	25.0	32.5	29.5
Incremental Delay (*d 2*), s/veh	0.3	7.0	0.4	7.2	2.7	0.6	0.7	5.8	22.5	13.0	2.6	0.6
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	14.8	34.2	22.1	26.1	27.4	22.6	21.8	38.6	57.5	37.9	35.1	30.1
Level of Service (LOS)	B	C	C	C	C	C	C	D	E	D	D	C
Approach Delay, s/veh / LOS	31.6	C		26.3	C		46.5	D		35.9	D	
Intersection Delay, s/veh / LOS	34.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.36	A	1.53	B	0.94	A	1.03	A

HCS Signalized Intersection Results Summary

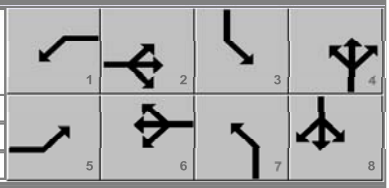
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 NBPM Rainbow & Paseo.xus		
Project Description	No Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	54	397	51	278	455	147	76	364	233	107	164	41

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



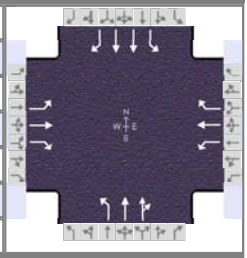
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.7	20.6	12.1	24.3	4.9	18.8	6.2	5.8
Green Extension Time (g_e), s	0.0	3.3	0.0	2.4	0.0	0.1	0.1	1.6
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.41	1.00	0.76	0.00	1.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	59	432	55	302	495	160	83	345	304	116	178	45
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1627	1781	1781	1610
Queue Service Time (g_s), s	1.7	18.6	2.2	10.1	22.3	6.8	2.9	16.5	16.8	4.2	3.8	2.1
Cycle Queue Clearance Time (g_c), s	1.7	18.6	2.2	10.1	22.3	6.8	2.9	16.5	16.8	4.2	3.8	2.1
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	376	610	517	418	610	525	493	386	336	322	735	333
Volume-to-Capacity Ratio (*X*)	0.156	0.708	0.107	0.723	0.811	0.304	0.168	0.892	0.905	0.361	0.242	0.134
Back of Queue (*Q*), ft/ln (95 th percentile)	33.7	355.6	39.8	222.4	429.4	122.2	57.8	381.4	352.3	89.1	76.2	38.4
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	14.0	1.6	8.8	16.9	4.9	2.3	15.0	14.1	3.5	3.0	1.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.34	0.18	0.40	1.27	0.21	0.00	0.17	0.51	0.48	0.25	0.09	0.00
Uniform Delay (d_1), s/veh	17.2	27.2	21.6	19.4	28.4	23.2	21.1	35.5	35.6	23.2	30.5	29.8
Incremental Delay (d_2), s/veh	0.9	6.8	0.4	10.4	11.2	1.5	0.7	25.4	30.1	3.1	0.8	0.8
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	18.1	33.9	22.1	29.8	39.6	24.7	21.8	60.9	65.7	26.4	31.3	30.6
Level of Service (LOS)	B	C	C	C	D	C	C	E	E	C	C	C
Approach Delay, s/veh / LOS	31.0	C		34.0	C		58.5	E		29.5	C	
Intersection Delay, s/veh / LOS	39.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.39	A	2.07	B	1.09	A	0.77	A

HCS Signalized Intersection Results Summary

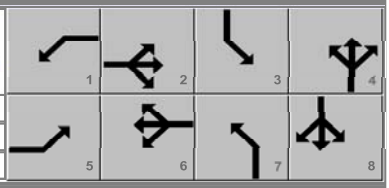
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 NBAM Rainbow & Paseo Opt.xus		
Project Description	No Build AM Optimized				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	32	400	54	243	268	72	49	200	254	225	353	29

Signal Information			
Cycle, s	68.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	2.0	22.0	3.0	2.0	18.0
Yellow	3.0	0.0	4.0	3.0	0.0	3.5
Red	0.5	0.0	2.0	0.5	0.0	1.5



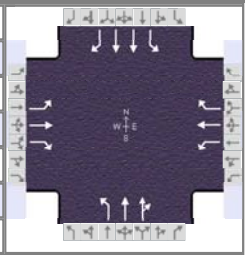
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	6.5	28.0	8.5	30.0	6.5	23.0	8.5	25.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	2.9	15.9	7.0	10.1	3.4	12.5	7.0	7.8
Green Extension Time (g_e), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	1.7
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	1.00	1.00	0.10	1.00	1.00	1.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	35	435	59	264	291	78	53	217	276	245	384	32
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	0.9	13.9	1.8	5.0	8.1	2.2	1.4	6.6	10.5	5.0	5.8	1.0
Cycle Queue Clearance Time (g_c), s	0.9	13.9	1.8	5.0	8.1	2.2	1.4	6.6	10.5	5.0	5.8	1.0
Green Ratio (*g/C*)	0.37	0.32	0.32	0.40	0.35	0.35	0.31	0.26	0.26	0.35	0.29	0.29
Capacity (*c*), veh/h	407	605	513	350	660	568	364	495	420	336	1047	474
Volume-to-Capacity Ratio (*X*)	0.086	0.719	0.114	0.755	0.441	0.138	0.146	0.439	0.658	0.728	0.366	0.067
Back of Queue (*Q*), ft/ln (95 th percentile)	16.4	277.7	29.9	132.1	161.4	37.2	28.2	136.4	197.8	107.2	104.5	16.1
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	10.9	1.2	5.2	6.4	1.5	1.1	5.4	7.9	4.2	4.1	0.6
Queue Storage Ratio (*RQ*) (95 th percentile)	0.16	0.14	0.30	0.76	0.08	0.00	0.08	0.18	0.27	0.31	0.12	0.00
Uniform Delay (d_1), s/veh	14.4	20.3	16.2	19.9	16.9	15.0	17.0	20.8	22.3	21.2	19.0	17.3
Incremental Delay (d_2), s/veh	0.4	7.2	0.5	14.0	2.1	0.5	0.8	2.8	7.9	13.0	1.0	0.3
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	14.8	27.5	16.6	33.9	19.0	15.5	17.9	23.6	30.1	34.2	20.0	17.6
Level of Service (LOS)	B	C	B	C	B	B	B	C	C	C	B	B
Approach Delay, s/veh / LOS	25.4	C		24.8	C		26.3	C		25.1	C	
Intersection Delay, s/veh / LOS	25.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.42	B	2.11	B	2.10	B
Bicycle LOS Score / LOS	1.36	A	1.53	B	0.94	A	1.03	A

HCS Signalized Intersection Results Summary

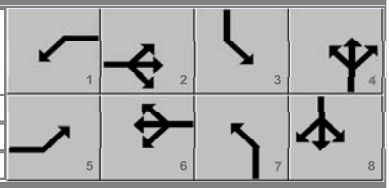
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 NBPM Rainbow & Paseo Opt.xus		
Project Description	No Build PM Optimized				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	54	397	51	278	455	147	76	364	233	107	164	41

Signal Information			
Cycle, s	71.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	3.0	27.0	3.0	2.0	15.0	
Yellow	3.0	0.0	4.0	3.0	0.0	3.5	
Red	0.5	0.0	2.0	0.5	0.0	1.5	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	6.5	33.0	9.5	36.0	8.5	22.0	6.5	20.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	3.4	15.2	8.0	16.7	4.5	14.4	5.0	5.0
Green Extension Time (*g e*), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	1.5
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	1.00	1.00	0.22	1.00	1.00	1.00	0.06

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	59	432	55	302	495	160	83	345	304	116	178	45
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1627	1781	1781	1610
Queue Service Time (*g s*), s	1.4	13.2	1.6	6.0	14.7	4.5	2.5	12.2	12.4	3.0	3.0	1.6
Cycle Queue Clearance Time (*g c*), s	1.4	13.2	1.6	6.0	14.7	4.5	2.5	12.2	12.4	3.0	3.0	1.6
Green Ratio (*g/C*)	0.42	0.38	0.38	0.49	0.42	0.42	0.29	0.24	0.24	0.25	0.21	0.21
Capacity (*c*), veh/h	345	711	603	438	790	680	432	448	389	205	752	340
Volume-to-Capacity Ratio (*X*)	0.170	0.607	0.092	0.690	0.626	0.235	0.191	0.770	0.781	0.567	0.237	0.131
Back of Queue (*Q*), ft/ln (95 th percentile)	27.6	250.1	26.2	164.2	267.3	72.8	47.6	268.9	247.9	92.9	55.8	28.6
Back of Queue (*Q*), veh/ln (95 th percentile)	1.1	9.8	1.0	6.5	10.5	2.9	1.9	10.6	9.9	3.7	2.2	1.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.28	0.13	0.26	0.94	0.13	0.00	0.14	0.36	0.34	0.27	0.07	0.00
Uniform Delay (*d 1*), s/veh	13.7	17.7	14.1	15.8	16.1	13.1	18.9	25.2	25.3	24.5	23.2	22.7
Incremental Delay (*d 2*), s/veh	1.1	3.8	0.3	8.6	3.7	0.8	1.0	12.0	14.4	10.9	0.7	0.8
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	14.7	21.5	14.4	24.4	19.8	14.0	19.9	37.2	39.6	35.4	24.0	23.5
Level of Service (LOS)	B	C	B	C	B	B	B	D	D	D	C	C
Approach Delay, s/veh / LOS	20.1	C		20.3	C		36.3	D		27.8	C	
Intersection Delay, s/veh / LOS	25.8						C					

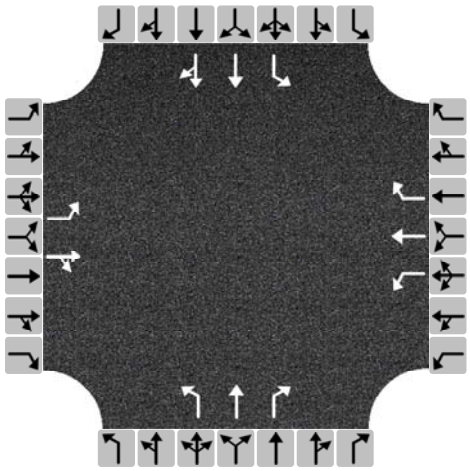
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.41	B	2.11	B	2.11	B
Bicycle LOS Score / LOS	1.39	A	2.07	B	1.09	A	0.77	A

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	16	100	12	54	194	106	18	30	133	347	165	57
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	122		59	211	115	20	33	145	377	90	152
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.015	0.108		0.052	0.187	0.102	0.017	0.029	0.129	0.335	0.080	0.135
Final Departure Headway, h_d (s)	8.71	8.14		8.21	7.70	7.00	8.70	8.19	7.48	7.64	7.13	6.84
Final Degree of Utilization, x	0.042	0.275		0.134	0.451	0.224	0.047	0.074	0.300	0.800	0.178	0.288
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.41	5.84		5.91	5.40	4.70	6.40	5.89	5.18	5.34	4.83	4.54

Capacity, Delay and Level of Service

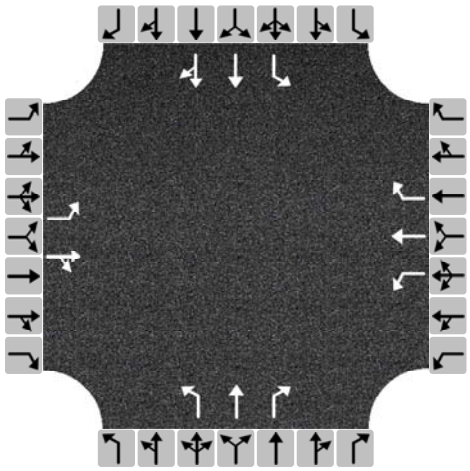
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	122		59	211	115	20	33	145	377	90	152
Capacity (veh/h)	413	442		439	467	514	414	440	482	471	505	526
95% Queue Length, Q_{95} (veh)	0.1	1.1		0.5	2.3	0.9	0.1	0.2	1.2	7.4	0.6	1.2
Control Delay (s/veh)	11.8	13.9		12.2	16.6	11.7	11.8	11.5	13.4	34.4	11.4	12.3
Level of Service, LOS	B	B		B	C	B	B	B	B	D	B	B
Approach Delay (s/veh) | LOS	13.6	B		14.4	B		12.9	B		25.7	D	
Intersection Delay (s/veh) | LOS	19.3						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	71	272	13	139	193	263	11	83	98	159	83	20
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	310		151	210	286	12	90	107	173	45	67
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.069	0.275		0.134	0.186	0.254	0.011	0.080	0.095	0.154	0.040	0.059
Final Departure Headway, h_d (s)	8.76	8.22		8.47	7.97	7.26	9.74	9.23	8.51	9.41	8.90	8.66
Final Degree of Utilization, x	0.188	0.708		0.356	0.464	0.576	0.032	0.231	0.252	0.452	0.111	0.161
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.46	5.92		6.17	5.67	4.96	7.44	6.93	6.21	7.11	6.60	6.36

Capacity, Delay and Level of Service

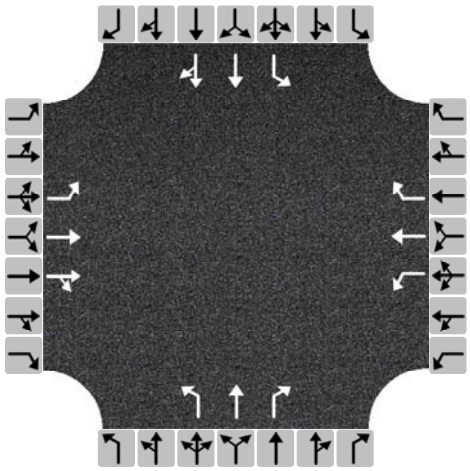
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	310		151	210	286	12	90	107	173	45	67
Capacity (veh/h)	411	438		425	452	496	369	390	423	383	405	416
95% Queue Length, Q_{95} (veh)	0.7	5.4		1.6	2.4	3.6	0.1	0.9	1.0	2.3	0.4	0.6
Control Delay (s/veh)	13.5	28.5		15.8	17.4	19.4	12.8	14.7	14.1	19.6	12.7	13.0
Level of Service, LOS	B	D		C	C	C	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	25.5	D		17.9	C		14.3	B		17.0	C	
Intersection Delay (s/veh) | LOS	19.1						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	16	100	12	54	194	106	18	30	133	347	165	57
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	54	67	59	211	115	20	33	145	377	90	152
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.015	0.048	0.060	0.052	0.187	0.102	0.017	0.029	0.129	0.335	0.080	0.135
Final Departure Headway, h_d (s)	8.64	8.14	8.01	8.04	7.54	6.84	8.41	7.91	7.21	7.44	6.94	6.65
Final Degree of Utilization, x	0.042	0.123	0.150	0.131	0.442	0.219	0.046	0.072	0.289	0.779	0.173	0.280
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.34	5.84	5.71	5.74	5.24	4.54	6.11	5.61	4.91	5.14	4.64	4.35

Capacity, Delay and Level of Service

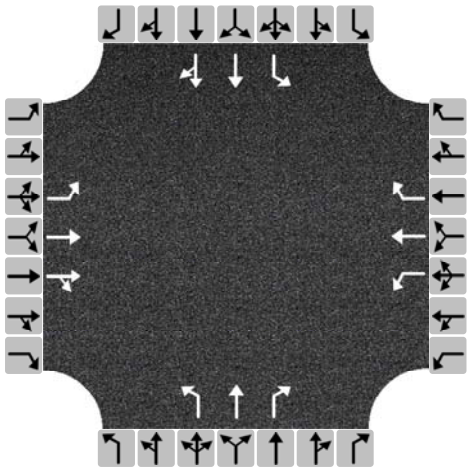
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	54	67	59	211	115	20	33	145	377	90	152
Capacity (veh/h)	417	442	450	448	478	527	428	455	500	484	519	541
95% Queue Length, Q_{95} (veh)	0.1	0.4	0.5	0.4	2.2	0.8	0.1	0.2	1.2	7.0	0.6	1.1
Control Delay (s/veh)	11.7	12.0	12.1	11.9	16.1	11.4	11.5	11.2	12.8	31.7	11.1	11.9
Level of Service, LOS	B	B	B	B	C	B	B	B	B	D	B	B
Approach Delay (s/veh) | LOS	12.0	B		14.1	B		12.4	B		23.9	C	
Intersection Delay (s/veh) | LOS	18.1						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	71	272	13	139	193	263	11	83	98	159	83	20
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	148	162	151	210	286	12	90	107	173	45	67
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.069	0.131	0.144	0.134	0.186	0.254	0.011	0.080	0.095	0.154	0.040	0.059
Final Departure Headway, h_d (s)	8.56	8.06	8.00	8.09	7.59	6.89	9.15	8.65	7.95	8.88	8.38	8.16
Final Degree of Utilization, x	0.184	0.331	0.360	0.339	0.442	0.547	0.030	0.217	0.235	0.426	0.105	0.151
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.26	5.76	5.70	5.79	5.29	4.59	6.85	6.35	5.65	6.58	6.08	5.86

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	148	162	151	210	286	12	90	107	173	45	67
Capacity (veh/h)	420	446	450	445	475	523	393	416	453	405	429	441
95% Queue Length, Q_{95} (veh)	0.7	1.4	1.6	1.5	2.2	3.3	0.1	0.8	0.9	2.1	0.3	0.5
Control Delay (s/veh)	13.2	14.7	15.1	14.9	16.2	17.6	12.1	13.7	13.1	18.0	12.1	12.3
Level of Service, LOS	B	B	C	B	C	C	B	B	B	C	B	B
Approach Delay (s/veh) | LOS	14.6	B		16.5	C		13.3	B		15.7	C	
Intersection Delay (s/veh) | LOS	15.4						C					

HCS Two-Way Stop-Control Report

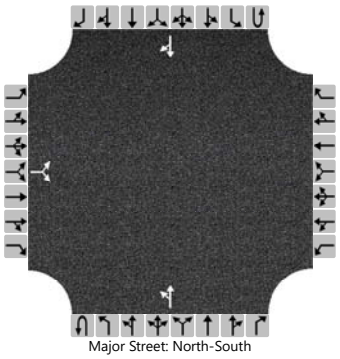
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Time Analyzed	No Build AM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		14						6	177				188	0
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			15							7						
Capacity, c (veh/h)			836							1367						
v/c Ratio			0.02							0.00						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.4							7.6	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.4								0.3						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

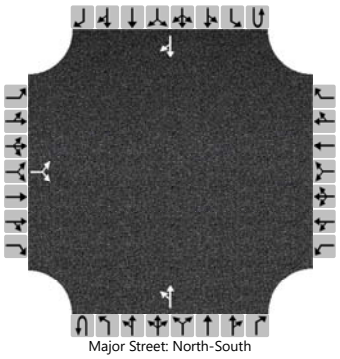
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	1/8/2024
Analysis Year	2037
Time Analyzed	No Build PM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		0		13						20	287				131	0
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			14							22						
Capacity, c (veh/h)			905							1440						
v/c Ratio			0.02							0.02						
95% Queue Length, Q_{95} (veh)			0.0							0.0						
Control Delay (s/veh)			9.0							7.5	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.0								0.6						
Approach LOS		A								A						

PEAK HOUR VOLUME SIGNAL WARRANT ANALYSIS

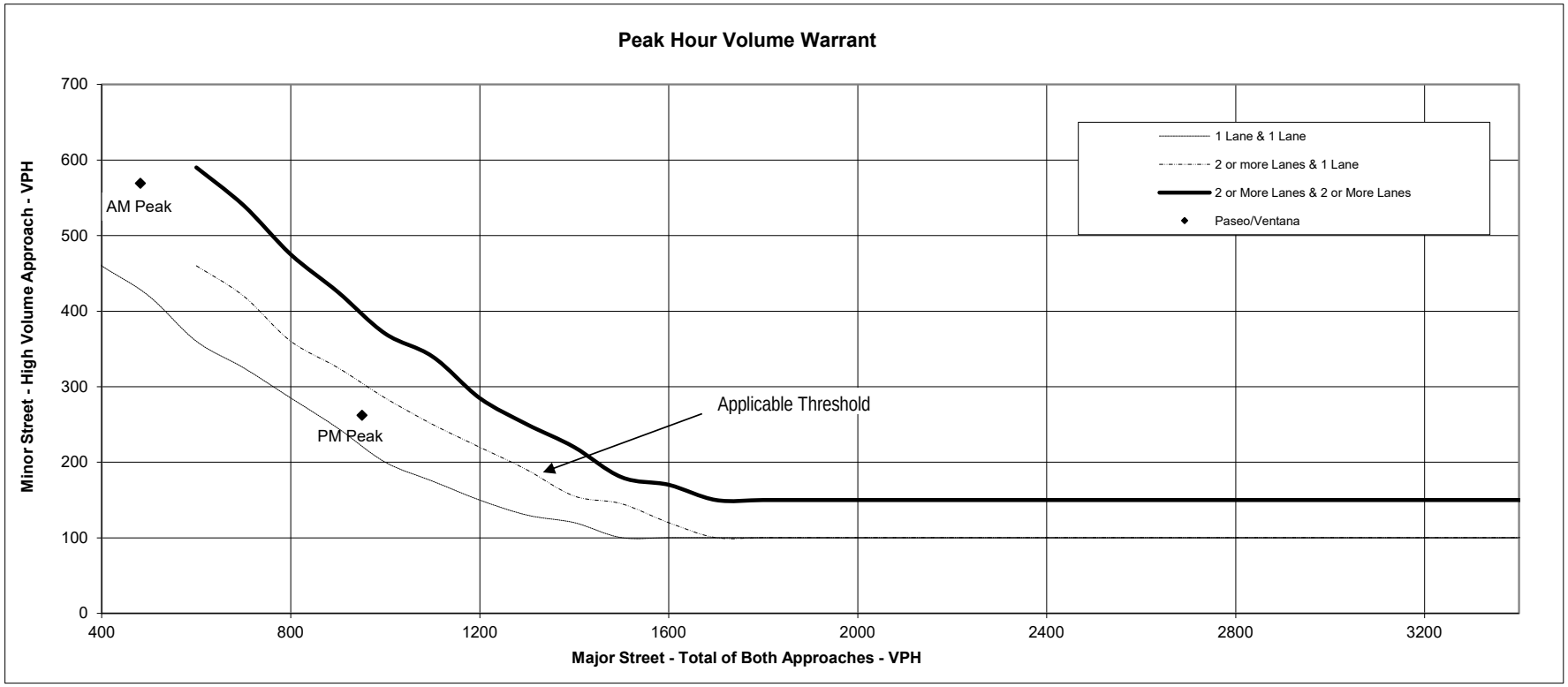
***USE THIS TAB IF MAJOR RD MPH<40

Satisfies Warrant 3A NO

Peak Hour Delay (Criteria 4 Hours if 1-lane, 5 hrs if 2-lane approach)		TotalIntersection Voume > 800	Minor Approach > 100
4.06 Hours in AM	NO	YES	YES
1.24 Hours in PM	NO	YES	YES

Scenario: 2037 No Build
Intersection: Paseo/Ventana
Type: 1 Lane/2 Lane
Major Street (Orientation): Paseo (E/W)
Minor Street (Orientation): Ventana/Woodmont (N/S)

	Minor Street Approach Volume			Major Street Approach Volume			Satisfies Warrant 3B
Time	NB	SB	High Vol	EB	WB	EB + WB	
AM Peak	181	569	569	128	354	482	YES
PM Peak	192	262	262	356	595	951	NO

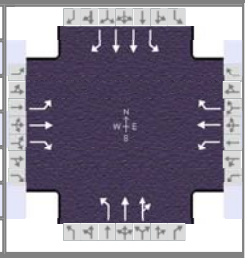


Note: 150 VPH applies as the lower threshold for minor street approach with 2 or more lanes & 100 VPH as the threshold for a minor street approach with one lane

APPENDIX G
2037 BUILD INTERSECTION CAPACITY & WARRANT ANALYSIS

HCS Signalized Intersection Results Summary

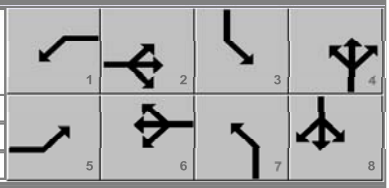
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 BAM Rainbow & Paseo.xus		
Project Description	Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	42	480	54	243	295	72	49	200	254	225	353	32

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



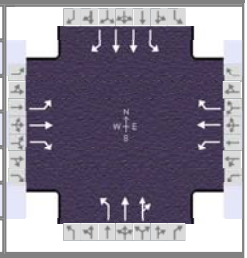
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	3.3	26.0	10.6	14.8	3.9	17.4	11.6	10.8
Green Extension Time (*g e*), s	0.0	1.6	0.1	3.4	0.0	0.5	0.0	1.5
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	1.00	0.10	0.00	1.00	1.00	0.13

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	46	522	59	264	321	78	53	217	276	245	384	35
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (*g s*), s	1.3	24.0	2.4	8.6	12.8	3.2	1.9	9.6	15.4	9.6	8.8	1.6
Cycle Queue Clearance Time (*g c*), s	1.3	24.0	2.4	8.6	12.8	3.2	1.9	9.6	15.4	9.6	8.8	1.6
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	495	610	517	359	610	525	409	386	327	336	735	333
Volume-to-Capacity Ratio (*X*)	0.092	0.855	0.114	0.736	0.526	0.149	0.130	0.563	0.843	0.728	0.522	0.105
Back of Queue (*Q*), ft/ln (95 th percentile)	25	468.8	42.2	204.4	254.6	56.1	37.1	212.9	306.1	220.8	178.5	29.7
Back of Queue (*Q*), veh/ln (95 th percentile)	1.0	18.5	1.7	8.0	10.0	2.2	1.5	8.4	12.2	8.7	7.0	1.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.25	0.23	0.42	1.17	0.13	0.00	0.11	0.28	0.41	0.63	0.21	0.00
Uniform Delay (*d 1*), s/veh	14.9	29.0	21.7	20.2	25.2	22.0	21.2	32.8	35.1	25.0	32.5	29.6
Incremental Delay (*d 2*), s/veh	0.4	14.3	0.4	12.7	3.2	0.6	0.7	5.8	22.5	13.0	2.6	0.6
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	15.3	43.3	22.1	32.9	28.4	22.6	21.8	38.6	57.5	37.9	35.1	30.2
Level of Service (LOS)	B	D	C	C	C	C	C	D	E	D	D	C
Approach Delay, s/veh / LOS	39.3	D		29.5	C		46.5	D		35.9	D	
Intersection Delay, s/veh / LOS	37.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.52	B	1.58	B	0.94	A	1.03	A

HCS Signalized Intersection Results Summary

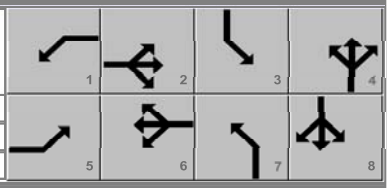
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 BPM Rainbow & Paseo.xus		
Project Description	Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	61	452	51	278	547	147	76	364	233	107	164	52

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



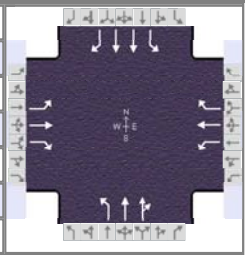
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.9	24.1	12.1	30.9	4.9	18.8	6.2	5.8
Green Extension Time (g_e), s	0.0	2.8	0.0	0.0	0.0	0.1	0.1	1.6
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.78	1.00	1.00	0.00	1.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	66	491	55	302	595	160	83	345	304	116	178	57
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1627	1781	1781	1610
Queue Service Time (g_s), s	1.9	22.1	2.2	10.1	28.9	6.8	2.9	16.5	16.8	4.2	3.8	2.7
Cycle Queue Clearance Time (g_c), s	1.9	22.1	2.2	10.1	28.9	6.8	2.9	16.5	16.8	4.2	3.8	2.7
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	320	610	517	378	610	525	493	386	336	322	735	333
Volume-to-Capacity Ratio (*X*)	0.207	0.806	0.107	0.798	0.975	0.304	0.168	0.892	0.905	0.361	0.242	0.170
Back of Queue (*Q*), ft/ln (95 th percentile)	39.3	424.9	39.8	238.9	618.8	122.2	57.8	381.4	352.3	89.1	76.2	49.2
Back of Queue (*Q*), veh/ln (95 th percentile)	1.5	16.7	1.6	9.4	24.4	4.9	2.3	15.0	14.1	3.5	3.0	2.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.39	0.21	0.40	1.37	0.31	0.00	0.17	0.51	0.48	0.25	0.09	0.00
Uniform Delay (d_1), s/veh	18.7	28.3	21.6	20.4	30.6	23.2	21.1	35.5	35.6	23.2	30.5	30.0
Incremental Delay (d_2), s/veh	1.5	10.9	0.4	16.0	30.8	1.5	0.7	25.4	30.1	3.1	0.8	1.1
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	20.2	39.2	22.1	36.4	61.4	24.7	21.8	60.9	65.7	26.4	31.3	31.1
Level of Service (LOS)	C	D	C	D	E	C	C	E	E	C	C	C
Approach Delay, s/veh / LOS	35.6	D		48.7	D		58.5	E		29.6	C	
Intersection Delay, s/veh / LOS	45.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.50	A	2.23	B	1.09	A	0.78	A

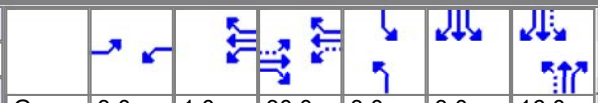
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 BAM Rainbow & Paseo Opt.xus		
Project Description	Build AM Optimized				

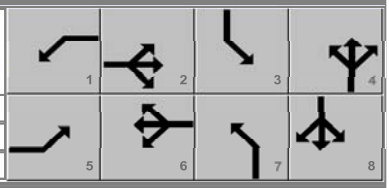


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	42	480	54	243	295	72	49	200	254	225	353	32

Signal Information			
Cycle, s	74.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.0	1.0	30.0	3.0	3.0	16.0
Yellow	3.0	0.0	4.0	3.0	0.0	3.5
Red	0.5	0.0	2.0	0.5	0.0	1.5



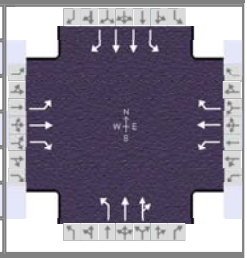
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	6.5	36.0	7.5	37.0	6.5	21.0	9.5	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.1	19.0	6.0	10.9	3.7	14.2	8.0	8.6
Green Extension Time (g_e), s	0.0	0.0	0.0	3.7	0.0	0.0	0.0	1.6
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	1.00	1.00	0.04	1.00	1.00	1.00	0.05

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	46	522	59	264	321	78	53	217	276	245	384	35
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	1.1	17.0	1.7	4.0	8.9	2.2	1.7	7.6	12.2	6.0	6.6	1.2
Cycle Queue Clearance Time (g_c), s	1.1	17.0	1.7	4.0	8.9	2.2	1.7	7.6	12.2	6.0	6.6	1.2
Green Ratio (*g/C*)	0.45	0.41	0.41	0.46	0.42	0.42	0.26	0.22	0.22	0.32	0.26	0.26
Capacity (*c*), veh/h	457	758	643	348	784	675	309	404	343	288	914	413
Volume-to-Capacity Ratio (*X*)	0.100	0.688	0.091	0.759	0.409	0.116	0.172	0.538	0.806	0.850	0.420	0.084
Back of Queue (*Q*), ft/ln (95 th percentile)	20.2	310.3	27.6	173.5	171.7	35.6	34.6	169.5	250.3	150.8	125.2	21.2
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	12.2	1.1	6.8	6.8	1.4	1.4	6.7	10.0	5.9	4.9	0.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.20	0.16	0.28	0.99	0.09	0.00	0.10	0.23	0.34	0.43	0.15	0.00
Uniform Delay (d_1), s/veh	12.3	18.1	13.6	21.6	15.1	13.1	21.3	25.7	27.5	24.5	22.9	20.9
Incremental Delay (d_2), s/veh	0.4	5.1	0.3	14.4	1.6	0.3	1.2	5.1	18.0	25.7	1.4	0.4
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	12.8	23.2	13.9	36.0	16.7	13.5	22.5	30.8	45.6	50.2	24.3	21.3
Level of Service (LOS)	B	C	B	D	B	B	C	C	D	D	C	C
Approach Delay, s/veh / LOS	21.6	C		24.0	C		37.4	D		33.7	C	
Intersection Delay, s/veh / LOS	28.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.41	B	2.11	B	2.11	B
Bicycle LOS Score / LOS	1.52	B	1.58	B	0.94	A	1.03	A

HCS Signalized Intersection Results Summary

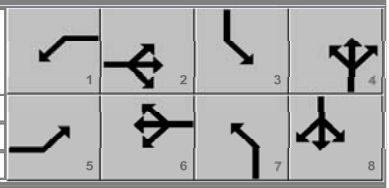
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	2037 BPM Rainbow & Paseo Opt.xus		
Project Description	Build PM Optimized				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	61	452	51	278	547	147	76	364	233	107	164	52

Signal Information			
Cycle, s	74.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	3.0	29.0	3.0	18.0	0.0	
Yellow	3.0	0.0	4.0	3.0	3.5	0.0	
Red	0.5	0.0	2.0	0.5	1.5	0.0	



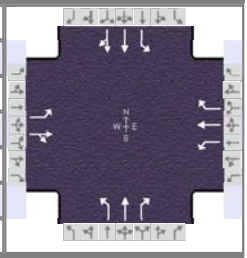
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	6.5	35.0	9.5	38.0	6.5	23.0	6.5	23.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	3.6	18.0	8.0	21.6	4.6	14.9	5.0	5.0
Green Extension Time (*g e*), s	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.6
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	1.00	1.00	0.42	1.00	1.00	1.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	66	491	55	302	595	160	83	345	304	116	178	57
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1627	1781	1781	1610
Queue Service Time (*g s*), s	1.6	16.0	1.6	6.0	19.6	4.6	2.6	12.7	12.9	3.0	3.0	2.0
Cycle Queue Clearance Time (*g c*), s	1.6	16.0	1.6	6.0	19.6	4.6	2.6	12.7	12.9	3.0	3.0	2.0
Green Ratio (*g/C*)	0.43	0.39	0.39	0.49	0.43	0.43	0.28	0.24	0.24	0.28	0.24	0.24
Capacity (*c*), veh/h	285	733	621	400	809	696	382	455	396	202	866	392
Volume-to-Capacity Ratio (*X*)	0.232	0.670	0.089	0.755	0.735	0.229	0.216	0.758	0.769	0.575	0.206	0.144
Back of Queue (*Q*), ft/ln (95 th percentile)	33.7	296.3	26.9	184.2	346.1	74.8	51.2	274	252.2	93.7	55.3	36
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	11.7	1.1	7.3	13.6	3.0	2.0	10.8	10.1	3.7	2.2	1.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.34	0.15	0.27	1.05	0.17	0.00	0.15	0.37	0.34	0.27	0.07	0.00
Uniform Delay (*d 1*), s/veh	14.9	18.6	14.2	17.6	17.5	13.2	20.1	26.0	26.1	24.5	22.3	22.0
Incremental Delay (*d 2*), s/veh	1.9	4.8	0.3	12.5	5.9	0.8	1.3	11.2	13.4	11.3	0.5	0.8
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	16.8	23.4	14.5	30.0	23.4	14.0	21.4	37.2	39.5	35.8	22.8	22.7
Level of Service (LOS)	B	C	B	C	C	B	C	D	D	D	C	C
Approach Delay, s/veh / LOS	21.9	C		23.9	C		36.4	D		27.1	C	
Intersection Delay, s/veh / LOS	27.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.41	B	2.11	B	2.11	B
Bicycle LOS Score / LOS	1.50	A	2.23	B	1.09	A	0.78	A

HCS Signalized Intersection Results Summary

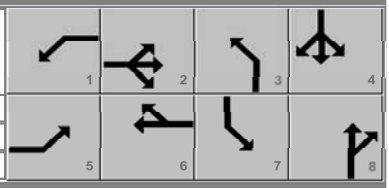
General Information				Intersection Information	
Agency	BH			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	Build AM	PHF	0.92
Urban Street	Paseo del Norte	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Paseo & Ventana/Wood…	File Name	2037 BAM Paseo & Ventana Alt.xus		
Project Description	Thomas Development Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	16	147	12	84	194	106	21	31	176	347	165	57

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.1	3.8	41.9	2.6	6.4	13.2
Yellow	4.0	0.0	4.0	4.0	4.0	4.0
Red	0.0	0.0	0.0	0.0	0.0	0.0



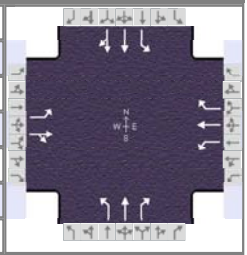
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	1.1	4.0
Phase Duration, s	6.1	45.9	9.9	49.7	6.6	17.2	17.0	27.6
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2
Queue Clearance Time (g_s), s	2.4		6.5		3.1	12.4	15.0	6.9
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.9
Phase Call Probability	0.35		0.90		0.43	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	17	173		91	211	115	23	34	191	377	123	118
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1875		1810	1900	1610	1810	1900	1610	1810	1900	1736
Queue Service Time (g_s), s	0.4	4.9		4.5	5.5	3.4	1.1	1.4	10.4	13.0	4.6	4.9
Cycle Queue Clearance Time (g_c), s	0.4	4.9		4.5	5.5	3.4	1.1	1.4	10.4	13.0	4.6	4.9
Green Ratio (*g/C*)	0.49	0.47		0.07	0.51	0.51	0.03	0.15	0.15	0.31	0.26	0.26
Capacity (*c*), veh/h	627	873		119	965	818	52	278	235	524	497	454
Volume-to-Capacity Ratio (*X*)	0.028	0.198		0.765	0.218	0.141	0.435	0.121	0.812	0.720	0.248	0.260
Back of Queue (*Q*), ft/ln (95 th percentile)	8	93		93	104	55	23	28	186	309	92	88
Back of Queue (*Q*), veh/ln (95 th percentile)	0.3	3.7		3.7	4.2	2.2	0.9	1.1	7.4	12.4	3.7	3.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		0.43	0.00	0.25	0.00	0.00	0.00	1.14	0.00	0.00
Uniform Delay (d_1), s/veh	11.9	14.2		41.3	12.3	11.7	43.0	33.4	37.2	27.7	26.2	26.3
Incremental Delay (d_2), s/veh	0.0	0.5		3.8	0.5	0.4	2.1	0.1	2.6	4.1	0.1	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	11.9	14.7		45.2	12.8	12.1	45.1	33.5	39.8	31.8	26.3	26.4
Level of Service (LOS)	B	B		D	B	B	D	C	D	C	C	C
Approach Delay, s/veh / LOS	14.4	B		19.7	B		39.4	D		29.7	C	
Intersection Delay, s/veh / LOS	26.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.08	B	2.13	B	1.93	B
Bicycle LOS Score / LOS	0.80	A	1.18	A	0.90	A	1.00	A

HCS Signalized Intersection Results Summary

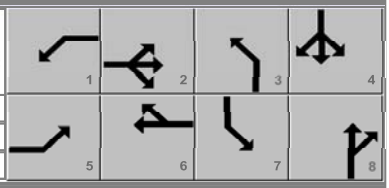
General Information				Intersection Information	
Agency	BH			Duration, h	0.250
Analyst	AG	Analysis Date	Jan 8, 2024	Area Type	Other
Jurisdiction		Time Period	Build PM	PHF	0.92
Urban Street	Paseo del Norte	Analysis Year	2037	Analysis Period	1> 7:00
Intersection	Paseo & Ventana/Wood…	File Name	2037 BPM Paseo & Ventana Alt.xus		
Project Description	Thomas Development Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	71	304	13	242	193	263	13	84	127	159	85	20

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.1	6.0	41.7	1.8	1.2	10.1
Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Red	0.0	0.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	1.1	4.0
Phase Duration, s	9.1	45.7	19.2	55.7	5.8	14.1	11.0	19.3
Change Period, (*Y+R c*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2
Queue Clearance Time (*g s*), s	3.9		14.7		2.7	9.5	9.0	4.5
Green Extension Time (*g e*), s	0.1	0.0	0.5	0.0	0.0	0.6	0.0	0.7
Phase Call Probability	0.85		1.00		0.30	1.00	0.99	1.00
Max Out Probability	0.00		0.00		0.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	77	345		263	210	286	14	91	138	173	57	57
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1886		1810	1900	1610	1810	1900	1610	1810	1900	1777
Queue Service Time (*g s*), s	1.9	10.8		12.7	4.7	8.3	0.7	4.0	7.5	7.0	2.3	2.5
Cycle Queue Clearance Time (*g c*), s	1.9	10.8		12.7	4.7	8.3	0.7	4.0	7.5	7.0	2.3	2.5
Green Ratio (*g/C*)	0.52	0.46		0.17	0.57	0.57	0.02	0.11	0.11	0.21	0.17	0.17
Capacity (*c*), veh/h	735	874		305	1092	926	36	214	181	311	324	303
Volume-to-Capacity Ratio (*X*)	0.105	0.394		0.862	0.192	0.309	0.393	0.427	0.762	0.556	0.178	0.187
Back of Queue (*Q*), ft/ln (95 th percentile)	32	205		240	85	127	15	84	135	147	47	47
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	8.2		9.6	3.4	5.1	0.6	3.3	5.4	5.9	1.9	1.9
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		1.12	0.00	0.59	0.00	0.00	0.00	0.54	0.00	0.00
Uniform Delay (*d 1*), s/veh	10.8	15.9		36.4	9.1	9.9	43.6	37.2	38.8	31.4	31.9	32.0
Incremental Delay (*d 2*), s/veh	0.0	1.3		2.8	0.4	0.9	2.6	0.5	2.5	1.3	0.1	0.1
Initial Queue Delay (*d 3*), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	10.8	17.2		39.2	9.5	10.8	46.2	37.7	41.3	32.8	32.0	32.1
Level of Service (LOS)	B	B		D	A	B	D	D	D	C	C	C
Approach Delay, s/veh / LOS	16.0	B		20.3	C		40.2	D		32.5	C	
Intersection Delay, s/veh / LOS	24.1						C					

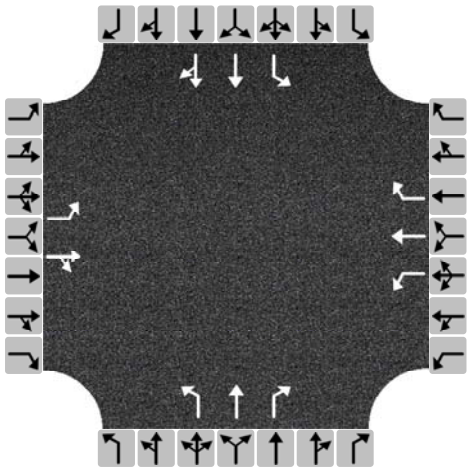
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.07	B	2.13	B	1.94	B
Bicycle LOS Score / LOS	1.18	A	1.74	B	0.89	A	0.72	A

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	16	147	12	84	194	106	21	31	176	347	165	57
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	173		91	211	115	23	34	191	377	90	152
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.015	0.154		0.081	0.187	0.102	0.020	0.030	0.170	0.335	0.080	0.135
Final Departure Headway, h_d (s)	9.22	8.66		8.80	8.30	7.59	9.30	8.79	8.07	8.29	7.78	7.49
Final Degree of Utilization, x	0.045	0.416		0.223	0.486	0.243	0.059	0.082	0.429	0.868	0.194	0.315
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.92	6.36		6.50	6.00	5.29	7.00	6.49	5.77	5.99	5.48	5.19

Capacity, Delay and Level of Service

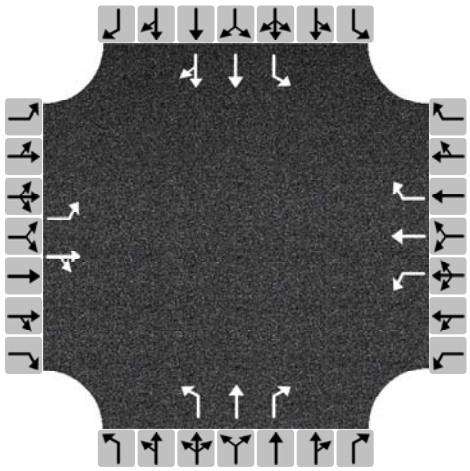
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	173		91	211	115	23	34	191	377	90	152
Capacity (veh/h)	391	416		409	434	474	387	410	446	434	463	481
95% Queue Length, Q_{95} (veh)	0.1	2.0		0.8	2.6	0.9	0.2	0.3	2.1	8.8	0.7	1.3
95% Queue Length, Q_{95} (ft)	2.5	50.8		20.3	66.0	22.9	5.1	7.6	53.3	223.5	17.8	33.0
Control Delay (s/veh)	12.3	17.4		14.0	18.6	12.7	12.6	12.3	16.7	45.5	12.3	13.6
Level of Service, LOS	B	C		B	C	B	B	B	C	E	B	B
Approach Delay (s/veh) | LOS	16.9	C		16.0	C		15.7	C		32.9	D	
Intersection Delay (s/veh) | LOS	23.1						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	71	304	13	242	193	263	13	84	127	159	85	20
% Thrus in Shared Lane												50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	345		263	210	286	14	91	138	173	46	68
Percent Heavy Vehicles	2	2		2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.069	0.306		0.234	0.186	0.254	0.013	0.081	0.123	0.154	0.041	0.060
Final Departure Headway, h_d (s)	9.42	8.89		9.02	8.51	7.80	10.50	9.99	9.26	10.26	9.74	9.51
Final Degree of Utilization, x	0.202	0.851		0.659	0.496	0.619	0.041	0.253	0.355	0.493	0.125	0.180
Move-Up Time, m (s)	2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	7.12	6.59		6.72	6.21	5.50	8.20	7.69	6.96	7.96	7.44	7.21

Capacity, Delay and Level of Service

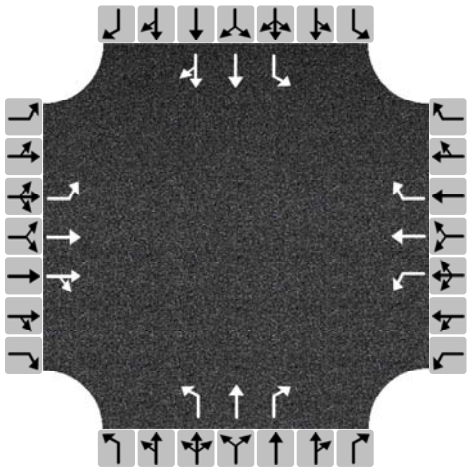
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	345		263	210	286	14	91	138	173	46	68
Capacity (veh/h)	382	405		399	423	462	343	361	389	351	369	378
95% Queue Length, Q_{95} (veh)	0.7	8.2		4.6	2.7	4.1	0.1	1.0	1.6	2.6	0.4	0.6
95% Queue Length, Q_{95} (ft)	17.8	208.3		116.8	68.6	104.1	2.5	25.4	40.6	66.0	10.2	15.2
Control Delay (s/veh)	14.5	45.3		27.5	19.3	22.4	13.7	16.0	17.0	22.5	13.8	14.3
Level of Service, LOS	B	E		D	C	C	B	C	C	C	B	B
Approach Delay (s/veh) | LOS	39.7	E		23.3	C		16.4	C		19.2	C	
Intersection Delay (s/veh) | LOS	25.7						D					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	Build AM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	16	147	12	84	194	106	21	31	176	347	165	57
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	80	93	91	211	115	23	34	191	377	90	152
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.015	0.071	0.083	0.081	0.187	0.102	0.020	0.030	0.170	0.335	0.080	0.135
Final Departure Headway, h_d (s)	9.08	8.58	8.48	8.50	8.00	7.30	8.87	8.37	7.67	7.97	7.47	7.18
Final Degree of Utilization, x	0.044	0.190	0.219	0.216	0.469	0.234	0.056	0.078	0.408	0.835	0.186	0.303
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.78	6.28	6.18	6.20	5.70	5.00	6.57	6.07	5.37	5.67	5.17	4.88

Capacity, Delay and Level of Service

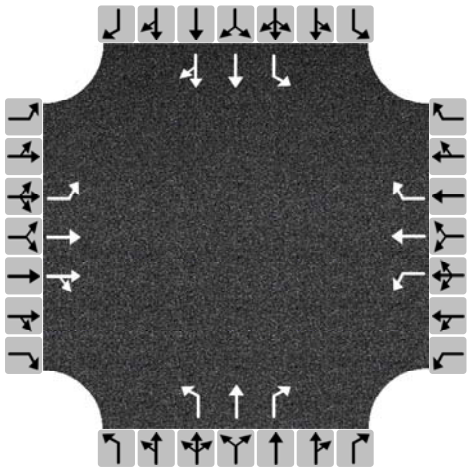
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	17	80	93	91	211	115	23	34	191	377	90	152
Capacity (veh/h)	396	419	424	423	450	493	406	430	469	452	482	501
95% Queue Length, Q_{95} (veh)	0.1	0.7	0.8	0.8	2.4	0.9	0.2	0.3	2.0	8.1	0.7	1.3
95% Queue Length, Q_{95} (ft)	2.5	17.8	20.3	20.3	61.0	22.9	5.1	7.6	50.8	205.7	17.8	33.0
Control Delay (s/veh)	12.2	13.3	13.5	13.5	17.6	12.2	12.1	11.8	15.5	39.7	11.9	13.0
Level of Service, LOS	B	B	B	B	C	B	B	B	C	E	B	B
Approach Delay (s/veh) | LOS	13.3	B		15.2	C		14.7	B		29.1	D	
Intersection Delay (s/veh) | LOS	20.7						C					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Analysis Time Period (hrs)	0.25
Time Analyzed	Build PM
Project Description	Thomas Development
Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	71	304	13	242	193	263	13	84	127	159	85	20
% Thrus in Shared Lane			50									50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	165	179	263	210	286	14	91	138	173	46	68
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.069	0.147	0.159	0.234	0.186	0.254	0.013	0.081	0.123	0.154	0.041	0.060
Final Departure Headway, h_d (s)	9.20	8.70	8.64	8.53	8.03	7.33	9.82	9.32	8.62	9.62	9.12	8.90
Final Degree of Utilization, x	0.197	0.399	0.431	0.624	0.468	0.582	0.039	0.236	0.330	0.462	0.117	0.168
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	6.90	6.40	6.34	6.23	5.73	5.03	7.52	7.02	6.32	7.32	6.82	6.60

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	R	L	T	R	L	T	TR
Flow Rate, v (veh/h)	77	165	179	263	210	286	14	91	138	173	46	68
Capacity (veh/h)	391	414	417	422	448	491	367	386	418	374	395	405
95% Queue Length, Q_{95} (veh)	0.7	1.9	2.1	4.1	2.4	3.7	0.1	0.9	1.4	2.4	0.4	0.6
95% Queue Length, Q_{95} (ft)	17.8	48.3	53.3	104.1	61.0	94.0	2.5	22.9	35.6	61.0	10.2	15.2
Control Delay (s/veh)	14.1	17.1	17.7	24.4	17.6	19.8	12.9	14.9	15.5	20.3	13.0	13.4
Level of Service, LOS	B	C	C	C	C	C	B	B	C	C	B	B
Approach Delay (s/veh) | LOS	16.8	C		20.8	C		15.1	C		17.5	C	
Intersection Delay (s/veh) | LOS	18.4						C					

HCS Two-Way Stop-Control Report

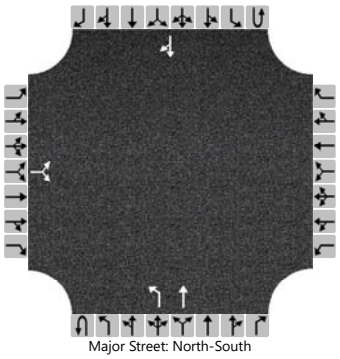
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		43		58						21	177				188	30
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			110							23						
Capacity, c (veh/h)			678							1330						
v/c Ratio			0.16							0.02						
95% Queue Length, Q_{95} (veh)			0.6							0.1						
95% Queue Length, Q_{95} (ft)			15.2							2.5						
Control Delay (s/veh)			11.3							7.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		11.3								0.8						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

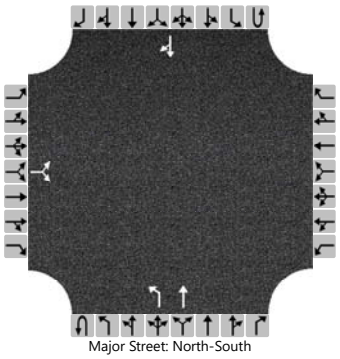
General Information

Analyst	AG
Agency/Co.	BHI
Date Performed	6/6/2024
Analysis Year	2037
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Thomas Development

Site Information

Intersection	Girona & Woodmont
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		29		43						71	287				131	105
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			78							77						
Capacity, c (veh/h)			582							1308						
v/c Ratio			0.13							0.06						
95% Queue Length, Q_{95} (veh)			0.5							0.2						
95% Queue Length, Q_{95} (ft)			12.7							5.1						
Control Delay (s/veh)			12.1							7.9						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		12.1								1.6						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

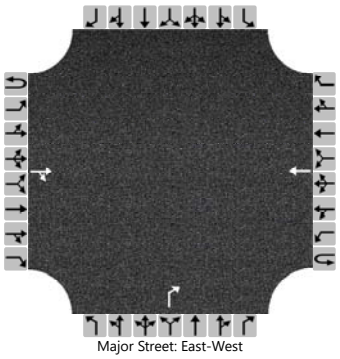
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	6/6/2024
Analysis Year	2037
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	Thomas Development

Site Information

Intersection	Paseo & North Entrance
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	North Site Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			128	1			269					47				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												51				
Capacity, c (veh/h)												906				
v/c Ratio												0.06				
95% Queue Length, Q_{95} (veh)												0.2				
95% Queue Length, Q_{95} (ft)												5.1				
Control Delay (s/veh)												9.2				
Level of Service (LOS)												A				
Approach Delay (s/veh)										9.2						
Approach LOS										A						

HCS Two-Way Stop-Control Report

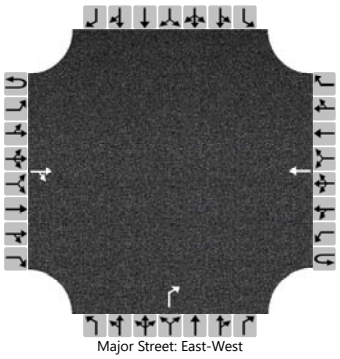
General Information

Analyst	AG
Agency/Co.	BH
Date Performed	6/6/2024
Analysis Year	2037
Time Analyzed	Build PM
Intersection Orientation	East-West
Project Description	Thomas Development

Site Information

Intersection	Paseo & North Entrance
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	North Site Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			356	3			225					32				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												35				
Capacity, c (veh/h)												657				
v/c Ratio												0.05				
95% Queue Length, Q_{95} (veh)												0.2				
95% Queue Length, Q_{95} (ft)												5.1				
Control Delay (s/veh)												10.8				
Level of Service (LOS)												B				
Approach Delay (s/veh)										10.8						
Approach LOS										B						

PEAK HOUR VOLUME SIGNAL WARRANT ANALYSIS

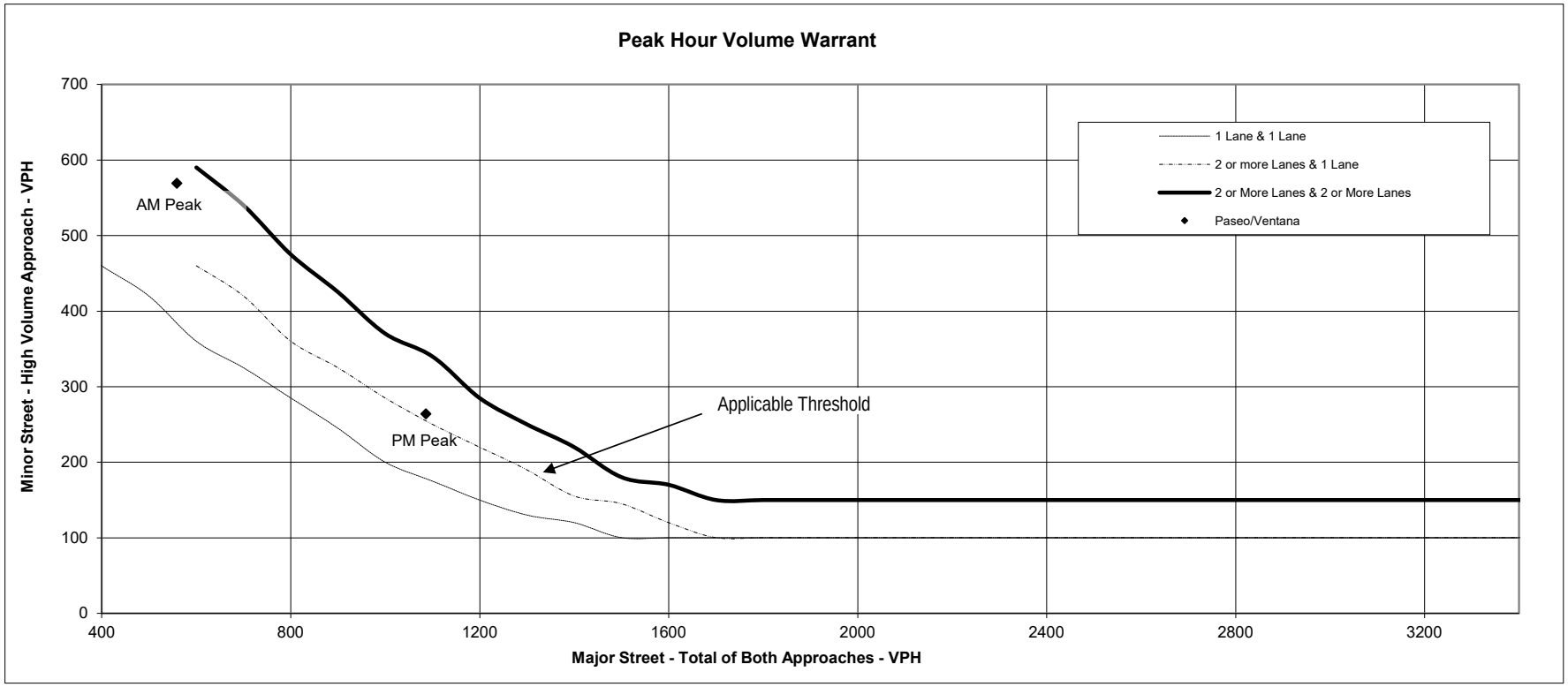
***USE THIS TAB IF MAJOR RD MPH<40

Satisfies Warrant 3A YES

Peak Hour Delay (Criteria 4 Hours if 1-lane, 5 hrs if 2-lane approach)		TotalIntersection Voume > 800	Minor Approach > 100
5.20 Hours in AM	YES	YES	YES
1.41 Hours in PM	NO	YES	YES

Scenario: 2037 Build
Intersection: Paseo/Ventana
Type: 1 Lane/2 Lane
Major Street (Orientation): Paseo (E/W)
Minor Street (Orientation): Ventana/Woodmont (N/S)

	Minor Street Approach Volume			Major Street Approach Volume			Satisfies Warrant 3B
Time	NB	SB	High Vol	EB	WB	EB + WB	
AM Peak	228	569	569	175	384	559	YES
PM Peak	224	264	264	388	698	1,086	YES



Note: 150 VPH applies as the lower threshold for minor street approach with 2 or more lanes & 100 VPH as the threshold for a minor street approach with one lane