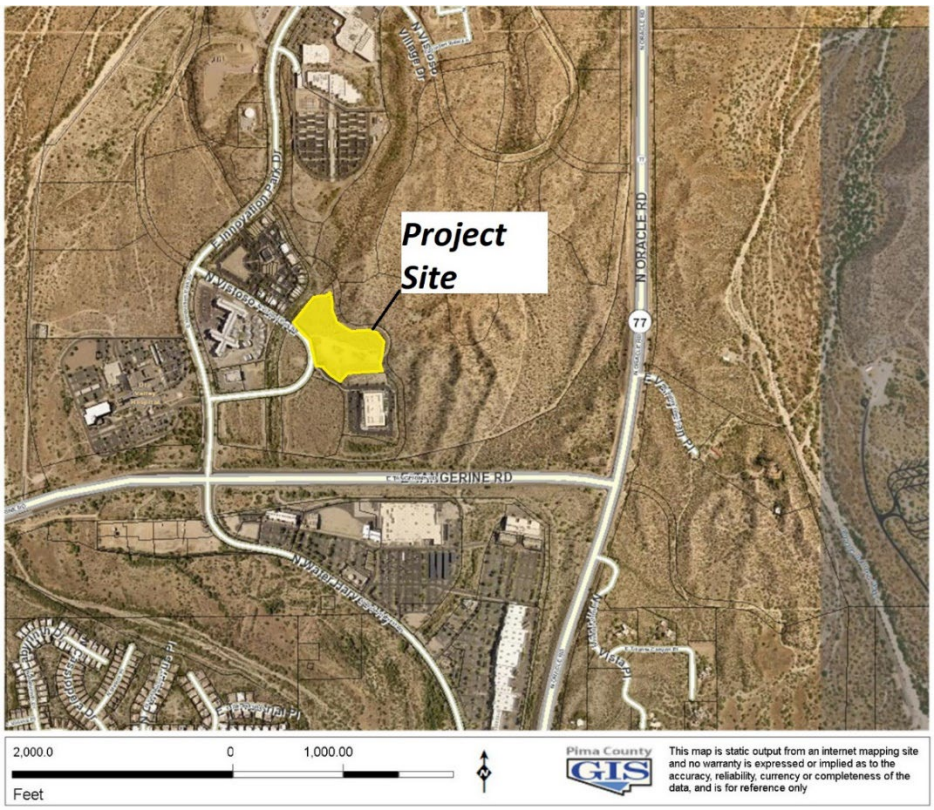
Oro Valley Assisted Living

Traffic Memorandum



Prepared for submittal to:

Town of Oro Valley, AZ

M Esparza Engineering, LLC
2934 W. Salvia Drive
Tucson, AZ 85745

July 19, 2022
Updated May 6, 2024

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Phone: (520) 207-3358
Project No. 2022.13
Marcos Esparza, P.E., Principal

July 19, 2022
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Table of Contents

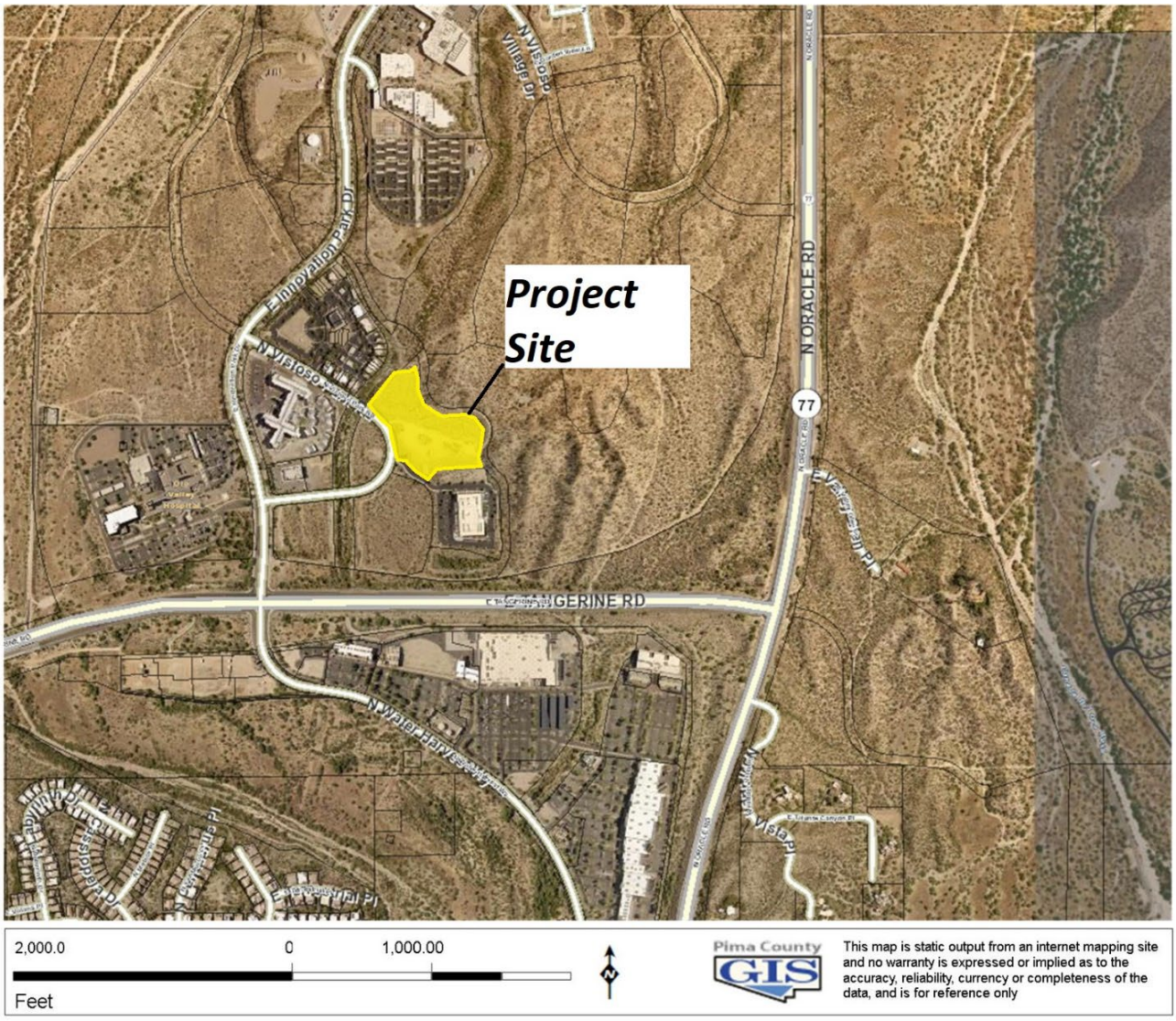
List of Exhibits

1. Introduction and Executive Summary

Purpose of Report and Study Objectives

This report addresses the potential traffic impacts associated with the proposed assisted living residential project located at 12380 North Vistoso Park Road in Oro Valley Road. The development plan showing the unit layout is provided as an attachment to this letter. The project includes eighteen independent living residential units with 36 beds and a mix of 137 assisted living and memory care units with 210 beds. The project is located north of Tangerine Road and just east of Innovation Park Drive with access from Vistoso Park Road. The parcel is currently vacant. The project location is shown in Exhibit 1.

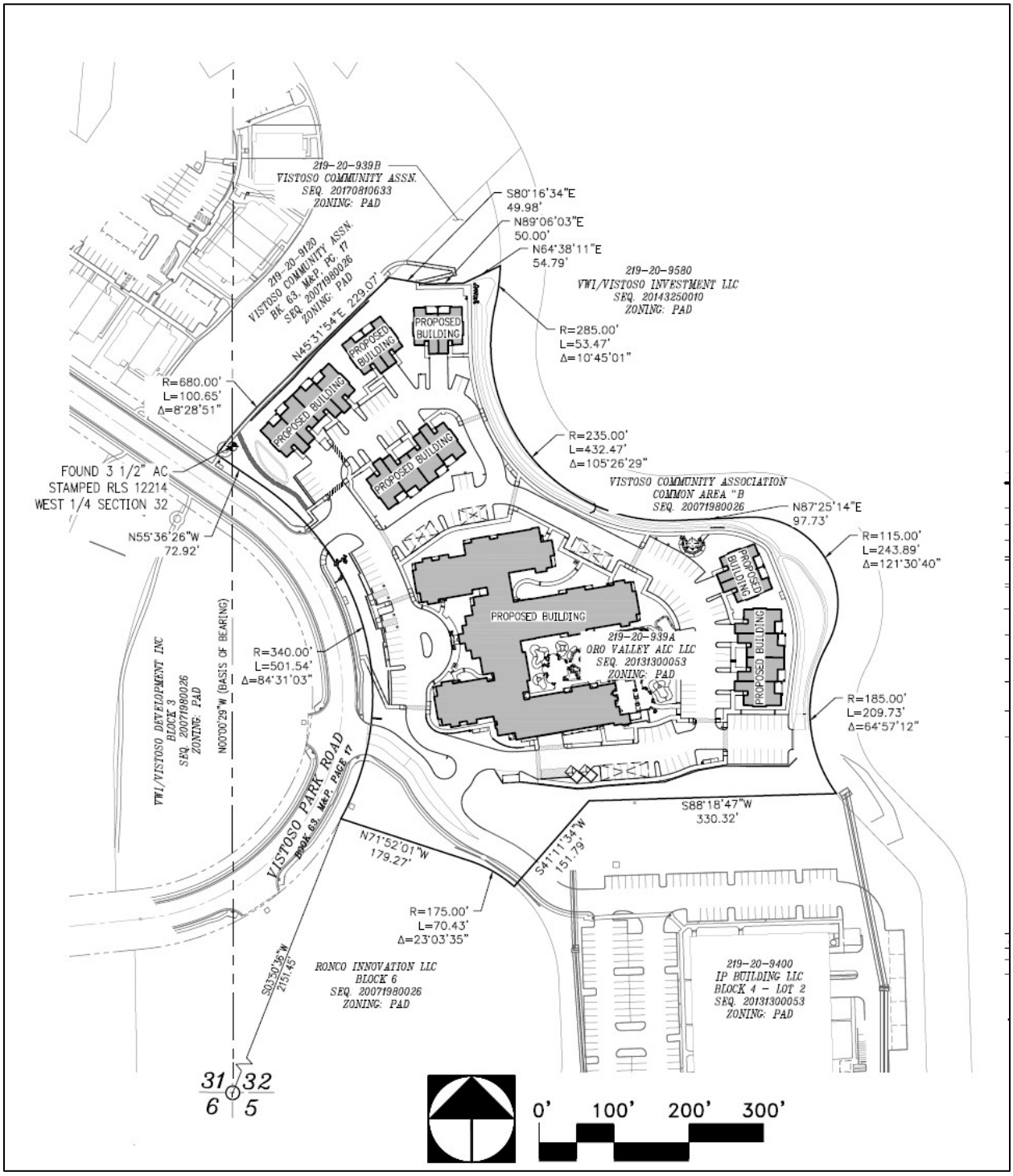
Exhibit 1 Project Location



As shown on the development plan there are two access locations on Vistoso Park Road. The southern driveway will share access with an existing driveway to the Meggitt building. The

northern driveway is at an existing curb cut on Vistoso Park Road north of the Meggitt driveway. Both access locations will be full access driveways with stop control on the driveways. The development plan is shown in Exhibits 2

Exhibit 2 Site Plan



The objectives of this traffic study are to determine the traffic impacts of the project on the local transportation system and to recommend improvements to maintain efficient and safe traffic operations for motor vehicle uses, pedestrians, and bicyclists. This report focuses on access management, trip generation, and the potential for turn lanes on Vistoso Park Drive.

Summary of Findings

Study Area

The project is located north of Tangerine Road and just east of Innovation Park Drive with access from Vistoso Park Road. The parcel is currently vacant. The All Seasons assisted living development is just west of the project. Innovation Corporate Center, Northwest Hospital and the Tucson Orthopaedic Institute are also in the vicinity of the project.

The study area includes the adjacent and nearby streets (Tangerine Farms, Innovation Park Drive and Vistoso Park Road), and the intersections of Tangerine Road/Innovation Park Drive, Innovation Park Drive/Vistoso Park Road and the two project access intersections on Vistoso Park Road.

Development Description

The development plan showing the unit layout is provided as an attachment to this letter. The project includes eighteen independent living residential units with 36 beds and a mix of 137 assisted living and memory care units with 210 beds.

Principal Findings

1. The project will generate 676 daily trips, 46 AM peak hour trips and 61 PM peak hour trips.
2. All study area roadways and intersections will operate at LOS D or better based on projected 2024 daily and peak hour traffic volumes.
3. Based on a 2% background growth rate, the projected daily traffic volumes for 2024 without the project will not exceed the LOS D capacities of the project roadways.
4. Right turns lanes are not numerically warranted for the northbound right turns from Vistoso Park Drive into the project driveways.
5. The driveway spacing and corner clearances for the project driveways meet Pima County and Oro Valley standards.
6. The provision of gated entrances should conform to Oro Valley Subdivision Street Standards.
7. Roadway and subdivision design should conform to current jurisdictional standards. This includes ensuring that sight distance requirements are met.
8. All new traffic signs and markings, on-site and off-site, must comply fully with the *Manual on Uniform Traffic Control Devices* and Town requirements.

2. Proposed Development

Site Location

The project location is shown in Exhibit 1. The project is located north of Tangerine Road and just east of Innovation Park Drive with access from Vistoso Park Road.

Land Use and Intensity

The development plan showing the unit layout is provided as an attachment to this letter. The project includes eighteen independent living residential units surrounding a three-story building. The building includes a mix of 137 assisted living and memory care units with 210 beds.

Proposed Access

There are two proposed access locations, both off Vistoso Park Road as shown on the site plan. The access locations will meet corner clearance and driveway spacing criteria based on Pima County and Town of Oro Valley typical standards.

Development Phasing and Timing

For the purposes of this report, the buildout year is assumed to be 2024.

3. Study Area Conditions

Area Characteristics

Land Use

The project will share an access off Vistoso Park Road with the Meggitt building which is south of the project site. The All Seasons assisted living development is just west of the project. Innovation Corporate Center, Northwest Hospital and the Tucson Orthopaedic Institute are also in the vicinity of the project.

Anticipated Future Development

There are no major proposed development projects in the project study area, or in the vicinity of the project.

Program for Completion of Roadway and Intersection Improvements

There are no projects in the vicinity of the project listed in the 2020-2024 Pima Association of Governments Transportation Improvement Program.

Existing Roads

Tangerine Road and Oracle Road (aka State Route 77) will provide regional access to the site. Innovation Park Drive is a north/south collector road west of the site. Vistoso Park Road is a local loop road east of Innovation Park Drive. Project access will be off Vistoso Park Road at two locations. Exhibit 3 provides a physical inventory of the roadways within or near the study area.

Exhibit 3 Roadway Inventory

Road	*Segment*	*Travel Lanes*	*Speed Limit*	*Oro Valley Bike Map Designation*	*Sun Tran Bus Route*	*ADT*	*ADT Year*	*Source*	*LOS D Capacity*
Vistoso Park Road	Loop	2	25 MPH	Multipurpose Lane	None	635	2022	FDS	13,986
Innovation Park Drive	North of Tangerine Road	4	35 MPH	Multipurpose Lane	Sun Tran Express Routes 107X and 203X; Sun Shuttle Route 401	9,484	2022	PAG	29,160
Tangerine Road	At Innovation Drive	4	45 MPH	Signed Bike Route	Sun Tran Express Routes 107X and 203X	9,764	2021	PAG	35,820

FDS - Field Data Services of Arizona
PAG - Pima Association of Governments

Access

There are two proposed access locations for this project, both off Vistoso Park Road.

Study Area

The study area includes the adjacent roadways and intersections.

Physical Characteristics

Roadway Characteristics

Tangerine Road, Innovation Park Drive are major roads with existing or proposed regional access to the project. Vistoso Park Road is a local road providing direct access to the project. All roads are in good condition.

Tangerine Road is a major regional four-lane east-west arterial that terminates at State Route 77 to the east. Innovation Park Drive is a minor arterial that provides access from Tangerine Road to the north at its terminus at Rancho Vistoso Boulevard (where it continues at Commerce Loop Drive). speed limit on each road is 45 mph. The posted speed limit on Shore Cliff Drive is 25 mph.

Existing Intersections

The closest signalized intersection is at Tangerine Road/Innovation Park Drive/Water Harvest Way. The intersections of Innovation Park Drive/Vistoso Park Road (North) and Innovation Park Drive/Vistoso Park Road (South) are unsignalized.

Ground Photos

Ground photos of the southern access to the project are provided in Exhibit 4.

Exhibit 4 Ground Photographs

Looking Northeast at Vistoso Park Road/Meggitt Access (Driveway 1) intersection

At Meggitt driveway on Vistoso Park Road

Looking north on Vistoso Park Road, south of the Meggitt driveway

Traffic Control Devices

The intersection of Innovation Park Drive/Vistoso Park Road (South) is a four-leg intersection with stop control on the east-west streets. The intersection of Innovation Park Drive/Vistoso Park Road (North) is a three-leg intersection with stop control on the Vistoso Park Drive (North) leg.

Transit Service

Two Sun Tran express bus routes operate on Innovation Park Drive; 107X, and 203X, and Sun Shuttle Route 401.

Pedestrian/Bicycle Facilities

Oro Valley Bike Map designations for the project roadways are provided in Exhibit 3. There is good bicycle route connectivity adjacent to and in the vicinity of the project.

Traffic Volumes

Daily Traffic Volumes

Daily traffic volumes for most study area roadways are available on PAG's website.

Level of service (LOS) is a qualitative description of how well a roadway or intersection operates under prevailing traffic conditions. A grading system of A through F, similar to academic grades, is utilized. LOS A is free-flowing traffic, whereas LOS F is forced flow and extreme congestion.

Exhibit 3 (Roadway Inventory) shows the estimated current traffic volumes, capacity, and LOS for the average weekday on the nearby roadway segments.

Safety Related Deficiencies

ADOT collects crash data for all roadways within the state. We reviewed the data for the intersections and roadways near the project site for the most recently available five-year period (2016-2020).

Roadway Segment Crashes

There were no roadway segment crashes on Innovation Park Drive or on Vistoso Park Road during the five-year period.

Intersection Crashes

As shown in Exhibit 5, there were twenty-three intersection crashes at Tangerine Road/Innovation Park Drive during the five-year period. Most of the crashes were rear-end type crashes (12) with 21 of the 23 being non-injury crashes. The five-year crash rate at this intersection was 0.58 crashes per million-entering-vehicles.

There were two intersection crashes at the Innovation Park Drive/Vistoso Park Road (South) intersection during the five-year period – one rear end crash and one sideswipe crash with both being non-injury crashes. The five-year crash rate at this intersection was 0.12 crashes per million-entering-vehicles.

Although not shown in the table, there were three intersection crashes at the Innovation Park Drive/Vistoso Park Road (North) intersection during the five-year period. There was one single-vehicle, one rear-end and one sideswipe crash with one crash involving injuries and the other two being non-injury crashes.

Exhibit 5 Crash Data

Tangerine Road/Innovation Park Drive

Crash Type	2016	2017	2018	2019	2020	Total	%
Single Vehicle				1		1	4%
Angle		1		1		2	9%
Left Turn	1			3		4	17%
Rear End	1	3	4	2	2	12	52%
Sideswipe	2	1			1	4	17%
Total	**4**	**5**	**4**	**7**	**3**	**23**	
Crash Rate (per MEV)	**0.50**	**0.63**	**0.50**	**0.88**	**0.38**	**0.58**	

Severity						Total	%
Fatality				1		1	4%
Bodily Injury				1		1	4%
Property Damage	4	5	4	5	3	21	91%

Innovation Park Drive/Vistoso Park Road (South)

Crash Type	2016	2017	2018	2019	2020	Total	%
Rear End		1				1	50%
Sideswipe					1	1	50%
Total	**0**	**1**	**0**	**0**	**1**	**2**	
Crash Rate (per MEV)	**0.00**	**0.29**	**0.00**	**0.00**	**0.29**	**0.12**	

Severity						Total	%
Bodily Injury						0	0%
Property Damage		1			1	2	100%

4. Projected Traffic

Site Traffic Forecasting

Trip Generation

The future traffic from the project is estimated using the trip rates contained in the Institute of Traffic Engineers' *Trip Generation Manual,* 11th Edition. The number of trips generated is the mathematical product of land use intensity (building square footage, number of dwelling units, etc.) and the trip generation rate, based on an average rate or from a fitted curve equation. The result is the total number of one-way trips (not round trips) expected to be generated by the project. These trips represent the number of vehicles estimated to enter and leave the project.

Trip Generation

We applied the average trip rates for weekday, AM and PM peak hour trip generation from *Trip Generation Manual* to estimate trip generation for the land uses, Assisted Living (ITE Land Use 254) and Single Family Attached Housing (ITE Land Use Code 215). The Single Family Attached Housing category was applied to the "Casitas."

Exhibit 6 shows the trip rates and estimated trip generation. Based on the trip rates for the project land uses, the project generates about 676 daily one-way trips with 46 during the AM peak hour and 61 during the PM peak hours.

Exhibit 6 Trip Generation

Trip Generation Rates - Average Rates

Proposed Use	*Unit*	*No.Units*	*ITE Categ.*	*Weekday AM*		*Weekday PM*		*Avg Weekday*	
				In	*Out*	*In*	*Out*	*In*	*Out*
Assisted Living (includes Memory Care)	Beds	210	254	0.18		0.24		2.6	
				60%	40%	39%	61%	50%	50%
Single Family Attached Housing	Dwelling Unit	18	215	0.48		0.57		7.2	
				31%	69%	57%	43%	50%	50%

Trip Generation

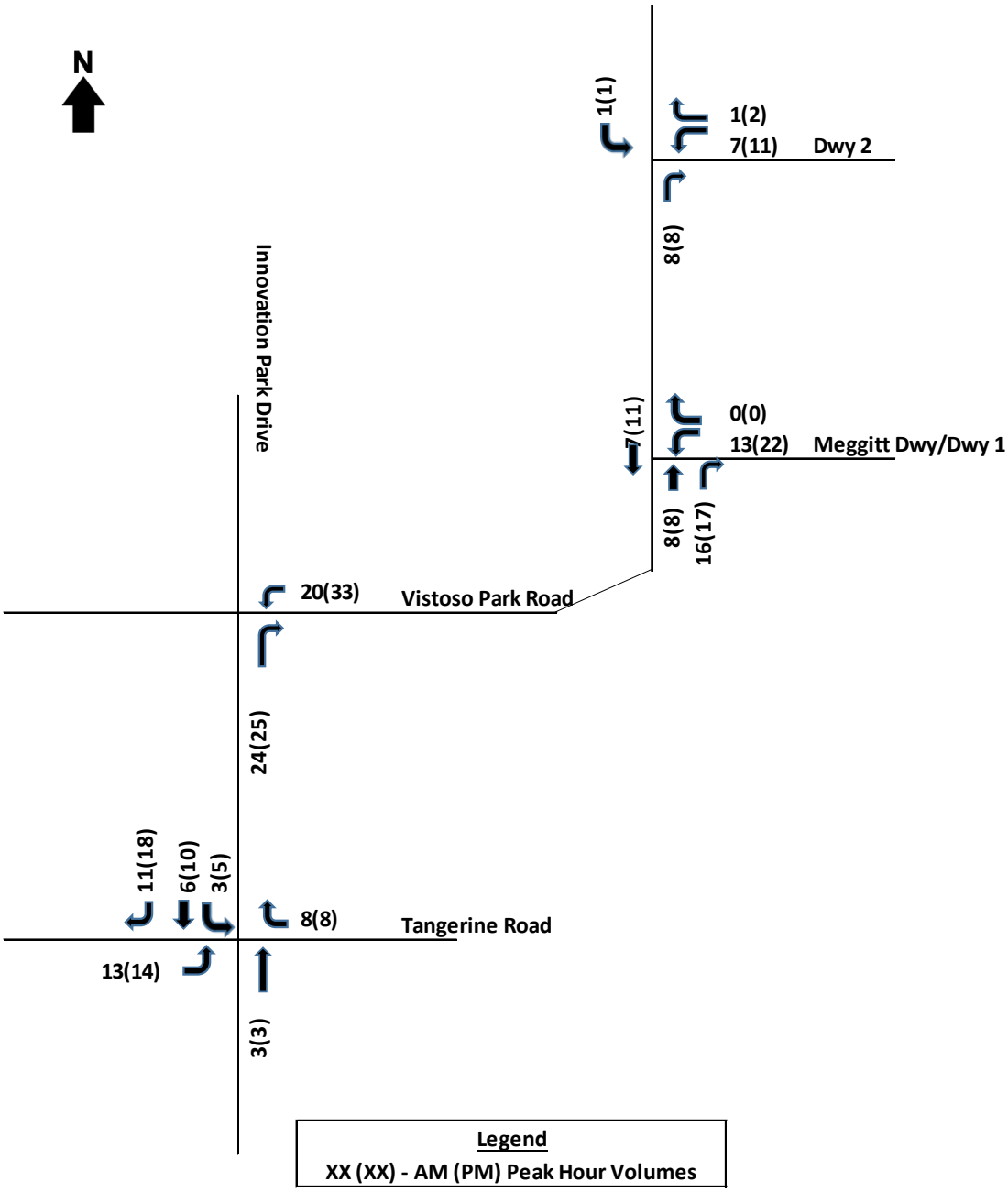
Proposed Use		*Unit*	*No. Units*	*Weekday AM*		*Weekday PM*		*Avg Weekday*	
				In	*Out*	*In*	*Out*	*In*	*Out*
Assisted Living (includes		Beds	210	38		50		546	
				23	15	20	31	273	273
Single Family Attached Housing		Dwelling	18	9		10		130	
				3	6	6	4	65	65
			Totals	***46***		***61***		***676***	
				25	***21***	***26***	***35***	***338***	***338***

Trip Distribution and Assignment

We collected traffic data at the Vistoso Park Road/Meggitt Driveway to determine what the distribution of trips is on Vistoso Park Road. Based on the existing volumes at this intersection, we applied a 95% Northbound/5% Southbound distribution at the project driveways to the project trips.

The majority of the site traffic will be via Innovation Drive and from Tangerine Road based on existing traffic patterns. The site trips at the project driveways are shown in Exhibit 7.

Exhibit 7 Site Traffic Assignment



Total Traffic

We applied a 2% per year growth factor to the recorded peak hour volumes at the project intersections and at the project roadways and added the site trips to estimate 2024 "with project" volumes. Year 2024 intersection peak hour intersection volumes are shown in Exhibit 8. Year 2024 daily roadway

volumes are shown in Exhibit 9. As shown in Exhibit 9, the daily volumes are well below the LOS D daily volume threshold capacities.

Exhibit 8 Future Traffic Volumes at Project Driveways – 2024 (With Project)

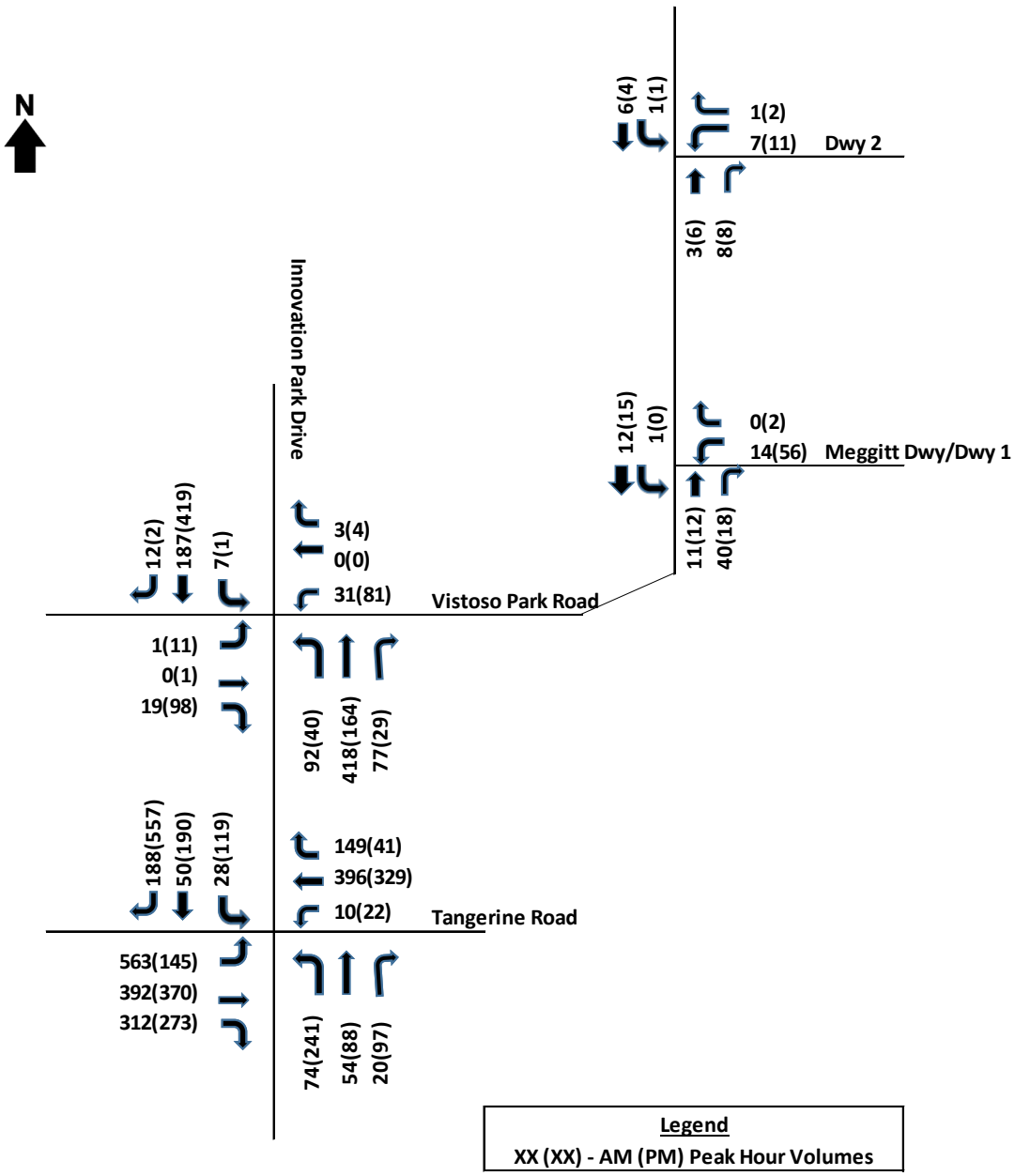


Exhibit 9 Year 2024 Daily Traffic Volumes and Capacities

Road	*Segment*	*LOS D Capacity*	*2024 ADT*	*Site Trips*	*2024 Total ADT*
Vistoso Park Road	Loop	13,986	661	642	1,303
Innovation Park Drive	North of Tangerine Road	29,160	9,867	642	10,509
Tangerine Road	At Innovation Drive	35,820	10,362	338	10,700

Note: Highest daily site trips shown (95% of site trips on south segments of Vistoso Park Road and Innovation Park Drive; 50% of site trips on Tangerine Road, west of Innovation Park Drive.

5. Traffic and Improvement Analysis

Level of Service Analysis

With Project

We conducted intersection capacity analyses for the study area intersections for the build out year 2024. The results of the intersection analysis are shown in Exhibit 10. All movements operate at LOS D or better.

Because the impact of the project will be very minor at the norther project driveway on Vistoso Park Road, a capacity analysis was not conducted at this location.

Exhibit 10 Intersection Level of Service – Future Conditions

Tangerine/Innovation/Water Harvest

	2024 With Project			
	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Eastbound				
Left	26	C	48.3	D
Through	10.9	B	26.2	C
Right	2.4	A	4.5	A
Approach	15.5	B	22.7	C
Eastbound				
Left	25.7	C	28.9	D
Through	24.5	C	33.6	C
Right	6.3	A	0.7	A
Approach	17.6	B	30.4	C
Eastbound				
Left	30.5	C	35.1	D
Through	28	C	27.5	C
Right	0.3	A	2.1	A
Approach	25.9	C	28.4	C
Eastbound				
Left	29.3	C	17.1	B
Through	26.4	C	18.7	B
Right	9.2	A	28.9	C
Approach	14.6	B	25	C
Intersection	***16.7***	***B***	***25.7***	***C***

Innovation Park/Vistoso Park

	2024 With Project			
	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Northbound				
Left	8	A	8.4	A
Southbound				
Left	8.7	A	7.7	A
Eastbound				
Left	17.3	C	16	C
Through/Right	9.8	A	10.6	B
Westbound				
Left	26.2	D	19	C
Through/Right	12.6	B	10.3	B

Vistoso Park/Driveway 1

	2024 With Project			
	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Westbound Left/Right				
	9.1	A	9.3	A
Southbound Left				
	7.3	A	7.3	A

Vistoso Park/Driveway 2

	2024 With Project			
	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Westbound Left/Right				
	8.9	A	8.9	A
Southbound Left				
	7.2	A	7.2	A

Off Site Improvements

There are existing curb cuts on Vistoso Park Road at both proposed driveway locations. The south driveway (Driveway 1) is to be shared with the existing Meggitt business south of the project area.

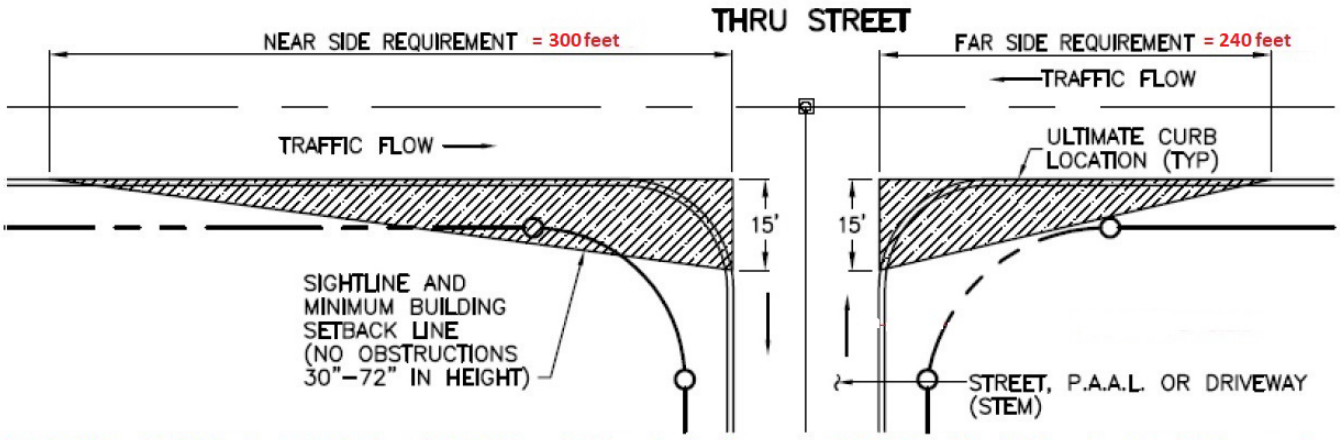
The southern project driveway was analyzed with a shared left/right lane which is its existing configuration. The northern driveway is also recommended to have one ingress and one egress lane. The northern access will be designed to Oro Valley Subdivision Street Standards and Policies Manual.

Traffic Safety

Sight Distance

Sight distances at the project driveways should meet the criteria in Oro Valley's Subdivision Street Standards and Policies Manual. Based on the design speed of 30 mph (5 mph over the speed limit of 25 mph) on Vistoso Park Drive (see Exhibit 11), the near side distance should be 300 feet. The far side distance should be 240 feet.

Exhibit 11 Sight Distance Requirements (Vistoso Park Drive/Project Driveways)

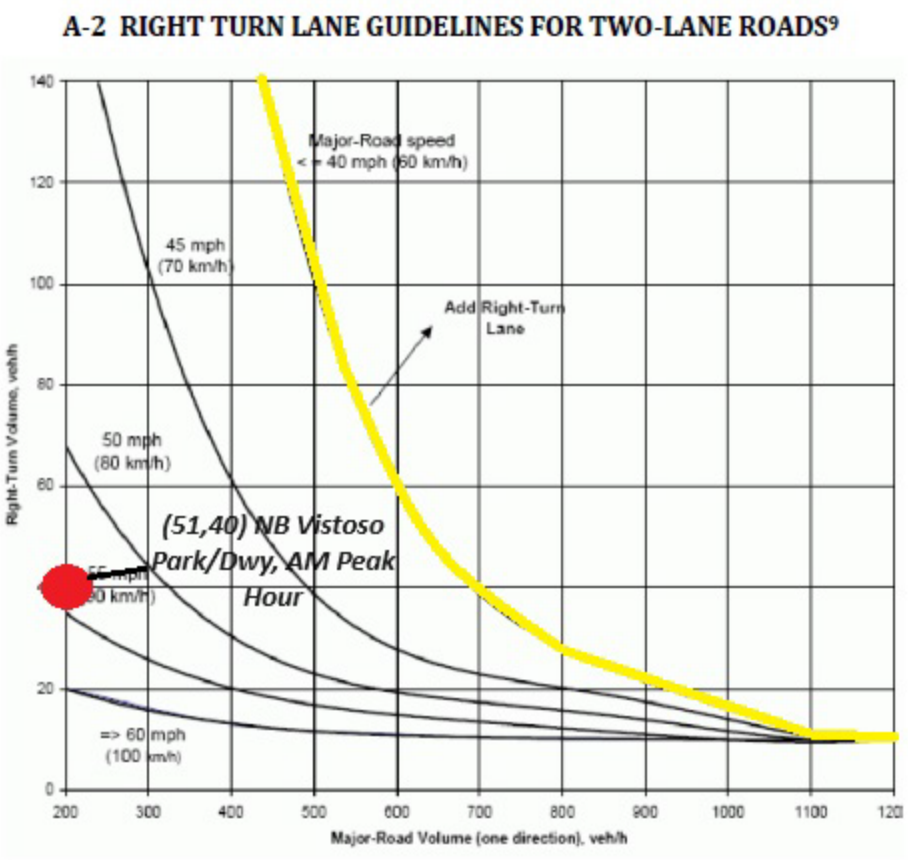


Per Oro Valley Subdivision Street Standards and Policies Manual, SVT must be 5 mph over speed limit (25 mph), so SVT based on 30 mph design speed.

Acceleration/Deceleration Lanes, Auxiliary Lanes

Turn lane warrant criteria from the *Pima County Subdivision and Development Street Standards* were applied to determine whether right turn lanes are warranted at the project intersections on Vistoso Park Road, a 25-mph roadway. There is an existing two-way left turn lane along Vistoso Park Road at the project driveways, so only right turn lane warrants were conducted. Because the south project driveway (Driveway 1) will experience the higher traffic volumes, only this driveway was analyzed. Exhibit 12 shows the right turn lane warrant criteria and where the northbound right turn lane volumes under the 2024 With Project condition fall on the chart. Right turn lanes are not warranted at either project driveway.

Exhibit 12 Right Turn Lane Warrant Chart



Note: First number within parentheses is the major road peak hour volume; second number is the projected peak hour right turn volume. The analysis was done for the southern driveway on Vistoso Park Road which will have the higher volumes.
Source: Pima County Subdivision and Development Street Standards, 2016

Based on the location of the volumes on the chart (Exhibit 12), a right turn lane is not warranted for the northbound right turn on Vistoso Park Road into Driveway 1 based on volumes at the intersection during the highest (AM) peak hour.

Driveway Spacing

As shown in the site plan, the existing spacing of the two driveways is 200 feet. This distance meets Pima County standards for driveway spacing on a 25-mph road. Oro Valley defers to Pima County standards for driveway spacing.

Alternative Modes Considerations

Innovation Park Drive is on bus routes and sidewalks and multi-use paths exist in the vicinity of the project. The area is well served for alternate modes

6. Conclusions and Recommendations

1. The project will generate 676 daily trips, 46 AM peak hour trips and 61 PM peak hour trips.
2. All study area roadways and intersections will operate at LOS D or better based on projected 2024 daily and peak hour traffic volumes.
3. Based on a 2% background growth rate, the projected daily traffic volumes for 2024 without the project will not exceed the LOS D capacities of the project roadways.
4. Right turns lanes are not numerically warranted for the northbound right turns from Vistoso Park Drive into the project driveways.
5. The driveway spacing and corner clearances for the project driveways meet Pima County and Oro Valley standards.
6. The provision of gated entrances should conform to Oro Valley Subdivision Street Standards.
7. Roadway and subdivision design should conform to current jurisdictional standards. This includes ensuring that sight distance requirements are met.
8. All new traffic signs and markings, on-site and off-site, must comply fully with the *Manual on Uniform Traffic Control Devices* and Town requirements.

Appendix

- Site Plan
- Traffic Data
- Synchro Analysis

DEVELOPMENT PLAN FOR ORO VALLEY ASSISTED LIVING COMMUNITY

OV2300981

GENERAL NOTES

1. THE GROSS AREA OF THIS DEVELOPMENT IS 8.03 ACRES (349,931 S.F.).
2. THE GROSS DISTURBANCE OF THIS AREA IS 7.19 ACRES (313,400 S.F.).
3. THE GROSS FLOOR AREA OF THIS DEVELOPMENT AREA: 134,391 S.F.
4. NO NEW STREETS ARE PROPOSED.
5. THERE ARE NO CONDITIONS, VARIANCES, OR OTHER MODIFICATIONS APPLICABLE TO THE PROJECT.
6. ASSURANCES FOR SITE IMPROVEMENTS, LANDSCAPING, AND RE-VEGETATION BONDS MUST BE POSTED PRIOR TO THE ISSUANCE OF GRADING PERMITS.
7. SEE SHEET 2 FOR PARKING CALCULATIONS.

PLANNING GENERAL NOTES

1. EXISTING ZONING FOR THIS PROJECT IS RANCHO VISTOSO PLANNED AREA DEVELOPMENT (P.A.D), CPI.
2. MAXIMUM ALLOWED BUILDING HEIGHT = 36' OR 44' ON SLOPES BETWEEN 15 AND 25%.
3. THE PROPOSED BUILDING HEIGHT = 45'-5".
4. OPEN SPACE REQUIREMENT: NONE.
   15% OF THE TOTAL NET AREA MUST BE LANDSCAPED. SEE LANDSCAPE PLAN FOR CALCULATION.
5. THE REQUIRED SETBACKS: FRONT = 25', SIDE = 20' OR COMMON WALL, REAR = 30'.
6. THE LANDSCAPE BUFFERYARDS FOR THIS PROJECT ARE: NORTH = 15' (BUFFERYARD "B"), WEST = 30' (BUFFERYARD "B"), EAST = 0', SOUTH = 0'.
7. OPEN SPACE REQUIREMENT: NONE.
   15% OF THE TOTAL NET AREA MUST BE LANDSCAPED.
8. ALL SIGNAGE AND LIGHTING TO BE ADDRESSED AS PART OF SEPARATE REVIEW AND APPROVAL PROCESS.
9. ALL PUBLIC ART REQUIREMENTS MUST BE MET PRIOR TO FINAL CERTIFICATE OF OCCUPANCY ISSUANCE, PER ORO VALLEY ZONING CODE REVISED SECTION 27.3.
10. THIS PROJECT IS DESIGNED TO MEET THE TANGERINE ROAD CORRIDOR OVERLAY DISTRICT (TRCOD) AND THE ORACLE ROAD SCENIC CORRIDOR DISTRICT (ORSCOD).
11. BUILDING SITE COVERAGE MAY NOT EXCEED 50%
    TOTAL BUILDING SQUARE FOOTAGE = 134,391 S.F. = 38% OF TOTAL SITE AREA
12. THE TOWN OF ORO VALLEY ENVIRONMENTALLY SENSITIVE LANDS (ESL) MAP IDENTIFIES THE SUBJECT SITE AS RECOURSE MANAGEMENT AREA TIER 3 (0% OPEN SPACE) WITH A GENERAL PLAN LAND USE DESIGNATION OF "GROWTH AREAS. THE ESL ORDINANCE DOES NOT APPLY TO PADS AND PAD AMENDMENTS APPROVED BY TOWN COUNCIL PRIOR TO JULY 19, 2011. THE APPROVAL DATE OF THE RANCHO VISTOSO PAD IS JUNE 22, 1987.

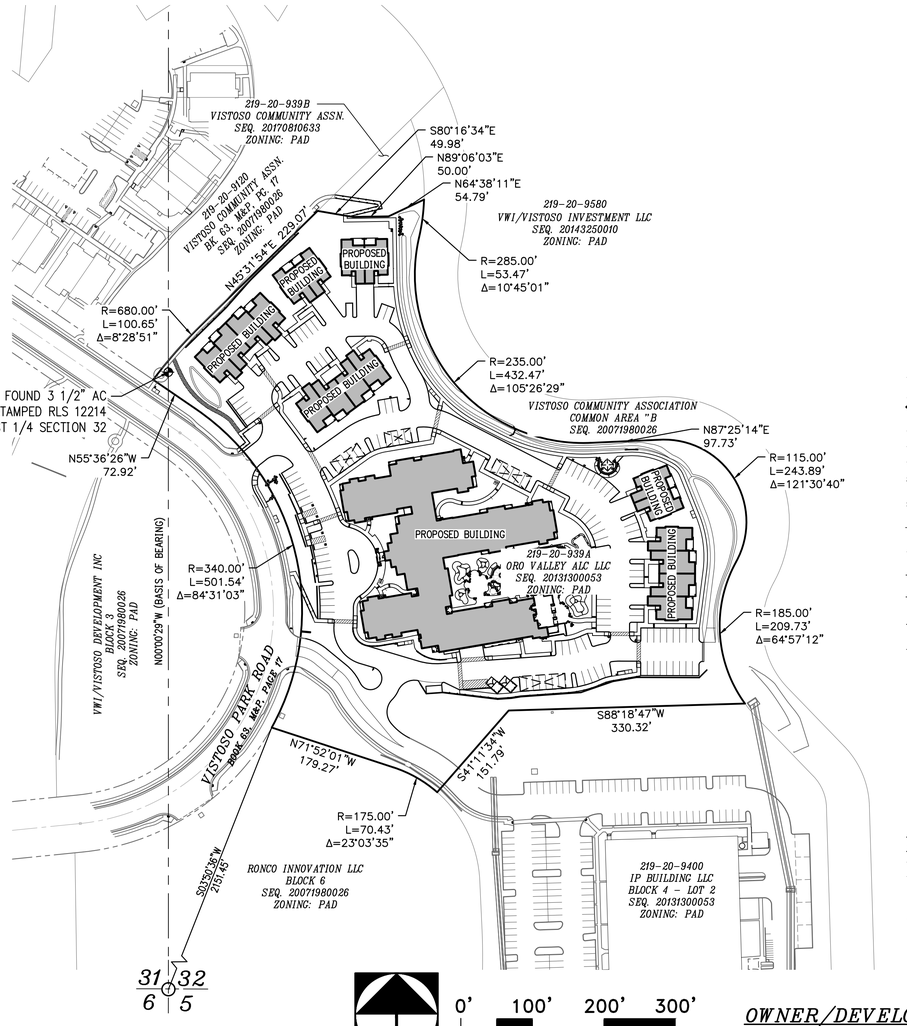
ENGINEERING GENERAL NOTES

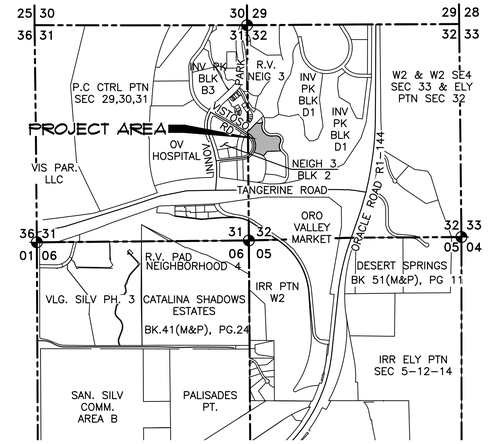
1. THE DESIGN VEHICLE FOR THIS PROJECT IS A SU-30. THE DESIGN SPEED FOR THIS PROJECT IS 15 MPH.
2. ALL NEW PUBLIC ROADS WITHIN AND ADJACENT TO THIS PROJECT WILL BE CONSTRUCTED IN ACCORDANCE THE APPROVED PLANS. SEPARATE PUBLIC IMPROVEMENT AND CONSTRUCTION PLANS WILL BE SUBMITTED TO THE TOWN ENGINEER'S OFFICE FOR REVIEW AND APPROVAL.
3. ANY RELOCATION OR MODIFICATION OF EXISTING UTILITIES AND/OR PUBLIC IMPROVEMENTS NECESSITATED BY THE PROPOSED DEVELOPMENT WILL BE AT NO EXPENSE TO THE PUBLIC.
4. BASIS OF ELEVATION: ELEVATION FOR THIS PROJECT IS BASED ON NGVD 1929 BEING THE TOP OF A BRASS DISC IN CONCRETE, HIGHWAY RIGHT-OF-WAY MARKER STATION 769+90.44, NORTH SIDE OF TANGERINE ROAD, 99 FEET NORTH OF PAVEMENT CENTERLINE, 430 FEET EAST OF BRIDGE OVER BIG WASH.
   ELEVATION = 2687.29 (NGVD 29).
5. THE BASIS OF BEARING: THE BASIS OF BEARINGS FOR THIS PROJECT IS THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 32, TOWNSHIP 12 SOUTH, RANGE 14 EAST, G.&S.R.M., PIMA COUNTY, ARIZONA. SAID BEARING BEING: N00°00'29"W.
6. MATERIALS WITHIN SIGHT VISIBILITY TRIANGLES MUST BE PLACED SO AS NOT TO INTERFERE WITH A VISIBILITY PLANE DESCRIBED BY TWO HORIZONTAL LINES LOCATED THIRTY (30) INCHES AND SEVENTY TWO (72) INCHES ABOVE FINISHED GRADE OF THE ROADWAY SURFACE.
7. CIVIL IMPROVEMENT PLAN MUST BE APPROVED PRIOR TO THE ISSUANCE OF ANY PERMITS BY THE TOWN ENGINEER AND/OR BUILDING OFFICIAL.
8. ALL WEATHER ACCESS MUST BE PROVIDED TO ALL LOTS WITHIN THIS SUBDIVISION.

DRAINAGE GENERAL NOTES

1. ALL DRAINAGE WAYS WILL BE CONSTRUCTED ACCORDING TO APPROVED PLANS PRIOR TO THE ISSUANCE OF ANY PERMITS FORM THE TOWN ENGINEER AND/OR BUILDING OFFICIAL FOR PARCELS AFFECTED. AFFECTED PARCELS MUST BE SPECIFICALLY IDENTIFIED EITHER BY NUMBER IN NOTE OR BY OUTLINE ON THE DEVELOPMENT PLAN.
2. DRAINAGE MUST BE COLLECTED AND RELEASED FROM A PROPOSED DEVELOPMENT AT THE LOCATIONS AND IN THE MANNER EXISTING PRIOR TO DEVELOPMENT.
3. DRAINAGE WAYS MUST BE PROVIDED WHERE NECESSARY TO CARRY DRAINAGE FLOWS THROUGH OR FROM THE DEVELOPMENT AND SUCH DRAINAGE WAYS MUST BE DEDICATED AND MAINTAINED BY PROPERTY OWNERS OR PROPERTY OWNER'S ASSOCIATION.
4. ALL DRAINAGE WAYS, DRAINAGE STRUCTURES AND DETENTION BASINS ARE PROVIDED WITH ADEQUATE MAINTENANCE ACCESS AND ARE INCLUDED AS PART OF ANY DRAINAGE EASEMENT.
5. DRAINAGE WAYS MUST BE DESIGNED TO NOT DISCHARGE ONTO PAVED STREETS, EASEMENTS OR PARKING AREAS.
6. PARKING AREAS MUST NOT BE USED AS DETENTION BASINS.

(SEE SHEET 2 FOR CONTINUATION OF NOTES)





3" = 1 MILE

LOCATION MAP

A PORTION OF SECTION 31 & 32
T11S, R14E, G & S.R.M., TOWN OF ORO VALLEY,
PIMA COUNTY, ARIZONA

LEGEND

- EXIST. MAJOR CONTOUR
- EXIST. MINOR CONTOUR
- PROJECT BOUNDARY
- EXISTING LOT LINE
- EXIST. PAVEMENT
- PROPOSED VERTICAL CURB
- EXISTING VERTICAL CURB
- EXIST. PUBLIC SEWER LINE & MANHOLE
- EXIST. PUBLIC WATERLINE & VALVE
- EXISTING EASEMENT LINE
- LOT SETBACKS (TYP.)
- SECTION LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- SECTION OR 1/4 SECTION CORNER
- FINISHED FLOOR ELEVATION / FINISHED PAD ELEVATION
- GRADE BREAK (GB/HP/LP)
- POST BARRICADE
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- CENTERLINE MONUMENT
- GRADING LIMITS
- LIGHT POLE
- ASPHALT PAVEMENT
- PAVEMENT SAWCUT
- PARKING STALLS
- TOP OF SLOPE
- BOTTOM OF SLOPE
- SIGHT VISIBILITY TRIANGLE (SVT)
- 100 YR FLOOD PLAIN
- EROSION HAZARD SETBACK
- PROPOSED WALL
- PROPOSED HANDRAIL
- DEVELOPED AREA BOUNDARY
- PROPOSED RIPRAP
- PROPOSED DG PATH
- PARKING COUNT
- PROPOSED PRIVATE SEWER LINE & MANHOLE
- PROPOSED PUBLIC WATERLINE & VALVE
- PROPOSED SIGN
- FIRE HYDRANT
- WATER METER
- IRRIGATION METER
- EX. STORM DRAIN SYSTEM
- PROPOSED CULVERT

0' 100' 200' 300'

PROJECT OVERVIEW

APPROVAL

BY: _____ _____
PLANNING AND ZONING ADMINISTRATOR — DATE

BY: _____ _____
TOWN ENGINEER — DATE

BY: _____ _____
ORO VALLEY WATER UTILITY DIRECTOR — DATE

ENGINEER'S EARTHWORK ESTIMATE

CUT: 9,660 C.Y.
FILL: 8,895 C.Y.
NET: 765 C.Y. EXPORT

THIS IS AN ESTIMATE ONLY FOR PERMITTING. CONTRACTOR IS TO CALCULATE HIS/HER OWN QUANTITIES BASED ON THE SOILS REPORT PROVIDED, INCLUSIVE OF ANY OVER-EXCAVATION THAT MAY BE REQUIRED. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, OVER-EXCAVATION FOR BUILDINGS, CHANGING SOIL TYPE, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.

SHEET INDEX

OWNER/DEVELOPER

ORO VALLEY ALC LLC
2731 77TH AVE SE
SUITE 203
MERCER ISLAND, WA 98040
PHONE: (425) 417-6086
ATTN: WILLIAM R. MOORE III
BILLMOORE@ROUNDLAKELLC.COM

ENGINEER

THE WLB GROUP, INC.
4444 E. BROADWAY BLVD.
TUCSON, AZ 85711
PHONE: (520) 811-7480
ATTN: DAVID LITTLE
DLITTLE@WLBGROUP.COM

LANDSCAPE ARCHITECT

THE WLB GROUP, INC.
4444 E. BROADWAY BLVD.
TUCSON, AZ 85711
PHONE: (520) 811-7480
ATTN: GARY GRIZZLE
GGRIZZLE@WLBGROUP.COM

OV12-12-20
OV12-06-14B
REF: OV09-07-07

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

The WLB Group Inc. **WLB**

Engineering Planning Surveying Landscape Architecture Urban Design
Offices located in Tucson, Phoenix, & Flagstaff, AZ, and Las Vegas, NV.
4444 East Broadway Tucson, AZ 85711
(520) 881-7480

ORO VALLEY ASSISTED LIVING COMMUNITY
RANCHO VISTOSO NEIGHBORHOOD 3 INNOVATION CORPORATE CENTER
BLOCK 4 - LOT 1, ORO VALLEY, ARIZONA
Project

COVER SHEET
DEVELOPMENT PLAN
Sheet Title

No.	Date	Item

Revisions

Scale	AS SHOWN
Job No.	185050-HN-02/0105
Date	MARCH 2024
Designed By	DWL/JAW
Checked By	DWL

Registered Professional Engineer (Civil) CERTIFICATE NO. 36234 DAVID W. LITTLE ARIZONA U.S.A.

Sheet 1 of 13

D:\185050\HN-02 RV N 3 Inn Corp Ctr Lot 1\04 Platting\02 DP\DP-01_Cover.dwg Plotted: Mar 01,2024

Project: **Tangerine Road/Innovation Park**
Date: **Wednesday, September 11, 2019**

Count | 0:15

Count Starts at

	7:00 AM	NB Water Harvest Way			SB Innovation Park Drive			EB Tangerine			WB Tangerine			TOTALS						
	END Time	Left Turn	THRU	Right	Left Turn	THRU	Right Turn	Left Turn	THRU	Right Turn	Left Turn	THRU	Right Turn	NB	SB	EB	WB	Total	END Time	
	7:15 AM	12	5	2	3	11	22	73	67	88	5	55	37	19	36	228	97	380	7:15 AM	
	7:30 AM	20	7	6	7	6	37	89	73	130	1	77	45	33	50	292	123	498	7:30 AM	
	7:45 AM	13	8	3	7	5	39	144	92	77	1	112	56	24	51	313	169	557	7:45 AM	
	8:00 AM	18	18	2	5	10	44	150	99	47	4	99	63	38	59	296	166	559	8:00 AM	
	8:15 AM	16	13	7	4	19	40	115	91	29	3	71	54	36	63	235	128	462	8:15 AM	
	8:30 AM	12	16	5	7	11	35	121	78	29	3	87	48	33	53	228	138	452	8:30 AM	
	8:45 AM	15	15	6	9	13	39	91	69	27	4	72	46	36	61	187	122	406	8:45 AM	
	9:00 AM	20	9	4	8	21	38	109	54	34	11	55	27	33	67	197	93	390	9:00 AM	
7:00 AM	8:00 AM	63	38	13	22	32	142	456	331	342	11	343	201	114	196	1129	555	1994	7:00 AM	8:00 AM
7:15 AM	8:15 AM	67	46	18	23	40	160	498	355	283	9	359	218	131	223	1136	586	2076	7:15 AM	8:15 AM
7:30 AM	8:30 AM	59	55	17	23	45	158	530	360	182	11	369	221	131	226	1072	601	2030	7:30 AM	8:30 AM
7:45 AM	8:45 AM	61	62	20	25	53	158	477	337	132	14	329	211	143	236	946	554	1879	7:45 AM	8:45 AM
8:00 AM	9:00 AM	63	53	22	28	64	152	436	292	119	21	285	175	138	244	847	481	1710	8:00 AM	9:00 AM
7:00 AM	9:00 AM	126	91	35	50	96	294	892	623	461	32	628	376	252	440	1976	1036	3704	7:00 AM	9:00 AM
														0.86	0.88	0.91	0.87			
2022		71	49	19	24	42	170	528	377	300	10	381	231							
2024 NP		74	51	20	25	44	177	550	392	312	10	396	241							
Site Trips			3		3	6	11	13					8							
2024 WP		74	54	20	28	50	188	563	392	312	10	396	249							

Count Starts at

	4:00 PM	NB Water Harvest Way			SB Innovation Park Drive			EB Tangerine			WB Tangerine			TOTALS						
	END Time	Left Turn	THRU	Right	Left Turn	THRU	Right Turn	Left Turn	THRU	Right Turn	Left Turn	THRU	Right Turn	NB	SB	EB	WB	Total	END Time	
	4:15 PM	49	21	18	27	39	110	33	110	68	5	101	5	88	176	211	111	586	4:15 PM	
	4:30 PM	56	23	20	22	52	132	36	90	67	4	69	8	99	206	193	81	579	4:30 PM	
	4:45 PM	54	17	23	26	35	125	30	62	59	10	69	8	94	186	151	87	518	4:45 PM	
	5:00 PM	59	16	27	28	37	121	20	73	53	1	59	9	102	186	146	69	503	5:00 PM	
	5:15 PM	52	11	28	27	41	155	23	88	51	5	65	6	91	223	162	76	552	5:15 PM	
	5:30 PM	58	12	24	17	32	130	26	65	54	5	57	3	94	179	145	65	483	5:30 PM	
	5:45 PM	47	16	20	16	25	96	16	74	40	5	68	5	83	137	130	78	428	5:45 PM	
	6:00 PM	28	15	15	10	17	72	25	67	44	5	56	5	58	99	136	66	359	6:00 PM	
4:00 PM	5:00 PM	218	77	88	103	163	488	119	335	247	20	298	30	383	754	701	348	2186	4:00 PM	5:00 PM
4:15 PM	5:15 PM	221	67	98	103	165	533	109	313	230	20	262	31	386	801	652	313	2152	4:15 PM	5:15 PM
4:30 PM	5:30 PM	223	56	102	98	145	531	99	288	217	21	250	26	381	774	604	297	2056	4:30 PM	5:30 PM
4:45 PM	5:45 PM	216	55	99	88	135	502	85	300	198	16	249	23	370	725	583	288	1966	4:45 PM	5:45 PM
5:00 PM	6:00 PM	185	54	87	70	115	453	90	294	189	20	246	19	326	638	573	285	1822	5:00 PM	6:00 PM
4:00 PM	6:00 PM	403	131	175	173	278	941	209	629	436	40	544	49	709	1392	1274	633	4008	4:00 PM	6:00 PM
														0.94	0.92	0.83	0.78			
2022		231	82	93	109	173	518	126	356	262	21	316	32							
2024 NP		241	85	97	114	180	539	131	370	273	22	329	33							
Site Trips			3		5	10	18	14					8							
2024 WP		241	88	97	119	190	557	145	370	273	22	329	41							

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Innovation Park Dr	DATE:	03/24/22	LOCATION:	Oro Valley
E-W STREET:	Vistoso Park Rd (South)	DAY:	THURSDAY	PROJECT#	22-1195-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	0	1	1	0.5	0.5	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	9	62	13	1	34	0	0	0	1	0	0	0	120
7:15 AM	25	90	10	1	51	1	0	0	2	0	0	1	181
7:30 AM	19	99	11	4	54	2	1	0	6	1	0	0	197
7:45 AM	19	124	16	1	46	6	0	0	8	4	0	1	225
8:00 AM	25	89	14	1	29	3	0	0	2	6	0	1	170
8:15 AM	18	82	7	0	58	3	3	0	4	1	0	1	177
8:30 AM	20	73	9	3	59	3	0	0	12	4	0	2	185
8:45 AM	19	81	8	2	53	4	1	1	10	5	0	0	184
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	154	700	88	13	384	22	5	1	45	21	0	6	1439
Approach %	16.35	74.31	9.34	3.10	91.65	5.25	9.80	1.96	88.24	77.78	0.00	22.22	
App/Depart	942	/	711	419	/	450	51	/	102	27	/	176	

AM Peak Hr Begins at: 715 AM

PEAK													
Volumes	88	402	51	7	180	12	1	0	18	11	0	3	773
2024 NP	92	418	53	7	187	12	1	0	19	11	0	3	
Site Trips			24							20			
2024 WP	92	418	77	7	187	12	1	0	19	31	0	3	
Approach %	16.27	74.31	9.43	3.52	90.45	6.03	5.26	0.00	94.74	78.57	0.00	21.43	

PEAK HR. FACTOR:	0.851	0.829	0.594	0.500	0.859

CONTROL: 2-Way Stop (EB & WB)
COMMENT 1:
GPS: 32.429155, -110.946822

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Innovation Park Dr 0	DATE:	03/24/22	LOCATION:	Oro Valley
E-W STREET:	Vistoso Park Rd (South)	DAY:	THURSDAY	PROJECT#	22-1195-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	0	1	1	0.5	0.5	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	11	48	3	0	107	1	4	0	25	11	0	0	210
4:15 PM	9	35	0	0	95	0	4	0	29	14	0	0	186
4:30 PM	11	37	1	1	103	0	3	1	16	11	0	4	188
4:45 PM	7	38	0	0	98	1	0	0	24	10	0	0	178
5:00 PM	3	31	2	0	107	0	2	0	27	13	0	0	185
5:15 PM	5	40	1	0	83	2	1	0	13	8	1	1	155
5:30 PM	3	28	0	0	51	1	3	0	7	8	0	0	101
5:45 PM	3	27	0	0	65	0	1	0	15	6	0	0	117
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	52	284	7	1	709	5	18	1	156	81	1	5	1320
Approach %	15.16	82.80	2.04	0.14	99.16	0.70	10.29	0.57	89.14	93.10	1.15	5.75	
App/Depart	343	/	307	715	/	946	175	/	9	87	/	58	

PM Peak Hr Begins at: 400 PM

PEAK													
Volumes	38	158	4	1	403	2	11	1	94	46	0	4	762
2024 NP	40	164	4	1	419	2	11	1	98	48	0	4	
Site Trips			25							33			
2023 WP	40	164	29	1	419	2	11	1	98	81	0	4	
Approach %	19.00	79.00	2.00	0.25	99.26	0.49	10.38	0.94	88.68	92.00	0.00	8.00	

PEAK HR. FACTOR:	0.806	0.940	0.803	0.833	0.907

CONTROL: 2-Way Stop (EB & WB)
COMMENT 1: 0
GPS: 32.429155, -110.946822

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Vistoso Park Rd	DATE:	03/24/22	LOCATION:	Oro Valley
E-W STREET:	Meggitt Driveway	DAY:	THURSDAY	PROJECT#	22-1195-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	1	11	0	0	0	0	0	0	0	0	0	12
7:15 AM	0	0	6	1	0	0	0	0	0	0	0	0	7
7:30 AM	0	0	4	0	1	0	0	0	0	1	0	0	6
7:45 AM	0	1	5	0	0	0	0	0	0	0	0	0	6
8:00 AM	0	3	7	1	0	0	0	0	0	0	0	0	11
8:15 AM	0	0	7	0	1	0	0	0	0	0	0	0	8
8:30 AM	0	0	3	0	2	0	0	0	0	0	0	0	5
8:45 AM	0	0	6	0	2	0	0	0	0	1	0	0	9
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	5	49	2	6	0	0	0	0	2	0	0	64
Approach %	0.00	9.26	90.74	25.00	75.00	0.00	####	####	####	100.00	0.00	0.00	
App/Depart	54	/	5	8	/	8	0	/	51	2	/	0	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	3	23	1	5	0	0	0	0	1	0	0	33
2024 NP	0	3	24	1	5	0	0	0	0	1	0	0	
Site Trips		8	16		7					13			
2024 WP	0	11	40	1	12	0	0	0	0	14	0	0	
Approach %	0.00	11.54	88.46	16.67	83.33	0.00	####	####	####	100.00	0.00	0.00	

PEAK HR. FACTOR:	0.650	0.750	0.000	0.250	0.750

CONTROL:	1-Way Stop (WB)
COMMENT 1:	
GPS:	32.430004, -110.943797

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Vistoso Park Rd 0	DATE:	03/24/22	LOCATION:	Oro Valley
E-W STREET:	Meggitt Driveway	DAY:	THURSDAY	PROJECT#	22-1195-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	1	0	0	1	0	0	0	0	8	0	0	10
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	1	0	0	3	0	0	0	0	12	0	1	17
4:45 PM	0	1	0	0	0	0	0	0	0	5	0	0	6
5:00 PM	0	0	1	0	1	0	0	0	0	10	0	0	12
5:15 PM	0	2	0	0	0	0	0	0	0	6	0	1	9
5:30 PM	0	0	0	0	1	0	0	0	0	7	0	1	9
5:45 PM	0	0	0	0	0	0	0	0	0	5	0	1	6
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	5	1	0	6	0	0	0	0	54	0	5	71
Approach %	0.00	83.33	16.67	0.00	100.00	0.00	####	####	####	91.53	0.00	8.47	
App/Depart	6	/	10	6	/	60	0	/	1	59	/	0	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	0	4	1	0	4	0	0	0	0	33	0	2	44
2024 NP	0	4	1	0	4	0	0	0	0	34	0	2	
Site Trips		8	17		11					22			
2023 WP	0	12	18	0	15	0	0	0	0	56	0	2	
Approach %	0.00	80.00	20.00	0.00	100.00	0.00	####	####	####	94.29	0.00	5.71	

PEAK HR. FACTOR:	0.625	0.333	0.000	0.673	0.647

CONTROL:	1-Way Stop (WB)
COMMENT 1:	0
GPS:	32.430004, -110.943797

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, March 24, 2022 City: Oro Valley Project #: 22-1195-003

Location: Vistoso Park Rd east of Innovation Park Dr

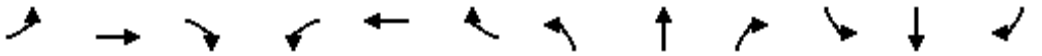
AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			9		9		
00:15			0		0			12:15			11		6		
00:30			0		0			12:30			8		7		
00:45			0	0	1	1	1	12:45			7	35	10	32	67
01:00			0		0			13:00			10		2		
01:15			0		0			13:15			12		4		
01:30			0		0			13:30			9		7		
01:45			0	0	0	0		13:45			4	35	8	21	56
02:00			0		0			14:00			5		4		
02:15			0		0			14:15			9		10		
02:30			0		0			14:30			7		9		
02:45			0	0	0	0		14:45			4	25	5	28	53
03:00			0		0			15:00			6		8		
03:15			0		0			15:15			4		18		
03:30			0		0			15:30			6		11		
03:45			0	0	0	0		15:45			4	20	10	47	67
04:00			0		0			16:00			1		9		
04:15			0		0			16:15			0		1		
04:30			1		0			16:30			1		15		
04:45			0	1	0	0	1	16:45			1	3	5	30	33
05:00			7		0			17:00			1		11		
05:15			4		0			17:15			2		6		
05:30			4		0			17:30			0		8		
05:45			6	21	0	0	21	17:45			0	3	5	30	33
06:00			12		0			18:00			0		3		
06:15			5		0			18:15			0		1		
06:30			17		0			18:30			1		2		
06:45			15	49	3	3	52	18:45			0	1	2	8	9
07:00			12		0			19:00			0		0		
07:15			6		0			19:15			1		3		
07:30			4		2			19:30			0		0		
07:45			6	28	0	2	30	19:45			0	1	1	4	5
08:00			10		0			20:00			0		1		
08:15			7		1			20:15			0		0		
08:30			3		2			20:30			0		0		
08:45			6	26	3	6	32	20:45			0	0	0	1	1
09:00			8		6			21:00			0		0		
09:15			10		3			21:15			0		0		
09:30			8		6			21:30			0		0		
09:45			13	39	6	21	60	21:45			1	1	0	0	1
10:00			7		11			22:00			0		0		
10:15			6		7			22:15			0		1		
10:30			3		5			22:30			0		1		
10:45			4	20	15	38	58	22:45			0	0	0	2	2
11:00			4		8			23:00			0		0		
11:15			3		8			23:15			0		0		
11:30			5		7			23:30			0		0		
11:45			7	19	11	34	53	23:45			0	0	0	0	
Total Vol.				203		105	**308**					124		203	**327**

GPS Coordinates: 32.429303, -110.944922

Daily Totals

NB	SB	EB	WB	Combined
		327	308	**635**

	AM			PM		
Split %	65.9%	34.1%	**48.5%**	37.9%	62.1%	**51.5%**
Peak Hour	06:30	10:00	**11:45**	12:45	15:15	**12:00**
Volume	50	38	**68**	38	48	**67**
P.H.F.	0.74	0.63	**0.94**	0.79	0.67	**0.93**

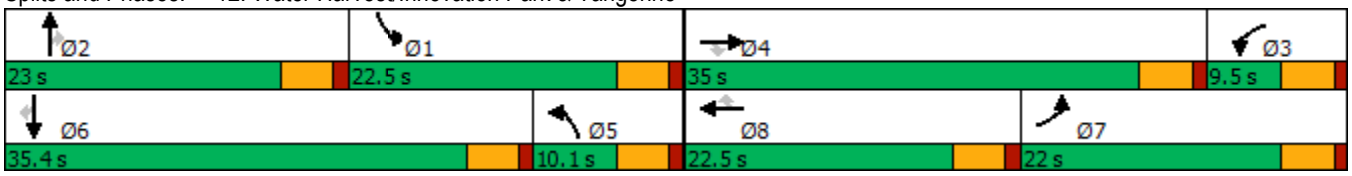


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	563	392	312	10	396	249	74	54	20	28	50	188
Future Volume (vph)	563	392	312	10	396	249	74	54	20	28	50	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	800		280	300		570	170		170	220		170
Storage Lanes	2		2	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00
Frt			0.850			0.850		0.995	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	2787	3433	3539	1583	3433	3373	1441	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	2787	3433	3539	1583	3433	3373	1441	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			343			286		2	236			214
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			886			330			759	
Travel Time (s)		13.2			20.1			7.5			17.3	
Peak Hour Factor	0.91	0.91	0.91	0.87	0.87	0.87	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	619	431	343	11	455	286	86	63	23	32	57	214
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	619	431	343	11	455	286	86	65	21	32	57	214
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.0	35.0	35.0	9.5	22.5	22.5	10.1	23.0	23.0	22.5	35.4	35.4
Total Split (%)	24.4%	38.9%	38.9%	10.6%	25.0%	25.0%	11.2%	25.6%	25.6%	25.0%	39.3%	39.3%
Maximum Green (s)	17.5	30.5	30.5	5.0	18.0	18.0	5.6	18.5	18.5	18.0	30.9	30.9
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	Min	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0	0	0	0
Act Effct Green (s)	16.6	32.3	32.3	6.7	14.4	14.4	6.2	6.7	6.7	6.8	9.7	9.7
Actuated g/C Ratio	0.26	0.52	0.52	0.11	0.23	0.23	0.10	0.11	0.11	0.11	0.15	0.15
v/c Ratio	0.68	0.24	0.21	0.03	0.56	0.49	0.26	0.18	0.06	0.17	0.10	0.50
Control Delay	26.0	10.9	2.4	25.7	24.5	6.3	30.5	28.0	0.3	29.3	26.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	10.9	2.4	25.7	24.5	6.3	30.5	28.0	0.3	29.3	26.4	9.2
LOS	C	B	A	C	C	A	C	C	A	C	C	A
Approach Delay		15.5			17.6			25.9			14.6	
Approach LOS		B			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 62.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Water Harvest/Innovation Park & Tangerine



Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	19	31	1	3	92	418	77	7	187	12
Future Vol, veh/h	1	1	19	31	1	3	92	418	77	7	187	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	110	-	-	230	-	160	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	59	59	59	50	50	50	85	85	85	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	32	62	2	6	108	492	91	8	225	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	711	1047	120	838	963	246	239	0	0	583	0	0
Stage 1	248	248	-	708	708	-	-	-	-	-	-	-
Stage 2	463	799	-	130	255	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	320	227	909	259	254	754	1325	-	-	987	-	-
Stage 1	734	700	-	392	436	-	-	-	-	-	-	-
Stage 2	548	396	-	860	695	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	294	207	909	231	231	754	1325	-	-	987	-	-
Mov Cap-2 Maneuver	294	207	-	231	231	-	-	-	-	-	-	-
Stage 1	674	694	-	360	400	-	-	-	-	-	-	-
Stage 2	497	364	-	821	689	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	24.6	1.2	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1325	-	-	294	777	231	481	987	-	-
HCM Lane V/C Ratio	0.082	-	-	0.006	0.044	0.268	0.017	0.009	-	-
HCM Control Delay (s)	8	-	-	17.3	9.8	26.2	12.6	8.7	-	-
HCM Lane LOS	A	-	-	C	A	D	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0	0.1	1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	1	11	40	1	12
Future Vol, veh/h	14	1	11	40	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	1	12	43	1	13

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	49	34	0	0	55	0
Stage 1	34	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	960	1039	-	-	1550	-
Stage 1	988	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	959	1039	-	-	1550	-
Mov Cap-2 Maneuver	892	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	900	1550	-
HCM Lane V/C Ratio	-	-	0.018	0.001	-
HCM Control Delay (s)	-	-	9.1	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

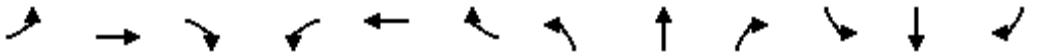
Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	1	3	8	1	6
Future Vol, veh/h	7	1	3	8	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	3	9	1	7

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	17	8	0	0	12	0
Stage 1	8	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1001	1074	-	-	1607	-
Stage 1	1015	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1000	1074	-	-	1607	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1013	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	936	1607	-
HCM Lane V/C Ratio	-	-	0.009	0.001	-
HCM Control Delay (s)	-	-	8.9	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

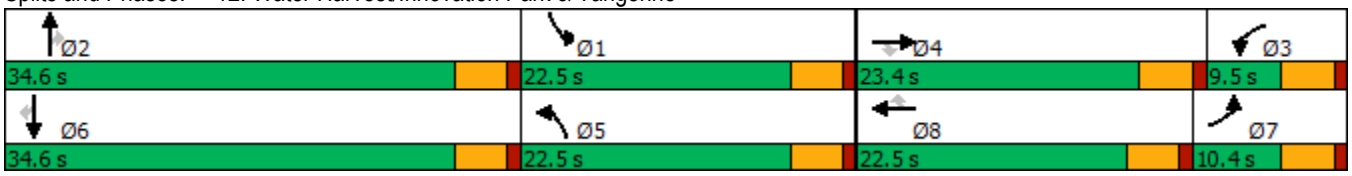


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	370	273	22	329	41	241	88	97	119	190	557
Future Volume (vph)	145	370	273	22	329	41	241	88	97	119	190	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	800		280	300		570	170		170	220		170
Storage Lanes	2		2	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.91	1.00	0.95	1.00
Frt			0.850			0.850		0.954	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	2787	3433	3539	1583	3433	3234	1441	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	2787	3433	3539	1583	3433	3234	1441	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			329			127		42	127			251
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			886			330			759	
Travel Time (s)		13.2			20.1			7.5			17.3	
Peak Hour Factor	0.83	0.83	0.83	0.78	0.78	0.78	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	175	446	329	28	422	53	256	94	103	129	207	605
Shared Lane Traffic (%)									41%			
Lane Group Flow (vph)	175	446	329	28	422	53	256	136	61	129	207	605
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.4	23.4	23.4	9.5	22.5	22.5	22.5	34.6	34.6	22.5	34.6	34.6
Total Split (%)	11.6%	26.0%	26.0%	10.6%	25.0%	25.0%	25.0%	38.4%	38.4%	25.0%	38.4%	38.4%
Maximum Green (s)	5.9	18.9	18.9	5.0	18.0	18.0	18.0	30.1	30.1	18.0	30.1	30.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Min	Min	Min	Min	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	6.1	21.9	21.9	5.1	14.5	14.5	11.1	7.8	7.8	28.6	25.3	25.3
Actuated g/C Ratio	0.08	0.29	0.29	0.07	0.19	0.19	0.15	0.10	0.10	0.38	0.34	0.34
v/c Ratio	0.63	0.44	0.32	0.12	0.62	0.13	0.51	0.37	0.23	0.19	0.17	0.87
Control Delay	48.3	26.2	4.5	38.9	33.6	0.7	35.1	27.5	2.1	17.1	18.7	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	26.2	4.5	38.9	33.6	0.7	35.1	27.5	2.1	17.1	18.7	28.9
LOS	D	C	A	D	C	A	D	C	A	B	B	C
Approach Delay		22.7			30.4			28.4			25.0	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 25.7		Intersection LOS: C	
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Water Harvest/Innovation Park & Tangerine



Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1	98	81	1	4	40	164	29	1	419	2
Future Vol, veh/h	11	1	98	81	1	4	40	164	29	1	419	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	110	-	-	230	-	160	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	83	83	83	81	81	81	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	123	98	1	5	49	202	36	1	446	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	649	785	224	526	750	101	448	0	0	238	0	0
Stage 1	449	449	-	300	300	-	-	-	-	-	-	-
Stage 2	200	336	-	226	450	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	355	323	779	435	339	935	1109	-	-	1326	-	-
Stage 1	559	571	-	684	664	-	-	-	-	-	-	-
Stage 2	783	640	-	756	570	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	340	308	779	353	324	935	1109	-	-	1326	-	-
Mov Cap-2 Maneuver	340	308	-	353	324	-	-	-	-	-	-	-
Stage 1	534	570	-	654	635	-	-	-	-	-	-	-
Stage 2	743	612	-	635	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	18.5	1.4	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	340	767	353	679	1326	-	-
HCM Lane V/C Ratio	0.045	-	-	0.04	0.161	0.276	0.009	0.001	-	-
HCM Control Delay (s)	8.4	-	-	16	10.6	19	10.3	7.7	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.6	1.1	0	0	-	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	2	12	18	1	15
Future Vol, veh/h	56	2	12	18	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	2	13	20	1	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	41	23	0	0	33	0
Stage 1	23	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	970	1054	-	-	1579	-
Stage 1	1000	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	969	1054	-	-	1579	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1004	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	904	1579	-
HCM Lane V/C Ratio	-	-	0.07	0.001	-
HCM Control Delay (s)	-	-	9.3	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	2	6	8	1	4
Future Vol, veh/h	11	2	6	8	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	2	7	9	1	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	18	12	0	0	16	0
Stage 1	12	-	-	-	-	-
Stage 2	6	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1000	1069	-	-	1602	-
Stage 1	1011	-	-	-	-	-
Stage 2	1017	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	999	1069	-	-	1602	-
Mov Cap-2 Maneuver	918	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1016	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	938	1602	-
HCM Lane V/C Ratio	-	-	0.015	0.001	-
HCM Control Delay (s)	-	-	8.9	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-