

**Traffic Impact Analysis**

**Lovett Coppell Development  
Coppell, Texas**

<b>PRELIMINARY</b>	
<b>Kimley»Horn</b>	
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Updated Submittal: September 7, 2023  
Original Submittal: August 15, 2023



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## 1. Project Description

The site as proposed will comprise a total of 257,500 SF for warehouse use, 15,500 SF for retail, and 15,500 SF for office use. The property is currently undeveloped. **Exhibit 1** shows the vicinity of the proposed development including the location of the Lovett Coppell Development and a neighboring proposed Northwest Gateway Plaza background development accounted for in the TIA. **Exhibit 2** shows the proposed development plan including proposed driveways, adjacent travel lanes, parking facilities, and building areas.

## 2. Study Area

The analysis included the following proposed driveways:

- Drive 1, a right-in/right-out driveway located along SH 121 west of Denton Tap Road upstream of the Sam Rayburn Tollway entrance ramp
- Drive 2, a right-in/right-out driveway located along SH 121 west of Denton Tap Road between the Sam Rayburn Tollway entrance ramp and the Business 121 (BUS-121) merge
- Drive 3, a right-in/right-out driveway located along BUS-121 northeast of the SH 121/BUS-121 merge

The major study area roadways are described below.

**SH 121** is a frontage road along Sam Rayburn Tollway and is a 2-lane one-way road in front of Drive 1. Southbound SH 121 becomes a one-lane road in front of Drive 2 and merges into BUS-121. The posted speed limit is 50 mph in front of the site.

**Business 121** is a 4-lane divided state highway in front of the site. Drive 3 has access to BUS-121 northbound, a 2-lane section of the highway. The posted speed limit on BUS-121 is 50 mph along the site.

Due to the one-way nature of the roadways surrounding the site, the BUS-121/Vista Ridge Mall Drive intersection north can be used to travel southbound along BUS-121 or traffic can travel eastbound to access Sam Rayburn Tollway via Denton Tap Road.

**Exhibit 3** illustrates the intersection geometry used for the traffic analyses for existing and future conditions.

## 3. Study Scenarios

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios:

- 2023 existing traffic (**Exhibit 4**)
- 2025 background traffic (**Exhibit 9**)
- 2025 background plus site traffic (**Exhibit 10**)
- 2030 background traffic (**Exhibit 11**)

- 2030 background plus site traffic (**Exhibit 12**)

The capacity analyses were conducted using the *Synchro*<sup>TM</sup> software package and the associated *Highway Capacity Manual* reports for unsignalized intersection results.

#### 4. Trip Generation

Site-generated traffic estimates are determined using a process known as trip generation. The trips indicated are actually one-way trips or trip ends, where one vehicle entering and exiting the site is counted as one inbound trip and one outbound trip. **Table 1** shows the resulting daily and weekday AM and PM peak hour trip generation for the proposed development, showing new external trips. A floor area ratio (FAR) of 0.25 is used for the non-industrial acreage and is split between the retail and office square footage. No reductions were taken for internal capture, pass-by trips, or multimodal use.

**Table 1 – Trip Generation**

Land Uses	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
<b>Warehousing - Total</b>	257,500	SF	150	440	34	10	44	13	33	46
<b>Warehousing - Trucks</b>	257,500	SF	150	155	3	2	5	4	4	8
<b>Warehousing - Passenger Cars</b>	257,500	SF	150	285	31	8	39	9	29	38
<b>Strip Retail Plaza (&lt;40k)</b>	15,500	SF	822	844	22	15	37	51	51	102
<b>General Office Building</b>	15,500	SF	710	168	21	3	24	4	18	22
<b>Development Totals</b>										
<b>Total Net New External Vehicle Trips:</b>				<b>1,452</b>	<b>77</b>	<b>28</b>	<b>105</b>	<b>68</b>	<b>102</b>	<b>170</b>

Trip Generation rates based on ITE's *Trip Generation Manual*, 11<sup>th</sup> Edition.

#### 5. Trip Distribution & Traffic Assignment

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site.

The corresponding inbound and outbound traffic assignment, where the directional distribution is applied using the most probable paths to and from the site, can be found in **Exhibit 5** for passenger cars and **Exhibit 7** for trucks. The resulting site-generated weekday AM and weekday PM peak hour turning movements after multiplying the new external trip generation by the respective traffic assignment percentages is shown in **Exhibit 6** for passenger cars and **Exhibit 8** for trucks.

#### 6. Traffic Counts

24-hour machine counts were collected near the site on SH 121, and peak hour counts were collected on Business 121. The raw count sheets are provided at the end of this report. The heavy vehicle percentages in the existing traffic are unknown and is estimated to be five percent of the total traffic. Typical heavy vehicle percentages are between two percent to five percent for highways and arterial roads.

The counts showed the volume on the roadway link as follows:

- SH 121: 13,679 vehicles per day (vpd)
- Business 121 NB: 1,723 AM peak hour vehicles and 2,598 PM peak hour vehicles

## 7. Projected Background Traffic

The existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on the recent growth in the area, a conservative annual growth rate of 2% was used for the background traffic. **Table 2** shows the TxDOT historical link volumes. Traffic from the proposed Northwest Gateway Plaza background development east of the site is included in the background traffic. The trip assignment and site generated traffic for the Northwest Gateway Plaza background development are shown in **Exhibit A1** and **Exhibit A2**.

**Table 2 – Historical Link Volumes**

BUS 121						
Record	Year	Link Start	Link End	Source	24-Hour Volume	Annual Growth Rate
1	2013	BUS 121	Vista Ridge Mall Dr	TxDOT	40,414	-
2	2014	BUS 121	Vista Ridge Mall Dr	TxDOT	42,500	5.2%
3	2015	BUS 121	Vista Ridge Mall Dr	TxDOT	45,519	7.1%
4	2016	BUS 121	Vista Ridge Mall Dr	TxDOT	45,562	0.1%
5	2017	BUS 121	Vista Ridge Mall Dr	TxDOT	51,133	12.2%
3	2018	BUS 121	Vista Ridge Mall Dr	TxDOT	47,937	-6.3%
4	2019	BUS 121	Vista Ridge Mall Dr	TxDOT	54,394	13.5%
5	2020	BUS 121	Vista Ridge Mall Dr	TxDOT	44,507	-18.2%
6	2021	BUS 121	Vista Ridge Mall Dr	KHA	44,815	-3.2%
<b>Average Growth 2013 - 2021:</b>						<b>1.6%</b>

## 8. Intersection Analysis

**Table 3** shows the intersection operational results for the weekday AM and PM peak hours, respectively.

**Table 3 – Traffic Operational Results – Weekday AM Peak Hour**

INTERSECTION	APPROACH	2025 Background plus Site Traffic		2025 Background plus Site Traffic		2030 Background plus Site Traffic		2030 Background plus Site Traffic	
		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
TX-121 & Drive 1	SBR	16.1	C	15.9	C	17.2	C	17.0	C
TX-121 & Drive 2	SBR	10.2	B	11.2	B	10.4	B	11.4	B
BUS-121 & Drive 3	WBR	25.5	D	61.3	F	28.6	D	79.5	F

During the AM peak hour for the 2025 and 2030 background plus site scenarios, the site driveways operate at an acceptable D or better level of service (LOS). Drive 3 operates at LOS

F during the PM peak hour for the 2025 and 2030 background plus site scenarios. The highest volumes of the day are analyzed for the peak hour, so delays will be lower during all other hours of the day. Business 121 carries a large volume of traffic during the peak hours, and the anticipated LOS F reflects an expected delay for site traffic exiting the site onto a state highway and represents vehicles waiting for a gap in traffic. The queue length is only about one vehicle during the PM peak hour, and drivers may choose to utilize Drive 1 or Drive 2 to avoid these delays. Both Drive 1 and Drive 2 operate at LOS C or better during both peak hours

## 9. Site Access Evaluation

### (I) Auxiliary Lanes

No right-turn lanes are recommended for the development due to low right-turning volumes. **Table 4** shows the right-turn volumes and TxDOT threshold, respectively.

**Table 4 – Right-Turn Analysis**

Right-Turn Location	Projected Maximum Peak Hour Right-Turn Volume	TxDOT Threshold (Access Management Manual, Table 2-3)	Right-Turn Lane Recommended?
Drive 1 from SH 121 SB	23 vph	50 vph	No
Drive 2 from SH 121 SB	11 vph	50 vph	No
Drive 3 from BUS-121	43 vph	50 vph	No

### (II) Driveway sight distances

Driveway sight distance is adequate at each intersection. Drive 1 and Drive 3 are located along relatively straight and flat segments and have the 425-foot sight distance required by the TxDOT Access Management Manual (Table 2-3). Drive 3 is about 300 feet from the curve in the road upstream; however, with the neighboring parcel of land west of the proposed development being undeveloped 425 feet of sight distance is visible around the curve. It is recommended that all driveways be designed to provide adequate sight distance (i.e. clear sight with no obstructing objects, signs, landscaping, etc.).

### (III) Driveway Spacing

All driveways exceed the TxDOT 425-foot spacing criteria based on the 50 mph speed limit.

## 10. Summary

The site driveways are anticipated to adequately serve the Lovett Coppell development, and off-site improvements are not recommended.

The study area unsignalized intersection approaches are expected to operate within acceptable conditions during the AM peak hour. Drive 3 is expected to operate at LOS F during the PM peak hour for the 2025 and 2030 background plus site scenarios; however queues are about

one vehicle at each driveway. The highest volumes of the day are analyzed for the peak hour, so delays will be lower during all other hours of the day. BUS-121 has a relatively high traffic volume resulting in longer delays at Drive 3 due to waiting for the few gaps in traffic but Drive 1 and Drive 2 can handle the increase in traffic if vehicles are to reroute. Assigned traffic to Drive 3 is low and queue lengths are short; therefore, the amount of delay is manageable.

## **11. Certification Statement**

I, Jacob Halter, P.E., PTOE, hereby certify that the information provided in this report is complete and accurate to the best of my knowledge.



**EXHIBIT 1**

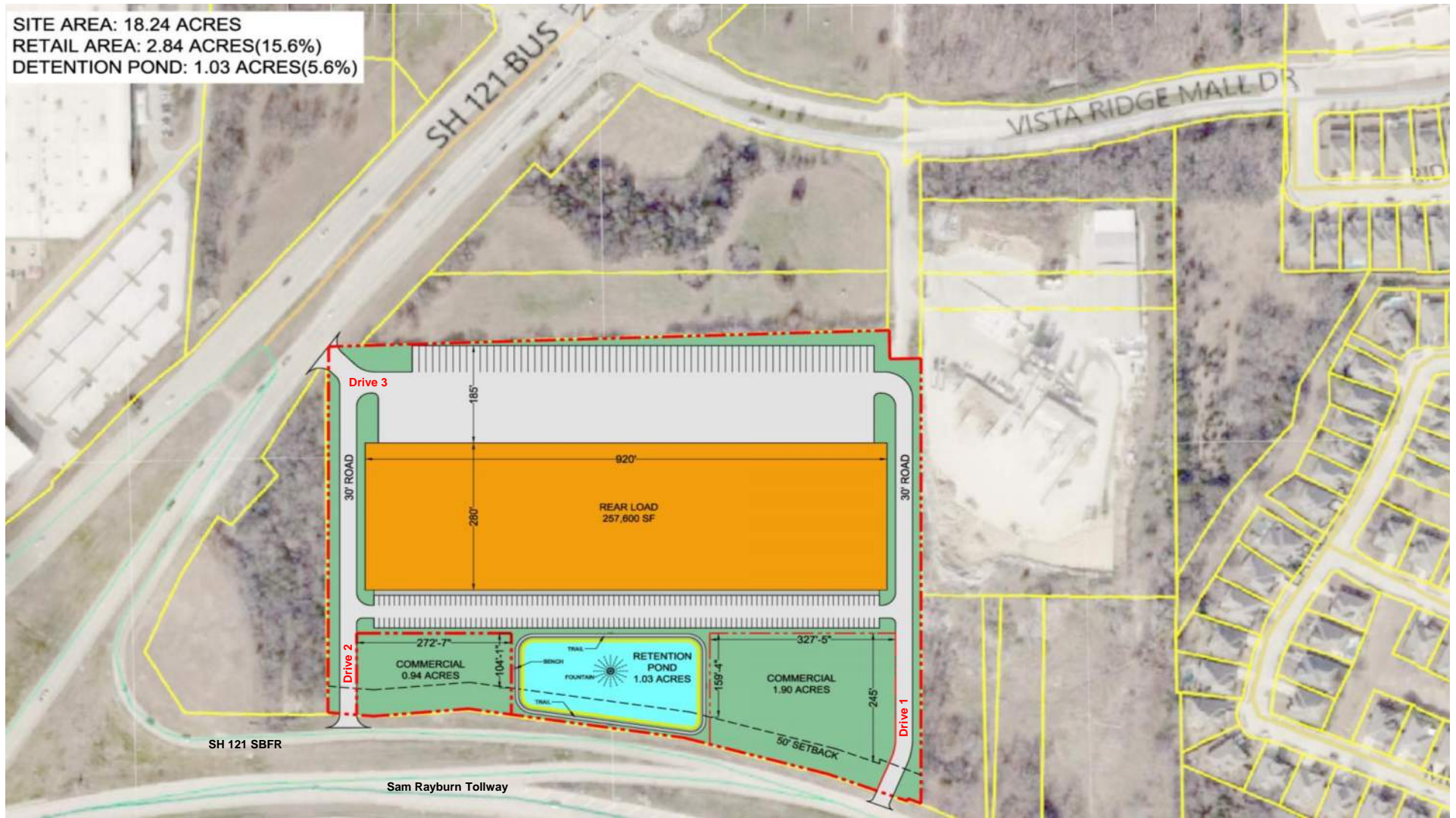
Vicinity Map  
Lovette Coppell - Coppell, Texas



North  
↑  
Not To Scale



SITE AREA: 18.24 ACRES  
RETAIL AREA: 2.84 ACRES(15.6%)  
DETENTION POND: 1.03 ACRES(5.6%)

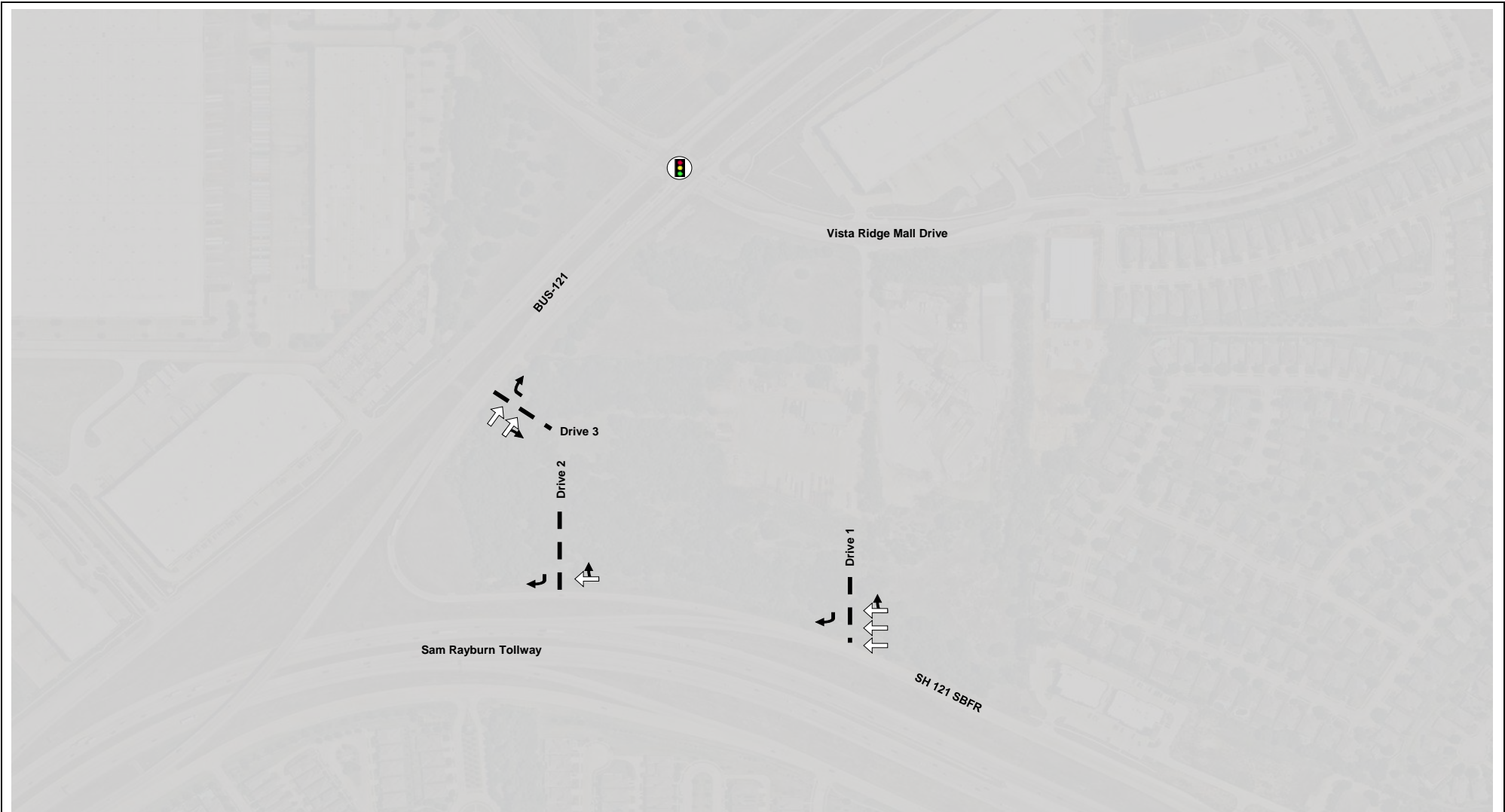


## EXHIBIT 2

Conceptual Site Plan  
Lovette Coppell - Coppell, Texas

**Kimley»Horn**

North  
↑  
Not To Scale



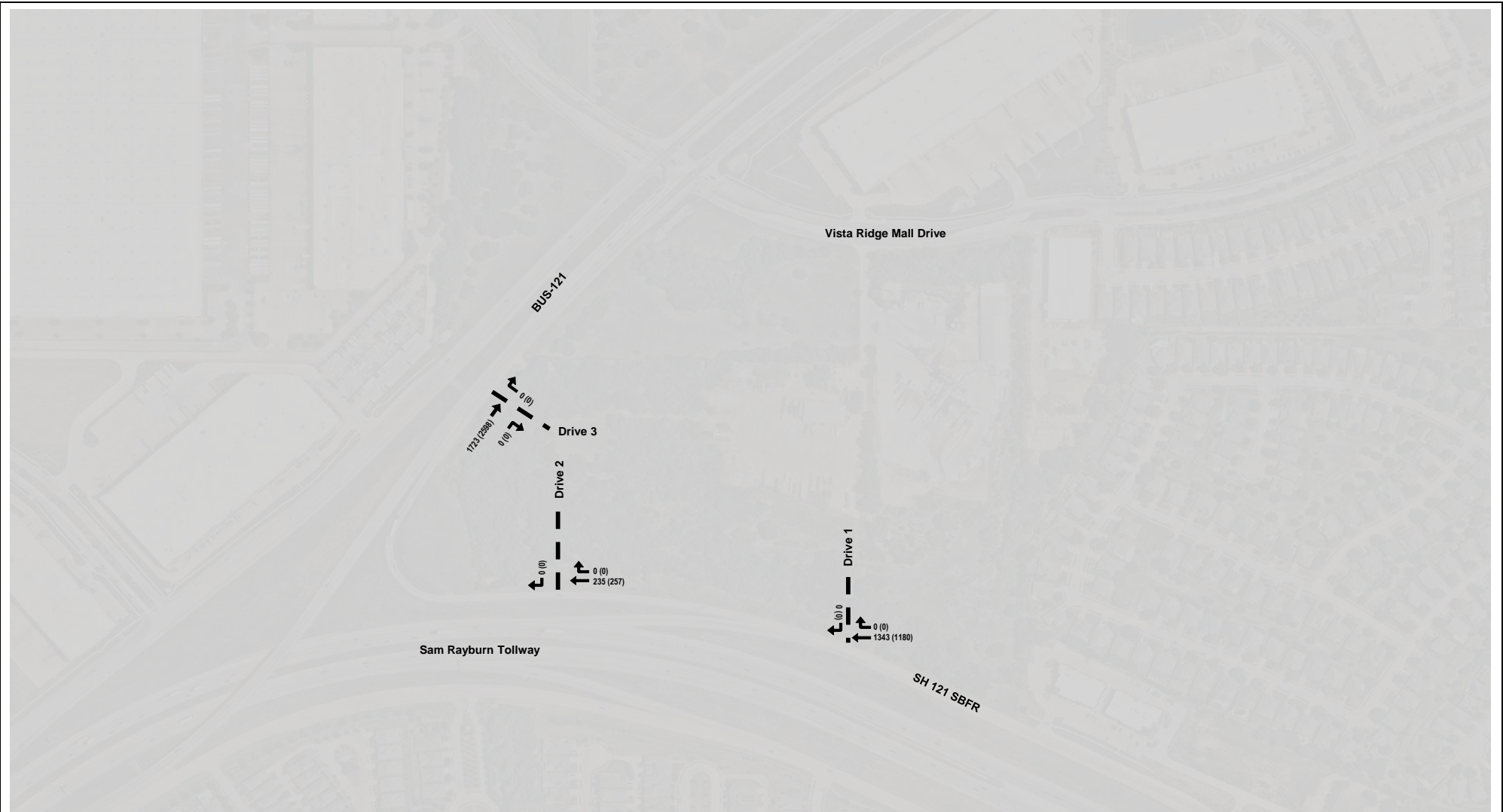
**EXHIBIT 3**

Lane Assignment and Intersection Control  
 Lovette Coppell - Coppell, Texas



LEGEND:	
	= Signalized Intersection
STOP	= Stop-Controlled Approach
	= Travel Lane
	= Turn Bay
	= Driveway Lanes or Off-Site Improvements
TW/LTL	= Two-Way Left Turn Lane

North  
  
 Not To Scale



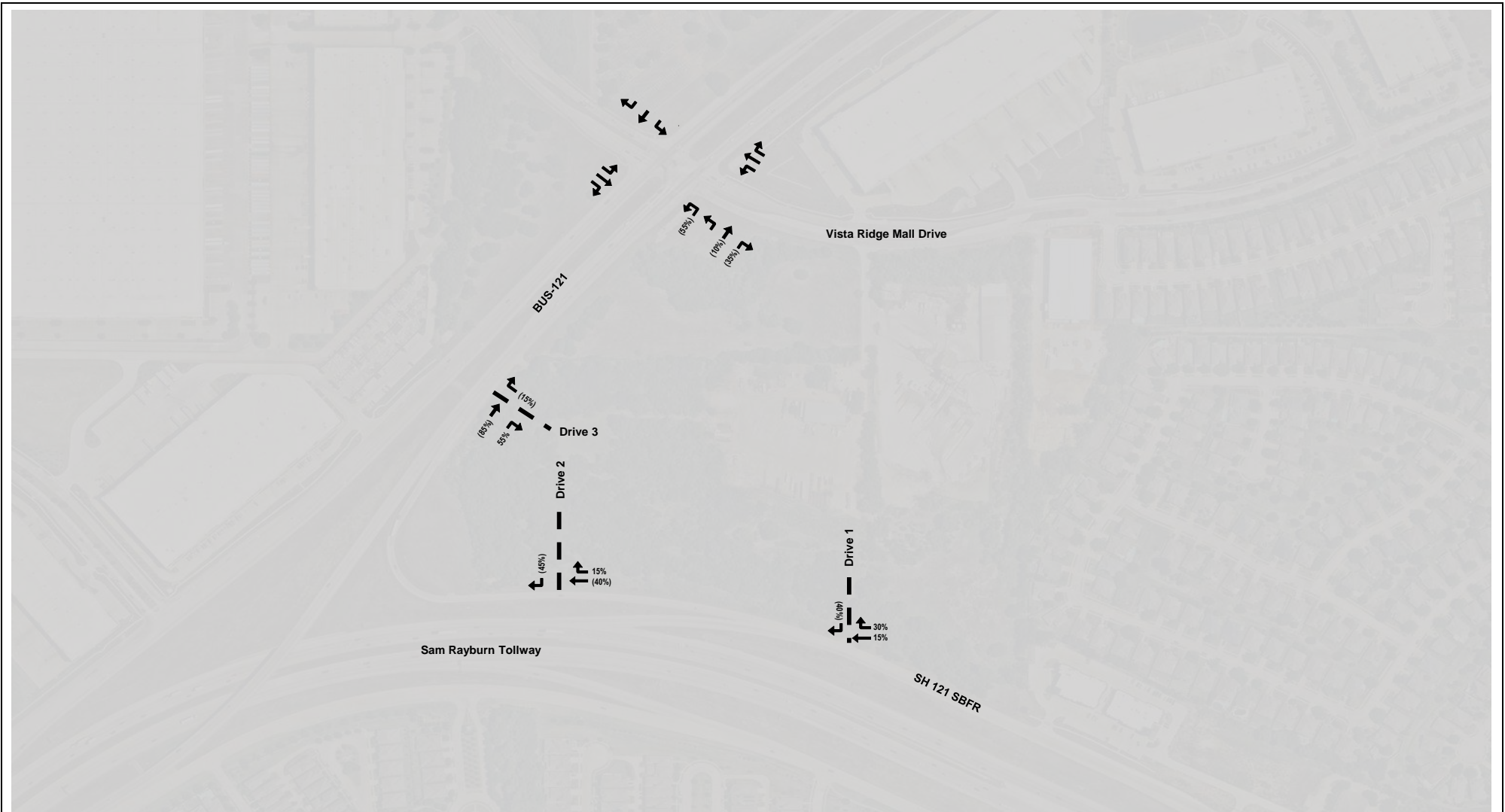
**EXHIBIT 4**

2023 Existing Traffic  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.





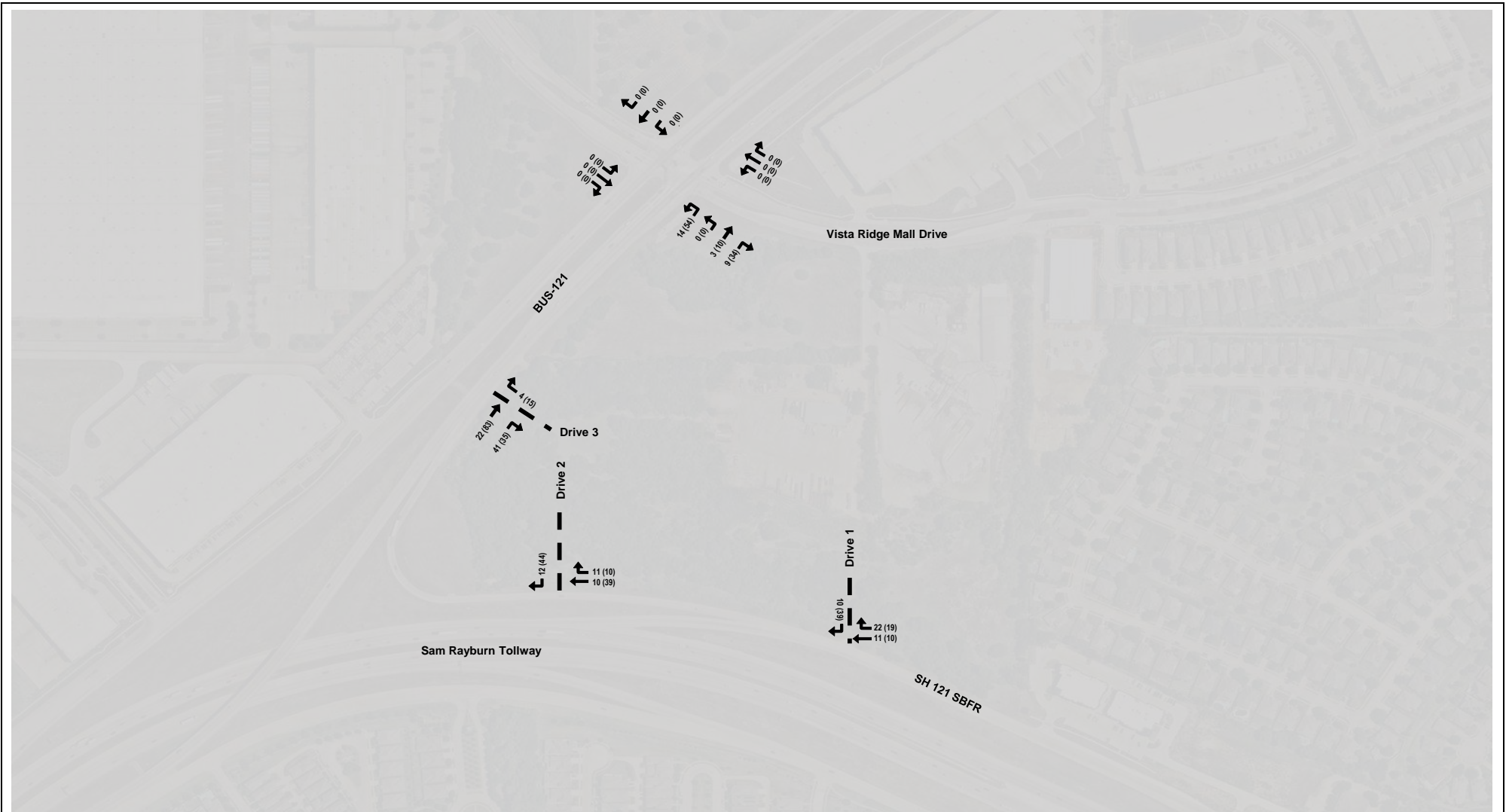
**EXHIBIT 5**

Trip Distribution & Assignment - Passenger Cars  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X% (Y%)  
 X% = Percentage of Inbound Site-Generated Traffic  
 (Y%) = Percentage of Outbound Site-Generated Traffic

North  
 ↑  
 Not To Scale



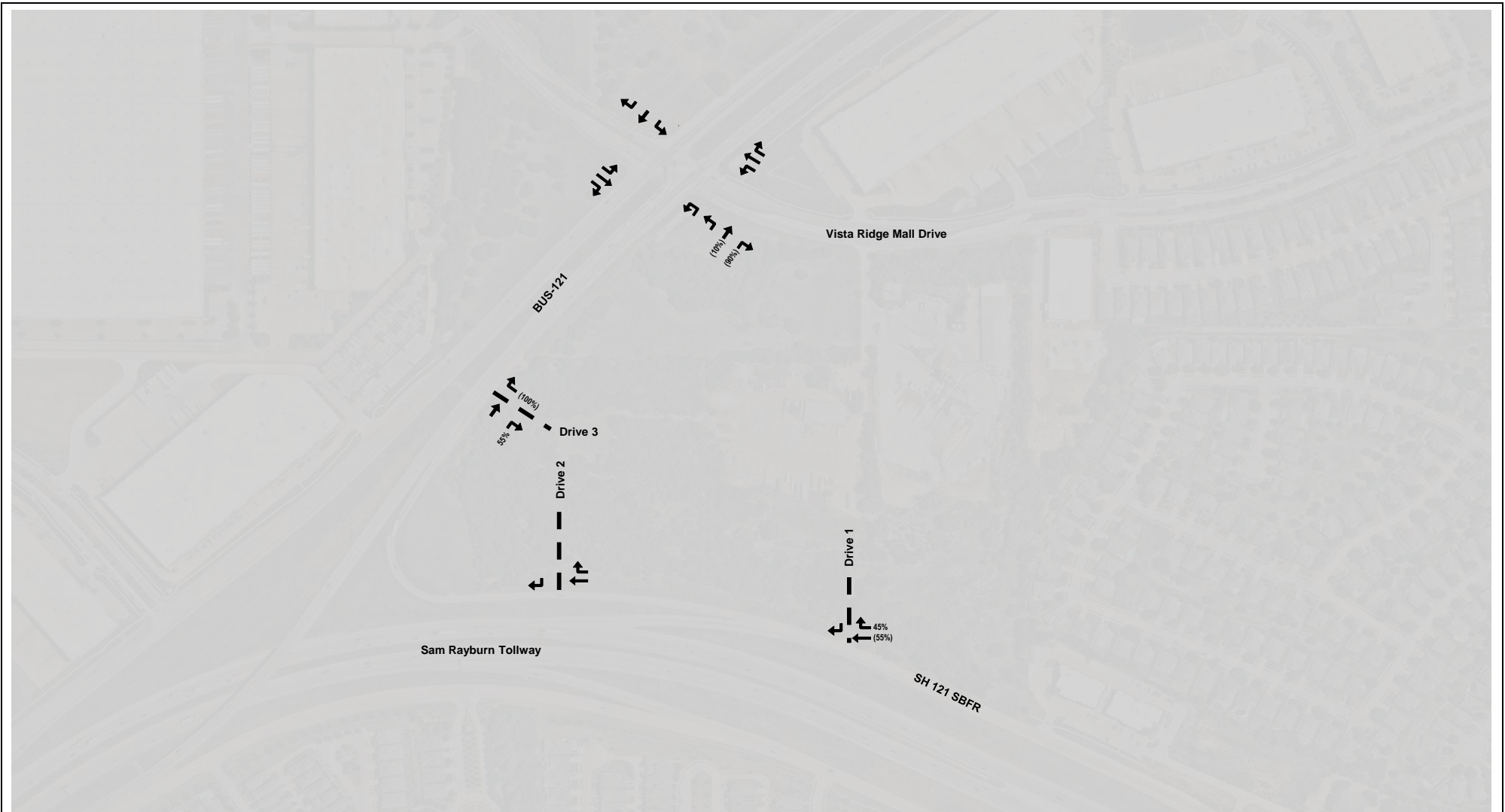
### EXHIBIT 6

Site-Generated Traffic Volumes - Passenger Cars  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.

North  
 ↑  
 Not To Scale



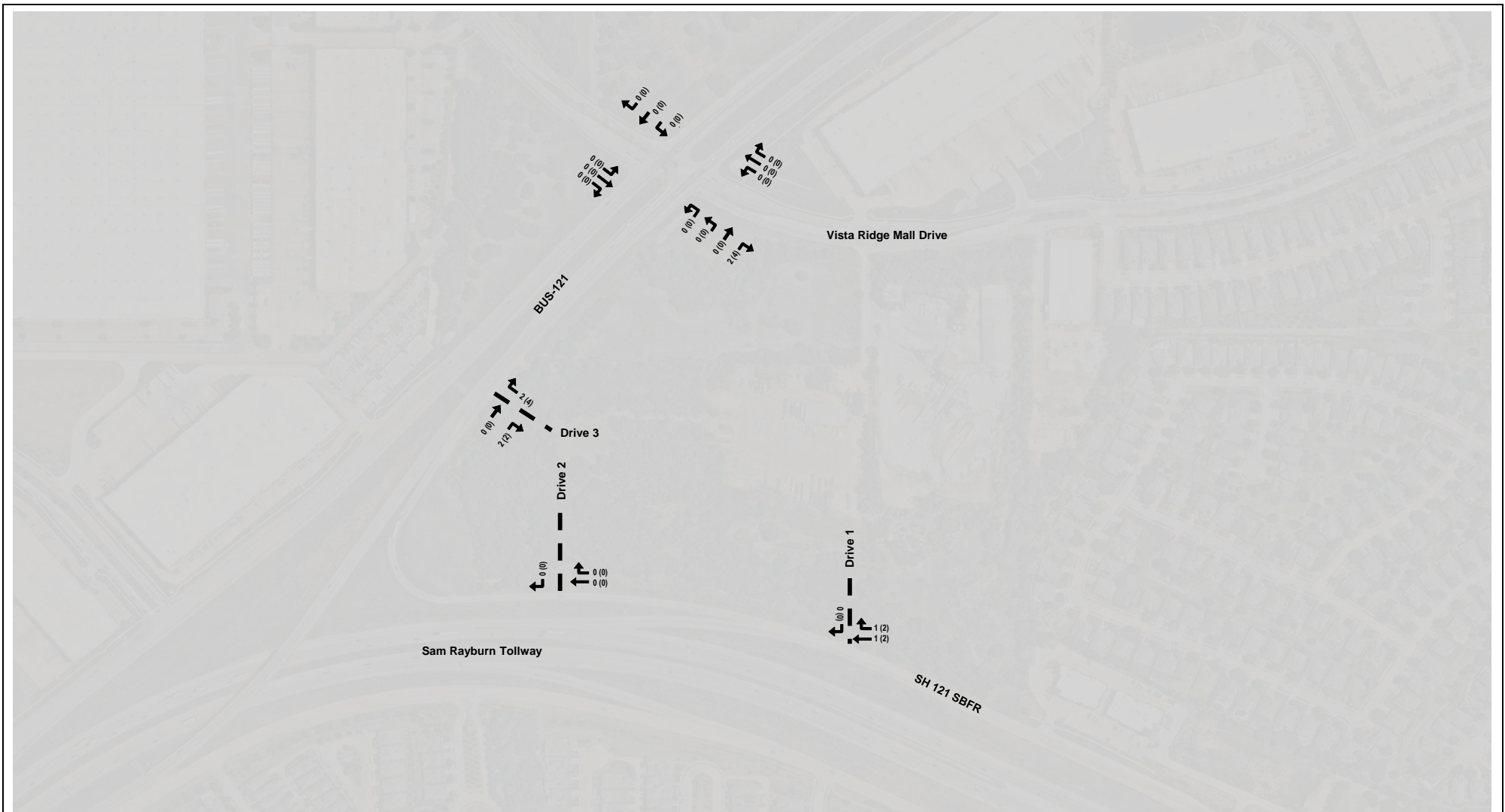
**EXHIBIT 7**

Trip Distribution & Assignment - Trucks  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X% (Y%)  
 X% = Percentage of Inbound Site-Generated Traffic  
 (Y%) = Percentage of Outbound Site-Generated Traffic

North  
 ↑  
 Not To Scale



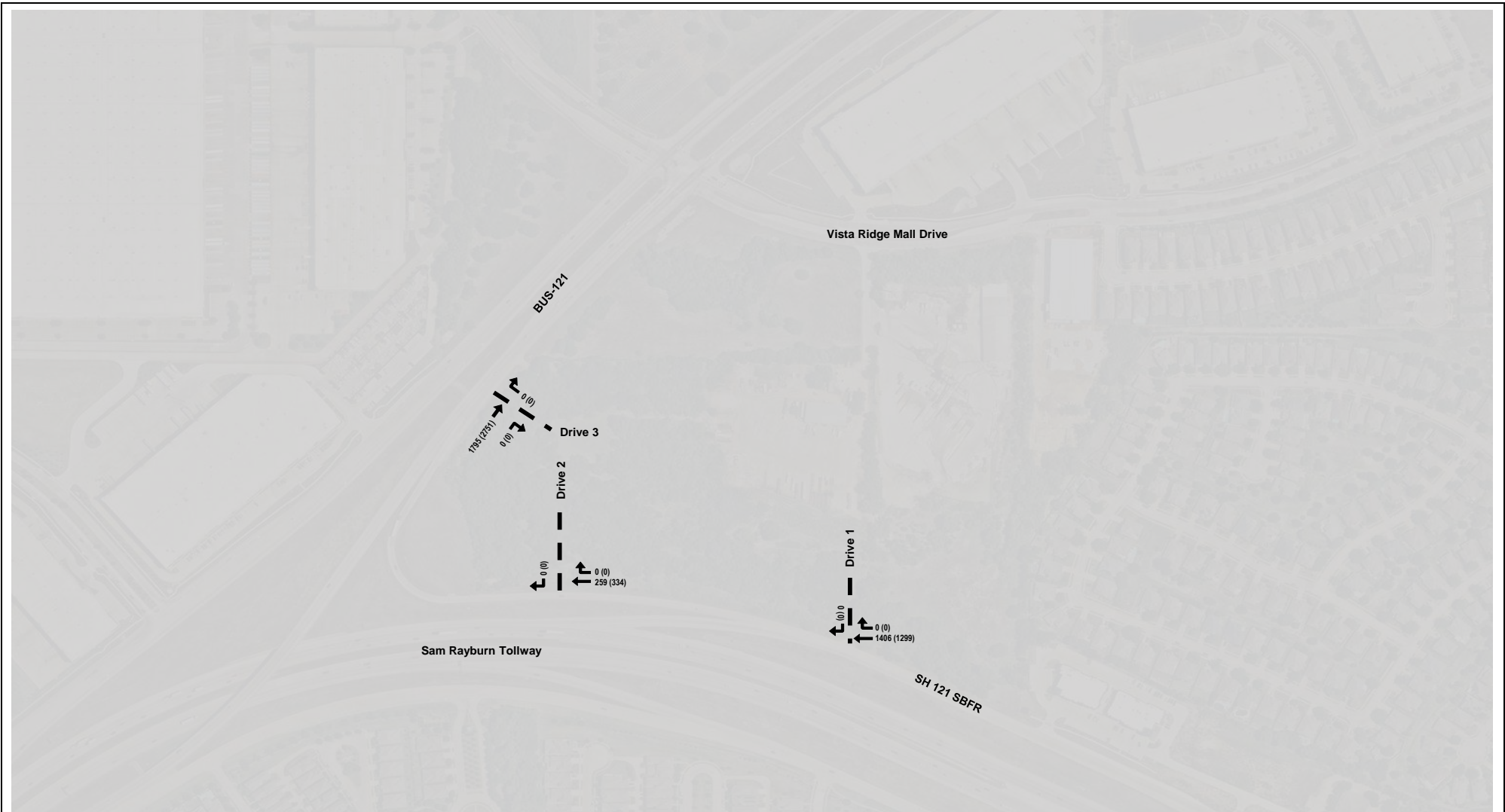
**EXHIBIT 8**

Site-Generated Traffic Volumes - Trucks  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.

North  
 ↑  
 Not To Scale



**EXHIBIT 9**

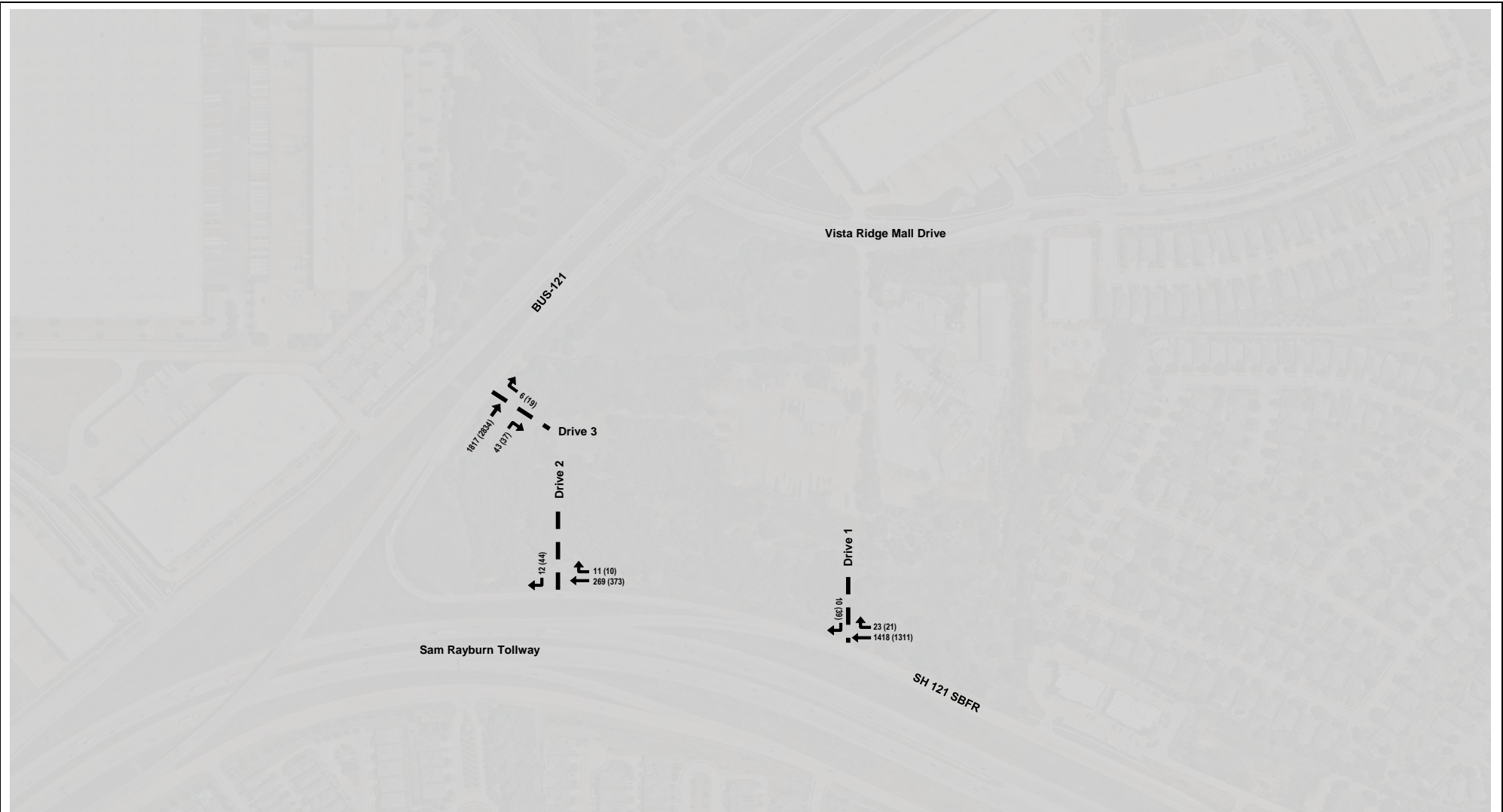
2025 Background Traffic Volumes  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.

North  
 ↑  
 Not To Scale





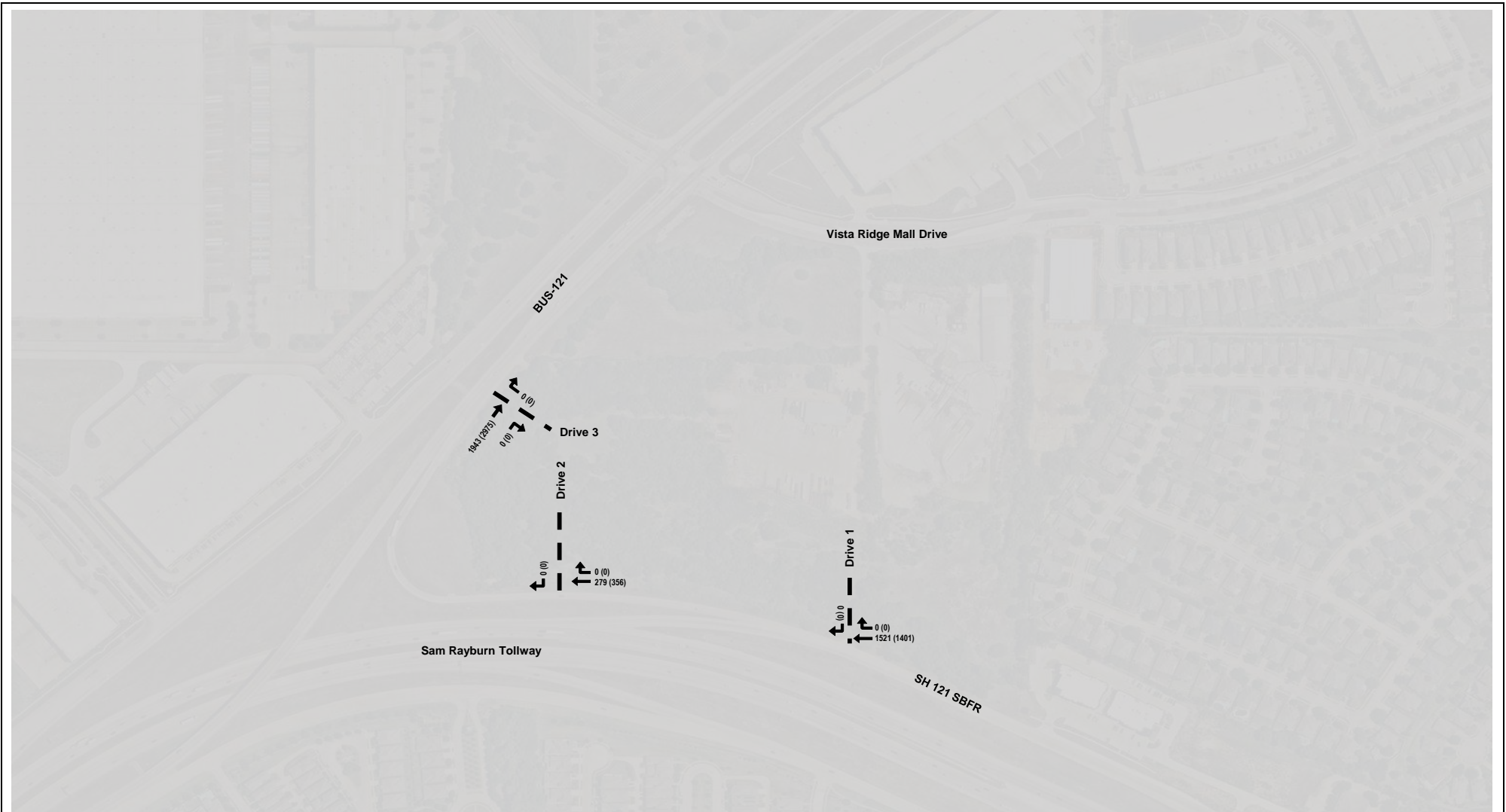
**EXHIBIT 10**

2025 Background Plus Site-Generated Traffic Volumes  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.





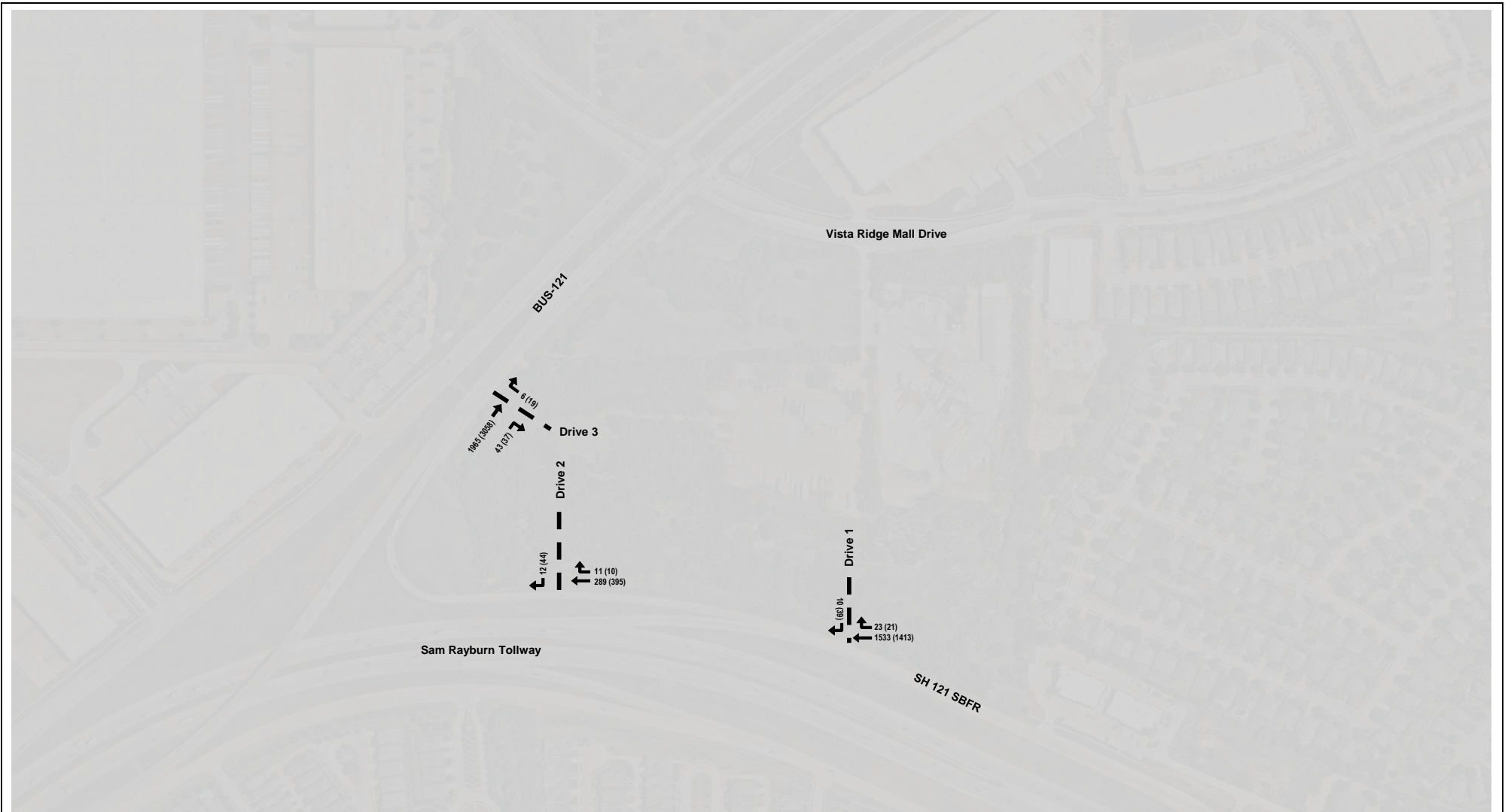
**EXHIBIT 11**

2030 Background Traffic Volumes  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.





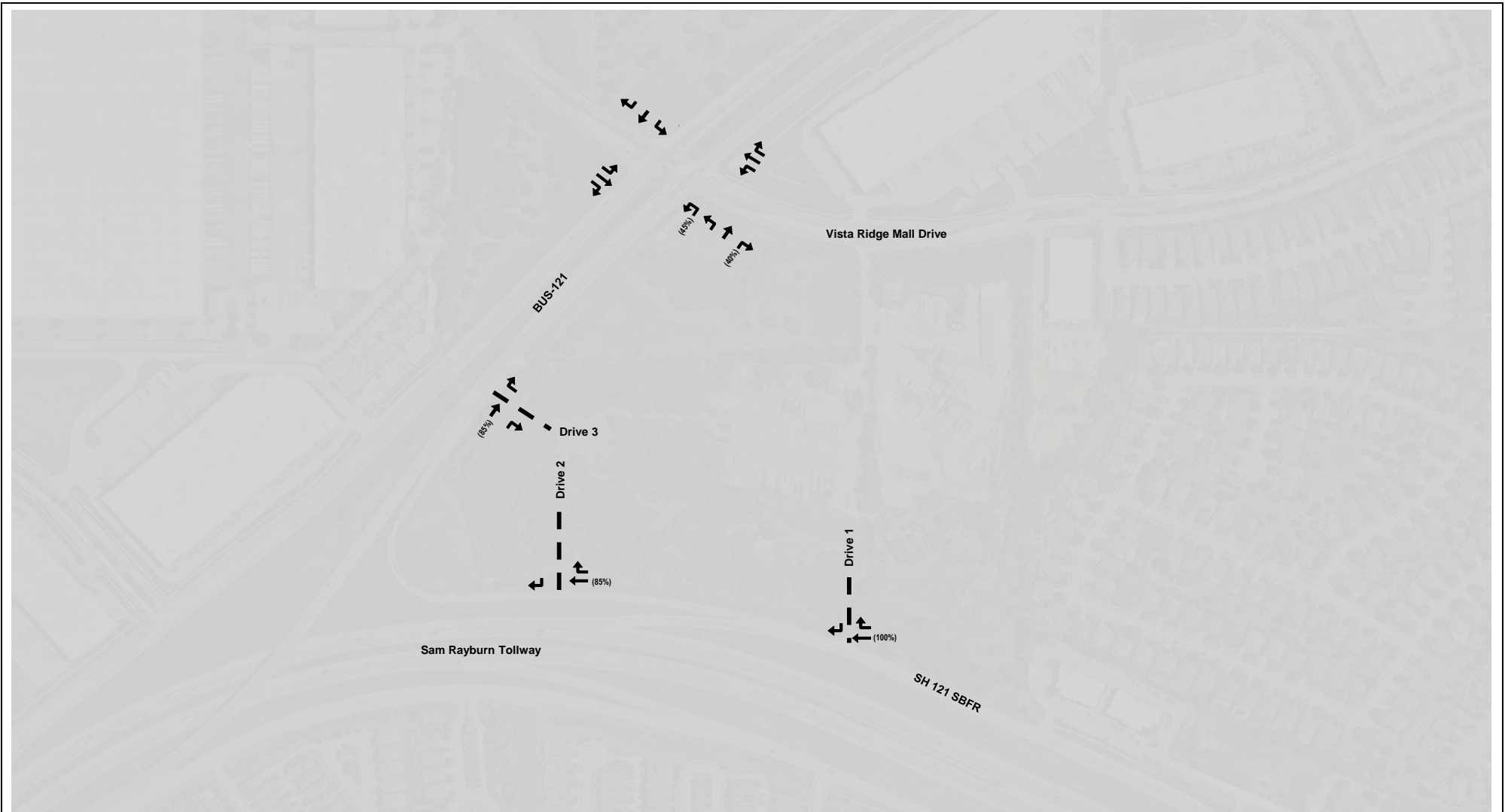
**EXHIBIT 12**

2030 Background Plus Site-Generated Traffic Volumes  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.





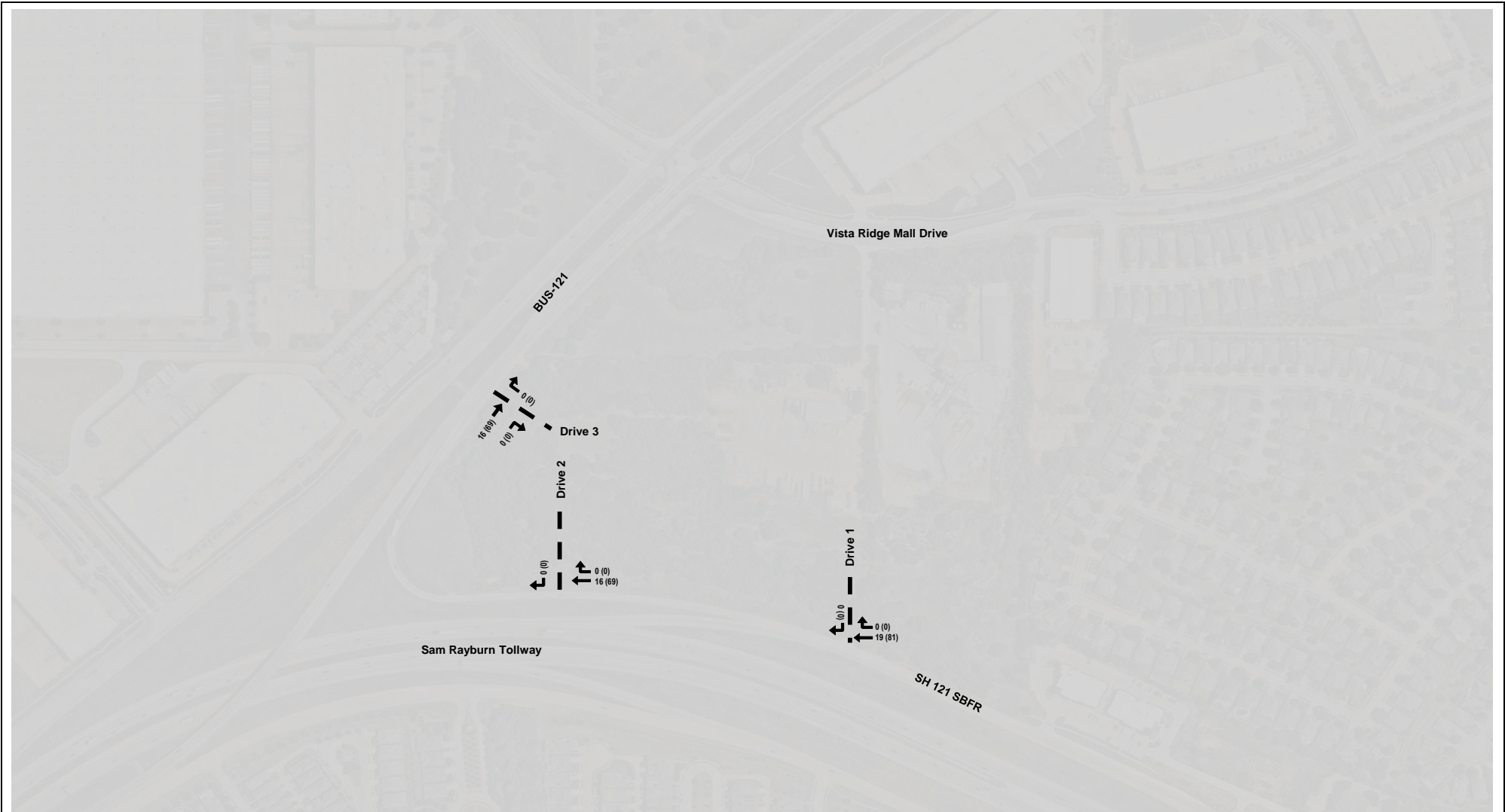
**EXHIBIT A1**

Trip Distribution and Traffic Assignment: Northwest Gateway Plaza  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X% (Y%)  
 X% = Percentage of Inbound Site-Generated Traffic  
 (Y%) = Percentage of Outbound Site-Generated Traffic

North  
 ↑  
 Not To Scale



**EXHIBIT A2**

Site-Generated Traffic Volumes: Northwest Gateway Plaza  
 Lovette Coppell - Coppell, Texas



**LEGEND:**  
 X (Y)  
 X = Weekday AM Peak Hour Turning Movements  
 Y = Weekday PM Peak Hour Turning Movements  
 Volumes may not sum from point to point due to rounding  
 and presence of smaller driveways not included in analysis.



Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑			↑
Traffic Vol, veh/h	0	0	1418	23	0	10
Future Vol, veh/h	0	0	1418	23	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	5	4	0	0
Mvmt Flow	0	0	1558	25	0	11

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 792
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.9
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 336
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 336
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	16.1
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	336
HCM Lane V/C Ratio	-	-	0.033
HCM Control Delay (s)	-	-	16.1
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↑
Traffic Vol, veh/h	0	0	269	11	0	12
Future Vol, veh/h	0	0	269	11	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	4	0	0	0
Mvmt Flow	0	0	332	14	0	15

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 339
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.2
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 708
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 708
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	10.2
HCM LOS		B

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	708
HCM Lane V/C Ratio	-	-	0.021
HCM Control Delay (s)	-	-	10.2
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

**Intersection**

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑			↑↑↑
Traffic Vol, veh/h	0	6	1817	43	0	0
Future Vol, veh/h	0	6	1817	43	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	33	4	4	0	0
Mvmt Flow	0	7	2019	48	0	0

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	-	1034	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.56	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.63	-	-	-
Pot Cap-1 Maneuver	0	182	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	182	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	25.5	0	0
HCM LOS	D		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	182
HCM Lane V/C Ratio	-	-	0.037
HCM Control Delay (s)	-	-	25.5
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑			↑
Traffic Vol, veh/h	0	0	1311	21	0	39
Future Vol, veh/h	0	0	1311	21	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	9	0	0
Mvmt Flow	0	0	1425	23	0	42

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 724
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.9
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 373
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 373
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	15.9
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	373
HCM Lane V/C Ratio	-	-	0.114
HCM Control Delay (s)	-	-	15.9
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.4

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↑
Traffic Vol, veh/h	0	0	373	10	0	44
Future Vol, veh/h	0	0	373	10	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	4	0	0	0
Mvmt Flow	0	0	419	11	0	49

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 425
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.2
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 634
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 634
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	11.2
HCM LOS		B

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	634
HCM Lane V/C Ratio	-	-	0.078
HCM Control Delay (s)	-	-	11.2
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.3



**Intersection**

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	19	2834	37	0	0
Future Vol, veh/h	0	19	2834	37	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	21	4	5	0	0
Mvmt Flow	0	21	3080	40	0	0

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	-	1560	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.32	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.51	-	-	-
Pot Cap-1 Maneuver	0	84	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	84	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	61.3	0	0
HCM LOS	F		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	84
HCM Lane V/C Ratio	-	-	0.246
HCM Control Delay (s)	-	-	61.3
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	0.9

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑			↑
Traffic Vol, veh/h	0	0	1533	23	0	10
Future Vol, veh/h	0	0	1533	23	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	5	4	0	0
Mvmt Flow	0	0	1685	25	0	11

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 855
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.9
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 306
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 306
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	17.2
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	306
HCM Lane V/C Ratio	-	-	0.036
HCM Control Delay (s)	-	-	17.2
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↑
Traffic Vol, veh/h	0	0	289	11	0	12
Future Vol, veh/h	0	0	289	11	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	4	0	0	0
Mvmt Flow	0	0	357	14	0	15

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 364
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.2
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 685
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 685
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	10.4
HCM LOS		B

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	685
HCM Lane V/C Ratio	-	-	0.022
HCM Control Delay (s)	-	-	10.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

**Intersection**

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑↑
Traffic Vol, veh/h	0	6	1965	43	0	0
Future Vol, veh/h	0	6	1965	43	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	33	4	4	0	0
Mvmt Flow	0	7	2183	48	0	0

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	- 1116	0	0	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	- 7.56	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	- 3.63	-	-	-	-
Pot Cap-1 Maneuver	0	159	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	- 159	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	28.6	0	0
HCM LOS	D		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 159	-
HCM Lane V/C Ratio	-	- 0.042	-
HCM Control Delay (s)	-	- 28.6	-
HCM Lane LOS	-	- D	-
HCM 95th %tile Q(veh)	-	- 0.1	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑			↑
Traffic Vol, veh/h	0	0	1413	21	0	39
Future Vol, veh/h	0	0	1413	21	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	9	0	0
Mvmt Flow	0	0	1536	23	0	42

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 780
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.9
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 342
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 342
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	17
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	342
HCM Lane V/C Ratio	-	-	0.124
HCM Control Delay (s)	-	-	17
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.4

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↑
Traffic Vol, veh/h	0	0	395	10	0	44
Future Vol, veh/h	0	0	395	10	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	4	0	0	0
Mvmt Flow	0	0	444	11	0	49

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 450
Stage 1	-	- - -
Stage 2	-	- - -
Critical Hdwy	-	- - 6.2
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- - -
Follow-up Hdwy	-	- - 3.3
Pot Cap-1 Maneuver	-	- 0 613
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	- - -
Mov Cap-1 Maneuver	-	- - 613
Mov Cap-2 Maneuver	-	- - -
Stage 1	-	- - -
Stage 2	-	- - -

Approach	WB	SB
HCM Control Delay, s	0	11.4
HCM LOS		B

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	613
HCM Lane V/C Ratio	-	-	0.081
HCM Control Delay (s)	-	-	11.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.3

**Intersection**

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	19	3058	37	0	0
Future Vol, veh/h	0	19	3058	37	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	21	4	5	0	0
Mvmt Flow	0	21	3324	40	0	0

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	-	1682	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.32	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.51	-	-	-
Pot Cap-1 Maneuver	0	68	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	68	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

**Approach**

	WB	NB	SB
HCM Control Delay, s	79.5	0	0
HCM LOS	F		

**Minor Lane/Major Mvmt**

	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	68
HCM Lane V/C Ratio	-	-	0.304
HCM Control Delay (s)	-	-	79.5
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	1.1

**VOLUME**

SR 121 W/O Denton Tap Rd Before Tollway Entrance Ramp

Day: Tuesday  
Date: 6/27/2023

City: Coppell  
Project #: TX23\_470112\_001

DAILY TOTALS						NB	SB							Total
						0	0							13,679
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
0:00				19	19	12:00				176	176			
0:15				18	18	12:15				211	211			
0:30				7	7	12:30				215	215			
0:45				8	8	12:45				209	811	209 811		
1:00				13	13	13:00				180	180			
1:15				13	13	13:15				190	190			
1:30				13	13	13:30				196	196			
1:45				13	13	13:45				155	721	155 721		
2:00				9	9	14:00				208	208			
2:15				12	12	14:15				184	184			
2:30				17	17	14:30				214	214			
2:45				13	13	14:45				189	795	189 795		
3:00				5	5	15:00				202	202			
3:15				15	15	15:15				179	179			
3:30				20	20	15:30				189	189			
3:45				27	27	15:45				169	739	169 739		
4:00				28	28	16:00				220	220			
4:15				27	27	16:15				214	214			
4:30				40	40	16:30				212	212			
4:45				42	42	16:45				222	868	222 868		
5:00				57	57	17:00				274	274			
5:15				68	68	17:15				302	302			
5:30				123	123	17:30				297	297			
5:45				121	121	17:45				307	1180	307 1180		
6:00				112	112	18:00				260	260			
6:15				154	154	18:15				213	213			
6:30				213	213	18:30				210	210			
6:45				224	224	18:45				170	853	170 853		
7:00				236	236	19:00				169	169			
7:15				308	308	19:15				153	153			
7:30				370	370	19:30				156	156			
7:45				360	360	19:45				135	613	135 613		
8:00				294	294	20:00				133	133			
8:15				319	319	20:15				113	113			
8:30				302	302	20:30				116	116			
8:45				325	325	20:45				105	467	105 467		
9:00				232	232	21:00				140	140			
9:15				146	146	21:15				85	85			
9:30				162	162	21:30				114	114			
9:45				147	147	21:45				62	401	62 401		
10:00				117	117	22:00				78	78			
10:15				162	162	22:15				81	81			
10:30				154	154	22:30				66	66			
10:45				128	128	22:45				47	272	47 272		
11:00				152	152	23:00				52	52			
11:15				151	151	23:15				35	35			
11:30				160	160	23:30				31	31			
11:45				164	164	23:45				21	139	21 139		
<b>TOTALS</b>				<b>5820</b>	<b>5820</b>	<b>TOTALS</b>				<b>7859</b>	<b>7859</b>			
<b>SPLIT %</b>				<b>100.0%</b>	<b>42.5%</b>	<b>SPLIT %</b>				<b>100.0%</b>	<b>57.5%</b>			

DAILY TOTALS						NB	SB							Total
						0	0							13,679

AM Peak Hour				7:30	7:30	PM Peak Hour				17:00	17:00	
AM Pk Volume				1343	1343	PM Pk Volume				1180	1180	
Pk Hr Factor				0.907	0.907	Pk Hr Factor				0.961	0.961	
7 - 9 Volume	0	0	0	2514	2514	4 - 6 Volume	0	0	0	2048	2048	
7 - 9 Peak Hour				7:30	7:30	4 - 6 Peak Hour				17:00	17:00	
7 - 9 Pk Volume	0	0	0	1343	1343	4 - 6 Pk Volume	0	0	0	1180	1180	
Pk Hr Factor	0.000	0.000	0.000	0.907	0.907	Pk Hr Factor	0.000	0.000	0.000	0.961	0.961	

**VOLUME**

SR 121 Bet. Tollway Entrance Ramp & SR 121 Merge

Day: Tuesday  
Date: 6/27/2023

City: Coppell  
Project #: TX23\_470112\_002

DAILY TOTALS						NB	SB	EB	WB	Total	
						0	0	0	2,491	2,491	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
0:00				5	5	12:00				34	34
0:15				3	3	12:15				37	37
0:30				2	2	12:30				36	36
0:45				1	1	12:45				35	35
				11	11					142	142
1:00				4	4	13:00				38	38
1:15				5	5	13:15				41	41
1:30				2	2	13:30				36	36
1:45				2	2	13:45				30	30
				13	13					145	145
2:00				3	3	14:00				43	43
2:15				2	2	14:15				43	43
2:30				4	4	14:30				39	39
2:45				2	2	14:45				41	41
				11	11					166	166
3:00				1	1	15:00				36	36
3:15				2	2	15:15				24	24
3:30				1	1	15:30				33	33
3:45				2	2	15:45				29	29
				6	6					122	122
4:00				3	3	16:00				29	29
4:15				2	2	16:15				49	49
4:30				5	5	16:30				43	43
4:45				3	3	16:45				42	42
				13	13					163	163
5:00				6	6	17:00				52	52
5:15				6	6	17:15				64	64
5:30				10	10	17:30				67	67
5:45				17	17	17:45				74	74
				39	39					257	257
6:00				16	16	18:00				44	44
6:15				21	21	18:15				34	34
6:30				20	20	18:30				39	39
6:45				23	23	18:45				32	32
				80	80					149	149
7:00				30	30	19:00				24	24
7:15				38	38	19:15				24	24
7:30				67	67	19:30				29	29
7:45				74	74	19:45				28	28
				209	209					105	105
8:00				46	46	20:00				23	23
8:15				48	48	20:15				32	32
8:30				48	48	20:30				24	24
8:45				52	52	20:45				21	21
				194	194					100	100
9:00				37	37	21:00				28	28
9:15				31	31	21:15				23	23
9:30				36	36	21:30				27	27
9:45				30	30	21:45				10	10
				134	134					88	88
10:00				20	20	22:00				16	16
10:15				32	32	22:15				14	14
10:30				28	28	22:30				20	20
10:45				21	21	22:45				6	6
				101	101					56	56
11:00				39	39	23:00				13	13
11:15				39	39	23:15				12	12
11:30				33	33	23:30				7	7
11:45				38	38	23:45				6	6
				149	149					38	38
<b>TOTALS</b>				<b>960</b>	<b>960</b>	<b>TOTALS</b>				<b>1531</b>	<b>1531</b>
<b>SPLIT %</b>				<b>100.0%</b>	<b>38.5%</b>	<b>SPLIT %</b>				<b>100.0%</b>	<b>61.5%</b>

DAILY TOTALS						NB	SB	EB	WB	Total	
						0	0	0	2,491	2,491	
AM Peak Hour				7:30	7:30	PM Peak Hour				17:00	17:00
AM Pk Volume				235	235	PM Pk Volume				257	257
Pk Hr Factor				0.794	0.794	Pk Hr Factor				0.868	0.868
7 - 9 Volume	0	0	0	403	403	4 - 6 Volume	0	0	0	420	420
7 - 9 Peak Hour				7:30	7:30	4 - 6 Peak Hour				17:00	17:00
7 - 9 Pk Volume	0	0	0	235	235	4 - 6 Pk Volume	0	0	0	257	257
Pk Hr Factor	0.000	0.000	0.000	0.794	0.794	Pk Hr Factor	0.000	0.000	0.000	0.868	0.868

# SR 121 & Edmonds Ln/W Vista Ridge Mall Dr

## Peak Hour Turning Movement Count

ID: 23-470113-001  
City: Lewisville

Day: Tuesday  
Date: 6/27/2023

