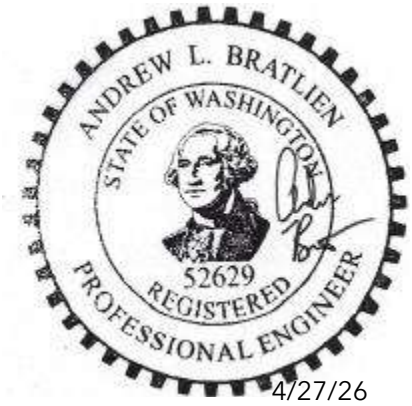
Date: April 27, 2026

To: Michael Bateman, City of Poulsbo

From: Andrew L. Bratlien, PE, PTOE
Heath & Associates

Subject: Chinook Mixed-Use Development
Trip Generation Analysis



This memorandum provides project information and trip generation analysis associated with the Chinook Mixed-Use development in Poulsbo. This analysis documents the project trip generation impacts relative to the Poulsbo Place Master Plan.[1]

1. Project Description

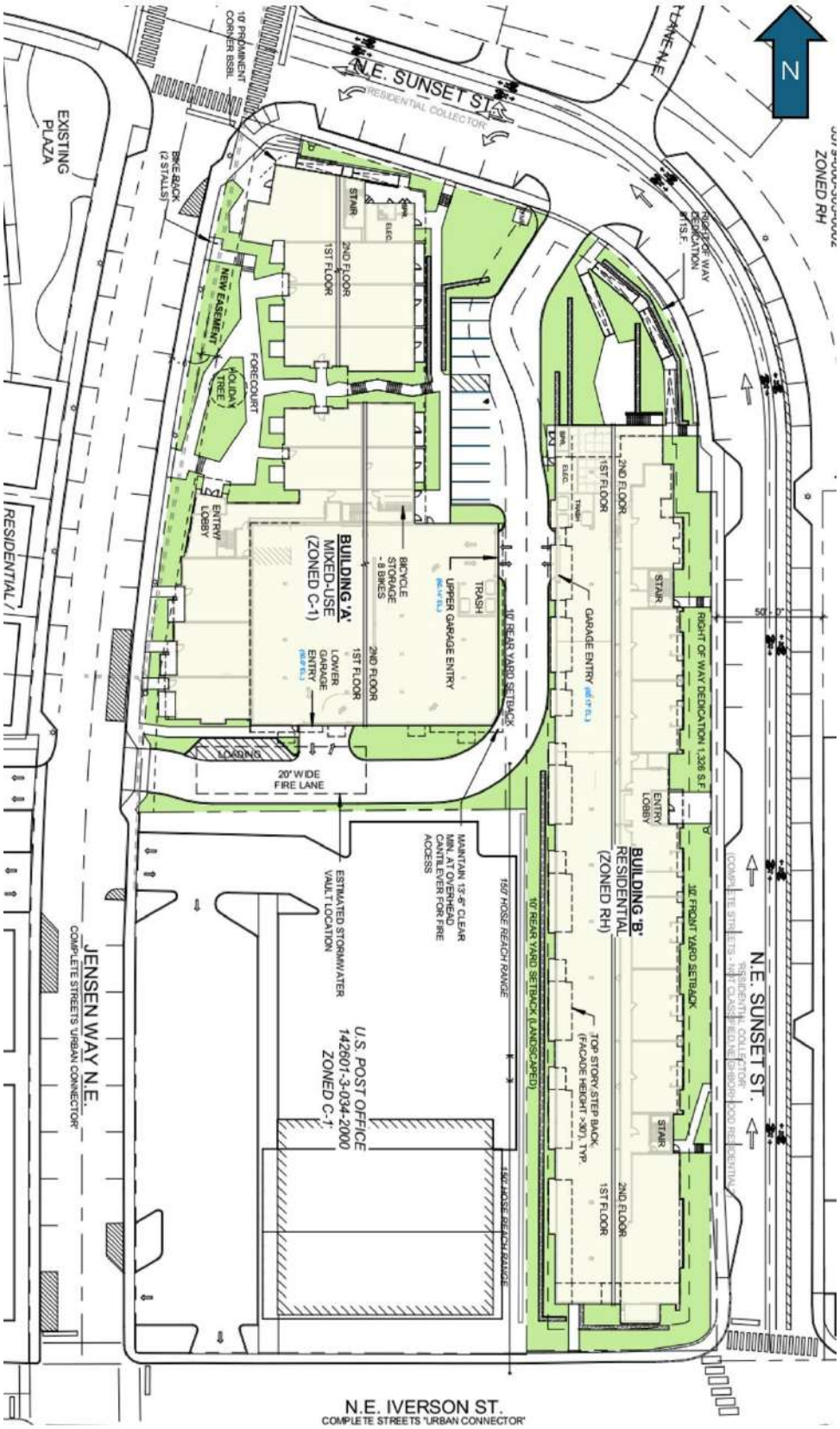
- **Proposal:** The project consists of two buildings containing the following uses:
  - Building A – Four-story mixed-use with 40 dwelling units and 1,377 square foot (sf) retail space
  - Building B – Four-story multifamily residential with 44 dwelling units
- **Location**
  - Bordered by NE Sunset Street, Jensen Way NE, and NE Iverson Street
  - Two parcels (142601-3-138-2007, -2008) totaling 2.30 acres
  - The project constitutes Division 8 of the Poulsbo Place Development.
- **Site Access:**
  - Site access is proposed via two driveways:
    - NE Sunset Street opposite Scooter Lane NE (full access)
    - Jensen Way NE opposite existing driveway (full access)
  - An internal circulating roadway will connect the two driveways, providing parking lot and parking garage access as well as emergency vehicle and loading access to both buildings.

A vicinity map is provided in **Figure 1** with the subject site outlined in blue. A conceptual site plan is presented in **Figure 2**.

[1] Gibson Traffic Consultants, Traffic Impact Analysis: Poulsbo Place Development, July 1995

Figure 1: Vicinity Map

Figure 2: Conceptual Site Plan



2. Trip Generation Analysis

2.1 Project Trip Generation

Project trip generation forecasts were calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual 12th Edition*. Trips associated with the proposed residential component are consistent with ITE Land Use Code (LUC) 221 "Multifamily Housing (Mid-Rise)," while trips associated with the proposed retail use are consistent with ITE LUC 822 "Strip Retail Plaza (<40 ksf)" Trip generation forecasts incorporated the impact of internal capture and pass-by trip adjustments, as summarized below:

Trip Adjustments – Internal Capture: Internal capture occurs when a traveler visits multiple destinations within a site during a single trip. For example, an apartment resident may walk to the on-site retail use. Internal trips were calculated using the ITE-recommended NHCRP 8-51 Internal Trip Capture Estimation Tool, which forecast no internal capture in the AM peak hour and a 15 percent internal capture rate in the PM peak hour. Daily internal capture trips were calculated as the average of AM and PM peak hour internal capture rates (7.5 percent).

Trip Adjustments – Pass-By Trips: Pass-by trips refer to vehicle trips that are already traveling along the adjacent roadways and choose to enter a site as an intermediate stop. These do not add to traffic volume on the surrounding street network but do contribute to driveway volumes. Pass-by trip adjustments were calculated using ITE *Trip Generation Manual* pass-by data, which includes a 40 percent average pass-by rate for the retail use (LUC 822).

The project trip generation forecast is summarized in **Table 1**. Detailed trip generation calculations are provided in the appendix.

Table 1: Project Trip Generation

Land Use	Units	Trip Type	AWDT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Multifamily Mid-Rise Housing LUC 221	84 DU	Total Trips	375	6	22	28	21	12	33
		Less Internal	-28	0	0	0	-3	-2	-5
		Less Pass-By	0	0	0	0	0	0	0
		Primary Trips	342	6	22	28	18	10	28
Strip Retail LUC 822	1,377 sf	Total Trips	75	3	2	5	10	10	20
		Less Internal	-6	0	0	0	-1	-2	-3
		Less Pass-By	-28	-1	-1	-2	-4	-3	-7
		Primary Trips	41	2	1	3	5	5	10
Total Trips by Type		Total Trips	450	9	24	33	31	22	53
		Less Internal	-34	0	0	0	-4	-4	-8
		Less Pass-By	-28	-1	-1	-2	-4	-3	-7
		Primary Trips	**388**	**8**	**23**	**31**	**23**	**15**	**38**

The project is anticipated to generate 388 weekday daily primary trips, including 31 AM peak hour primary trips (8 in; 23 out) and 38 PM peak hour primary trips (23 in; 15 out).

2.2 Poulsbo Place Master Plan Trip Capacity

Chinook Mixed-Use represents a portion of development permitted under the Poulsbo Place Master Plan, a mixed-use development originally granted SEPA approval based on technical analysis documented in the July 1995 Gibson Traffic Consultants report *Traffic Impact Analysis: Poulsbo Place Development*. The 1995 TIA identified a total of 3,505 new weekday daily trips and 402 new weekday PM peak hour trips for the Master Plan area.

The subject site represents Division 8 of the approved Master Plan. An April 28, 2015 memorandum by Gibson Traffic Consultants titled "Poulsbo Place II Assisted Living, GTC #15-079" evaluated trip generation associated with development completed in Divisions 1-7, which includes 300 single-family dwelling units and 10,000 square feet of commercial floor area. Completed traffic impact analyses for these developments are not available; therefore, trips generated associated with Divisions 1-7 were estimated based on ITE *Trip Generation Manual 12th Edition* data and methods.

Table 2 summarizes the approved Poulsbo Place Master Plan trip generation forecast as well as trip generation estimates associated with completed development in Divisions 1-7, based on ITE *Trip Generation Manual 12th Edition* data. Trip generation estimates for Divisions 1-7 retail uses utilized ITE fitted-curve equations and incorporated 40 percent pass-by reductions, reflecting a similar methodology applied in the 2015 analysis while utilizing current ITE trip generation data.

Table 2: Project Trip Generation

Master Plan Area	Land Use (ITE LUC)	Units	AWDT	PM Peak Hour		
				In	Out	Total
Divisions 1-7[1]	Single-Family Housing (210)	300 DU	2,686	164	100	264
	Strip Retail (822)[2]	10,000 sf	391	23	23	46
Division 8 (Proposed)	Chinook Mixed-Use[3]	84 DU; 1,377 sf	388	23	15	38
	Divisions 1-8 Total		3,465	210	138	348
	Master Plan Capacity Reservation[4]		3,505	182	220	402
	Remaining Trip Capacity		**40**	**-28**	**82**	**54**

[1]Divisions 1-8 land use per "Poulsbo Place Assisted Living, GTC #15-079" (GTC 2015)
[2]Divisions 1-7 retail calculated based on ITE fitted-curve equations with 40% pass-by rate per 2025 ITE guidance
[3]Chinook Mixed-Use primary trips per Table 1
[4]Poulsbo Place Master Plan trip generation per *Poulsbo Place Development Traffic Impact Analysis* (GTC 1995)

The existing and proposed Poulsbo Place Master Plan Area land uses, including the Chinook Mixed-Use development, are anticipated to generate 40 fewer weekday daily trips and 54 fewer PM peak hour trips than the Poulsbo Place Master Plan 1995 TIA forecast.

3. Sight Distance Analysis

The project proposes two access connections: one new driveway extending southwest from NE Sunset Street opposite Scoter Lane NE and one new driveway extending east from Jensen Way NE opposite an existing driveway. Per City of Poulsbo Street Standards – Section 2, sight driveways shall satisfy AASHTO sight distance standards.

3.1 Jensen Way NE Driveway

Poulsbo Municipal Code (PMC) 10.08.020 defines a 20-mph speed limit on Jensen Way NE in the site vicinity. Assuming a 25-mph design speed, AASHTO standards define a minimum 280-foot Entering Sight Distance (ESD) in each direction of the site driveway.

A preliminary review indicated sight lines looking north (right) from the site driveway extend to NE Sunset Street, measuring approximately 310 feet. Sight lines looking south (left) of the site driveway extend to NE Iverson Street, approximately 280 feet south. Minimum AASHTO sight distance standards are satisfied.

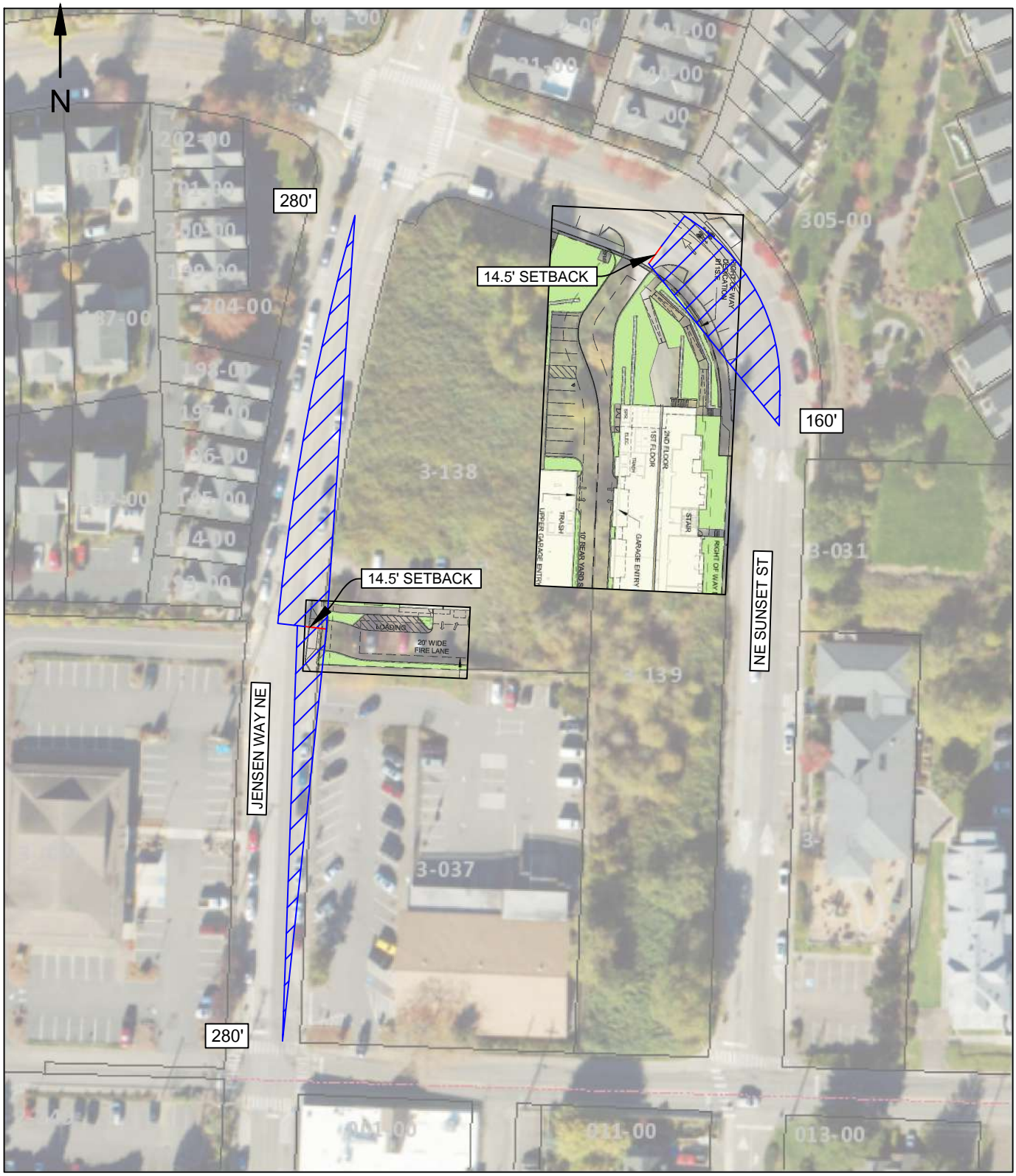
Jensen Way includes street parking along the site frontage in the driveway vicinity. Street parking is typical for urban complete street corridors but may constrain sight distance. The project should coordinate with City of Poulsbo to confirm the potential need for street parking restrictions in the driveway vicinity.

3.2 NE Sunset Street Driveway

NE Sunset Street includes speed bumps, curb bulb-outs, and 15-mph advisory speed signs in the site vicinity. Assuming a 20-mph design speed, AASHTO standards define a minimum 225-foot ESD in each direction of the site driveway. The project proposes converting NE Sunset Street to one-way northbound vehicle travel; therefore the site driveway will be restricted to left-in/left-out only.

A preliminary review indicated sight lines looking southeast (right) from the site driveway measure approximately 160 feet and are constrained by vertical and horizontal roadway curvature. NE Sunset Street entering sight distance should be verified based on the final site plan.

NE Sunset Street includes street parking along the site frontage in the driveway vicinity. Street parking is typical for urban complete street corridors but may constrain sight distance. The project should coordinate with City of Poulsbo to confirm the potential need for street parking restrictions in the driveway vicinity.



HEATH&ASSOCIATES
Transportation Planning & Engineering

CHINOOK DEVELOPMENT

ENTERING SIGHT DISTANCE (ESD) EXHIBIT
FIGURE 3

4. Active Transportation Facilities

NE Sunset Street: NE Sunset Street includes sidewalk along both sides of the street from Jensen Way NE to approximately 160 feet southeast of Scooter Lane NE, where the sidewalk on the project (western) side of NE Sunset Street terminates.

The street provides on-street parallel parking and speed tables with curb bulb-outs and 15 mph advisory speed signs in the site vicinity.

Jensen Way NE: Sidewalks and on-street parking are available on both sides of Jensen Way NE from NE Iverson Street to NE Sunset Street.

NE Iverson Street: NE Iverson Street includes sidewalk on the north side of the street in the project vicinity.

Marked Crosswalks: Marked crosswalks are available at the intersections of NE Iverson Street & Jensen Way NE, NE Iverson Street & NE Sunset Street, and Jensen Way NE & NE Sunset Street. All three intersections are all-way stop controlled.

Planned Active Transportation Improvements: The Poulsbo 2025 Transportation Functional Plan Update identifies no planned active transportation projects in the site vicinity.

5. Transit Service and Facilities

Kitsap Transit operates two transit routes in the project vicinity, as summarized in **Table 2**. Route 333 stops on Front Street approximately 1,500 feet from the project site. Route 344 stops at Jensen Way NE & NE Iverson Street, approximately 500 feet from the project site.

Table 3: Transit Routes

Route	Description	Weekday Service	Saturday
333	Silverdale Transit Center – Bainbridge Island Ferry	4:22-7:35 AM Eastbound 3:45-8:55 PM Westbound (every ~45-60 minutes)	n/a
344	North Viking Transit Center – Kitsap Regional Library	8:30 AM-6:52 PM (every ~60 minutes)	10:30 AM-6:20 PM (every ~60 minutes)

6. Frontage Improvements

The project proposes conversion of NE Sunset Street from a two-way two-lane corridor to a single one-way northbound vehicle travel lane with a two-way bike track on the eastern side of the street, including curb bulb-outs along the corridor and at driveways and intersections. Proposed frontage improvements include sidewalks on both sides of the street. Parallel on-street parking will be retained along the project frontage.

Frontage improvements on Jensen Way NE will include a new bike rack near the NE Sunset Street intersection and several pedestrian connections from the project to the existing Jensen Way NE sidewalk.

7. Conclusions

The Chinook Mixed-Use development is anticipated to generate 388 weekday daily primary trips, including 31 AM peak hour primary trips (8 in; 23 out) and 38 PM peak hour primary trips (23 in; 15 out).

The addition of project-generated trips to existing development within the Poulsbo Place Master Plan area is not anticipated to exceed the weekday daily or PM peak hour trip generation forecasts documented in the *Poulsbo Place Development Traffic Impact Analysis* (Gibson Traffic Consultants 1995).

A preliminary sight distance analysis found that sight triangles at the Jensen Way NE driveway extend to the all-way stop controlled intersections to the north (NE Sunset Street) and south (NE Iverson Street), satisfying minimum AASHTO sight distance standards. At the NE Sunset Street driveway, entering sight distance looking right from the NE Sunset Street driveway is constrained by vertical and horizontal curvature and should be verified with final site design.

Jensen Way NE and NE Sunset Street include street parking along the site frontage. Street parking is typical for urban complete street corridors but may constrain entering sight distance. The project should coordinate with City of Poulsbo to confirm the potential need for street parking restrictions in the driveway vicinity.

The project proposes converting NE Sunset Street to a one-way northbound street, including a two-way bike track and traffic calmings. Proposed frontage improvements include sidewalks on both sides of NE Sunset Street and pedestrian connections from the subject site to the existing Jensen Way NE sidewalk.

Based on the analysis documented herein, the project will not exceed the available capacity of the surrounding transportation network. No additional transportation operational or safety analysis is required.

CHINOOK MIXED-USE DEVELOPMENT
TRIP GENERATION ANALYSIS

APPENDIX
ITE Data Sheets

Single-Family Detached Housing
(210)

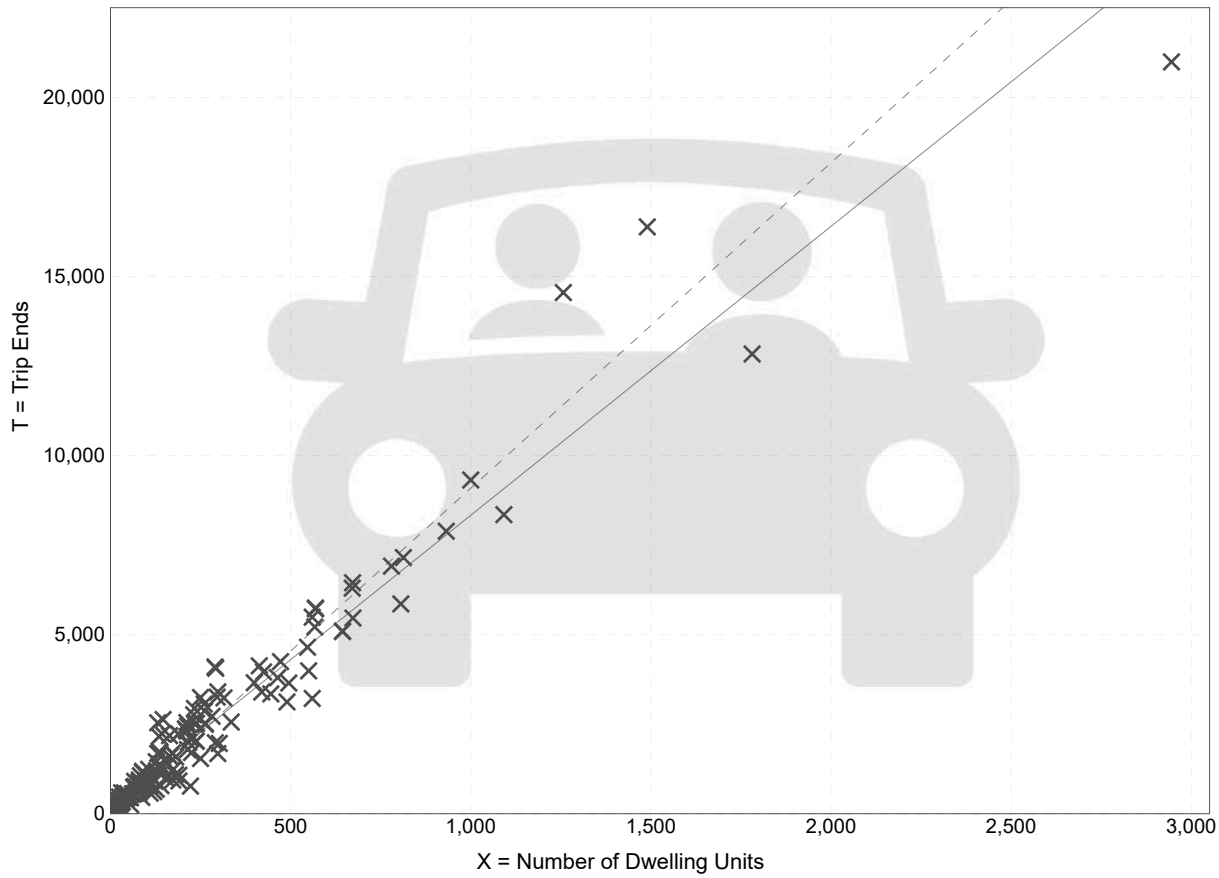
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 155
Avg. Num. of Dwelling Units: 261
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.09	3.47 - 23.80	2.29

Data Plot and Equation



Fitted Curve Equation: T = 8.07(X) + 265.45

R^2= 0.94

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

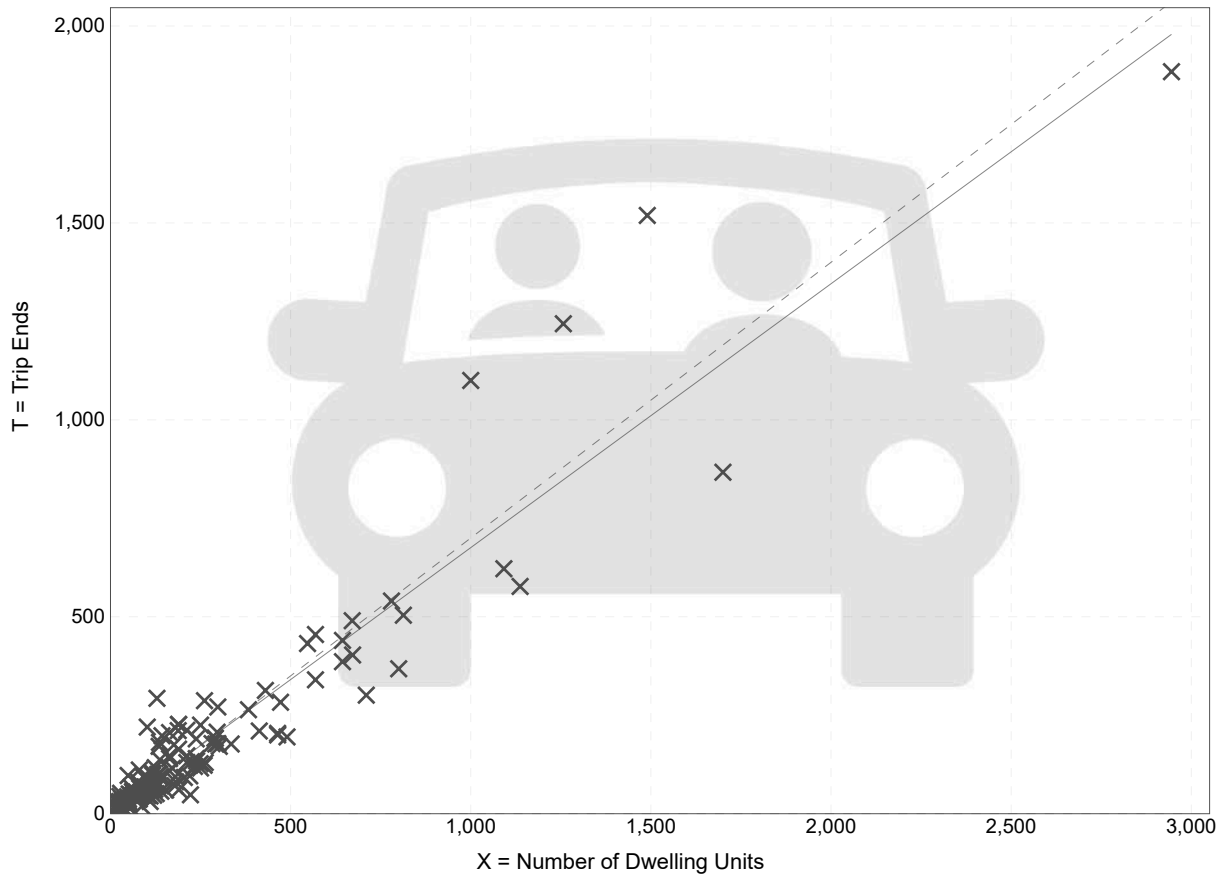
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 153
Avg. Num. of Dwelling Units: 239
Directional Distribution: 27% entering, 73% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.22 - 2.27	0.26

Data Plot and Equation



Fitted Curve Equation: T = 0.67(X) + 5.59

R^2= 0.89

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

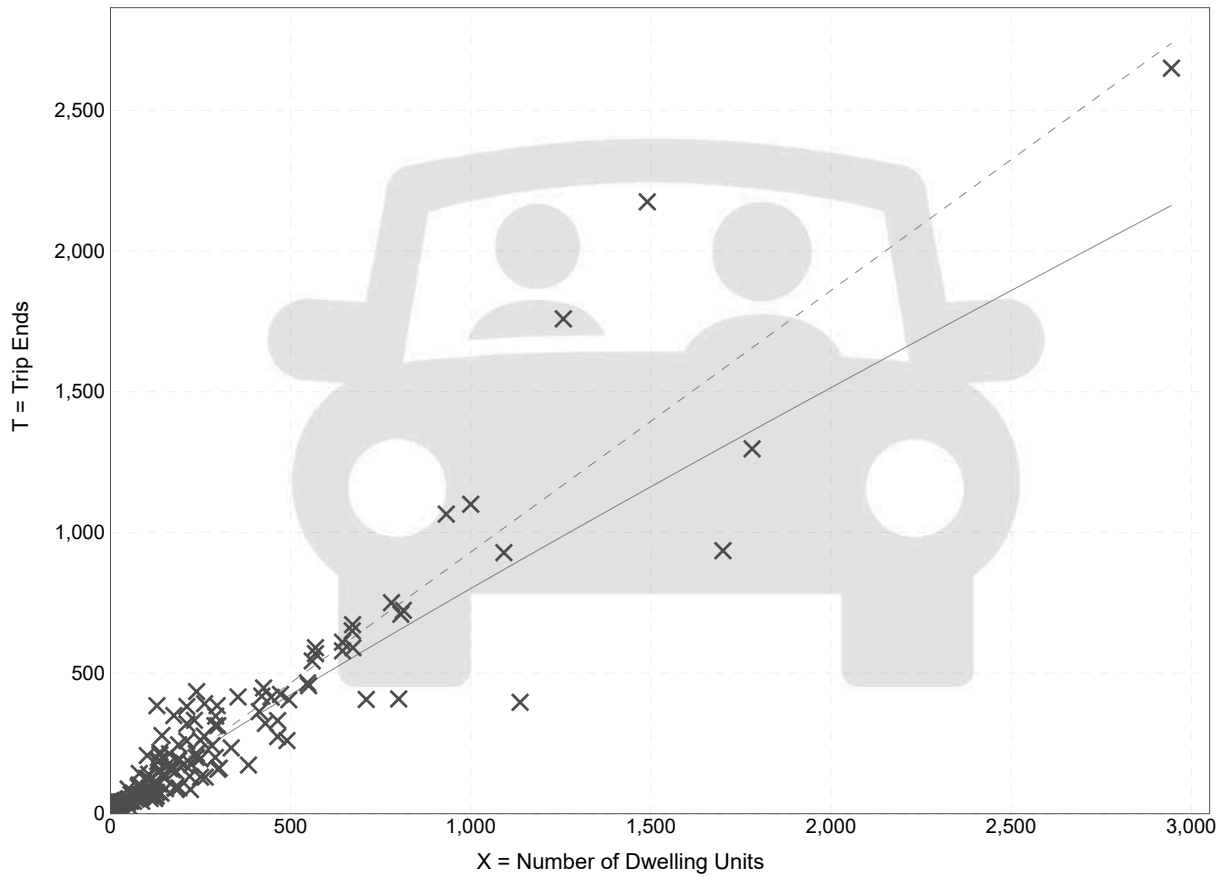
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	166
Avg. Num. of Dwelling Units:	266
Directional Distribution:	62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.93	0.35 - 2.98	0.33

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 0.33 **R^2= 0.90**

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

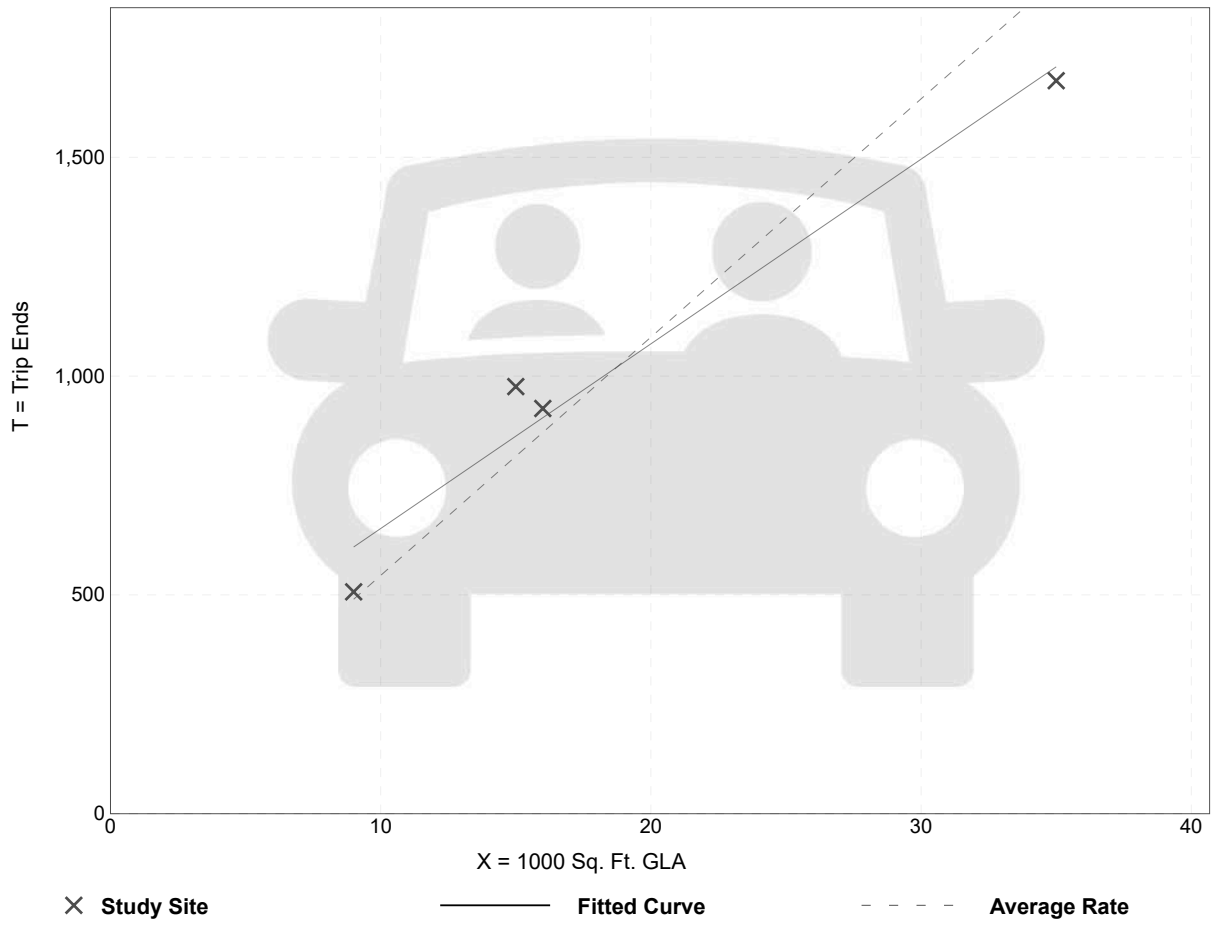
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: T = 42.20(X) + 229.68

R^2= 0.96

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

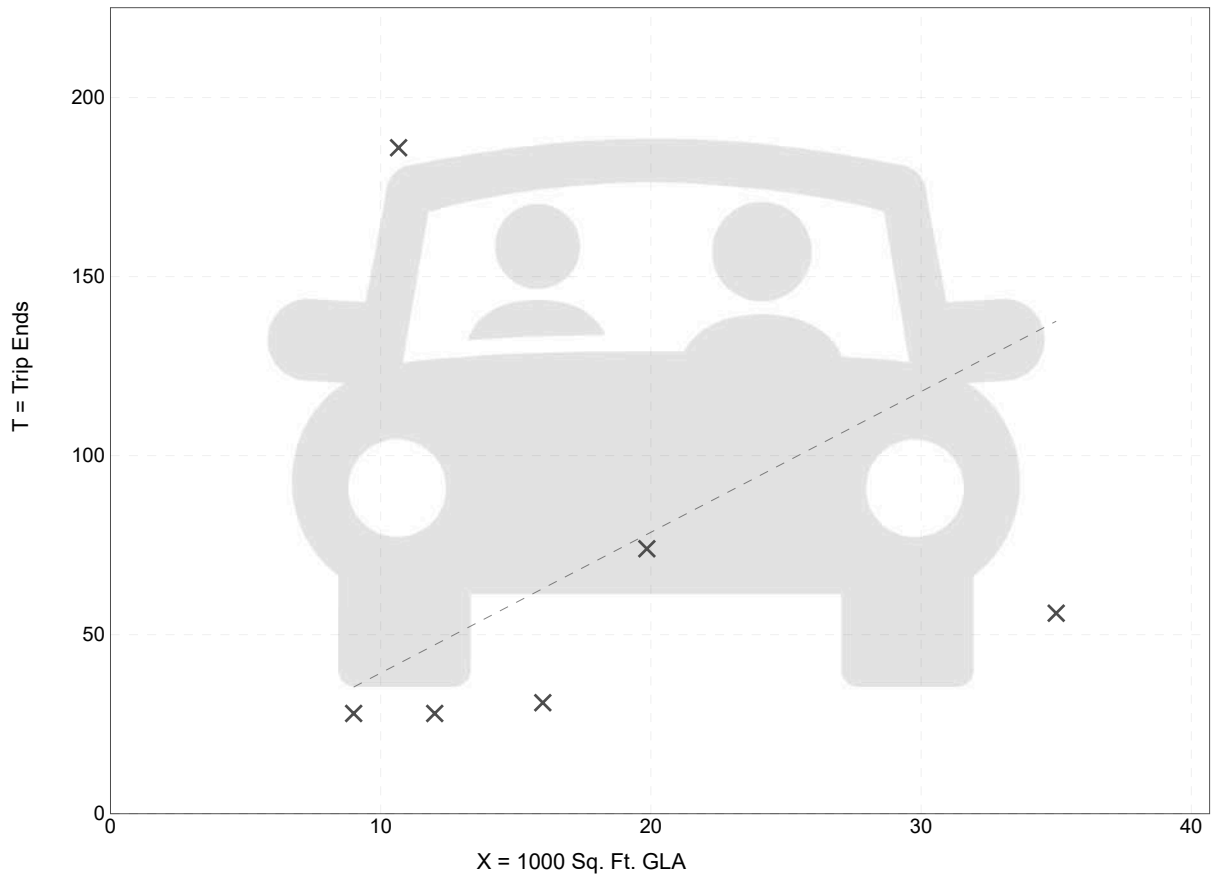
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GLA: 17
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.93	1.60 - 17.44	5.12

Data Plot and Equation



Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

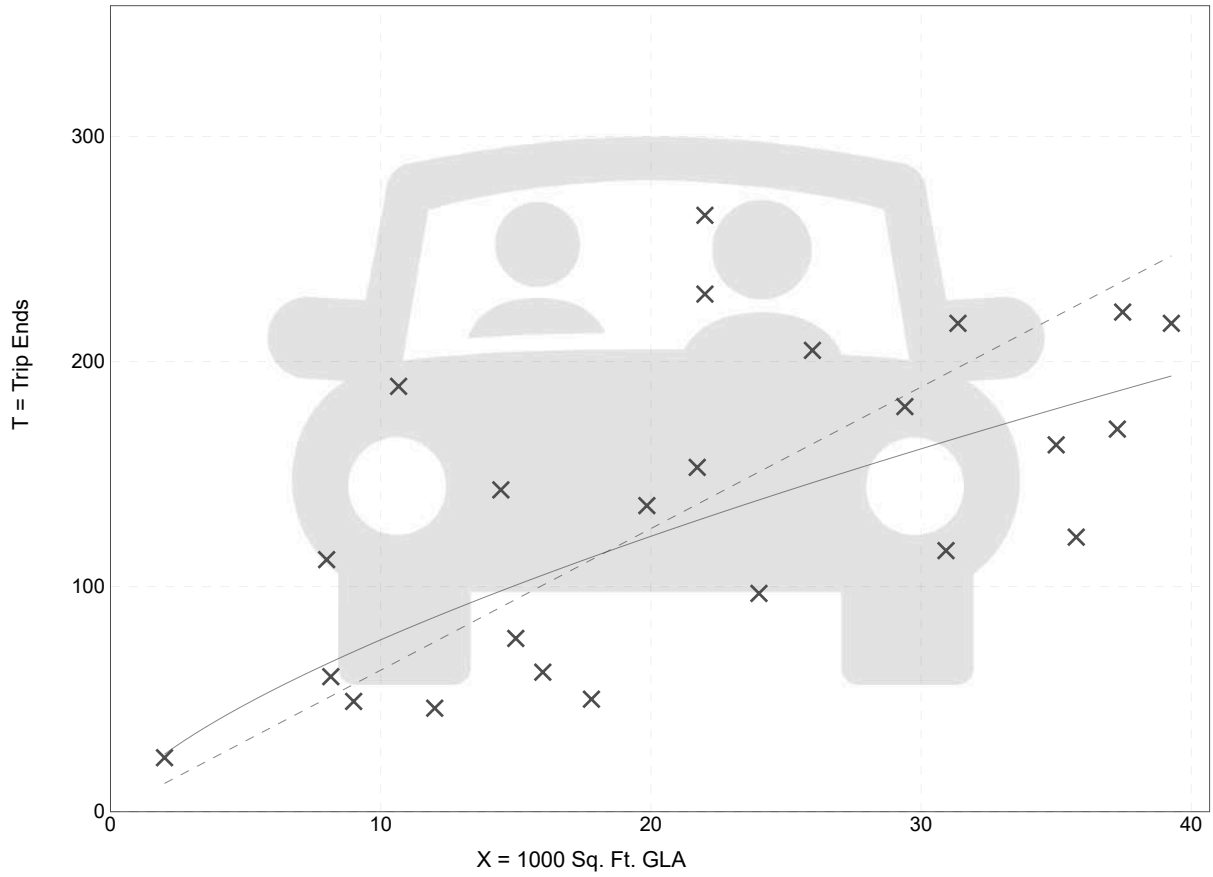
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 24
Avg. 1000 Sq. Ft. GLA: 22
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.29	2.81 - 17.72	3.02

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.68 Ln(X) + 2.77 **R^2= 0.54**

Trip Gen Manual, 12th Edition ● Institute of Transportation Engineers

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 12th Edition

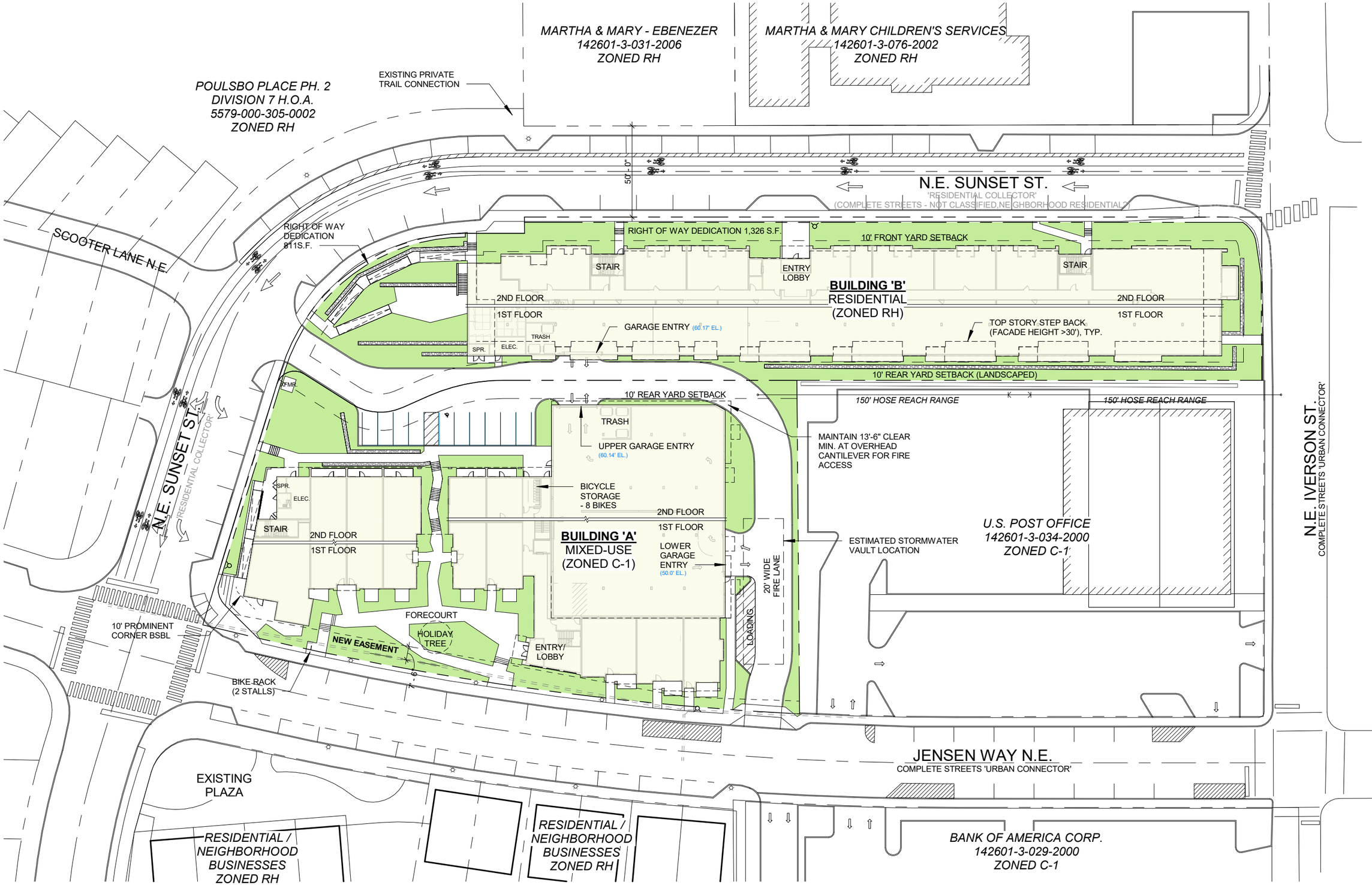
Land Use Code	821
Land Use	Shopping Plaza (40 - 150k)
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	15
Average Pass-By Rate	40%

Pass-By Characteristics for Individual Sites

GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
45	Florida	1992	844	56	24	20	44	—	30
50	Florida	1992	555	41	41	18	59	—	30
52	Florida	1995	665	42	33	25	58	—	30
53	Florida	1993	162	59	—	—	41	—	30
57.23	Kentucky	1993	247	31	53	16	69	2659	34
60	Florida	1995	1583	40	38	22	60	—	30
69.4	Kentucky	1993	109	25	42	33	75	1559	34
77	Florida	1992	365	46	—	—	54	—	30
78	Florida	1991	702	55	23	22	45	—	30
82	Florida	1992	336	34	—	—	66	—	30
92.857	Kentucky	1993	133	22	50	28	78	3555	34
100.888	Kentucky	1993	281	28	50	22	72	2111	34
121.54	Kentucky	1993	210	53	30	17	47	2636	34
144	New Jersey	1990	176	32	44	24	68	—	24
146.8	Kentucky	1993	—	36	39	25	64	—	34

CHINOOK MIXED-USE DEVELOPMENT
TRIP GENERATION ANALYSIS

APPENDIX
Site Plan



WATTENBARGER Architects PLLC

JENSEN WAY RESIDENCES

ARCHITECTURAL SITE PLAN

4/17/26

SCALE: 1" = 50'-0"

G-A04