

HEATH & ASSOCIATES

Transportation Planning & Engineering

TRIP GENERATION ASSESSMENT

McDonalds Puyallup

Puyallup, WA

November 1, 2024

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MCDONALDS PUYALLUP

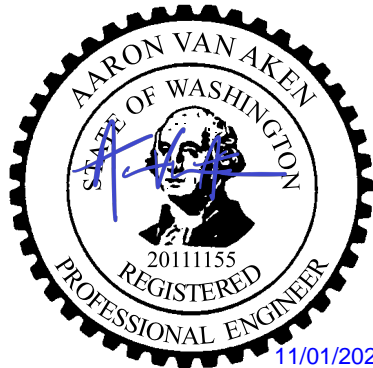
TRIP GENERATION MEMORANDUM

Prepared for:

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11/01/2024



MCDONALDS PUYALLUP TRIP GENERATION ASSESSMENT

November 1, 2024

To: City of Puyallup

Subject: McDonald's Puyallup – Trip Generation Assessment

INTRODUCTION

Heath & Associates has been retained to provide the City of Puyallup with an updated trip generation assessment for the East Town Crossing Development (TIA – 9/21/2022). The commercial Lot 2 has been revised from a larger multi-tenant commercial building to a 3,671 square foot McDonald's with drive-through. This report will analyze the resulting change in trip generation.

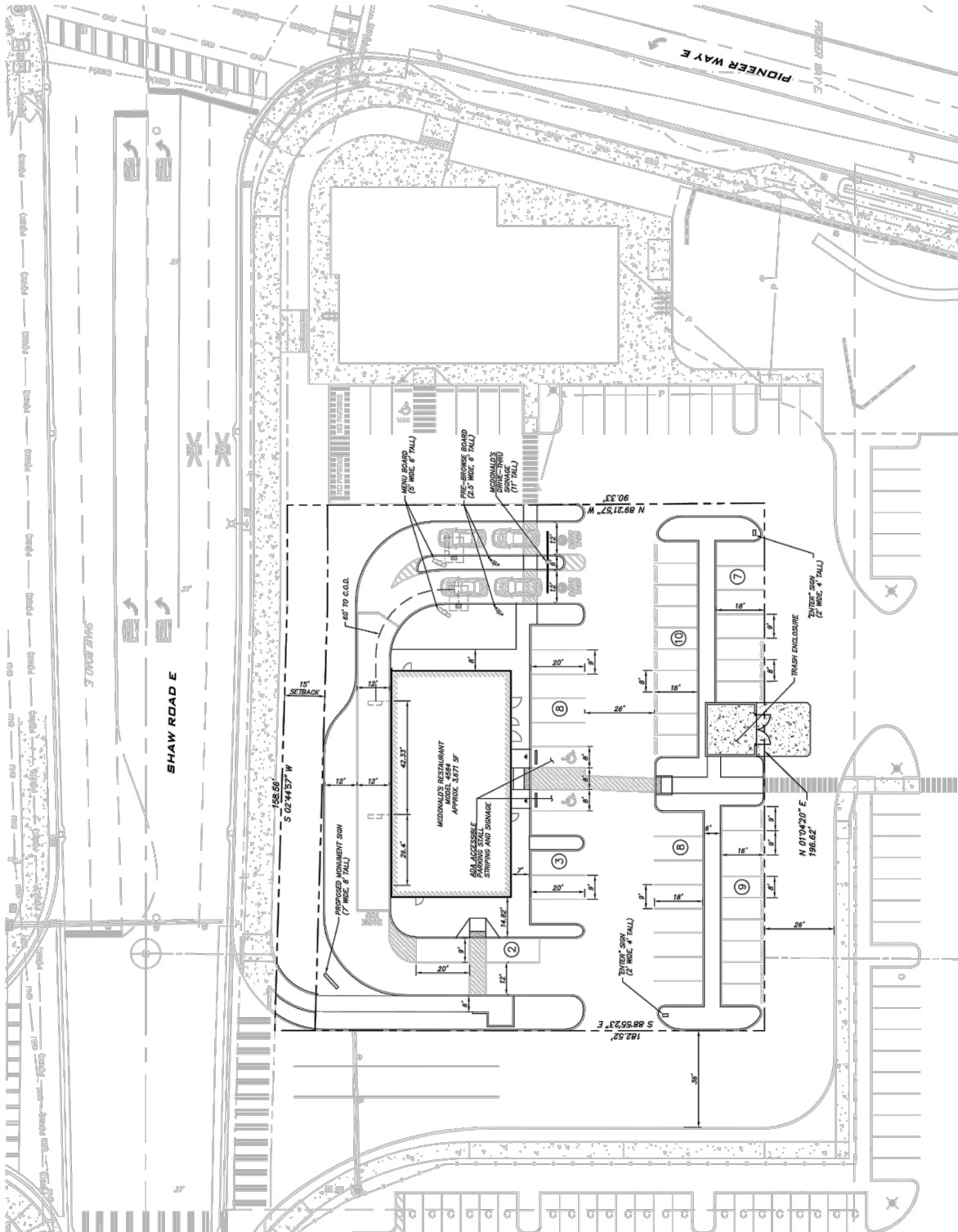
PROJECT DESCRIPTION

East Town Crossing is a proposed mixed-use development located within the City of Puyallup. The subject site is situated on 10.93-acres within multiple tax parcels (042026-4053; -4054; -1066; -4021; -1030; -1029; & -1026). The project now has plans to construct a McDonalds on Lot 2 which was originally considered as general retail space.

New Project Proposal:

- Lot 1 (Commercial) – Unchanged
- Lot 3 (Residential) – Unchanged
- **Lot 2 – 6,700 sq. ft. Retail Space to 3,671 sq. ft. Fast-Food (McDonalds)**

Figure 1 on the following page displays a conceptual site plan for the project McDonald's.



TRIP GENERATION

Trip generation estimates were derived from the Institute of Transportation Engineers (ITE) publication, *Trip Generation Manual, 11th Edition* and from the previously approved TIA. The following Land Use Codes (LUC) were used.

Original TIA

- Residential Use: LUC 220 – Multifamily Housing (Low-Rise)
- Retail/Commercial Use: LUC 822 – Strip Retail Plaza

Proposed Change

- McDonald's: LUC 934 – Fast-Food Restaurant with Drive-Through

Trip Adjustments

Internal Capture: Given the mixed-use nature of the development, internal capture trips, such as a resident from the apartments walking over to the McDonald's, is expected. Internal capture values are consistent with the previously approved TIA which considered a 2 percent AM and 14 percent PM trip reduction were similarly applied.

Pass-By Trips: Pass-by trips are vehicles already traveling along the roadway who decide to make an intermediary stop before continuing to their primary destination. Pass-by rates for each respective use are shown below.

- Retail/Commercial – Daily & AM: 26% PM: 34%
- Fast-Food (McDonalds) – Daily: 52.5% AM: 50% PM: 55%

Table 1 on the following page highlights the trip generation based on the change of use, provided in the appendix is a use-specific trip generation breakdown.

Table 1: Primary Project Trip Generation Comparison

| Scenario | AWDT | AM Peak-Hour Trips | | | PM Peak-Hour Trips | | |
|----------------------------------|------------|--------------------|-----------|-----------|--------------------|-----------|-----------|
| | | In | Out | Total | In | Out | Total |
| Original ETC TIA (Sept. 2022) | 1,547 | 28 | 63 | 91 | 71 | 49 | 120 |
| ETC with McDonald's | 2,048 | 62 | 98 | 160 | 83 | 59 | 142 |
| Net New Primary | 501 | 34 | 35 | 69 | 12 | 10 | 22 |

In total, and after accounting for trip rate adjustments (e.g., internal capture and pass-by) the change of use on Lot 2 is estimated to generate 22 net new PM peak hour trips.

TRAFFIC IMPACT FEE ASSESSMENT

Based on the City of Puyallup's Traffic Impact Fees (TIF), impact fees are assessed at \$4,500 per new PM peak hour trip. Preliminary traffic impact fees calculations are provided below.

Original East Town Crossing Estimated TIF:

- 120.0 PM Peak Hour Trips X \$4,500 Per Trip = -\$540,000.00

New Estimated TIF:

- 141.9 New PM Peak Hour Trips X \$4,500 Per Trip = \$638,550.00
 - McDonald's proportional share of total = 47.3 trips = \$212,850

The change in TIF between the original and new proposal is around \$98,550.00. However, Traffic Impact Fees are assessed at the time of building permit issuance and are subject to change based on actual tenant occupancies, final building sizes, current rates, etc. The initial TIF estimates are based on the PM peak hour trips that were approved in the original TIA and may not reflect the latest site conditions.



CONCLUSION

The East Town Crossing development has modified commercial Lot 2 from general retail space to a 3,671 drive-through McDonald's. This report evaluates the resulting trip generation differences.

Compared to the *East Town Crossing Traffic Impact Analysis* (Sept. 2022), the total primary PM peak hour trips went from 120.0 to 141.9, resulting in an increase in Traffic Impact Fees (TIF) of \$98,550.00 and totaling \$638,550.00.

McDonald's represents around 33% of the primary site traffic, or 47.3 trips yielding \$212,850 of the total TIF.

Please feel free to contact me should you require further information.
Aaron Van Aken, PTOE



MCDONALDS PUYALLUP TRIP GENERATION ASSESSMENT

APPENDIX



Fast-Food Restaurant with Drive-Through Window (934)

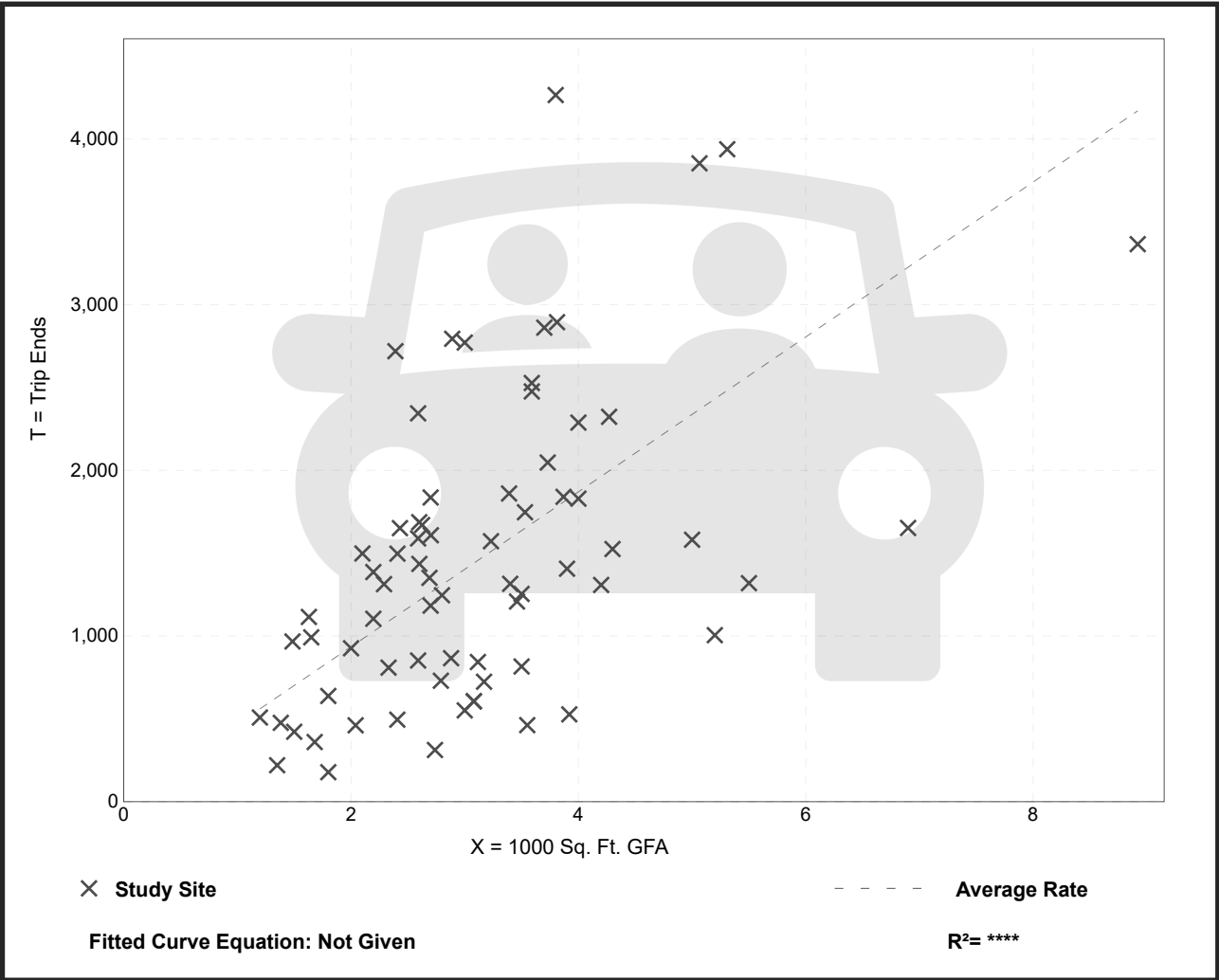
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 71
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|-----------------|--------------------|
| 467.48 | 98.89 - 1137.66 | 238.62 |

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 96

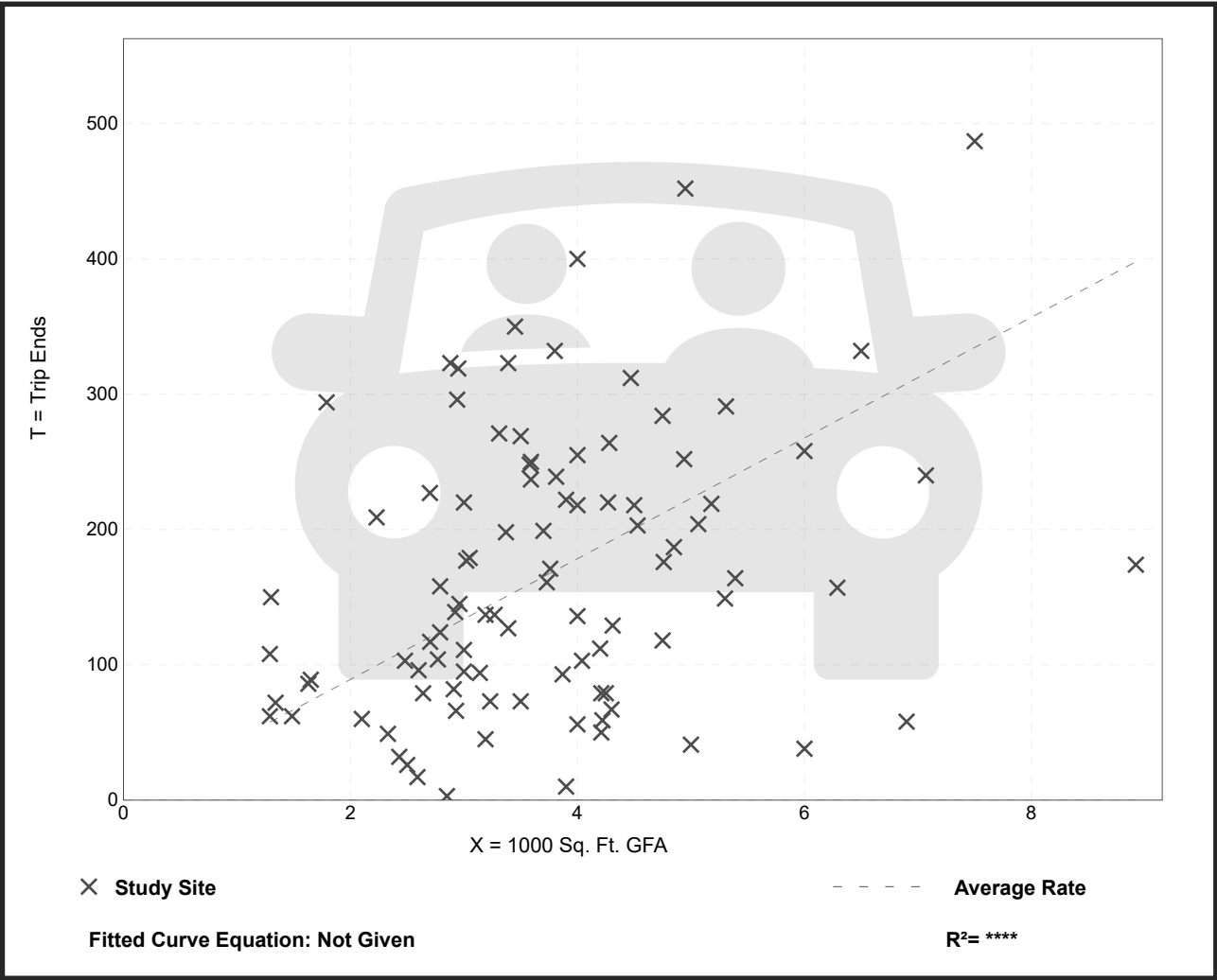
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 44.61 | 1.05 - 164.25 | 27.14 |

Data Plot and Equation



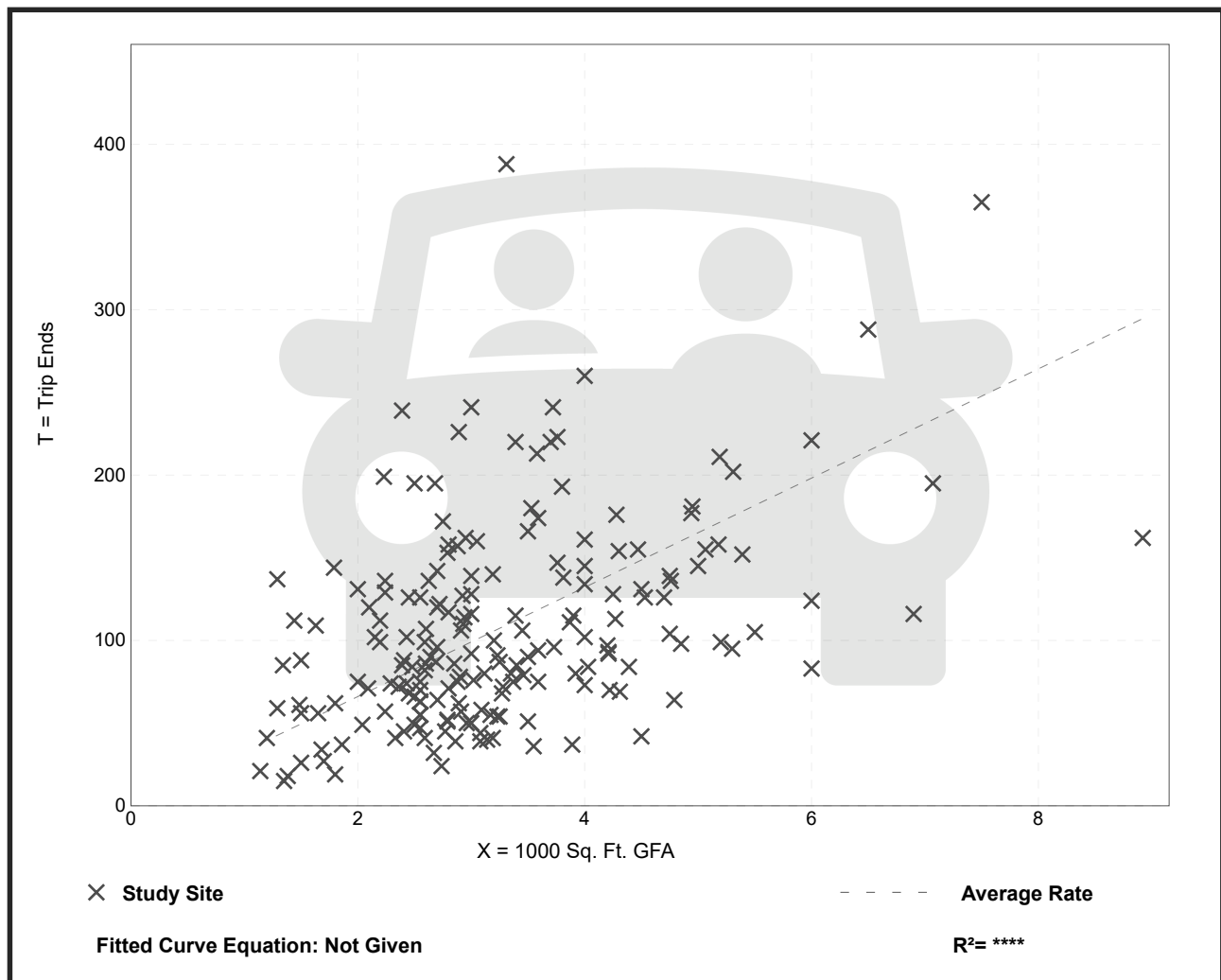
Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
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: 190
 Avg. 1000 Sq. Ft. GFA: 3
 Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 33.03 | 8.77 - 117.22 | 17.59 |

Data Plot and Equation

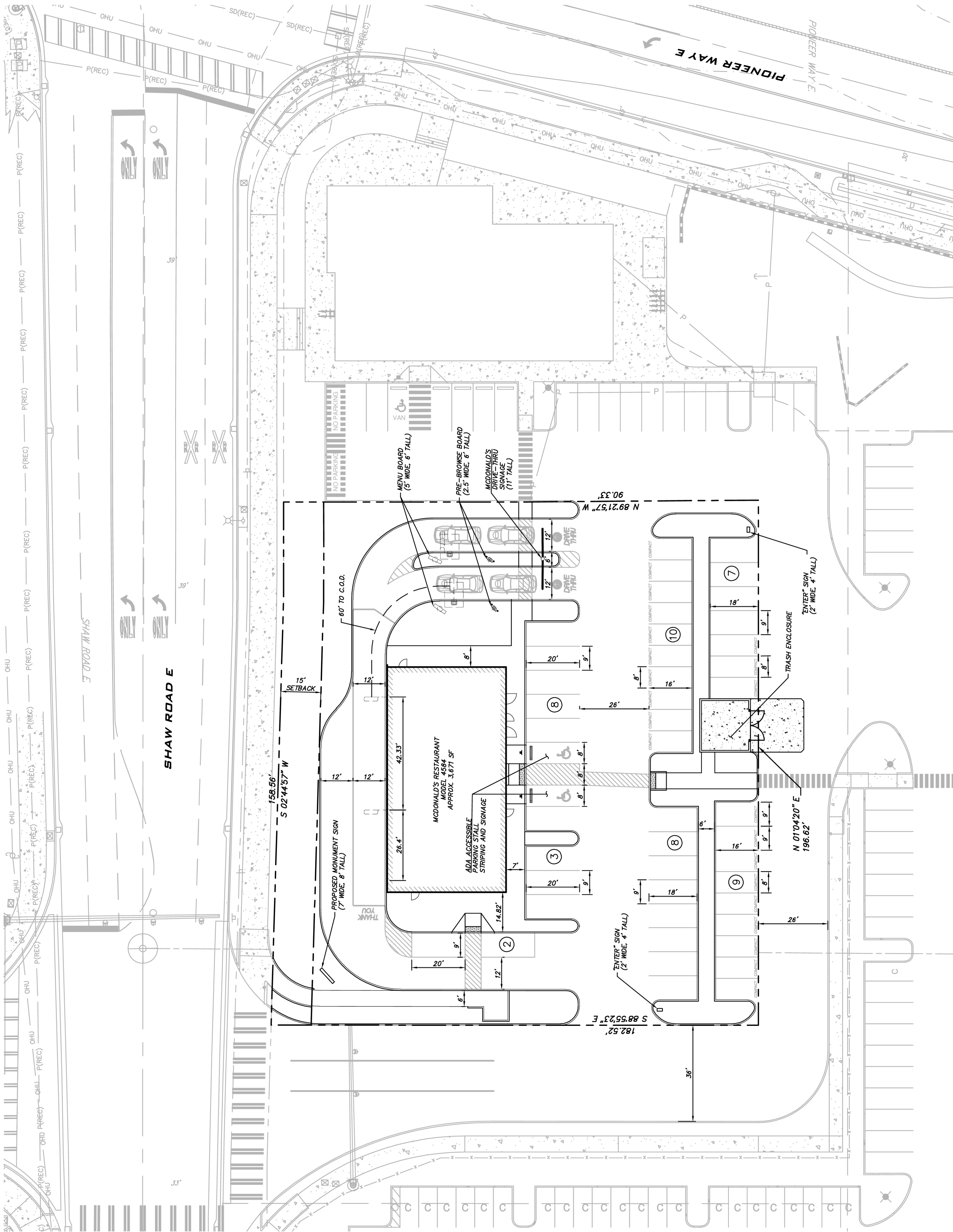


East Town Crossing - Trip Generation Summary

| Average Weekday Trips | | | | | | | | | | | | | | | | | |
|-----------------------|-------------------------|------|----------------|-------|--------|--------------|-----|-------------|-------|--------|------------------|-------|---------------|-------|---------------|--------|--------|
| Development | Land Use | LUC | Variable | Value | Rate | Distribution | | Total Trips | | | Internal Capture | | Pass-by Trips | | Primary Trips | | |
| | | | | | | In | Out | In | Out | Total | % | Total | % | Total | In | Out | Total |
| Previous | Single-Family | #210 | Dwelling Units | 3 | 9.43 | 50% | 50% | 14.1 | 14.1 | 28.3 | 0% | 0 | 0% | 0.0 | 14.1 | 14.1 | 28.3 |
| | Multi-Family (Low-Rise) | #220 | Dwelling Units | 193 | 6.74 | 50% | 50% | 650.4 | 650.4 | 1300.8 | 8% | 104.1 | 0% | 0.0 | 598.4 | 598.4 | 1196.8 |
| Proposed | Strip Retail Plaza | #822 | 1000 Sq. Ft. | 3.502 | 54.45 | 50% | 50% | 95.3 | 95.3 | 190.7 | 8% | 15.3 | 26% | 45.6 | 64.9 | 64.9 | 129.8 |
| | FF With DT | #934 | 1000 Sq. Ft. | 3.671 | 467.48 | 50% | 50% | 858.1 | 858.1 | 1716.1 | 8% | 137.3 | 53% | 828.9 | 375.0 | 375.0 | 749.9 |
| Net New Primary Trips | | | | | | | | | | | | | | | 1024.1 | 1024.1 | 2048.2 |
| 874.5 | | | | | | | | | | | | | | | | | |
| Weekday AM Peak Hour | | | | | | | | | | | | | | | | | |
| Development | Land Use | LUC | Variable | Value | Rate | Distribution | | Total Trips | | | Internal Capture | | Pass-by Trips | | Primary Trips | | |
| | | | | | | In | Out | In | Out | Total | % | Total | % | Total | In | Out | Total |
| Previous | Single-Family | #210 | Dwelling Units | 3 | 0.7 | 26% | 74% | 0.5 | 1.6 | 2.1 | 0% | 0 | 0% | 0.0 | 0.5 | 1.6 | 2.1 |
| | Multi-Family (Low-Rise) | #220 | Dwelling Units | 193 | 0.4 | 24% | 76% | 18.5 | 58.7 | 77.2 | 2% | 1.5 | 0% | 0.0 | 18.2 | 57.5 | 75.7 |
| Proposed | Strip Retail Plaza | #822 | 1000 Sq. Ft. | 3.502 | 2.36 | 60% | 40% | 5.0 | 3.3 | 8.3 | 2% | 0.2 | 26% | 2.1 | 3.6 | 2.4 | 6.0 |
| | FF With DT | #934 | 1000 Sq. Ft. | 3.671 | 44.61 | 51% | 49% | 83.5 | 80.2 | 163.8 | 2% | 3.3 | 50% | 80.2 | 40.9 | 39.3 | 80.2 |
| Net New Primary Trips | | | | | | | | | | | | | | | 62.1 | 97.7 | 159.8 |
| 82.3 | | | | | | | | | | | | | | | | | |
| Weekday PM Peak Hour | | | | | | | | | | | | | | | | | |
| Development | Land Use | LUC | Variable | Value | Rate | Distribution | | Total Trips | | | Internal Capture | | Pass-by Trips | | Primary Trips | | |
| | | | | | | In | Out | In | Out | Total | % | Total | % | Total | In | Out | Total |
| Previous | Single-Family | #210 | Dwelling Units | 3 | 0.94 | 63% | 37% | 1.8 | 1.0 | 2.8 | 0% | 0 | 0% | 0.0 | 1.8 | 1.0 | 2.8 |
| | Multi-Family (Low-Rise) | #220 | Dwelling Units | 193 | 0.51 | 63% | 37% | 62.0 | 36.4 | 98.4 | 14% | 13.8 | 0% | 0.0 | 53.3 | 31.3 | 84.6 |
| Proposed | Strip Retail Plaza | #822 | 1000 Sq. Ft. | 3.502 | 6.59 | 50% | 50% | 11.5 | 11.5 | 23.1 | 14% | 3.2 | 34% | 6.7 | 6.5 | 6.5 | 13.1 |
| | FF With DT | #934 | 1000 Sq. Ft. | 3.671 | 33.03 | 52% | 48% | 63.1 | 58.2 | 121.3 | 14% | 17.0 | 55% | 57.4 | 24.4 | 22.5 | 46.9 |
| Net New Primary Trips | | | | | | | | | | | | | | | 82.5 | 59.4 | 141.9 |
| 64.1 | | | | | | | | | | | | | | | | | |

Sources:

Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, (2021).
 Institute of Transportation Engineers, *Trip Generation Handbook*, 3rd Edition, (2017).
 Internal Capture Rates based on NCHRP 8-51 Internal Capture (ADT rates are the average of the AM/PM)



EXISTING UTILITY NOTE

EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND DEPTH OF ANY UTILITIES IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED CROSSINGS AND MATERIAL WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO BREACHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES. TO DETERMINE THE PRECISE LOCATION AND DEPTH OF ANY UTILITIES, THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND OBTAIN AN ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE CONSTRUCTION.

JOB NUMBER:
23007853

SHEET NAME:
SP-01

SHT **1** OF **1**

TEST FIT SITE PLAN

MCD PUYALLUP

CITY OF PUYALLUP **WASHINGTON**

[illegible]

ATWELL

6 CENTRAL WAY, SUITE 400
KIRKLAND, WA 98033
P: 425.216.4051
WWW.ATWELL-GROUP.COM

SCALE:
AS NOTED

PROJECT MANAGER:
JON KOEPFGEN, PE

PROJECT ENGINEER:
PETER RALSTON, PE

DESIGNER:
JUSTIN RODDA

ISSUE DATE:
8/27/2024

PROJECT INFORMATION

ZONING:
PROPOSED LOT AREA
PROPOSED BUILDING AREA

PARKING REQUIRED: 1 STALL PER 100 SF

PARKING PROVIDED:

PARKING PROVIDED: