

## TRAFFIC IMPACT STATEMENT

FOR

933 ROUTE 22 WEST, LLC

**PROPOSED** 

# **POPEYES**

BLOCK 158, LOT 9 933 ROUTE 22 WESTBOUND

BOROUGH OF NORTH PLAINFIELD, SOMERSET COUNTY, NEW JERSEY

AUGUST 18, 2021

Elizabeth Dolan, P.E.

NJ LICENSE No. 37071

GARY W. DEAN, P.E., P.P. NJ LICENSE NO. 83722

### Introduction

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While any development changes on the subject property may affect traffic conditions, both the volume and characteristics of that traffic are of important consideration in the evaluation of this application. Dolan & Dean Consulting Engineers, LLC (D&D) has been retained to prepare this Traffic Impact Statement for the proposed redevelopment.

This Traffic Impact Statement has been prepared as part of the application to evaluate the anticipated levels of traffic activity associated with the site redevelopment, and to review site access, circulation, and parking.

## **EXISTING CONDITIONS**

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<u>US Route 22</u> is a federal highway under NJDOT jurisdiction. The roadway is classified as an urban principal arterial, with a posted speed limit of 50 miles per hour in the vicinity of the subject property. Two lanes per direction of travel are provided separated by a centrally located median.

## TRAFFIC CHARACTERISTICS OF THE EXISTING AND PROPOSED USES

The potential traffic generation from any use is directly related to the type, size, and characteristic of the use itself. The specific location of a particular use may also affect trip generation due to volumes of passing street traffic, and competing uses. Trip generation projections are customarily made using estimates compiled by the Institute of Transportation Engineers (ITE) in the 9<sup>th</sup> edition of the <u>Trip Generation Manual</u> for uses that closely resemble the anticipated operation.

Table I summarizes the projected trip generation for the proposed Popeyes and Arby's. Trip projections were calculated using ITE Land Use 934 "Fast Food Restaurant With Drive-Through Window" data.

Table I
ESTIMATED TRIP GENERATION
2,338 SF POPEYES

Morr	ing Peak	Hour	Evening Peak Hour		Saturday Peak Hour			
Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
47	47	94	38	38	76	64	64	128

A significant component of site traffic would not be "new" traffic per se. Particularly during peak hours, much of the retail site traffic will comprised of "pass-by" trips. Pass-by trips are defined as: "...trips attracted to a particular development from the traffic "passing-by" on the adjacent street."

As noted in the ITE <u>Trip Generation Handbook</u>, certain uses, including fast food restaurants are ideally located along busy streets in order to attract existing motorists. These uses



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generally attract most of their customers from traffic passing the site on their way from an origin to an ultimate destination. These trips <u>may not add new traffic to the adjacent street system.</u>

For the proposed Popeyes, the ITE data indicates that pass-by percentages of approximately 50% would be reasonably anticipated. By generating limited new peak hour traffic to the area, the proposed restaurants will not have a detrimental effect on the surrounding roadway system. Therefore, the overall traffic impact arising as a direct result of the proposal will be minimal. Table II shows the new and pass-by trips that are forecasted for the redevelopment.

Table II Trip Generation By Trip Type

Use	Morning Peak Hour	Evening Peak Hour	Saturday Peak Hour
New Trips	47	38	64
Pass-By Trips	47	38	64
Total	94	76	128

As noted, the new site generated trips are minimal and negligible from a traffic engineering perspective. Specifically, based on the definition of "significant" traffic increases used by NJDOT in the State Highway Access Management Code (NJAC 16:47), a traffic increase of 100 new trips could have an effect on operating conditions on adjacent roadways and intersections. As the site does not exceed a peak hour new trip increase of 100 or more vehicles, the site would not be expected to have any material effect on nearby traffic operations, intersection capacity, or levels of service. Further, the trip calculations summarized above take no credit for trips historically generated by the site.

## SITE ACCESS, CIRCULATION & PARKING

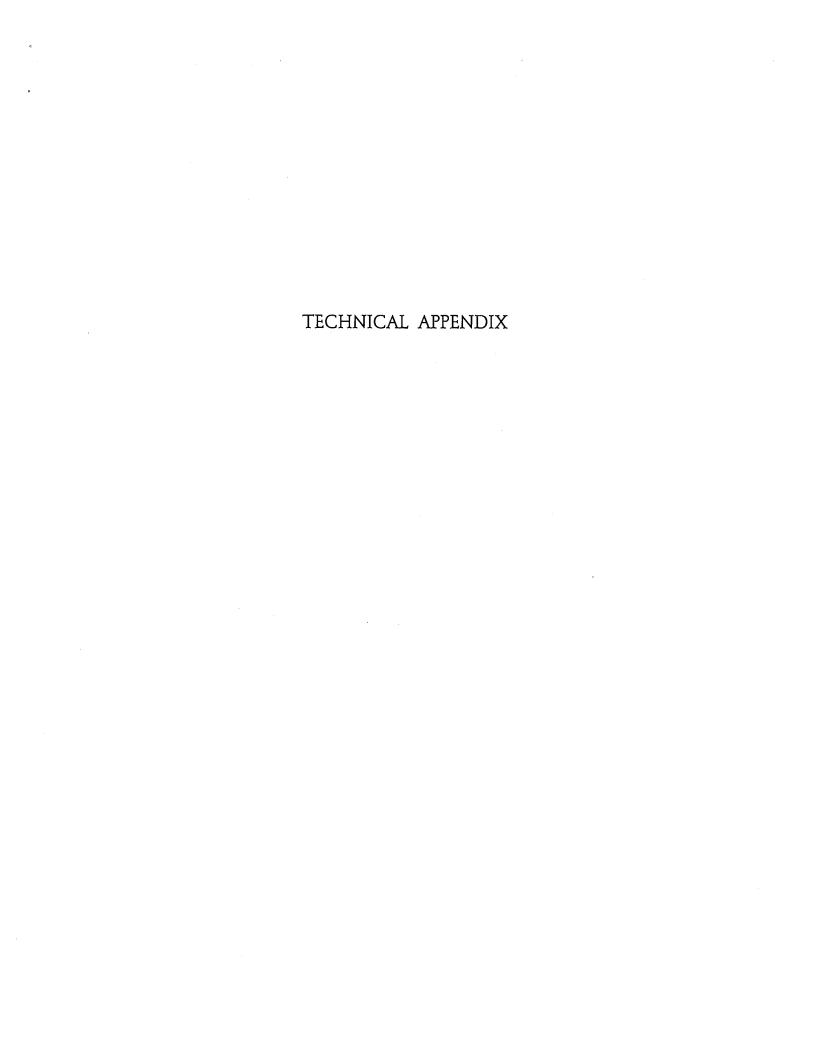
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- ➤ New ingress and egress driveways are proposed Route 22 westbound, which will be curbed and lengthened compared to the existing configuration. The new driveways will require a Major Access Permit from NJDOT.
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- According to <u>Transportation and Land Development</u> by the ITE, at least 30% of fast food traffic utilizes the drive-thru. Independent research conducted for other fast food companies indicates up to 70% use of the drive-thru. Additional research has indicated that use of the drive-thrus "self policing", not only at fast food uses, but other facilities providing drive-thru service. When queues become perceptibly long, patrons tend to park and walk into the restaurant, versus waiting longer queues.
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The site plan has been configured using recognized design standards to promote safe and efficient on-site circulation.



(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:

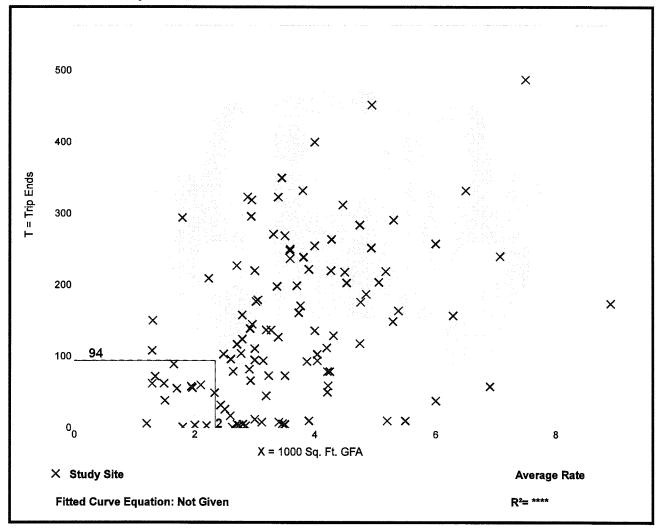
111

Avg. 1000 Sq. Ft. GFA:

Directional Distribution: 51% entering, 49% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
40.19	0.38 - 164.25	28.78



Vehicle Trip Ends vs:

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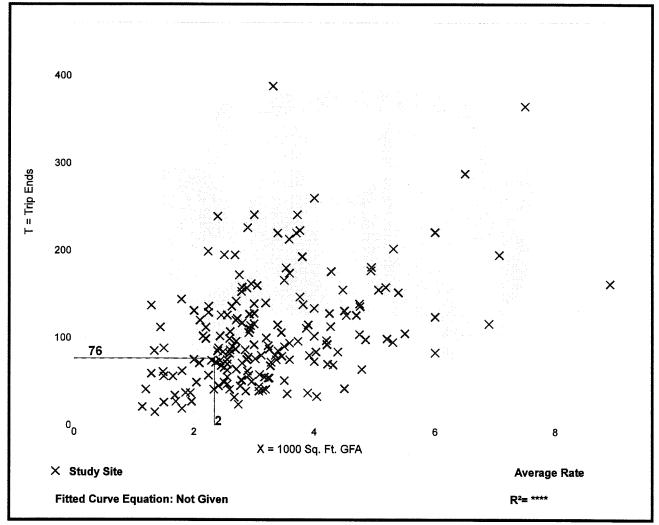
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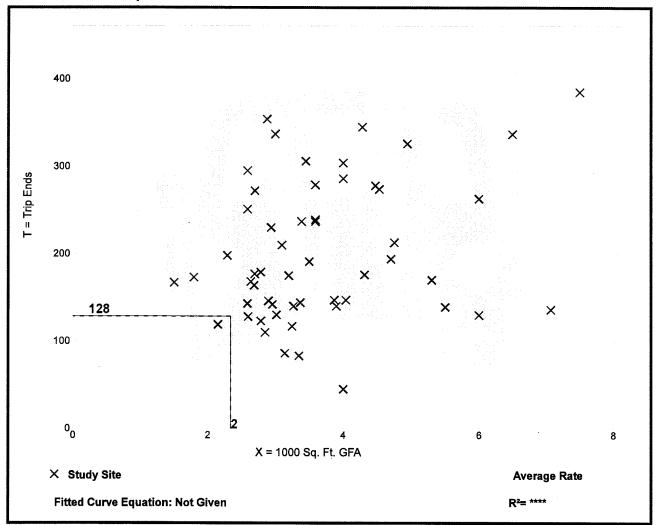
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TABLE II
TRIP GENERATION BY TRIP TYPE

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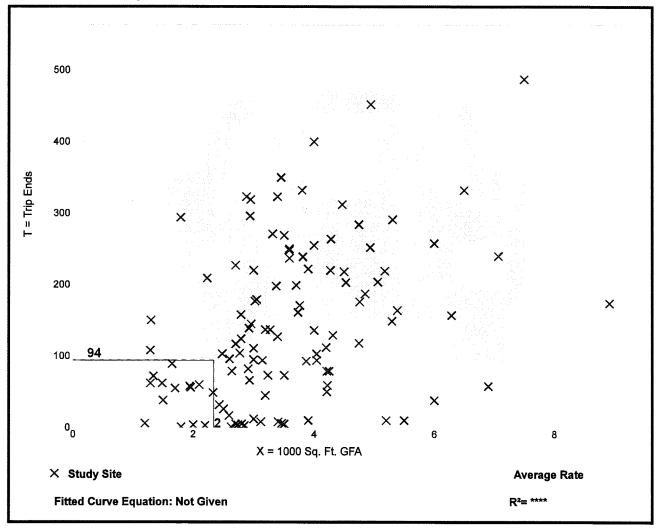
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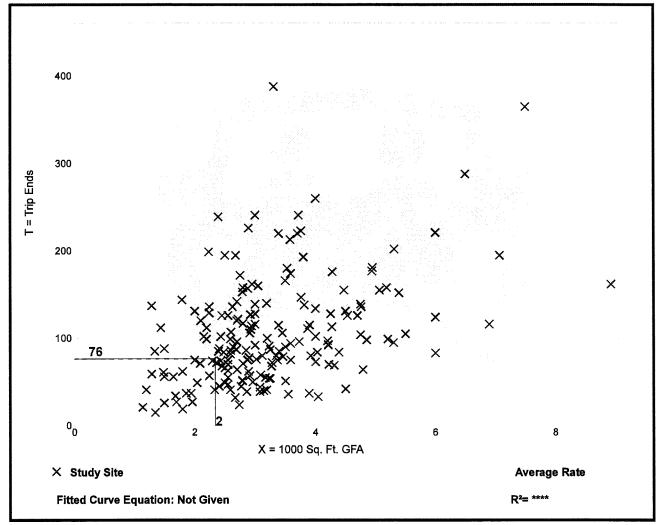
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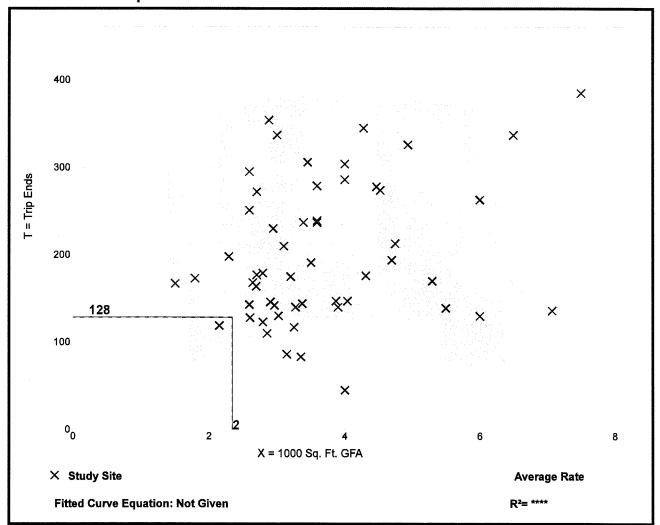
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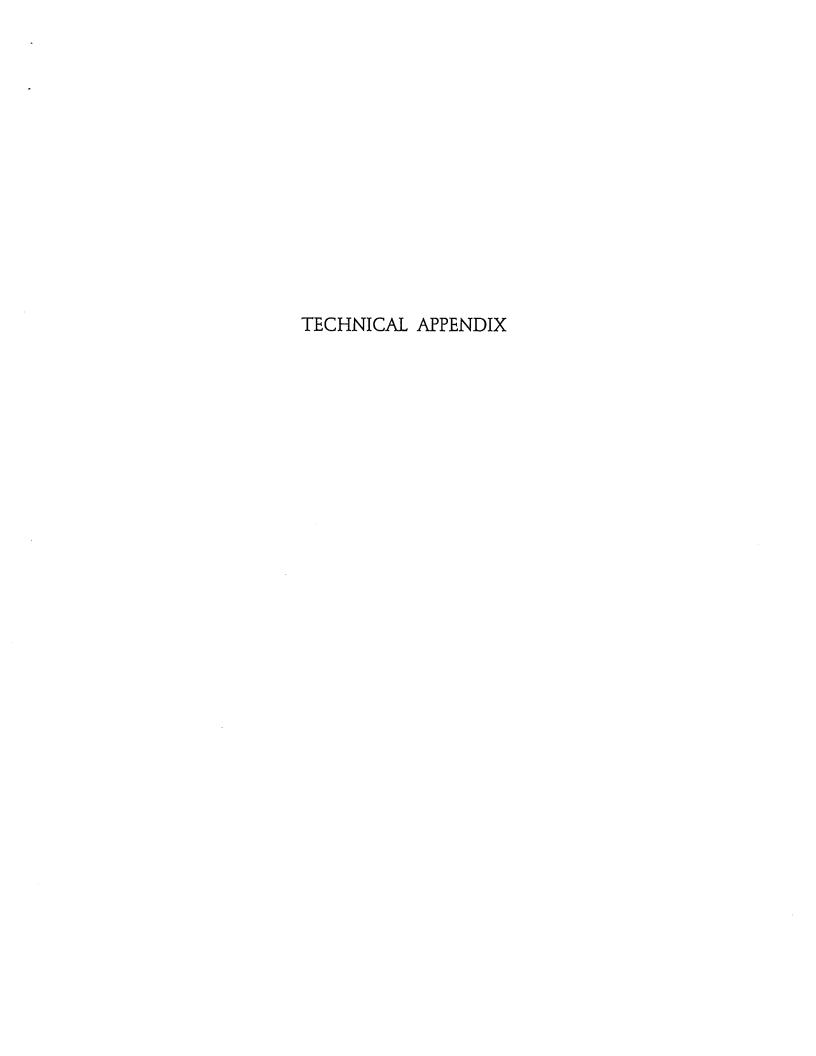
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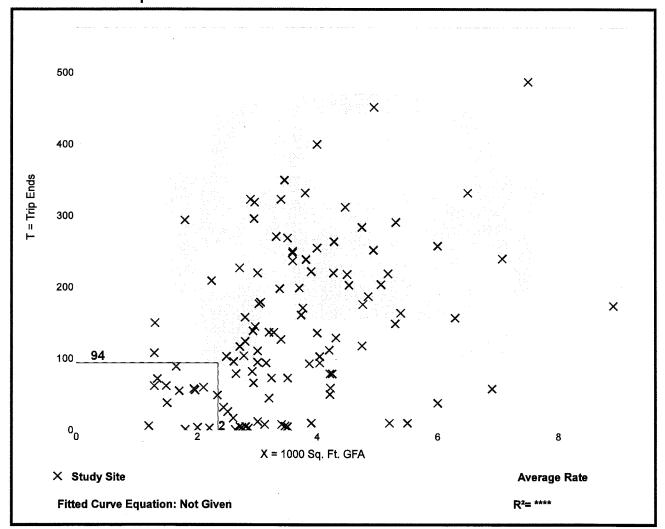
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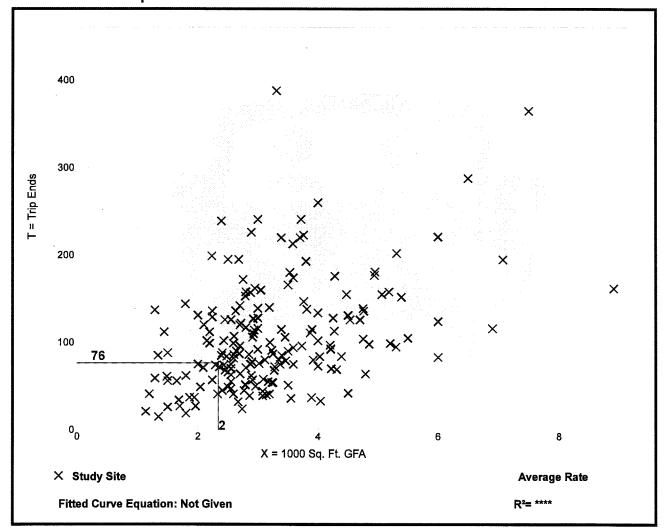
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