

RECEIVED SEP 03 2020

## TECHNICAL MEMORANDUM

**To:** Zoning Board Members

**From:** Nick Verderese, PE/Kevin Savage, PE

**Date:** September 2, 2020

**Re:** Proposed Freestanding Sign  
657 Franklin Turnpike (CR 62)  
Block 4703 – Lot 14  
Village of Ridgewood, Bergen County, NJ  
DT # 0141-11-066TE

Dynamic Traffic has prepared this technical memorandum in support of a proposed freestanding sign along Franklin Turnpike (CR 62) to serve an existing site that is currently occupied by a Dunkin' with Drive-Thru and a Shell Gas Station (8 fueling positions). The proposed freestanding sign is shown in the appended *Amended Sign Variance Plan*, prepared by Dynamic Engineering, last revised August 6, 2020. The site is designated as Block 4703 – Lot 14 on the Village of Ridgewood Tax Maps. The site was previously occupied by a fueling station and was redeveloped with the current Dunkin' with Drive-Thru and Shell Gas Station uses. The site previously had two (2) signs, one of NJ Route 17 and one on Franklin Turnpike (CR 62) identifying the fueling station use that included gasoline pricing. With the redevelopment of the site, the two (2) existing signs were removed and one (1) new sign was constructed along NJ Route 17. Since the redevelopment of the site, the owner has experienced a decrease in patrons for the fueling station use and is desirous of improving the sites visibility along Franklin Turnpike by installing an additional sign.

### *Site Generated Traffic Comparison*

Our office conducted a review of the traffic associated with the previous and current fueling station uses. Manual turning movement (MTM) counts were conducted at the site driveways on Tuesday, August 18, 2020 from 7:00 – 9:00 AM and from 4:30 – 6:30 PM and on Saturday, August 15, 2020 from 11:00 AM – 2:00 PM. Review of the collected traffic data reveals that the subject site (inclusive of the Dunkin') peaks during the weekday morning between 8:00 – 9:00 AM, during the weekday evening between 4:30 – 5:30 PM, and during the Saturday midday between 11:00 AM – 12:00 PM. Supplemental to this count, a survey of the number of vehicles which visited only the Shell Gas Station, visited only the Dunkin', and visited both the Shell and Dunkin' was gathered in order to determine the peak hour traffic for the site associated with the Shell Gas Station. All traffic counts are attached.

1904 Main Street, Lake Como, NJ 07719

In order to provide a comparison of the traffic volumes associated with the Shell Gas Station, a review of historical and national data was conducted. This office conducted traffic counts at the site driveways as identified in the *Traffic Impact Study*, dated August 14, 2017, and last revised September 15, 2017, when the subject site was occupied by a Shell Gas Station (10 fueling positions) only. Further, trip generation projections for the Shell Gas Station were prepared utilizing trip generation research data as published under Land Use Code 944 – Gasoline/Service Station in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 10<sup>th</sup> Edition*. This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country. Table I provides a comparison between the 2017 and national traffic data to the 2020 traffic data.

**Table I**  
**Shell Gas Station Trip Generation Comparison**

Land Use	AM PSH			PM PSH			Saturday PSH		
	In	Out	Total	In	Out	Total	In	Out	Total
Shell Gas Station (2017 As Counted)	34	31	65	42	44	86	.*	.*	.*
ITE Trip Generation (LUC 944 – 8 Fueling Positions)	41	41	82	56	56	112	51	51	102
Shell Gas Station (2020 As Counted)	25	25	50	30	30	60	29	29	58

\* - Not Counted

A review of the above table reveals that the traffic associated with the Shell Gas Station is less than what it previously generated and what the national data projects. It should be noted that a monument sign was previously located along Franklin Turnpike (CR 62) that displayed the price points for the gasoline station. With the redevelopment of the site, this sign was removed. Based on a review of the traffic data detailed above, it is anticipated that the removal of the sign may have contributed to the decrease in gas station traffic.

#### ***Price Point Legibility Analysis***

Due to a general abundance of gasoline service stations (an Exxon Gas Station located approximately 600' to the north on Route 17 Southbound), gas station patrons typically base their decision on where to fuel their vehicles based on the cost of gas at each station. As such, the letter height of the price point is a critical factor in determining whether drivers will be able to legibly read the sign, make a decision whether to visit the site or not, and if they choose to enter the site, be provided adequate visibility to safely and effectively slow or stop their vehicle to enter the site. The proposed price point height as shown on the *Amended Sign Variance Plan* is anticipated to be approximately 6" – 7".

In order to determine whether the proposed price point height is adequate, the *Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition (MUTCD)* as published by the Federal Highway Administration (FHWA) was referenced.

Quoting from the MUTCD, "Word messages should be as brief as possible and the lettering should be large enough to provide necessary legibility distance. A minimum specific ratio of 1 inch of letter height per 30 feet of legibility distance should be used."



In order to provide a conservative analysis, the stopping sight distance for Franklin Turnpike as published by the American Association of State Highway Transportation Officials (AASHTO) publication, *A Policy on Geometric Design of Highways and Streets* was referenced. This assumes a vehicle traveling along Franklin Turnpike will need to stop their vehicle in order to enter the site. Utilizing AASHTO methodology, Franklin Turnpike, a 25 MPH roadway (30 MPH design speed) has a design stopping sight distance of 200'. Utilizing the MUTCD methodology of 1" of letter height per 30' of legibility distance equates to a recommended letter height of 6.67". As such, the proposed price point height is anticipated to be legible by a driver traveling along Franklin Turnpike and to allow them to safely and effectively enter the site, if they choose to.

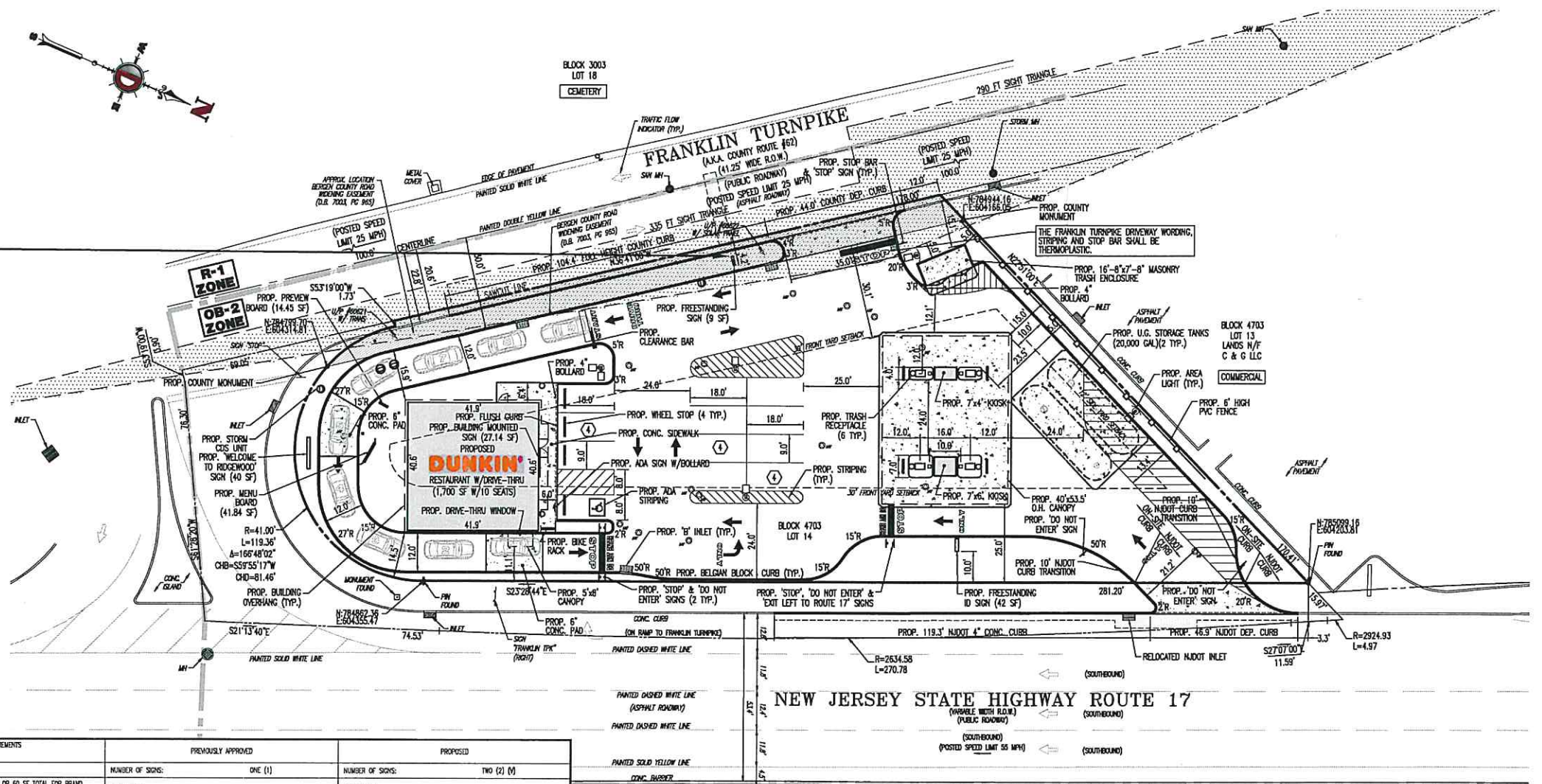
Further, the location of the freestanding sign on site contributes to a driver's perception of the site access. A sign that is located near an entrance to the site will provide further clarity for a driver making the decision to stop at the site to fuel their vehicle. If a sign is located away from the driveway and further on site, the location of the sign may cause confusion for a driver and be less likely seen prior to the driveway. The proposed location of the freestanding sign near the driveway and closer to the Franklin Turnpike right of way will provide the optimal location for driver safety along Franklin Turnpike (CR 62).

### ***Conclusions***

Per a review of the traffic counts conducted by this firm, the existing Shell Gas Station generates less traffic than both the previous development and national data. The proposed price point height is anticipated to be legible enough to allow drivers along Franklin Turnpike to safely slow and turn into the site. As such, it is the professional opinion of Dynamic Traffic that a freestanding sign constructed along Franklin Turnpike improves driver recognition of the site, thus providing for safer access for the property.



Key: 811  
Call before you dig

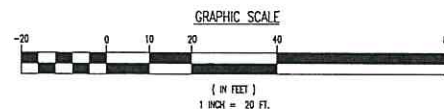


# SIGNAGE TABLE

TYPE	OB-2 ZONE REQUIREMENTS	GASOLINE SERVICE STATION REQUIREMENTS (§190-122.4(c))	PREVIOUSLY APPROVED	PROPOSED
FREESTANDING SIGN	MAXIMUM NUMBER OF SIGNS: ONE (1) FREESTANDING OR BUILDING SIGN MAXIMUM SIGN AREA: 30 SF PER SIDE OR 60 SF TOTAL	MAXIMUM NUMBER OF SIGNS: ONE (1) MAXIMUM SIGN AREA: 30 SF PER SIDE OR 60 SF TOTAL FOR BRAND NAME OF STATION	NUMBER OF SIGNS: ONE (1) SIGN AREA: NASH ROUTE 17 SHELL SIGN 42 SF SIGN AREA (SHELL BRAND SIGN ONLY) NASH ROUTE 17 SHELL SIGN 16 SF SIGN HEIGHT: 17.5 FT SIGN DIMENSION: 10.5 FT X 4 FT SIGN FRONT SETBACK: 10 FT	NUMBER OF SIGNS: TWO (2) (M) SIGN AREA: NASH ROUTE 17 SHELL SIGN 42 SF FRANKLIN TURNPIKE 9 SF (M) SIGN AREA: NASH ROUTE 17 (SHELL BRAND) SIGN 16 SF FRANKLIN TURNPIKE (DUNKIN') 2 SF FRANKLIN TURNPIKE (SHELL LOGO) 1 SF SIGN HEIGHT: NASH ROUTE 17 SHELL SIGN 17.5 FT FRANKLIN TURNPIKE 11 FT SIGN DIMENSION: NASH ROUTE 17 SHELL SIGN 10.5 FT X 4 FT (M) FRANKLIN TURNPIKE 3 FT X 3 FT SIGN FRONT SETBACK: NASH ROUTE 17 SHELL SIGN 10 FT FRANKLIN TURNPIKE 4.2 FT (M)
ATTACHED SIGNS	MAXIMUM NUMBER OF SIGNS: ONE (1) FREESTANDING OR BUILDING SIGN MAXIMUM SIGN AREA: 1 SF PER EVERY FOOT OF FRONT YARD SETBACK = 1 SF * 14.5 FT = 14.5 SF MAXIMUM SIGN DIMENSIONS: THE GREATER DIMENSION SHALL NOT EXCEED TWICE THAT OF THE LESSER DIMENSION MINIMUM SIGN FRONT SETBACK: 0 FT (DO NOT OVERHANG PROPERTY LINE)	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A MAXIMUM SIGN DIMENSIONS: N/A MINIMUM SIGN FRONT SETBACK: 10 FT	NUMBER OF SIGNS: ONE (1) SIGN AREA: 31.18 SF SIGN DIMENSION: 5.583 FT X 5.583 FT	NUMBER OF SIGNS: ONE (1) (C) SIGN AREA: 27.14 SF (C) SIGN DIMENSION: 38.125 FT X 8.54 FT (C)
CANOPY MOUNTED SIGN	MAXIMUM NUMBER OF SIGNS: ONE (1) MAXIMUM SIGN AREA: 30 SF PER SIDE, 60 SF TOTAL	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A	NUMBER OF SIGNS: ZERO (0) SIGN AREA: N/A	NUMBER OF SIGNS: ZERO (0) SIGN AREA: N/A
PREVIEW BOARD	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A	NUMBER OF SIGNS: ONE (1) (C) SIGN AREA: 14.45 SF	NUMBER OF SIGNS: ONE (1) (C) SIGN AREA: 14.45 SF
MENU BOARD	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A	MAXIMUM NUMBER OF SIGNS: N/A MAXIMUM SIGN AREA: N/A	NUMBER OF SIGNS: ONE (1) (C) SIGN AREA: 41.84 SF	NUMBER OF SIGNS: ONE (1) (C) SIGN AREA: 41.84 SF

N/A: NO STANDARD N/A: NOT APPLICABLE (V): VARIANCE (C): EXISTING NON-CONFORMANCE

- SIGNAGE TABLE NOTES
- ILLUMINATION OF ANY SIGN SHALL BE OF THE DIFFUSED LIGHTING TYPE, AND ONLY THE LETTERS OR LOGOS IN THE SIGN SHALL BE ILLUMINATED. (§190-122.8(a)(1))
  - INDIRECTLY LIGHTED SIGNS SHALL ONLY BE PERMITTED WHERE THE SOURCES OF ILLUMINATION ARE SHIELDED IN SUCH A MANNER THAT THE SAME ARE NOT VISIBLE FROM THE STREET OR ADJACENT PROPERTY. (§190-122.8(a)(2))
  - FLOODLIGHTS OR SPOTLIGHTS USED FOR THE ILLUMINATION OF SIGNS, WHETHER OR NOT SUCH LIGHTS ARE ATTACHED TO OR SEPARATE FROM THE BUILDING, SHALL NOT PROJECT LIGHT BEYOND THE SIGN CROSSSECTION REFLECTORS AND LIGHTS SHALL BE PERMITTED, PROVIDED, HOWEVER, THAT THE REFLECTORS SHALL BE PROVIDED WITH PROPER GLASS LENSES CONCENTRATING THE ILLUMINATION UPON THE AREA OF THE SIGN SO AS TO PREVENT GLARE UPON THE STREET OR ADJACENT PROPERTY. (§190-122.8(a)(3))
  - IN NO INSTANCE SHALL THE LIGHT INTENSITY OF ANY ILLUMINATED SIGN EXCEED 25 FOOT-CANDELS MEASURED WITH A STANDARD LIGHT METER MEASURED AT ANY POINT IN FRONT OF THE SIGN AT A DISTANCE THAT IS NO GREATER THAN THE SMALLEST HORIZONTAL OR VERTICAL DIMENSION OF SAID SIGN. THERE SHALL BE NO ELECTRIC CONDUIT LOCATED ON THE EXTERIOR FACADE OF A BUILDING USED TO PROVIDE ELECTRIC POWER TO ANY SIGN. (§190-122.8(a)(4))
  - THE SIGN SHALL BE LOCATED ON THE FACADE OF THE PRINCIPAL STRUCTURE FACING ON THE FRONT YARD. (§190-122.8(a)(5))
  - ANY SIGN PERMITTED IN THE OB-1 AND OB-2 OFFICE BUILDING ZONE DISTRICTS MAY BE ILLUMINATED, PROVIDED THAT THE SOURCES OF ILLUMINATION SHALL BE NONFLASHING AND SHIELDED IN SUCH A MANNER THAT THE SAME ARE NOT VISIBLE FROM THE STREET OR ADJACENT PROPERTY. (§190-122.8(b))
  - LETTERING OR OTHER MARKING WHICH ARE A STRUCTURAL PART OF A GASOLINE PUMP SHALL CONSIST ONLY OF A BRAND NAME, LEAD WARNING SIGN AND OTHER SIGNS AS REQUIRED BY LAW, PROVIDED THAT SIGNS INDICATING FULL ATTENDANT SERVICES ARE PROVIDED AT PUMPS AS REQUIRED BY STATE LAW SHALL ALSO BE PERMITTED. (§190-122.8(c)(1))
  - ONE SIGN FOR EACH DRIVE-IN LANE, MOUNTED ON THE DRIVE-IN CANOPY OVER EACH LANE, INDICATING THE NATURE AND OPERATIONAL STATUS OF SUCH LANE. SUCH SIGNS SHALL NOT EXCEED AN AREA OF FOUR SQUARE FEET. (§190-122.8(c)(2))
  - ONE SIGN, OR ONE GROUP OF SIGNS, FOR EACH MECHANICAL DEVICE SERVING THE DRIVE-IN USER, MOUNTED ON THE EQUIPMENT OR ON THE BUILDING OR CANOPY NEAR THE EQUIPMENT, INDICATING THE NATURE OF THE DEVICE AND PROVIDING OPERATIONAL INFORMATION. THE AREA OF SUCH SIGN OR GROUP OF SIGNS SHALL NOT EXCEED FOUR SQUARE FEET. (§190-122.8(c)(3))
  - THE TOP OF ANY ATTACHED SIGN SHALL NOT EXCEED THE ROOF LEVEL OF THE BUILDING. (§190-122.8(c)(4))



THE SCOPE OF THIS APPLICATION IS LIMITED TO A NEW FREESTANDING SIGN ON FRANKLIN TURNPIKE. NO SITE IMPROVEMENTS ARE PROPOSED.

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

**DYNAMIC ENGINEERING**  
LAND DEVELOPMENT CONSULTING • PERMITTING • GEOTECHNICAL • ENVIRONMENTAL • SURVEY • PLANNING & ZONING  
248 Main Street, Suite 102, Cheshire, NJ 07927 • 908.899.9229 • 1000 Main Street, Suite 102, North Plainfield, NJ 07063 • 908.899.9229 • 1000 Main Street, Suite 102, North Plainfield, NJ 07063 • 908.899.9229

TITLE: **AMENDED SIGN VARIANCE PLAN**

PROJECT: **657 RIDGEWOOD, LLC**  
**PROPOSED FUELING STATION & QUICK SERVICE RESTAURANT W/ DRIVE-THRU SERVICE**  
BLOCK 4703, LOT 14; TAX MAP SHEET #47  
857 FRANKLIN TURNPIKE (COUNTY ROUTE 62)  
VILLAGE OF RIDGEWOOD, BERGEN COUNTY, NEW JERSEY

JOB No: 0141-11-066  
DATE: 07/08/19  
DESIGNED BY: DJB  
SCALE: (H) 1"=20' (V)  
CHECKED BY: JEH  
SHEET No: 1  
CONSTRUCTION CHECK: DATE  
CONSTRUCTION CHECK: DATE  
DEC Client Code: 0141  
Rev: 2

**DRAFT**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE No. 49286  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE No. 41975



1904 Main Street, Lake Como, NJ 07719  
245 Main Street - Suite 110, Chester, NJ 07930  
732-681-0760

File Name : Rt 17 & Franklin Tpke & Driveways - AMPM  
Site Code : 00000000  
Start Date : 8/18/2020  
Page No : 1

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1904 Main Street, Lake Como, NJ 07719  
245 Main Street - Suite 110, Chester, NJ 07930  
732-681-0760

E/W: Dunkin Driveways  
N/S: Rt 17/Franklin Tpke  
Town/County: Ridgewood/Bergen  
Job #: 0141-11-066TE

File Name : Rt 17 & Franklin Tpke & Driveways - AMPM  
Site Code : 00000000  
Start Date : 8/18/2020  
Page No : 2

[illegible]

1904 Main Street, Lake Como, NJ 07719  
245 Main Street - Suite 110, Chester, NJ 07930  
732-681-0760


E/W: Dunkin Driveways  
N/S: Rt 17/Franklin Tpke  
Town/County: Ridgewood/Bergen  
Job #: 0141-11-066TE

File Name : Rt 17 & Franklin Tpke & Driveways - SAT  
Site Code : 00000000  
Start Date : 8/15/2020  
Page No : 1

**Groups Printed- Cars - Trucks (SU) - Trucks (TT)**

[illegible][illegible]

	To Pumps	To Dunkin'	BOTH
11:15			
11:30			
11:45			
12:00			
12:15			
12:30			
12:45			
1:00			
1:15			
1:30			
1:45			
2:00			


 657 Franklin TPKE.  
 8.15.20 11-2

	To Pumps	To Dunkin'	BOTH
7:15			
7:30			
7:45			
8:00			
8:15			
8:30			
8:45			
9:00			

8.18.20 7-9 AM



	TO PLUMPS	TO DUNKIN	BOTH
4:45			
5:00			
5:15			
5:30			
5:45			
6:00			
6:15			
6:30			

657 Franklin TPK.

8-18-20

4:30-6:30 PM