

SANITARY SEWERAGE
CALCULATIONS

for

PROPOSED
MIXED USE BUILDING
522-526 PARK AVENUE
CITY OF PLAINFIELD
UNION COUNTY, NEW JERSEY

MARCH 11, 2020

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A handwritten signature in black ink, appearing to read 'R. Adelsqhn', is written over a horizontal dashed line.

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SANITARY SEWERAGE CALCULATIONS

Proposed Development

In accordance with N.J.A.C. 7:14A-23:

Studio Units	
6 Units * 150 gpd/unit =	900 gpd
Two Bedroom Units	
8 Units * 225 gpd/unit =	1,800 gpd
Stores and Shopping Center (Gross Area)	
2,455 SF * .1gpd/SF=	245.5 gpd
TOTAL PROPOSED FLOW=	2945.9 gpd

Proposed flow is less than 8000 gpd; thus no TWA is required.

Project Name: **522 Park Avenue**
Location: **Plainfield, New Jersey**
Subject: **Sanitary Sewerage Calculations**

Project No.: **9250**
Date: **3/11/20**
By: **RJA**

Net Increase in Demand:

+2,945.9 gpd

Peaked Flow:

Peaking Factor =2

$2,945.9 \times 2 = 5,891 \text{ gpd} = 0.00589 \text{ mgd}$

Pipe Capacity (half full):

$4'' @ 2.00\% = 0.171 \text{ cfs} = 0.11 \text{ mgd} @ 3.99 \text{ ft/s}$

Proposed lateral capacity is adequate.

Additional flow to road = 0.00589 mgd.

Channel Report

<Name>

Circular

Diameter (ft) = 0.33

Invert Elev (ft) = 87.50

Slope (%) = 2.00

N-Value = 0.010

Calculations

Compute by: Q vs Depth

No. Increments = 10

Highlighted

Depth (ft) = 0.17

Q (cfs) = 0.171

Area (sqft) = 0.04

Velocity (ft/s) = 3.99

Wetted Perim (ft) = 0.52

Crit Depth, Yc (ft) = 0.24

Top Width (ft) = 0.33

EGL (ft) = 0.41

