Covelli
Design
Associates, Inc.
Urban Planning ◆ Landscape Architecture

Patrick A. Figurella, P.E.
City of Delray Beach
100 N.W. 1st Avenue
Delray Beach, Florida 33444

January 28, 2026

Re: Parks of Delray (Soft) Security Gates - Request for reduction of storage area.

Dear Mr. Figurella,

The HOA is planning install security gates at 5 locations within the entry roads of the Parks of Delray development. The gates will be at entrances accessing Congress Avenue and Old Germantown Road. The gates will be unmanned and do not have keypads or any kind of readers. The gates will automatically open when a vehicle approaches either entering or exiting the development. The gates are being installed to provide a sense of security but more importantly a platform for security cameras.

4 of the 5 gates are situated with adequate storage area as per code. The gate at the North West (Hammock Way) entrance from Old Germantown Road has a storage area of 77 feet which is less than the 100 feet required. The gate must be situated in this location due to conflicts with townhouse driveways. A queueing study is provided showing the distribution of traffic to the various entrances and specifically at the northwest entry (Hammock Way) that is the subject of the study. The study states that a 50 foot storage area is adequate even if the gates were to be closed at all times. Therefore, the provided 77 foot storage area is more than adequate to accommodate the volume of vehicles assigned to the Hammock Way entrance. Since the gates open on demand when a vehicle approaches, the amount of time the vehicle is stopped at the gate is minimal. Additionally, the gates will be open during daylight hours from the beginning of the morning peak hour at 7:00 am till the end of the evening peak hour at 6:00 pm so there will be no issue that would cause obstruction of Old Germantown Road during peak hours.

Therefore, as per the attached queueing study and information provided please approve the request to reduce the storage area from 100 feet to 77 feet for the gate proposed at Hammock Way.

If you have any questions or require additional information, please feel free to contact me.
Sincerely,
Covelli Design Associates

Michael Covelli, AICP/ ASLA
President

Mailing Address:
7050 W. Palmetto Park Road
Suite 15-274
Boca Raton, Florida 33433

Office Address:
1209 S. Swinton Avenue
Delray Beach, Florida 33444
561-910-0330 / LA# 0000967

Kimley»Horn

MEMORANDUM

To: Elianne Klein
13th Floor Homes, LLC
699 North Federal Highway, Suite 450
Fort Lauderdale, Florida 33304

From: Adam Kerr, P.E.
Kimley-Horn and Associates, Inc.

Date: January 12, 2026

Subject: Parks at Delray - Proposed Gate Queueing
Delray Beach, Florida
Kimley-Horn #140288000

Kimley-Horn and Associates has prepared the following queueing analysis for the project located at the Parks of Delray project located west side of Congress Avenue, south of Germantown Road in the City of Delray Beach, Florida. Figure 1 illustrates the site location for reference.

BACKGROUND

The existing site has a TPS approval dated August 14, 2024. The site is approved to be redeveloped as a mixed-use site with 1,009 dwelling units of residential use, 330,000 square feet of retail, and 70,000 square feet of office use. The development is also proposing six driveways; three full-access connections onto Old Germantown Road, and three driveways onto Congress Avenue. Access via Driveway 1, as shown in the attached figure, will have a gate for residents.

GATE QUEUEING

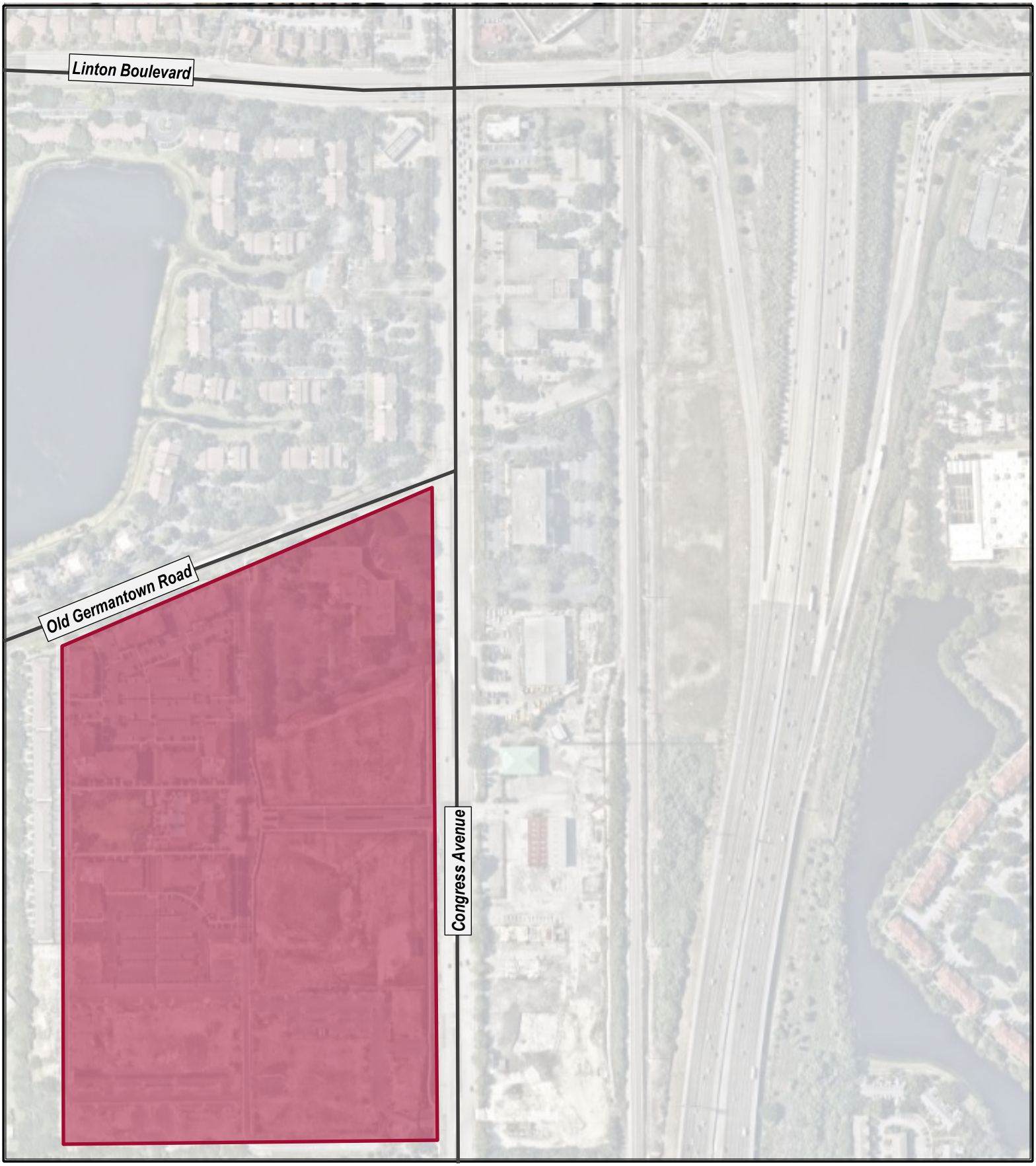
A gate is proposed to serve the residential traffic at Driveway 1. As requested by the City, a queue storage analysis was performed for this driveway. To determine the storage length, the following parameters listed below were used:

- Service Rate: 190 vehicle per hour
- Volume: 70 vehicles per hour (based on the peak traffic volumes in the approved traffic study)
- Probability of queue occurring: 95th percentile
- Spacing of queued vehicles: 25 feet

Backup documentation related to these assumptions and calculations is included in the Appendix. As determined in the calculation, the required storage at the gate is 2 vehicles, or 50 feet. The analysis shows that there is adequate storage available to accommodate the queue at this gate location. Furthermore, the gate is proposed to be in the opened position during the AM and PM peak hours and closed at night when the incoming traffic is lower. The analysis assumed that the gate would be closed throughout the day. Therefore, the expected queue is anticipated to be less than what was calculated in the analysis.

Please contact me via telephone at (561) 840-0874 or via e-mail at adam.kerr@kimley-horn.com should you have any questions regarding this evaluation.

ATTACHMENTS



NORTH

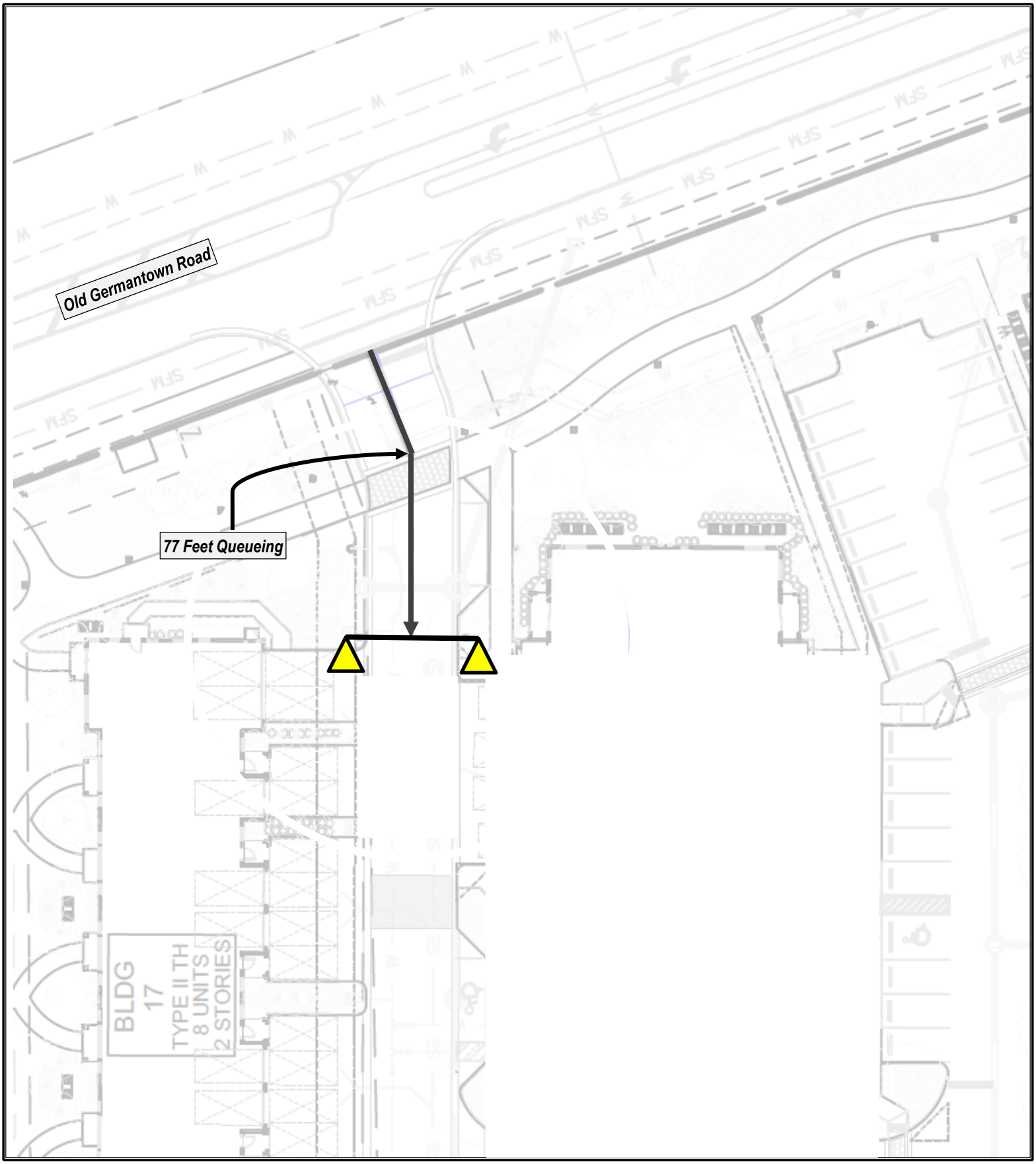
LEGEND

Site Location

FIGURE 1:

Site Location
Parks at Delray
KH # 140288000

Kimley»Horn



NORTH

LEGEND

Gate Location

FIGURE 2:

Gate & Queueing Location
Parks at Delray
KH # 140288000

Kimley»Horn

Queuing Analysis - Parks of Delray
Drivethrough-Total

Assumptions:

				AM Total	In	Out	PM Total	In	Out
Service Rate	=	190	vehicles per hour	48	28	20	108	70	38
Volume	=	100%	Higher Peak Hour Inbound Trips						
	=	70							

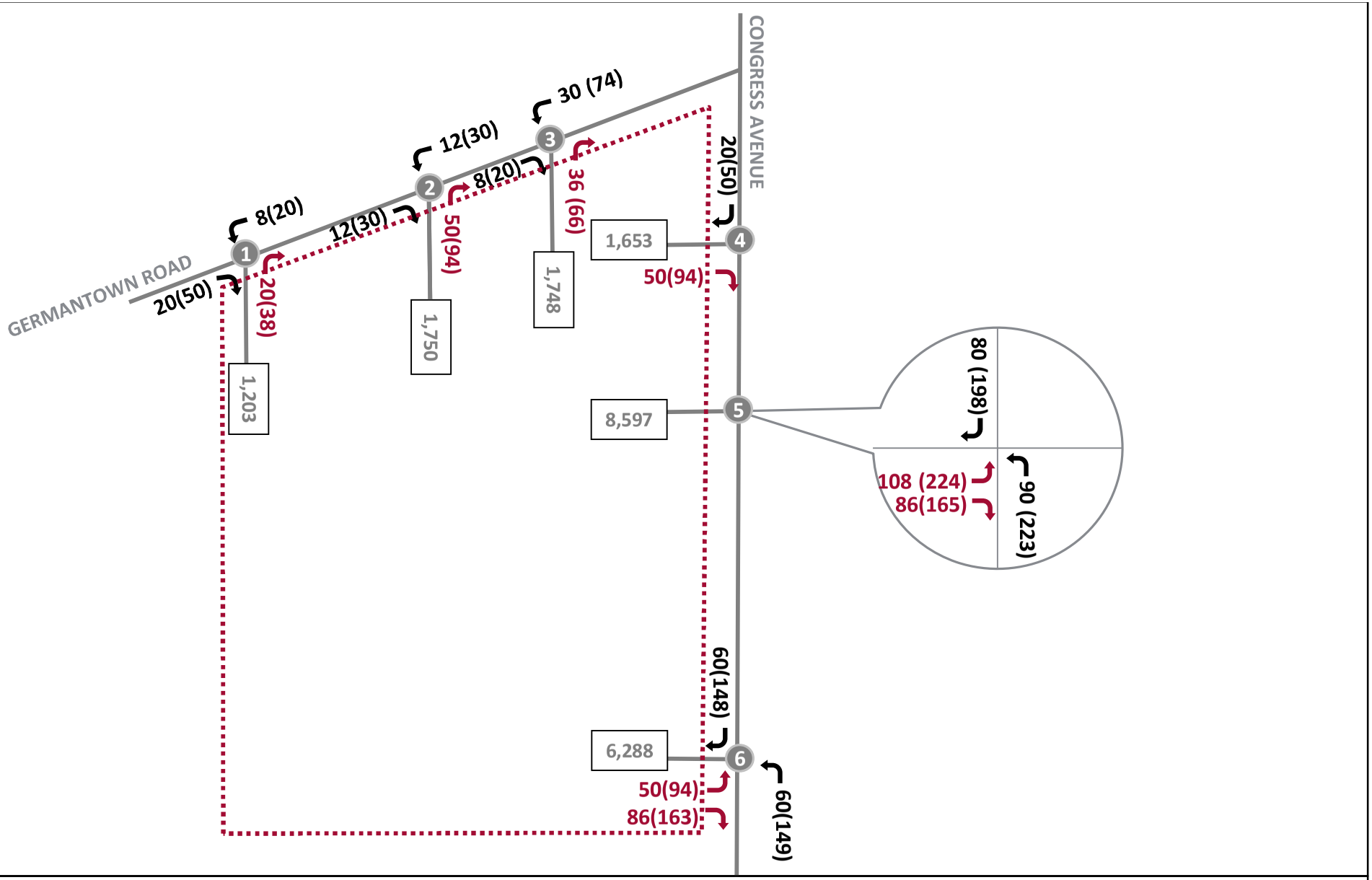
Probability of the queue occurring 95% of the time

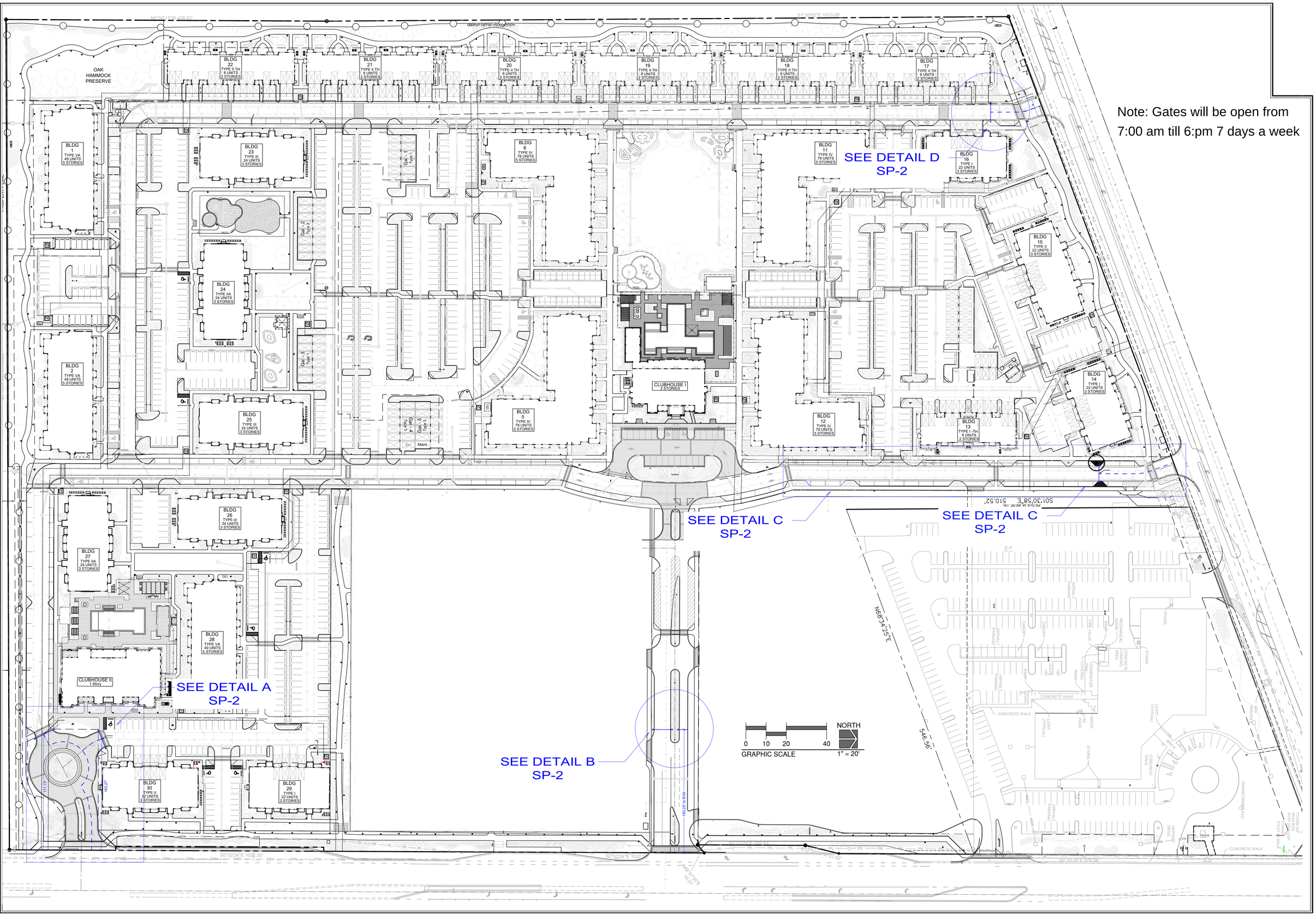
Calculations

$Q = 190$ veh/hr

$$\rho = \frac{70 \text{ veh/hr}}{190 \text{ veh/hr}} = 0.3684$$

$$\text{Queue} = \frac{LN(0.05) - LN(0.3684)}{LN(0.3684)} = \frac{-2.996 - -0.999}{-0.999} = 2 \text{ vehicles}$$


GERMANTOWN ROAD
CONGRESS AVENUE
1
2
3
4
5
6
8(20)
20(50)
20(38)
1,203
12(30)
50(94)
1,750
8(20)
30 (74)
36 (66)
1,748
20(50)
1,653
50(94)
8,597
80 (198)
108 (224)
86(165)
90 (223)
60(148)
6,288
50(94)
86(163)
60(149)
NORTH
Project Site
XX
Daily Volume
LEGEND
XX Inbound AM Volume
(XX) Inbound PM Volume
XX Outbound AM Volume
(XX) Outbound PM Volume
1690 – 2350 S. CONGRESS AVENUE
FIGURE 2
PROPOSED DRIVEWAY VOLUMES
140288000
Kimley»Horn



Note: Gates will be open from 7:00 am till 6:pm 7 days a week

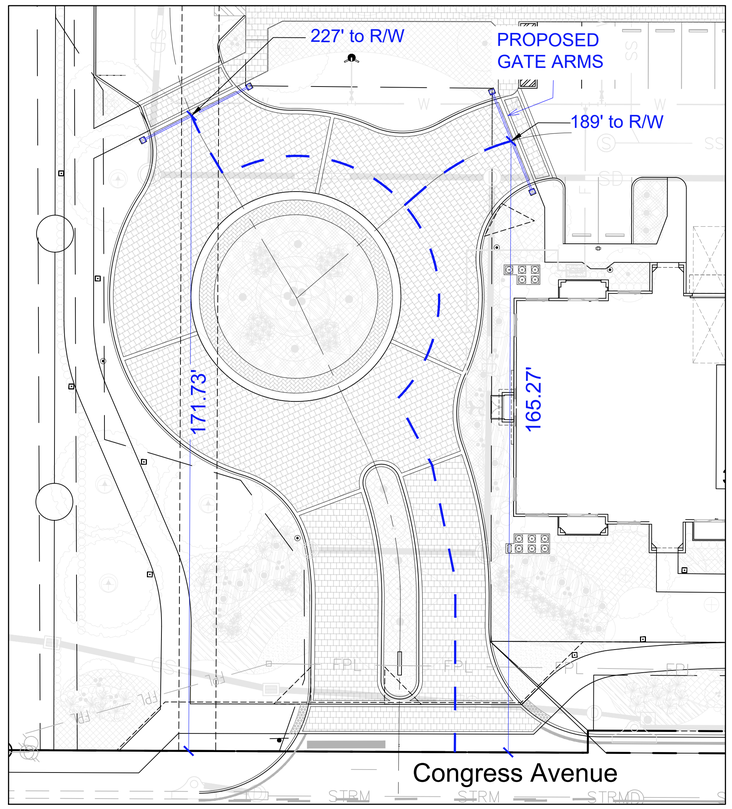
Revisions

Covelli Design Associates Inc.
Urban Planning ◆ Landscape Architecture
7050 West Palmetto Park Road Suite 15-274 Boca Raton, Florida 33433 561-910-0330
LA 0000967 covellidesign.com

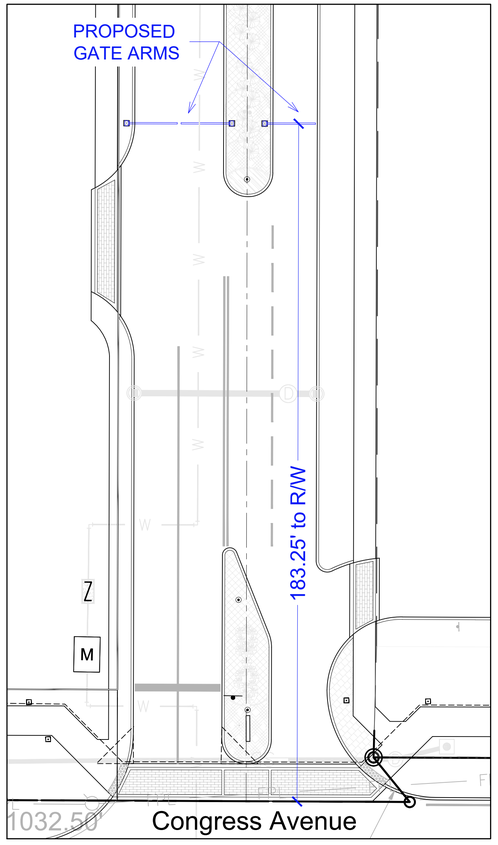
Gate Arms
Parks at Delray I & II
Delray Beach Florida

Date	01-21-2026
Scale	AsNoted
PN#	1231

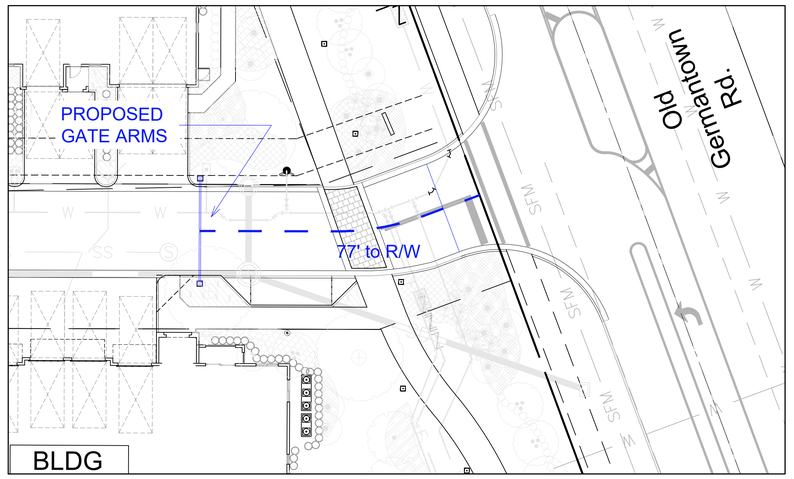
Drawing No.
SP-1
OF 2



DETAIL A



DETAIL B



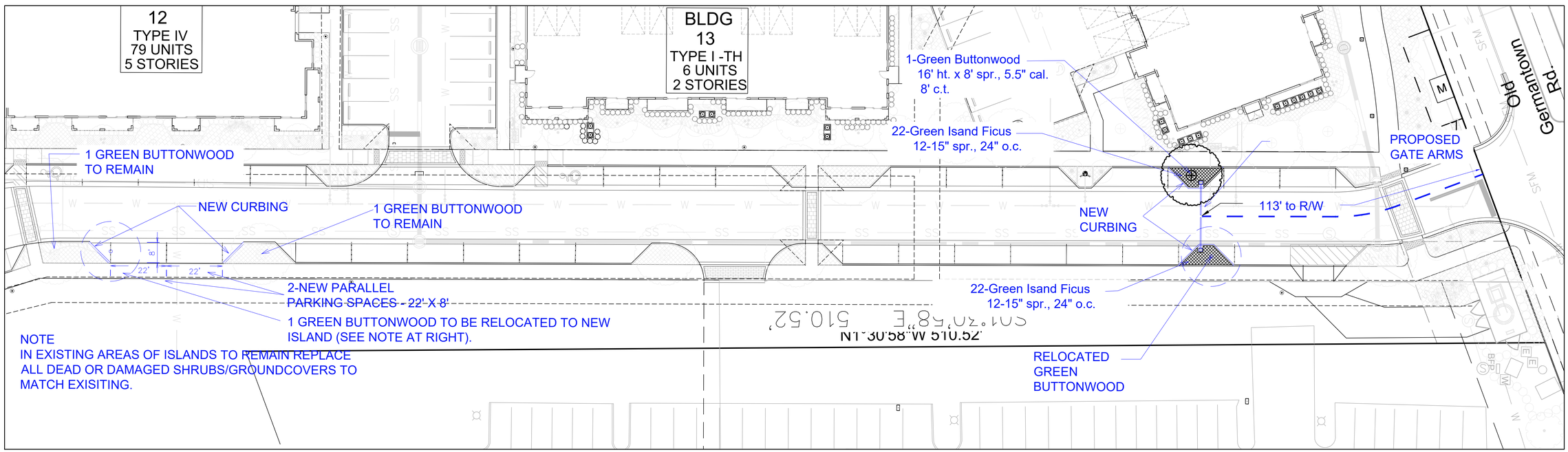
Note-
Based on provided queuing study this vehicular storage area can be reduced from 100' to 77' as shown and will not create a conflict within the Old Germantown Road R/W.

DETAIL D

GRAPHIC SCALE 0 10 20 40 — 1" = 20' — NORTH

LANDSCAPE NOTES
1. ADJUST EXISTING SHRUBS TO ACCOMMODATE NEW GATE ARM FOOTERS & HOUSING.
2. PRUNE OVERHANGING TREES OR PALMS TO CLEAR RAISED GATE ARMS.

NOTE - NEW LANDSCAPE ISLANDS
1. Two existing parking spaces to be relocated across from Bldg # 12 (at left).
2. Two new landscape islands. Remove all limerock, etc. and replace with planting soil. Connect new irrigation heads in islands to existing system.



NOTE
IN EXISTING AREAS OF ISLANDS TO REMAIN REPLACE ALL DEAD OR DAMAGED SHRUBS/GROUNDCOVERS TO MATCH EXISITING.

DETAIL C

Revisions

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7050 West Palmetto Park Road Suite 15-274
Boca Raton, Florida 33433
561-910-0330
LA 0000967
covellidesign.com

Gate Arms Detail Areas
Parks at Delray I & II
Delray Beach Florida

Date	01-21-2026
Scale	AsNoted
PN#	1231

Drawing No.
SP-2
OF 2

Residential Electronic Gate Service Rates



Bryant Ficek, PE, PTOE

Regular readers know we believe in Improving Transportation Globally and, equally important, we believe in sharing our information to help others achieve the same goal. This process leads us to complete various research projects and share the results. A notable one is our work on determining current trip generation for tradition land uses, like homes and offices, and new land uses that may not have been around in the past, like marijuana dispensaries and urgent care units (you can download our trip generation raw data spreadsheet). We shared this information with the Institute of Transportation Engineers (ITE) and expect to see it as part of the new Trip Generation Manual coming out later this year.

We are not the only ones who take this approach. Recently, Robert Kahn, a founding principal at RK Engineering Group (http://www.rkengineer.com) , completed a study of Service Rates for Residential Electronic Gates. He presented this information at the 2017 ITE Western District Annual Meeting and was kind enough to share his report with us.

Electronic gates controlling the accesses to residential neighborhoods are not very common in Minnesota. But they are present in many areas, particularly out west where Mr. Kahn's company is located. From his report, here are the key information and findings:

> The study purpose was to determine the hourly service rate capacity (vehicles per hour) of electronic gates at residential communities containing single family detached homes (although results could be applied to multi-family developments as well).
>
> The study focused on swinging or rolling style gates (not manned gates) where the gate capacity or service rate (vehicles per hour) is the key to determining the potential vehicle queues.
>
> The study collected data at 14 electronic gates during the p.m. peak period, which is the peak entering time for most residential communities.
>
> The peak inbound demand at these gates was split approximately 80 percent residents within the community and 20 percent visitors.
>
> With two entry lanes (one for visitors and one for residents), the recommended service rates are 115 vehicles per hour for visitors and 220 vehicles per hour for residents.
>
> With a single entry lane (for both visitors and residents), the recommended service rate is 190 vehicles per hour.
>
> The observed average p.m. peak hour trip generation rates for these residential developments was 0.76 vehicles per hour per dwelling unit (0.42 vehicles per hour per dwelling unit entering and 0.34 vehicles per hour per dwelling unit exiting).

While not specifically relevant to the type of work we commonly complete, we applaud this type of research as well as the sharing of information. These types of studies help move our industry forward in terms of more accurate results and, ultimately, better recommendations for the use of our resources. Thanks to Mr. Kahn for completing this work and helping all of us be better Traffic Engineers.

Do you have an interesting engineering project you'd like to share with other engineers? Write us at newsletter@mikeontraffic.com (mailto:newsletter@mikeontraffic.com). We would love to hear from you!

Want to partner on trip generation data? If you'd like to partner with us to collect trip generation in your area, we have a limited pool of video collection products that we're lending for free to collect trip generation data around the country. Leave your contact information in the comments section if you'd be interested in the lending program or contact Sales (mailto:%20sales@countingcars.com) at CountingCars.com.



Bryant Ficek, PE, PTOE

Bryant is Vice President of Spack Consulting, an engineering services company, which is part of the Spack Enterprise family of companies.

He is widely known in the transportation industry, and is an expert in Synchro, SimTraffic, Vistro and Vissim traffic modeling software. He is a regular contributor to MikeOn Traffic, a presenter for Traffic Corner Tuesday webinars, and published author of industry guides.

Related

Traffic Impact Study Improvements: Part 3 - All Trips Are Equal, But Some Trips Are More Equal Than Others (http://www.mikeontraffic.com/local_trip
August 25, 2015
In "Analysis"

Local Data Proves Best Again - Trip Generation at Hotels (http://www.mikeontraffic.com/hotel-trip-generation/)
January 24, 2017
In "Data"

New Trip Generation Data - Marijuana Dispensaries Drive 10 Times More Traffic Than Specialty Retail Stores (http://www.mikeontraffic.com/trip-generation-data-marijuana-dispensaries/)
November 11, 2015
In "Data"

Mike Covelli

Subject: FW: Parks at Delray A/B

From: Hanane Akif [mailto:HAkif@pbc.gov]
Sent: Monday, September 14, 2026 11:27 AM
To: Elianne Klein <eklein@13fi.com>; Quazi Bari <QBari@pbc.gov>
Cc: Manny Guzman <mguzman@13fi.com>; Biddle, Morgan <Morgan.Biddle@kimley-horn.com>; Mike Covelli <mike@covellidesign.com>
Subject: RE: Parks at Delray A/B

Elianne,

Thanks for the clarification. We understand that the gates will open automatically as vehicles approach, with no access restrictions, and will remain in the open position from 7:00 am. to 6:00 pm., as noted in the queuing analysis.

Based on the information provided, we have no objection to the proposed gate operation.

Thank you.

Hanane Akif, P.E.
Senior Professional Engineer
Traffic Division
Palm Beach County Engineering & Public Works
2300 N. Jog Road, West Palm Beach, FL 33411
Office: (561) 684-4030