



July 1, 2024
Revised September 6, 2024
Revised October 11, 2024

Village of Wellington
Traffic Engineering Division
12300 Forest Hill Blvd
Wellington, FL 33414

RE: *Isla Carroll*
Traffic Performance Standards Statement
Palm Beach, Florida
Kimley-Horn #140957002

Dear Village:

Kimley-Horn and Associates, Inc. has been retained to perform a traffic impact evaluation for the proposed development located on the northwest corner of the intersection of 120th Avenue and 35th Street in Wellington, Florida (see Figure 1). The existing site has been leased out to the National Polo Club for equestrian events throughout the year. These events often occur outside of the AM (7-9 AM) and PM (4-6 PM) peak hours of traffic that the surrounding road network experiences. Therefore, for trip generation purposes the existing site was not considered to generate any traffic, to maintain a conservative analysis. The proposed plan of development includes the addition of:

- 40 single family dwelling units
- 6 grooms quarters
- Showgrounds/equestrian uses with an average weekend attendance of 60 attendees
- 24 equestrian stables
- 107,011 square feet of air conditioned private space that includes:
 - Event Barn
 - Clubhouse
 - Pool
 - Fitness Center
 - Spa

It should be noted that all of the uses on site are part of the private club and operate exclusively for members and their guests. Therefore, a significant amount of traffic generated by the site will be internal to the site and be generated by the residential component internal to the site boundaries, with the trips never exiting to the external road network.

The Parcel Control Number (PCN) for the site is: 73-41-44-22-00-000-1030. This analysis was conducted to evaluate compliance with the Vehicular Traffic Performance Standards of the Village of Wellington, as defined in Article 9 of the Wellington Unified Land Development Code. (ULDC)

TRIP GENERATION DETERMINATION

A trip generation determination was prepared to determine the potential impacts of the proposed redevelopment utilizing rates and equations published by the Institute of Traffic Engineers (ITE) in *the 11th Edition Trip Generation Manual*. Traffic generated by the equestrian, stables, and grooms quarters were calculated using similar studies that have been conducted in Wellington, and the relevant excerpts are included in the Appendix, for reference. Table 1 summarizes the trip generation calculations for the proposed development. As shown in Table 1, the proposed redevelopment of the site results in an increase of 1,214 net new daily trips, an increase of 85 net new AM peak hour trips (+43 in, +42 out), and an increase of 114 net new PM peak hour trips (+61 in, +53 out).

Table 1: Weekday Trip Generation Calculations

| Land Use | Intensity | Daily Trips | AM Peak Hour | | | PM Peak Hour | | | |
|--|--|---|--|-----------|-----------|----------------|------------|-----------|-----------|
| | | | Total | In | Out | Total | In | Out | |
| Proposed Scenario | | | | | | | | | |
| Recreational Community Center | 107,011 ksf | 745 | 51 | 34 | 17 | 70 | 33 | 37 | |
| Single Family Detached | 40 DU | 400 | 28 | 7 | 21 | 38 | 24 | 14 | |
| Stable | 24 Stall(s) | 39 | 4 | 2 | 2 | 4 | 2 | 2 | |
| Grooms Quarters | 6 DU | 30 | 2 | 0 | 2 | 3 | 2 | 1 | |
| | | <i>Subtotal</i> | 1,214 | 43 | 42 | 115 | 61 | 54 | |
| Pass-By Capture | | | | | | | | | |
| Recreational Community Center | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Single Family Detached | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Stable | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Grooms Quarters | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | <i>Subtotal</i> | 0 | 0 | 0 | 0 | 0 | 0 | |
| Driveway Volumes | | | 1,214 | 85 | 43 | 42 | 115 | 61 | 54 |
| Proposed Net External Trips-Existing Net New External Trips | | | 1,214 | 85 | 43 | 42 | 115 | 61 | 54 |
| Land Use | Daily | AM Peak Hour | PM Peak Hour | | | Pass By | | | |
| Recreational Community Center | 25% of $L_n(T) = 0.98 * L_n(Q) + 3.42$ | 25% of 1.91 tps/stall (66% in, 34% out) | 25% of $L_n(T) = 0.71 * L_n(Q) + 0.71$ (47% in, 53% out) | | | 0.0% | | | |
| Single Family Detached | 10 tps/DU | 0.7 tps/DU (26% in, 74% out) | 0.94 tps/DU (63% in, 37% out) | | | 0.0% | | | |
| Stable | 1.62 tps/Stall(s) | 0.15 tps/Stall(s) (60% in, 40% out) | 0.15 tps/Stall(s) (60% in, 40% out) | | | 0.0% | | | |
| Grooms Quarters | 5 tps/DU | 0.35 tps/DU (20% in, 80% out) | 0.44 tps/DU (55% in, 35% out) | | | 0.0% | | | |

For reference, a weekend peak hour trip generation calculation was prepared to determine the amount of net new traffic generated by the site during average weekend conditions. On an average weekend, it is expected that the site will have 30-60 attendees for the equestrian uses on site. Table 2 summarizes the trip generation calculations during the weekend peak hour for the proposed development. As shown in Table 2 on average, the proposed redevelopment of the site results in an increase of 86 net new weekend peak hour trips (+52 in, +34 out).

Table 2: Average Weekend Trip Generation Calculations

| Land Use | Intensity | Peak Hour | | |
|--|-----------------|--|----------------|-----------|
| | | Total | In | Out |
| Proposed Scenario | | | | |
| Recreational Community Center | 107.011 ksf | 28 | 16 | 13 |
| Single Family Detached | 40 DU | 37 | 23 | 14 |
| Stable | 24 Stall(s) | 4 | 2 | 2 |
| Grooms Quarters | 6 DU | 3 | 2 | 1 |
| Showgrounds | 60 attendee(s) | 14 | 10 | 4 |
| | <i>Subtotal</i> | 86 | 53 | 34 |
| Pass-By Capture | | | | |
| Recreational Community Center | 0.0% | 0 | 0 | 0 |
| Single Family Detached | 0.0% | 0 | 0 | 0 |
| Stable | 0.0% | 0 | 0 | 0 |
| Grooms Quarters | 0.0% | 0 | 0 | 0 |
| Showgrounds | 0.0% | 0 | 0 | 0 |
| | <i>Subtotal</i> | 0 | 0 | 0 |
| Driveway Volumes | | 86 | 53 | 34 |
| Proposed Net External Trips-Existing Net New External Trips | | 86 | 53 | 34 |
| <u>Land Use</u> | | <u>Peak Hour:</u> | <u>Pass By</u> | |
| Recreational Community Center | | 25% of: 1.07 trips/ksf (54% in, 46% out) | 0.0% | |
| Single Family Detached | | 0.92 trips/DU (63% in, 37% out) | 0.0% | |
| Stable | | 0.15 trips/Stall(s) (60% in, 40% out) | 0.0% | |
| Grooms Quarters | | 0.44 trips/DU (65% in, 35% out) | 0.0% | |
| Showgrounds | | 0.23 trips/attendee(s) (73% in, 27% out) | 0.0% | |

A weekend peak hour analysis was also conducted to determine the amount of net new traffic generated by the site during peak weekend conditions. Peak weekend conditions for this site are representative of equestrian events that are planned to occur a few times a year, at most quarterly. These events are expected to have 300 attendees for the equestrian uses on site. Table 3 summarizes the trip generation calculations during the weekend peak hour for the proposed development. As shown in Table 3, the proposed redevelopment of the site results in an increase of 141 net new weekend peak hour trips (+92 in, +49 out). It should be noted that the weekend analysis utilizes an attendance of 300 attendees, representative of a quarterly event, for the equestrian uses on site, which is in excess of a standard weekend attendance of 60 attendees. The trip generation potential for the quarterly events was utilized in the following sections for the weekend peak hour analyses.

Table 3: Quarterly Event - Weekend Trip Generation Calculations

| Land Use | Intensity | Peak Hour | | |
|--|--|----------------|-----------|-----------|
| | | Total | In | Out |
| Proposed Scenario | | | | |
| Recreational Community Center | 107.011 ksf | 28 | 15 | 13 |
| Single Family Detached | 40 DU | 37 | 23 | 14 |
| Stable | 24 Stall(s) | 4 | 2 | 2 |
| Grooms Quarters | 6 DU | 3 | 2 | 1 |
| Showgrounds | 300 attendee(s) | 69 | 50 | 19 |
| | <i>Subtotal</i> | 141 | 92 | 49 |
| Pass-By Capture | | | | |
| Recreational Community Center | 0.0% | 0 | 0 | 0 |
| Single Family Detached | 0.0% | 0 | 0 | 0 |
| Stable | 0.0% | 0 | 0 | 0 |
| Grooms Quarters | 0.0% | 0 | 0 | 0 |
| Showgrounds | 0.0% | 0 | 0 | 0 |
| | <i>Subtotal</i> | 0 | 0 | 0 |
| Driveway Volumes | | 141 | 92 | 49 |
| Proposed Net External Trips-Existing Net New External Trips | | 141 | 92 | 49 |
| <u>Land Use</u> | <u>Peak Hour:</u> | <u>Pass By</u> | | |
| Recreational Community Center | 25% of: 1.07 trips/ksf (54% in, 46% out) | 0.0% | | |
| Single Family Detached | 0.92 trips/DU (63% in, 37% out) | 0.0% | | |
| Stable | 0.15 trips/Stall(s) (60% in, 40% out) | 0.0% | | |
| Grooms Quarters | 0.44 trips/DU (65% in, 35% out) | 0.0% | | |
| Showgrounds | 0.23 trips/attendee(s) (73% in, 27% out) | 0.0% | | |

The net new traffic associated with the redevelopment of the site was distributed across the surrounding road network based on complimentary land uses and existing traffic patterns in the area. The assumed traffic distribution is illustrated in Figure 2.

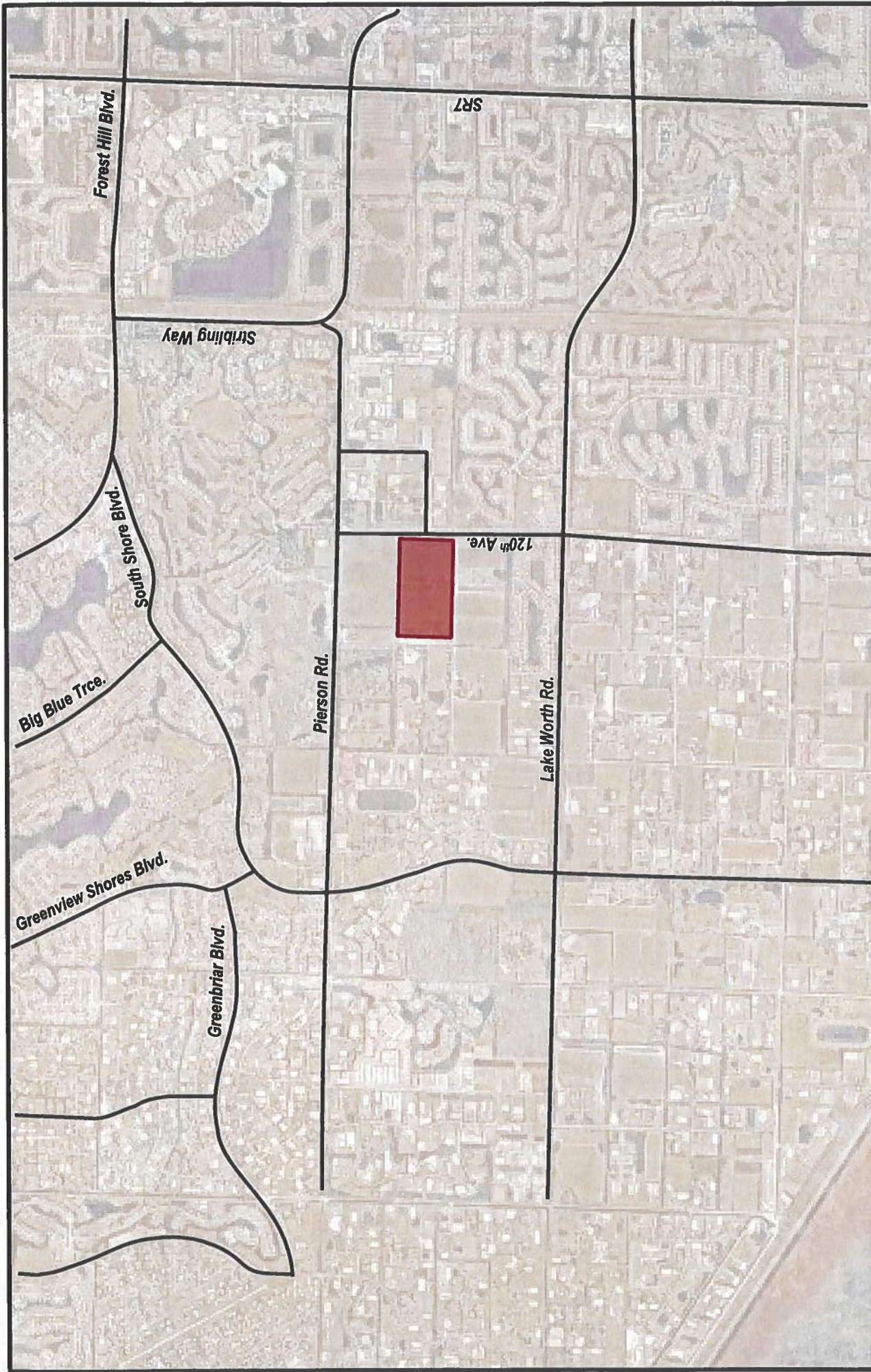
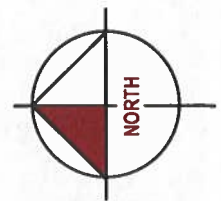


FIGURE 1
 Isla Carroll
 KH #140957002
 Site Location

LEGEND
 Site Location



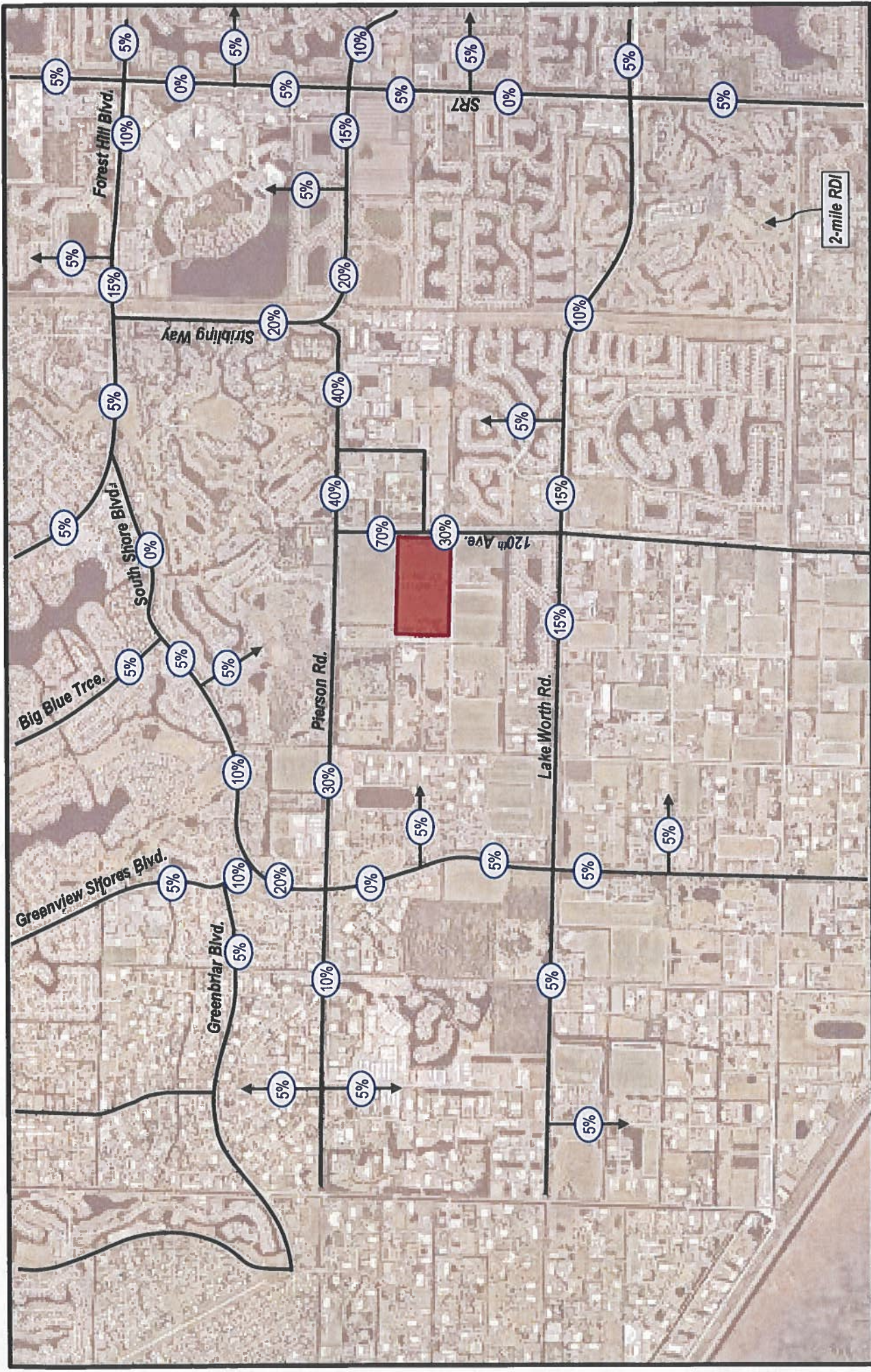




FIGURE 2
 Isla Carroll
 KH #140957002
 Project Distribution

LEGEND

-  Site Location
-  Traffic Assignment



LINK SIGNIFICANCE ANALYSIS

The project traffic was distributed across the links within the surrounding area based on the distribution illustrated in Figure 2, to determine if the addition of project traffic will significantly impact the roadway links, based on the methodology stated in Article 9. Table 4 and Table 5 summarize the weekday AM peak hour and PM peak hour significance analyses, respectively. The LOS D capacity as stated in Article 9 was utilized for a majority of the roadway links. Several links within the vicinity of the project are located within the Equestrian Preserve Area and therefore LOS E volumes were utilized, where applicable.

The weekend peak hour project traffic, for quarterly equestrian events, was distributed across the links within the Village of Wellington to determine if the addition of project traffic will significantly impact the roadway links, based on methodology stated in Article 9. Table 6 summarizes the weekend peak hour significance analysis.

The existing roadway capacities were measured to determine the intersections at which further analysis may be required. Test 1 of Article 9 states, during standard weekday conditions, where the addition of project traffic is significant on a link and the roadway capacity exceeds 80% intersection analysis is required. Additionally, the nearest major intersections from the driveway connections to the surrounding road network are required to be analyzed.

Based on this criteria, further intersection analysis is required at the following intersections:

1. 120th Avenue & Project Driveway (Weekday & Weekend)
2. 120th Avenue & Lake Worth Road (Weekday)
3. Stribling Way & Forest Hill Boulevard (Weekday)
4. Stribling Way & Pierson Road (Weekday)
5. SR 7 & Stribling Way (Weekday)

Additionally, a weekend peak hour analysis was conducted at the project driveway, for the larger quarterly equestrian events.

Table 4: AM Peak Hour Significance Analysis

| | | | AM PEAK HOUR VOLUME DEVELOPMENT & SIGNIFICANCE | | | | | | | | | | | | | |
|----------------------------|----------------------------|----------------------------|--|--------------------|---------------|---------------------------|---------------------|-------|-----------------|----------|------|--------------------|-------|-----------------|----------|------|
| ROADWAY | FROM | TO | EXISTING NUMBER OF LANES | PROJECT ASSIGNMENT | NB EB IN/OUT? | LOS DE GENERAL SVC VOLUME | NB EB PEAK ANALYSIS | | | | | SBWB PEAK ANALYSIS | | | | |
| | | | | | | | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? |
| Lake Worth Road | Gene Misch Way | South Shore Boulevard | 2L | 5% | i | 880 | - | - | 2 | 0.23% | No | - | - | 2 | 0.23% | No |
| Lake Worth Road | South Shore Boulevard | 120th Avenue | 2L | 15% | i | 880 | - | - | 6 | 0.68% | No | - | - | 6 | 0.68% | No |
| Lake Worth Road | 120th Avenue | SR7 | 4LD | 15% | o | 2,000 | - | - | 6 | 0.30% | No | - | - | 6 | 0.30% | No |
| Lake Worth Road | SR7 | Lyons Road | 6LD | 15% | o | 3,020 | - | - | 6 | 0.20% | No | - | - | 6 | 0.20% | No |
| Forest Hill Boulevard | Wellington Trace | South Shore Boulevard | 4LD | 5% | i | 2,000 | - | - | 2 | 0.10% | No | - | - | 2 | 0.10% | No |
| Forest Hill Boulevard | South Shore Boulevard | Stribling Way | 6LD | 5% | i | 3,020 | - | - | 2 | 0.07% | No | - | - | 2 | 0.07% | No |
| Forest Hill Boulevard | Stribling Way | SR7 | 6LD | 15% | o | 3,020 | - | - | 6 | 0.20% | No | - | - | 6 | 0.20% | No |
| South Shore Boulevard | 50th Street | Lake Worth Road | 2L | 5% | i | 800 | - | - | 2 | 0.25% | No | - | - | 2 | 0.25% | No |
| South Shore Boulevard | South Shore Boulevard | Lake Worth Road | 2LD | 5% | i | 840 | - | - | 2 | 0.24% | No | - | - | 2 | 0.24% | No |
| South Shore Boulevard | Pierson Road | Greenview Shores Boulevard | 4LD | 20% | o | 2,000 | - | - | 8 | 0.40% | No | - | - | 9 | 0.45% | No |
| South Shore Boulevard | Greenview Shores Boulevard | Big Blue Trace | 4LD | 10% | o | 2,000 | - | - | 4 | 0.20% | No | - | - | 4 | 0.20% | No |
| South Shore Boulevard | Big Blue Trace | Forest Hill Boulevard | 4LD | 0% | o | 2,000 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| 120th Avenue | Pierson Road | Project Driveway | 2L | 70% | o | 640 | 149 | 23% | 29 | 4.53% | Yes | 114 | 18% | 30 | 4.69% | Yes |
| 120th Avenue | Project Driveway | Lake Worth Road | 2L | 30% | i | 640 | 149 | 23% | 13 | 2.03% | Yes | 114 | 18% | 12 | 1.88% | Yes |
| 120th Avenue | Lake Worth Road | 50th Street | 2L | 0% | i | 640 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| Pierson Road | Ousley Farms Road | South Shore Boulevard | 2L | 10% | i | 800 | - | - | 4 | 0.50% | No | - | - | 4 | 0.50% | No |
| Pierson Road | South Shore Boulevard | 120th Avenue | 2L | 30% | i | 800 | 132 | 17% | 13 | 1.63% | Yes | 141 | 18% | 13 | 1.63% | Yes |
| Pierson Road | 120th Avenue | Stribling Way | 2L | 40% | o | 750 | 132 | 18% | 17 | 2.27% | Yes | 141 | 19% | 17 | 2.27% | Yes |
| Stribling Way | Forest Hill Boulevard | Pierson Road | 2L | 20% | o | 880 | - | - | 8 | 0.91% | No | 799 | 91% | 9 | 1.02% | Yes |
| Stribling Way | Pierson Road | SR7 | 2L | 20% | o | 880 | - | - | 8 | 0.91% | No | 443 | 50% | 9 | 1.02% | Yes |
| Stribling Way | SR7 | Donahue Way | 4LD | 10% | o | 2,000 | - | - | 4 | 0.20% | No | - | - | 4 | 0.20% | No |
| Greenview Shores Boulevard | South Shore Boulevard | Greenbriar Boulevard | 4LD | 10% | o | 2,000 | - | - | 4 | 0.20% | No | - | - | 4 | 0.20% | No |
| Big Blue Trace | Wellington Trace | South Shore Boulevard | 2L | 5% | o | 880 | - | - | 2 | 0.23% | No | - | - | 2 | 0.23% | No |
| SR7 | Forest Hill Boulevard | Stribling Way | 8LD | 5% | o | 4,040 | - | - | 2 | 0.05% | No | - | - | 2 | 0.05% | No |
| SR7 | Stribling Way | Lake Worth Road | 8LD | 5% | o | 4,040 | - | - | 2 | 0.05% | No | - | - | 2 | 0.05% | No |

Table 5: PM Peak Hour Significance Analysis

| | | | PM PEAK HOUR VOLUME DEVELOPMENT & SIGNIFICANCE | | | | | | | | | | | | | |
|----------------------------|----------------------------|----------------------------|--|--------------------|---------------|---------------------------|---------------------|-------|-----------------|----------|------|--------------------|-------|-----------------|----------|------|
| ROADWAY | FROM | TO | EXISTING NUMBER OF LANES | PROJECT ASSIGNMENT | NB EB IN/OUT? | LOS DE GENERAL SVC VOLUME | NB EB PEAK ANALYSIS | | | | | SBWB PEAK ANALYSIS | | | | |
| | | | | | | | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? |
| Lake Worth Road | Gene Misch Way | South Shore Boulevard | 2L | 5% | i | 880 | - | - | 3 | 0.34% | No | - | - | 3 | 0.34% | No |
| Lake Worth Road | South Shore Boulevard | 120th Avenue | 2L | 15% | i | 880 | 457 | 52% | 9 | 1.02% | Yes | - | - | 8 | 0.91% | No |
| Lake Worth Road | 120th Avenue | SR7 | 4LD | 15% | o | 2,000 | - | - | 6 | 0.40% | No | - | - | 9 | 0.45% | No |
| Lake Worth Road | SR7 | Lyons Road | 6LD | 15% | o | 3,020 | - | - | 6 | 0.26% | No | - | - | 9 | 0.30% | No |
| Forest Hill Boulevard | Wellington Trace | South Shore Boulevard | 4LD | 5% | i | 2,000 | - | - | 3 | 0.15% | No | - | - | 3 | 0.15% | No |
| Forest Hill Boulevard | South Shore Boulevard | Stribling Way | 6LD | 5% | i | 3,020 | - | - | 3 | 0.10% | No | - | - | 3 | 0.10% | No |
| Forest Hill Boulevard | Stribling Way | SR7 | 6LD | 15% | o | 3,020 | - | - | 8 | 0.26% | No | - | - | 9 | 0.30% | No |
| South Shore Boulevard | 50th Street | Lake Worth Road | 2L | 5% | i | 800 | - | - | 3 | 0.38% | No | - | - | 3 | 0.38% | No |
| South Shore Boulevard | South Shore Boulevard | Lake Worth Road | 2LD | 5% | i | 840 | - | - | 3 | 0.36% | No | - | - | 3 | 0.36% | No |
| South Shore Boulevard | Pierson Road | Greenview Shores Boulevard | 4LD | 20% | o | 2,000 | - | - | 11 | 0.55% | No | - | - | 12 | 0.60% | No |
| South Shore Boulevard | Greenview Shores Boulevard | Big Blue Trace | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 6 | 0.30% | No |
| South Shore Boulevard | Big Blue Trace | Forest Hill Boulevard | 4LD | 0% | o | 2,000 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| 120th Avenue | Pierson Road | Project Driveway | 2L | 70% | o | 640 | 274 | 43% | 37 | 5.78% | Yes | 168 | 26% | 43 | 6.72% | Yes |
| 120th Avenue | Project Driveway | Lake Worth Road | 2L | 30% | i | 640 | 274 | 43% | 18 | 2.81% | Yes | 168 | 26% | 16 | 2.50% | Yes |
| 120th Avenue | Lake Worth Road | 50th Street | 2L | 0% | i | 640 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| Pierson Road | Ousley Farms Road | South Shore Boulevard | 2L | 10% | i | 800 | - | - | 6 | 0.75% | No | - | - | 5 | 0.63% | No |
| Pierson Road | South Shore Boulevard | 120th Avenue | 2L | 30% | i | 800 | 209 | 26% | 18 | 2.25% | Yes | 214 | 27% | 16 | 2.00% | Yes |
| Pierson Road | 120th Avenue | Stribling Way | 2L | 40% | o | 750 | 209 | 28% | 21 | 2.80% | Yes | 214 | 29% | 24 | 3.20% | Yes |
| Stribling Way | Forest Hill Boulevard | Pierson Road | 2L | 20% | o | 880 | 610 | 69% | 11 | 1.25% | Yes | 651 | 74% | 12 | 1.36% | Yes |
| Stribling Way | Pierson Road | SR7 | 2L | 20% | o | 880 | 743 | 84% | 11 | 1.25% | Yes | 670 | 76% | 12 | 1.36% | Yes |
| Stribling Way | SR7 | Donahue Way | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 6 | 0.30% | No |
| Greenview Shores Boulevard | South Shore Boulevard | Greenbriar Boulevard | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 6 | 0.30% | No |
| Big Blue Trace | Wellington Trace | South Shore Boulevard | 2L | 5% | o | 880 | - | - | 3 | 0.34% | No | - | - | 3 | 0.34% | No |
| SR7 | Forest Hill Boulevard | Stribling Way | 8LD | 5% | o | 4,040 | - | - | 3 | 0.07% | No | - | - | 3 | 0.07% | No |
| SR7 | Stribling Way | Lake Worth Road | 8LD | 5% | o | 4,040 | - | - | 3 | 0.07% | No | - | - | 3 | 0.07% | No |

Table 6: Quarterly Event - Weekend Peak Hour Significance Analysis

| ROADWAY | FROM | TO | EXISTING NUMBER OF LINES | PROJECT ASSIGNMENT | NB EB IN/OUT? | LOS D E GENERAL SVC VOLUME | WEEKEND PEAK HOUR VOLUME DEVELOPMENT & SIGNIFICANCE | | | | | SBWB PEAK ANALYSIS | | | | |
|----------------------------|----------------------------|----------------------------|--------------------------|--------------------|---------------|----------------------------|---|-------|-----------------|----------|------|--------------------|-------|-----------------|----------|------|
| | | | | | | | NB EB PEAK ANALYSIS | | | | | SBWB PEAK ANALYSIS | | | | |
| | | | | | | | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? | 2022 VOL | % CAP | PROJECT TRAFFIC | % IMPACT | Sig? |
| Lake Worth Road | Gene Misch Way | South Shore Boulevard | 2L | 5% | i | 880 | - | - | 5 | 0.57% | No | - | - | 2 | 0.23% | No |
| Lake Worth Road | South Shore Boulevard | 120th Avenue | 2L | 15% | i | 880 | 423 | 48% | 14 | 1.59% | Yes | - | - | 7 | 0.80% | No |
| Lake Worth Road | 120th Avenue | SR7 | 4LD | 15% | o | 2,000 | - | - | 7 | 0.35% | No | - | - | 14 | 0.70% | No |
| Lake Worth Road | SR7 | Lyns Road | 6LD | 15% | o | 3,020 | - | - | 7 | 0.23% | No | - | - | 14 | 0.46% | No |
| Forest Hill Boulevard | Wellington Trace | South Shore Boulevard | 4LD | 5% | i | 2,000 | - | - | 5 | 0.25% | No | - | - | 2 | 0.10% | No |
| Forest Hill Boulevard | South Shore Boulevard | Stribing Way | 6LD | 5% | i | 3,020 | - | - | 5 | 0.17% | No | - | - | 2 | 0.07% | No |
| Forest Hill Boulevard | Stribing Way | SR7 | 6LD | 15% | o | 3,020 | - | - | 7 | 0.23% | No | - | - | 14 | 0.46% | No |
| South Shore Boulevard | 50th Street | Lake Worth Road | 2L | 5% | i | 880 | - | - | 5 | 0.63% | No | - | - | 2 | 0.25% | No |
| South Shore Boulevard | Lake Worth Road | Pierson Road | 2LD | 5% | i | 840 | - | - | 5 | 0.60% | No | - | - | 2 | 0.24% | No |
| South Shore Boulevard | Pierson Road | Greenview Shores Boulevard | 4LD | 20% | o | 2,000 | - | - | 10 | 0.50% | No | - | - | 18 | 0.90% | No |
| South Shore Boulevard | Greenview Shores Boulevard | Big Blue Trace | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 9 | 0.45% | No |
| South Shore Boulevard | Big Blue Trace | Forest Hill Boulevard | 4LD | 0% | o | 2,000 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| 120th Avenue | Pierson Road | Project Driveway | 2L | 70% | o | 640 | 689 | 108% | 34 | 5.31% | Yes | 543 | 85% | 64 | 10.00% | Yes |
| 120th Avenue | Project Driveway | Lake Worth Road | 2L | 30% | i | 640 | 621 | 97% | 28 | 4.38% | Yes | 477 | 75% | 15 | 2.34% | Yes |
| 120th Avenue | Lake Worth Road | 50th Street | 2L | 0% | i | 640 | - | - | 0 | 0.00% | No | - | - | 0 | 0.00% | No |
| Pierson Road | Outley Farms Road | South Shore Boulevard | 2L | 10% | i | 750 | 228 | 30% | 9 | 1.20% | Yes | - | - | 5 | 0.67% | No |
| Pierson Road | South Shore Boulevard | 120th Avenue | 2L | 30% | i | 750 | 255 | 34% | 28 | 3.73% | Yes | 254 | 34% | 15 | 2.00% | Yes |
| Pierson Road | 120th Avenue | Stribing Way | 2L | 40% | o | 750 | 255 | 34% | 20 | 2.67% | Yes | 254 | 34% | 37 | 4.93% | Yes |
| Stribing Way | Forest Hill Boulevard | Pierson Road | 2L | 20% | o | 880 | 496 | 56% | 10 | 1.14% | Yes | 597 | 68% | 18 | 2.05% | Yes |
| Stribing Way | Pierson Road | SR7 | 2L | 20% | o | 880 | 697 | 79% | 10 | 1.14% | Yes | 484 | 53% | 18 | 2.05% | Yes |
| Stribing Way | SR7 | Donahue Way | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 9 | 0.45% | No |
| Greenview Shores Boulevard | South Shore Boulevard | Greenbriar Boulevard | 4LD | 10% | o | 2,000 | - | - | 5 | 0.25% | No | - | - | 9 | 0.45% | No |
| Big Blue Trace | Wellington Trace | South Shore Boulevard | 2L | 5% | o | 880 | - | - | 2 | 0.23% | No | - | - | 5 | 0.57% | No |
| SR7 | Forest Hill Boulevard | Stribing Way | 6LD | 5% | o | 4,040 | - | - | 2 | 0.05% | No | - | - | 5 | 0.12% | No |
| SR7 | Stribing Way | Lake Worth Road | 6LD | 5% | o | 4,040 | - | - | 2 | 0.05% | No | - | - | 5 | 0.12% | No |

LINK CAPACITY ANALYSIS

The surrounding roadways identified in Table 4 and Table 5 that are expected to be significantly impacted by the projected traffic were evaluated using the Test 1 criteria defined in Article 12 of the Palm Beach County Unified Land Development Code. The following tables summarize the peak hour capacity analyses on the significantly impacted roadway links during weekday and weekend conditions. Traffic volumes from the year 2022 were obtained from the Wellington Speed and Count study conducted by Pinder Troutman Consulting and were collected during peak season conditions. Committed development project traffic was included for the Professional Center at Wellington, Wellington North, Wellington South, and Wellington Aquatic Center projects. Applicable traffic volume data and committed development data is included in the Appendix, for reference.

Table 7 and Table 8 illustrate the results of the weekday AM and PM peak hour analyses. As illustrated in these tables no roadway links are expected to exceed their applicable LOS capacities.

Table 9 illustrates the results of the weekend peak hour analysis, for quarterly equestrian events. As illustrated in this table all of the links are expected to operate at their respective LOS D/E capacities and are expected to operate acceptably with the addition of project traffic, with the exception of 120th Avenue on weekends. However, this is considered a background deficiency not caused by the addition of project traffic and would be over capacity without the addition of project traffic.

Table 7: Weekday AM Peak Hour Capacity Analysis

| Roadway | From | To | Committed | | LOS/D E | Direction | Significantly Impacted? | Count Year | Count Year | Committed Traffic - Option #1 | | Committed Traffic - Option #2 | | Unleveled (Maximum) Committed Traffic | Wilmington Committed Traffic | Wilmington Adjacent Traffic | Project Traffic | 2038 Total Traffic | Meets Standard | Back-ground Def. | Future v.c. |
|--------------|-----------------------|------------------|-----------|---------------|---------|-----------|-------------------------|------------|------------|-------------------------------|------------|-------------------------------|------------|---------------------------------------|------------------------------|-----------------------------|-----------------|--------------------|----------------|------------------|-------------|
| | | | Lanes | Facility Type | | | | | | Committed Traffic | 10% Growth | Committed Traffic | 10% Growth | | | | | | | | |
| 120th Avenue | Person Road | Project Driveway | 2L | Class II | 640 | NSMB | Yes | 2022 | 148 | 0 | 9 | 12% | 12% | 12 | 45 | 37 | 26 | 272 | Yes | - | 0.43 |
| | | | 2L | Class II | 640 | SSMB | Yes | 2022 | 114 | 0 | 7 | 12% | 12% | 9 | 42 | 71 | 30 | 266 | Yes | - | 0.42 |
| 120th Avenue | Project Driveway | Lake Marsh Road | 2L | Class II | 640 | NSMB | Yes | 2022 | 149 | 0 | 9 | 12% | 12% | 12 | 45 | 43 | 13 | 262 | Yes | - | 0.41 |
| | | | 2L | Class II | 640 | SSMB | Yes | 2022 | 114 | 0 | 7 | 12% | 12% | 9 | 42 | 22 | 12 | 199 | Yes | - | 0.31 |
| Person Road | South Shore Boulevard | 120th Avenue | 2L | Class II | 800 | NSMB | Yes | 2022 | 132 | 0 | 8 | 12% | 12% | 11 | 54 | 29 | 13 | 239 | Yes | - | 0.30 |
| | | | 2L | Class II | 800 | SSMB | Yes | 2022 | 141 | 0 | 9 | 12% | 12% | 11 | 58 | 57 | 13 | 281 | Yes | - | 0.35 |
| Person Road | 120th Avenue | Shiloh Way | 2L | Class II | 750 | NSMB | Yes | 2022 | 132 | 0 | 8 | 12% | 12% | 11 | 56 | 105 | 17 | 361 | Yes | - | 0.48 |
| | | | 2L | Class II | 750 | SSMB | Yes | 2022 | 141 | 0 | 9 | 12% | 12% | 11 | 60 | 139 | 17 | 401 | Yes | - | 0.53 |
| Shiloh Way | Forest Hill Boulevard | Person Road | 2L | Class II | 880 | NSMB | No | 2023 | 712 | 16 | 35 | 12% | 12% | 47 | 52 | 36 | 9 | 851 | Yes | - | 0.88 |
| | | | 2L | Class II | 880 | SSMB | No | 2023 | 712 | 16 | 35 | 12% | 12% | 47 | 52 | 36 | 9 | 851 | Yes | - | 0.88 |
| Shiloh Way | Person Road | SR7 | 2L | Class II | 880 | NSMB | No | 2023 | 464 | 29 | 24 | 12% | 12% | 31 | 53 | 28 | 9 | 606 | Yes | - | 0.69 |
| | | | 2L | Class II | 880 | SSMB | Yes | 2023 | 464 | 29 | 24 | 12% | 12% | 31 | 53 | 28 | 9 | 606 | Yes | - | 0.69 |

*Wilmington Committed Traffic includes project traffic from Wilmington North, Wilmington South, Professional Center at Wilmington, and Aquatic Center

Table 8: Weekday PM Peak Hour Capacity Analysis

| Roadway | From | To | Committed | | LOS/D E | Direction | Significantly Impacted? | Count Year | Count Year | Committed Traffic - Option #1 | | Committed Traffic - Option #2 | | Unleveled (Maximum) Committed Traffic | Wilmington Committed Traffic | Wilmington Adjacent Traffic | Project Traffic | 2038 Total Traffic | Meets Standard | Back-ground Def. | Future v.c. | |
|-----------------|-----------------------|------------------|-----------|---------------|---------|-----------|-------------------------|------------|------------|-------------------------------|------------|-------------------------------|------------|---------------------------------------|------------------------------|-----------------------------|-----------------|--------------------|----------------|------------------|-------------|---------------------------------|
| | | | Lanes | Facility Type | | | | | | Committed Traffic | 10% Growth | Committed Traffic | 10% Growth | | | | | | | | | Historic Growth Rate (from IBS) |
| Lake North Road | South Shore Boulevard | 120th Avenue | 2L | Class I | 880 | NSMB | Yes | 2022 | 467 | 5 | 28 | 12% | 12% | 37 | 82 | 20 | 8 | 615 | Yes | - | 0.70 | |
| | | | 2L | Class I | 880 | SSMB | No | 2022 | 467 | 5 | 28 | 12% | 12% | 37 | 82 | 20 | 8 | 615 | Yes | - | 0.70 | |
| 120th Avenue | Person Road | Project Driveway | 2L | Class II | 640 | NSMB | Yes | 2022 | 274 | 0 | 17 | 12% | 12% | 22 | 63 | 75 | 37 | 471 | Yes | - | 0.74 | |
| | | | 2L | Class II | 640 | SSMB | Yes | 2022 | 188 | 0 | 10 | 10 | 12% | 12% | 13 | 56 | 66 | 43 | 385 | Yes | - | 0.60 |
| 120th Avenue | Project Driveway | Lake Marsh Road | 2L | Class II | 640 | NSMB | Yes | 2022 | 274 | 0 | 17 | 12% | 12% | 22 | 63 | 40 | 18 | 359 | Yes | - | 0.56 | |
| | | | 2L | Class II | 640 | SSMB | Yes | 2022 | 188 | 0 | 10 | 10 | 12% | 12% | 13 | 5 | 45 | 16 | 247 | Yes | - | 0.39 |
| Person Road | South Shore Boulevard | 120th Avenue | 2L | Class II | 800 | NSMB | Yes | 2022 | 209 | 0 | 13 | 12% | 12% | 17 | 78 | 40 | 18 | 302 | Yes | - | 0.45 | |
| | | | 2L | Class II | 800 | SSMB | Yes | 2022 | 214 | 0 | 13 | 12% | 12% | 17 | 86 | 45 | 16 | 378 | Yes | - | 0.47 | |
| Person Road | 120th Avenue | Shiloh Way | 2L | Class II | 750 | NSMB | Yes | 2022 | 209 | 0 | 13 | 12% | 12% | 17 | 78 | 60 | 21 | 441 | Yes | - | 0.59 | |
| | | | 2L | Class II | 750 | SSMB | Yes | 2022 | 214 | 0 | 13 | 12% | 12% | 17 | 86 | 53 | 24 | 490 | Yes | - | 0.65 | |
| Shiloh Way | Forest Hill Boulevard | Person Road | 2L | Class I | 880 | NSMB | Yes | 2023 | 782 | 12 | 39 | 12% | 12% | 50 | 51 | 68 | 30 | 11 | 922 | No | Yes | 1.05 |
| | | | 2L | Class I | 880 | SSMB | Yes | 2023 | 573 | 12 | 29 | 12% | 12% | 38 | 41 | 55 | 26 | 12 | 707 | Yes | - | 0.80 |
| Shiloh Way | Person Road | SR7 | 2L | Class I | 880 | NSMB | Yes | 2024 | 627 | 35 | 34 | 12% | 12% | 44 | 73 | 69 | 30 | 11 | 1010 | No | Yes | 1.15 |
| | | | 2L | Class I | 880 | SSMB | Yes | 2024 | 651 | 35 | 26 | 12% | 12% | 34 | 65 | 26 | 12 | 810 | Yes | - | 0.92 | |

*Wilmington Committed Traffic includes project traffic from Wilmington North, Wilmington South, Professional Center at Wilmington, and Aquatic Center

Table 9: Quarterly Event - Weekend Peak Hour Capacity Analysis

| Roadway | From | | To | | Committed | | Direction | Significantly Impacted? | Count Year | 1.25% Committed Traffic Growth | Wellington | | 2028 Total Traffic | Meets Standard | Imp. Capacity | Meets Standard | |
|-----------------|-------|---------------|------------------------|--------|------------|----------------|-----------|-------------------------|------------|--------------------------------|------------------------------|----------------------------|--------------------|----------------|---------------|----------------|------------------|
| | Lanes | Facility Type | LOS/DIE Service Volume | Volume | Count Year | Traffic Volume | | | | | Wellington Committed Traffic | Wellington Abbr'ds Traffic | | | | | Back-ground Def. |
| Lake Worth Road | 2L | Class II | 800 | 423 | 2022 | 423 | NBEB | Yes | 2022 | 34 | 69 | 26 | 14 | 566 | Yes | - | - |
| | 2L | Class II | 880 | - | - | - | SBWB | No | - | - | - | - | - | - | - | - | - |
| 120th Avenue | 2L | Class II | 640 | 889 | 2023 | 889 | NBEB | Yes | 2023 | 46 | 67 | 92 | 34 | 928 | No | 1.45 | 1,288 |
| | 2L | Class II | 640 | 543 | 2023 | 543 | SBWB | Yes | 2023 | 36 | 81 | 88 | 64 | 812 | No | 1.27 | 1,288 |
| 120th Avenue | 2L | Class II | 640 | 821 | 2023 | 821 | NBEB | Yes | 2023 | 41 | 67 | 53 | 28 | 810 | No | 1.27 | 1,288 |
| | 2L | Class II | 640 | 477 | 2023 | 477 | SBWB | Yes | 2023 | 32 | 81 | 55 | 15 | 660 | No | 1.03 | 1,288 |
| Pierson Road | 2L | Class II | 750 | 228 | 2022 | 228 | NBEB | Yes | 2022 | 18 | 108 | 18 | 9 | 381 | Yes | - | - |
| | 2L | Class II | 750 | - | - | - | SBWB | No | - | - | - | - | - | - | - | - | - |
| Pierson Road | 2L | Class II | 750 | 255 | 2022 | 255 | NBEB | Yes | 2022 | 20 | 42 | 53 | 28 | 398 | Yes | - | - |
| | 2L | Class II | 750 | 254 | 2022 | 254 | SBWB | Yes | 2022 | 20 | 79 | 55 | 15 | 423 | Yes | - | - |
| Pierson Road | 2L | Class II | 750 | 255 | 2022 | 255 | NBEB | Yes | 2022 | 20 | 116 | 73 | 20 | 484 | Yes | - | - |
| | 2L | Class II | 750 | 254 | 2022 | 254 | SBWB | Yes | 2022 | 20 | 161 | 70 | 37 | 542 | Yes | - | - |
| Stirling Way | 2L | Class I | 880 | 496 | 2023 | 496 | NBEB | Yes | 2023 | 33 | 70 | 37 | 10 | 646 | Yes | - | - |
| | 2L | Class I | 880 | 597 | 2023 | 597 | SBWB | Yes | 2023 | 40 | 81 | 35 | 18 | 771 | Yes | - | - |
| Stirling Way | 2L | Class I | 880 | 697 | 2024 | 697 | NBEB | Yes | 2024 | 37 | 70 | 37 | 10 | 851 | Yes | - | - |
| | 2L | Class I | 880 | 464 | 2024 | 464 | SBWB | Yes | 2024 | 24 | 81 | 35 | 18 | 622 | Yes | - | - |

*Wellington Committed Traffic includes project traffic from Wellington North, Wellington South, Professional Center at Wellington, and Aquatic Center

WEEKDAY INTERSECTION ANALYSIS

The five intersections listed previously were analyzed based on the criteria stated in Article 9 of the Wellington Unified Land Development Code using *Synchro 12* software. Palm Beach County traffic count data was utilized where available. Existing count data was collected on at intersections where data was missing from the County. Furthermore, count data utilized collected as part of the Wellington South traffic analysis was utilized in the analysis. It should be noted that an equestrian show was occurring at the same time counts were collected, in March of 2023, and therefore the count data collected is representative of peak conditions for both weekday and weekend peak hours. Existing count data is included in the Appendix, for reference.

The following three scenarios were analyzed at each of the intersections:

- Existing Year (2023)
- Background Year (2028)
- Future Year (2028)

The existing count data was collected during peak season and therefore no peak season correction factor (PSCF) was applied. To develop background year traffic volumes existing volumes were grown over a five year period using a 1.29% annual compounding growth rate. This 1.29% annual compounding growth rate was used based on growth rate calculations conducted for the Wellington South project. The Palm Beach County TPS database was utilized to determine the amount of committed development traffic to include, if available. Furthermore, project traffic from the Professional Center at Wellington, Wellington North, Wellington South, Wellington Aquatic Center, Wellington Sports Academy at Village Park, and POD D-2 Orange Point PUD projects were included in the analyses. Committed development data for these projects is included in the Appendix. Project traffic was added to the background year traffic volumes to determine future year traffic volumes at each of the intersections.

The following tables summarize the results of the *Synchro* analyses for weekday peak hour conditions. Volume development worksheets, *Synchro* output worksheets, and Palm Beach County signal timing data is also included in the Appendix, for reference.

Table 10: Existing Year Weekday Peak Hour Synchro Analyses

| # | Intersection | Control Type | Movement | AM Peak Hour | | PM Peak Hour | |
|---|---------------------------------------|--------------|----------------|--------------|----------|--------------|----------|
| | | | | Delay (s) | LOS | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | - | - | - | - |
| | | | WB | 9.4 | A | 12.0 | B |
| | | | NB | - | - | - | - |
| | | | SB | - | - | - | - |
| | | | Overall | - | - | - | - |
| 2 | 120th Avenue & Lake Worth Road | TWSC | EB | - | - | - | - |
| | | | WB | - | - | - | - |
| | | | NB | 30.6 | D | 87.7 | F |
| | | | SB | 25.0 | D | 87.8 | F |
| | | | Overall | - | - | - | - |
| 3 | Stribling Way & Forest Hill Boulevard | Signalized | EB | 12.3 | B | 30.8 | C |
| | | | WB | 6.9 | A | 23.8 | C |
| | | | NB | 74.5 | E | 63.9 | E |
| | | | SB | - | - | - | - |
| | | | Overall | 13.9 | B | 32.8 | C |
| 4 | Stribling Way & Pierson Road | Roundabout | EB | 9.2 | A | 10.2 | B |
| | | | WB | - | - | - | - |
| | | | NB | 6.5 | A | 19.8 | C |
| | | | SB | 9.5 | A | 10.4 | B |
| | | | Overall | 8.6 | A | 14.5 | B |
| 5 | SR7 & Stribling Way | Signalized | EB | 153.0 | F | 70.5 | E |
| | | | WB | 423.0 | F | 229.2 | F |
| | | | NB | 39.8 | D | 89.1 | F |
| | | | SB | 54.3 | D | 78.0 | E |
| | | | Overall | 89.0 | F | 91.6 | F |

Table 11: Background Year (2028) Weekday Peak Hour Synchro Analyses

| # | Intersection | Control Type | Movement | AM Peak Hour | | PM Peak Hour | |
|---|---------------------------------------|--------------|----------------|--------------|----------|--------------|----------|
| | | | | Delay (s) | LOS | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | - | - | - | - |
| | | | WB | 12.7 | B | 38.0 | E |
| | | | NB | - | - | - | - |
| | | | SB | - | - | - | - |
| | | | Overall | - | - | - | - |
| 2 | 120th Avenue & Lake Worth Road | TWSC | EB | - | - | - | - |
| | | | WB | - | - | - | - |
| | | | NB | 85.0 | F | \$1241.2 | F |
| | | | SB | 77.2 | F | \$774.02 | F |
| | | | Overall | - | - | - | - |
| 3 | Stribling Way & Forest Hill Boulevard | Signalized | EB | 18.3 | B | 40.7 | D |
| | | | WB | 13.2 | B | 30.8 | C |
| | | | NB | 75.2 | E | 64.8 | E |
| | | | SB | - | - | - | - |
| | | | Overall | 20.3 | C | 40.0 | D |
| 4 | Stribling Way & Pierson Road | Roundabout | EB | 11.5 | B | 14.1 | B |
| | | | WB | - | - | - | - |
| | | | NB | 8.4 | A | 58.0 | F |
| | | | SB | 12.4 | B | 13.8 | B |
| | | | Overall | 11.1 | B | 31.9 | D |
| 5 | SR7 & Stribling Way | Signalized | EB | 150.0 | F | 96.6 | F |
| | | | WB | 271.1 | F | 156.7 | F |
| | | | NB | 34.7 | C | 88.0 | F |
| | | | SB | 66.1 | E | 184.1 | F |
| | | | Overall | 76.9 | E | 127.6 | F |

Table 12 Future Year (2028) Weekday Peak Hour Synchro Analyses

| # | Intersection | Control Type | Movement | AM Peak Hour | | PM Peak Hour | |
|---|---------------------------------------|--------------|----------------|--------------|----------|--------------|----------|
| | | | | Delay (s) | LOS | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | 15.2 | C | 42.2 | E |
| | | | WB | 13.1 | B | 46.4 | E |
| | | | NB | - | - | - | - |
| | | | SB | - | - | - | - |
| | | | Overall | - | - | - | - |
| 2 | 120th Avenue & Lake Worth Road | TWSC | EB | - | - | - | - |
| | | | WB | - | - | - | - |
| | | | NB | 93.2 | F | \$2214.0 | F |
| | | | SB | 94.7 | F | \$961.3 | F |
| | | | Overall | - | - | - | - |
| 3 | Stribling Way & Forest Hill Boulevard | Signalized | EB | 18.7 | B | 40.7 | D |
| | | | WB | 13.7 | B | 32.1 | C |
| | | | NB | 75.2 | E | 65.1 | E |
| | | | SB | - | - | - | - |
| | | | Overall | 20.8 | C | 40.7 | D |
| 4 | Stribling Way & Pierson Road | Roundabout | EB | 11.8 | B | 14.5 | B |
| | | | WB | - | - | - | - |
| | | | NB | 8.7 | A | 65.0 | F |
| | | | SB | 12.6 | B | 14.1 | B |
| | | | Overall | 11.3 | B | 34.9 | D |
| 5 | SR7 & Stribling Way | Signalized | EB | 149.4 | F | 97.6 | F |
| | | | WB | 269.1 | F | 155.5 | F |
| | | | NB | 34.7 | C | 88.5 | F |
| | | | SB | 66.9 | E | 184.1 | F |
| | | | Overall | 77.2 | E | 127.9 | F |

As illustrated in Table 12 the intersections significantly impacted by the addition of project traffic are expected to operate at or above their respective LOS criteria (LOS for signalized intersections, LOS E for unsignalized intersections and intersections within the Equestrian Preserve Area) during the weekday AM and PM peak hours, with the exception of:

- 120th Avenue & Lake Worth Road (AM & PM peak hour)
- SR7 & Stribling Way (AM & PM peak hour)

However the deficiencies for the intersections of 120th Avenue & Lake Worth Road and SR7 & Stribling Way occur during the background year without the addition of project traffic. According to Florida State Statute 163.3180, because the facilities identified exceed their respective LOS under background conditions, and because the improvements required to address future background conditions will also provide sufficient capacity for the proposed project traffic, the project is not responsible for the proportionate share of these improvements. No feasible improvements are available for the intersection of SR7 & Stribling Way, presently.

QUARTERLY EVENT - WEEKEND INTERSECTION ANALYSIS

The project driveway was analyzed during peak hour weekend conditions for one of the larger equestrian events planned as part of the site. Existing count data was utilized from the Wellington Aquatic Center traffic study and was collected on September 6, 2023.

The following three scenarios were analyzed for the intersection:

- Existing Year (2023)
- Background Year (2028)
- Future Year (2028)

The existing count data was collected outside of peak season and therefore a peak season correction factor (PSCF) was applied. To develop background year traffic volumes existing volumes were grown over a five year period using a 1.29% annual compounding growth rate. This 1.29% annual compounding growth rate was used based on growth rate calculations conducted for the Wellington South project. Furthermore, project traffic from the Professional Center at Wellington, Wellington North, Wellington South, Wellington Aquatic Center, Wellington Sports Academy at Village Park, and POD D-2 Orange Point PUD projects were included in the analyses. Committed development data for these projects is included in the Appendix. Project traffic was added to the background year traffic volumes to determine future year traffic volumes at each of the intersections. Table 13, Table 14, and Table 15 summarize the Synchro analyses results for the existing, background, and future conditions, respectively. Although the delay at the stop-control approach of the intersection will not meet the Level of Service D standard, the volume-to-capacity ratio is below 1.0 which indicates acceptable operation. It is recommended to monitor the intersection and provide special event control when traffic volumes are anticipated to be higher (such as during special events).

Table 13 Existing Weekend Peak Hour Synchro Analyses

| # | Intersection | Control Type | Movement | Peak Hour | |
|---|-------------------------|--------------|----------------|-----------|-----|
| | | | | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | - | - |
| | | | WB | 19.5 | C |
| | | | NB | - | - |
| | | | SB | - | - |
| | | | Overall | - | - |

Table 14 Background Year (2028) Weekend Peak Hour Synchro Analyses

| # | Intersection | Control Type | Movement | Peak Hour | |
|---|-------------------------|--------------|----------------|-----------|-----|
| | | | | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | - | - |
| | | | WB | \$374.5 | F |
| | | | NB | - | - |
| | | | SB | - | - |
| | | | Overall | - | - |

Table 15: Future Year (2028) Weekend Peak Hour Synchro Analyses – Quarterly Event

| # | Intersection | Control Type | Movement | Peak Hour | |
|---|-------------------------|--------------|----------|-----------|-----|
| | | | | Delay (s) | LOS |
| 1 | 120th Avenue & Driveway | TWSC | EB | \$398.7 | F |
| | | | WB | \$362.9 | F |
| | | | NB | - | - |
| | | | SB | - | - |
| | | | Overall | - | - |

DRIVEWAY CLASSIFICATION

Access to the site is proposed to be maintained via one main driveway on 120th Avenue and one service access driveway on 120th Avenue. Both driveways operate as full-access driveways. According to the Palm Beach County “Guide to Parking Lot and Street Access Design Criteria and Standards”, it is necessary to classify project driveways as minor, intermediate, or major according to the following criteria:

- Minor – Services a maximum daily volume of 500 vehicles.
- Intermediate – Services a daily volume ranging from 501 to 2000 vehicles.
- Major – Services a daily volume of more than 2000 vehicles.

Figure 3 illustrates the expected project traffic driveway volumes on weekdays for the site driveways after full buildout. Using the above criteria, the main driveway is classified as intermediate and the service driveway is classified as minor. Figure 4 illustrates the project traffic driveway volumes on weekends during events.

TURN LANE REQUIREMENTS

The Palm Beach County “Guide to Parking Lot and Street Access Design Criteria and Standards” provides guidance on the provisions of turn lanes at site driveways. According to the standards noted in this document, the volume thresholds for providing exclusive turn lanes are as follows

- Right turn lane – 75 peak hour right turns, with driveway volumes that exceed 1,000 trips per day, and average daily traffic volumes that exceed 10,000 vehicles per day.
- Left turn lane – 30 peak hour left turns

Based on these requirements, and the configuration of the existing driveways the need for exclusive turn lanes are not met at the project driveway. Nonetheless, due to the traffic volumes on 120th Avenue and the two-lane cross-section of the roadway without median, a northbound left-turn lane is recommended at the main driveway entrance on 120th Avenue.

PROPORTIONATE SHARE CALCULATION

Although not required, a proportionate share calculation was conducted for the intersection of 120th Avenue & Lake Worth Road to determine the project’s impact on Village-proposed improvements to the intersection. The intersection is not projected to operate at an acceptable level of service with background conditions without the addition of project traffic. Therefore, it was necessary to determine the potential total capacity of the intersection with the inclusion of the proposed north approach left-turn lane. The background scenario traffic volumes were reduced and analyzed in *Synchro 12* to calculate the maximum traffic volume at which the intersection will operate at an acceptable level of service with the existing stop control and existing lane configuration. By reducing each approach volume by 33.1% it was determined that the threshold of capacity for this intersection is 1,572 total vehicles under two-way stop-controlled conditions.

For the intersection to operate at an acceptable level of service during background and future year conditions, it is necessary to signalize the intersection. To determine the maximum intersection volume at which the intersection will operate with an acceptable level of service, background scenario traffic volumes were increased and analyzed using *Synchro 12* software. By increasing each approach volume by 18% it was determined that the threshold of capacity for this intersection is 2,776 total vehicles under signal control conditions.

The project is projected to add 34 vehicles PM peak hour vehicles at this intersection. Comparing the project's trips to the increase in capacity due to signalization, as calculated above, the proportionate share contribution to the signalization of the intersection is 2.82% Proportionate share calculations are included in the Appendix, for reference.



FIGURE 3
 Isla Carroll
 KH #140957002
 Weekday - Project Driveway Volumes



LEGEND


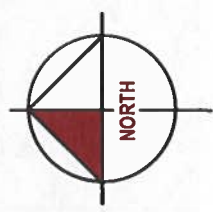
-  Site Location
- XX (XX)** AM (PM) Volumes





FIGURE 4
 Isla Carroll
 KH #140957002
 Weekend - Project Driveway Volumes

LEGEND
 Site Location



CONCLUSION

Kimley-Horn and Associates, Inc. has prepared a traffic study to evaluate the potential impact of redevelopment for the project site located at the northwest corner of the intersection of 120th Avenue and 35th Street in Wellington, Florida. No credit was taken for existing traffic generated by the site. However, the site currently generates traffic during events hosted by the National Polo Club. The proposed redevelopment plan is expected to include the addition of 40 single family dwelling units, 6 grooms quarters, 107,011 square feet of air conditioned private recreational space, and equestrian showgrounds uses with an average weekday attendance of 28 attendees and an average weekend attendance of 60 attendees. The proposed site will operate as a private club and the proposed uses on site will operate exclusively for members of the club and their guests.

As shown in the analysis, the site meets the requirements defined in Article 9 of the Wellington Unified Land Development Code, and the addition of a northbound left turn lane is required at the site driveway.

A proportionate share calculation was also conducted at the intersection of 120th Avenue & SR 7 for the proposed improvements. It was determined that the proportionate share for the signalization of this intersection associated with the impact of this project is 2.82%.

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.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Digitally signed
by Adam B Kerr
Date: 2024.10.11
13:44:06 -04'00'

Adam B. Kerr, P.E.
Transportation Engineer

Florida Registration
Number 64773
Registry No. 35106

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