

953 Mapleview Drive East (Block 193) City of Barrie

Traffic Brief / Parking Study / Construction Traffic Management Plan for Mapleview South (Innisfil) Ltd.

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1 Introduction

1.1 Background

Maplevue South (Innisfil) Ltd. [The Developer] is proposing a residential condominium development on Block 193, within the 953 Maplevue Drive East subdivision, located within the Hewitt's Secondary Plan Area in the City of Barrie [City]. A Traffic Brief was prepared by JD Engineering in May 2021 in support of the development of the subdivision. This report has been prepared in support of the Site Plan Approvals for Block 193.

The 953 Maplevue Drive East subdivision [Subject Site] is located on the south side of Maplevue Drive between Prince William Way and 20th Sideroad. An excerpt showing the 953 Maplevue Drive South subdivision lands within the Hewitt's Secondary Plan Overall Development Plan is provided in **Appendix A**. The Draft Plan of Subdivision for 953 Maplevue Drive East is provided in **Appendix A**¹.

Block 193 includes a total of 100 medium-density residential units.

The 953 Maplevue Drive East subdivision includes one intersection access onto Maplevue Drive East [Site Access]. Previously this intersection was to be full-movement, but it has since been confirmed that the Site Access will be restricted to right-in right-out [RIRO] functionality only. Roadway connections are also planned through lands to the east, west, and south.

The Developer has retained **JD Northcote Engineering Inc.** [JD Engineering] to prepare this Traffic Brief / Parking Study / Construction Traffic Management Plan in support of the proposed residential development in Block 193.

The subject lands were considered as part of the Hewitt's Transportation Study (LEA Consulting Ltd. February 2017) which has since been updated (February 2019). This Traffic Brief will build on and update the findings of the updated Hewitt's Transportation Study and other traffic projections in the local area.

1.2 Study Area

Figure 1 shows the location of the Subject Site and study area intersections in relation to the surrounding area. The Draft Plan of Subdivision by Jones Consulting Group Limited is shown in **Appendix B**.

The Subject Site is bound by Maplevue Drive East to the north and future residential lands to the east, west and south.

Through consultation with the City, the following intersections are included in the Traffic Brief:

- Maplevue Drive East / Site Access.

¹ The block numbering for the three medium density blocks has been revised in the Draft Plan of Subdivision to reflect the latest block numbering.

Figure 1 – Proposed Site Location and Study Area



1.3 Study Scope and Objectives

The purpose of this study is to identify the potential impacts to traffic flow at the site access and on the surrounding roadway network. The study analysis includes the following tasks:

- Consult with the City to address any traffic-related issues or concerns they have with the proposed development;
- Estimate future traffic volumes through the study area based on the updated Hewitt's Transportation Study, the City's Emme models and the most recent development plans;
- Complete a LOS analysis of horizon year traffic conditions and identify additional operational deficiencies;
- Review the need for auxiliary turn lanes at the study intersection;
- Identify improvement options to address operational deficiencies; and
- Document findings and recommendations in a final report.

1.4 Horizon Year and Analysis Periods

The 2026 and 2031 horizon years were selected for analysis of traffic operations in the study area. The 2026 horizon was chosen to evaluate the need for temporary improvements on Maplevue Drive East,

prior to the road widening which is anticipated to be completed by the City post 2026 (the City currently does not have a set timeline for the planned road widening). The weekday morning [AM] and weekday afternoon [PM] peak hours have been selected as the analysis periods for this study.

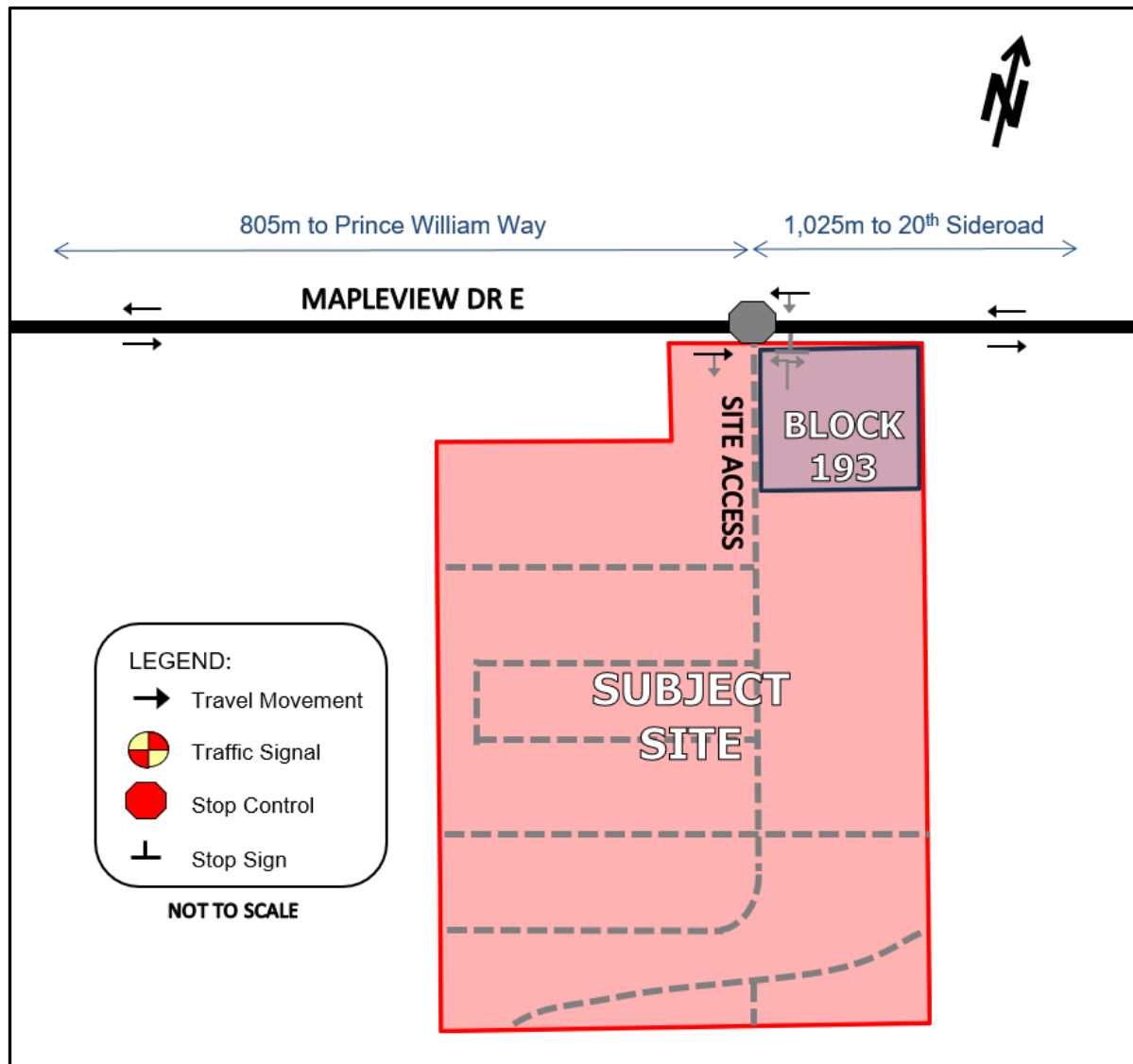
2 Information Gathering

2.1 Street and Intersection Characteristics

Maplevue Drive East is a two-lane arterial road with a rural cross-section within the study area. Maplevue Drive East has a posted speed limit of 60km/h and is under the jurisdiction of the City.

The existing intersection spacing and lane configuration within the study area is illustrated in **Figure 2**.

Figure 2 – Existing (2024) Intersection Spacing and Lane Configuration within Study Area



2.2 Local Transportation Infrastructure Improvements

In review of the City's Capital Project Detail Report, the following road improvements are anticipated within the study area:

- Maplevue Drive East (within study area)
 - Addition of two way left turn lane to provide a 3-lane cross-section;
 - Buffered bike lanes;
 - Sidewalk on the south side of the road; and
 - Multi-use trail on the north side.

Based on our correspondence with the City, it is our understanding that these improvements have been delayed to post 2026. It is also noted that the City is considering the construction of a 5-lane cross-

section on Maplevue Drive East between Prince William Way and Terry Fox Drive, rather than the previously planned 3-lane cross-section. However, in order to be conservative, the 3-lane cross-section has been used in the traffic modeling.

2.3 Traffic Data

A review of the City's Emme model was completed to establish the projected traffic volumes adjacent to the Subject Site during the 2026 and 2031 horizon years (Excerpts are provided in **Appendix C**). A summary of the traffic data is provided in **Table 1**.

Table 1 – Traffic Data

ROAD	Section	2016				2031			
		AM		PM		AM		PM	
		EB	WB	EB	WB	EB	WB	EB	WB
Maplevue Dr E	East of Prince William Way	196	147	299	158	490	664	797	515

The 2026 horizon year traffic volumes are provided in are **Table 2**, estimated by interpolating between the 2016 and 2031 Emme volumes.

Table 2 – 2026 Horizon Year Traffic Volumes

ROAD	Section	2026			
		AM		PM	
		EB	WB	EB	WB
Maplevue Dr E	East of Prince William Way	392	492	631	396

3 Proposed Development

The 953 Maplevue Drive East subdivision is proposed to include the following:

- Block 193 – 100 apartment units;
- Block 192 – 120 apartment units;
- Block 191 – 16 townhouses and 261 – 332 apartment units; and
- Subdivision – 150 single detached units and 61 townhouses (north of the creek).

For a total of:

- 150 single detached units;
- 77 townhouses; and
- 481 – 552 apartment units.

As previously mentioned, the proposed development includes a right-in right-out access onto Maplevue Drive East. The occupancy timeframe of the proposed development has been projected as follows:

- 2026 – 220 occupancies;
- 2031 – 559 occupancies (779 total).

The Draft Plan of the Subdivision including Block 193 is provided in **Appendix B**.

3.1 Traffic Generation

The traffic generation for Block 193 has been based on proxy site survey trip rates as utilized in the Hewitt's Transportation Study. The trip rates and estimated trip generation for the proposed development is illustrated below in **Table 3**.

Table 3 – Trips Rates and Estimated Trip Generation of Proposed Development - Block 193

Horizon Year	Size	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Proxy Site Trip Rate	-	0.14	0.34	0.48	0.41	0.25	0.66
<i>Block 193</i>	<i>100 units</i>	<i>14</i>	<i>34</i>	<i>48</i>	<i>41</i>	<i>25</i>	<i>66</i>
953 Mapleview Drive (Total)	779 units ¹	109	265	374	319	195	514

¹For the purpose of this study, the highest proposed unit count has been considered

As shown, the Subject Site is estimated to generate a total of 374 AM and 514 PM peak hour trips during the 2031 horizon year.

Block 193 will attribute 48 AM and 66 PM peak hour trips to the total.

3.2 Traffic Assignment

The assignment of traffic volumes through the study area has been assumed to follow the same distribution as utilized in the Hewitt's Transportation Study for the subject lands. The distribution has been derived from the future (2031) PM peak synchro analysis for the Street 24 (Site Access) / Mapleview Drive East intersection (Excerpts are provided in **Appendix C**). The distribution is illustrated in **Table 4**.

Table 4 – Proposed Development Traffic Distribution

Travel Direction (to / from)	Percent of Total Traffic Generation			
	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
East via Mapleview Drive E	20%	6%	20%	6%
West via Mapleview Drive E	80%	94%	80%	94%
TOTAL	100%	100%	100%	100%

As the Site Access has been restricted to right-in right-out functionality only, it is anticipated that trips arriving from the east or departing to the west will utilize internal connections through adjacent subdivisions to the east, west, and south, as the lands are developed. These connections are shown on the Draft Plan and the Hewitt Secondary Plan excerpt and include Street 'E' to the west, Street 'A' (McAush Street) to the east and west, Street 'C' to the west, and future Street 'B' (Terry Fox Drive) to the east and southwest.

The site traffic assignment for the proposed development during the AM and PM peak hour is illustrated in and **Figure 3 and 4**.

Figure 3 – Site Traffic Assignment (2026)

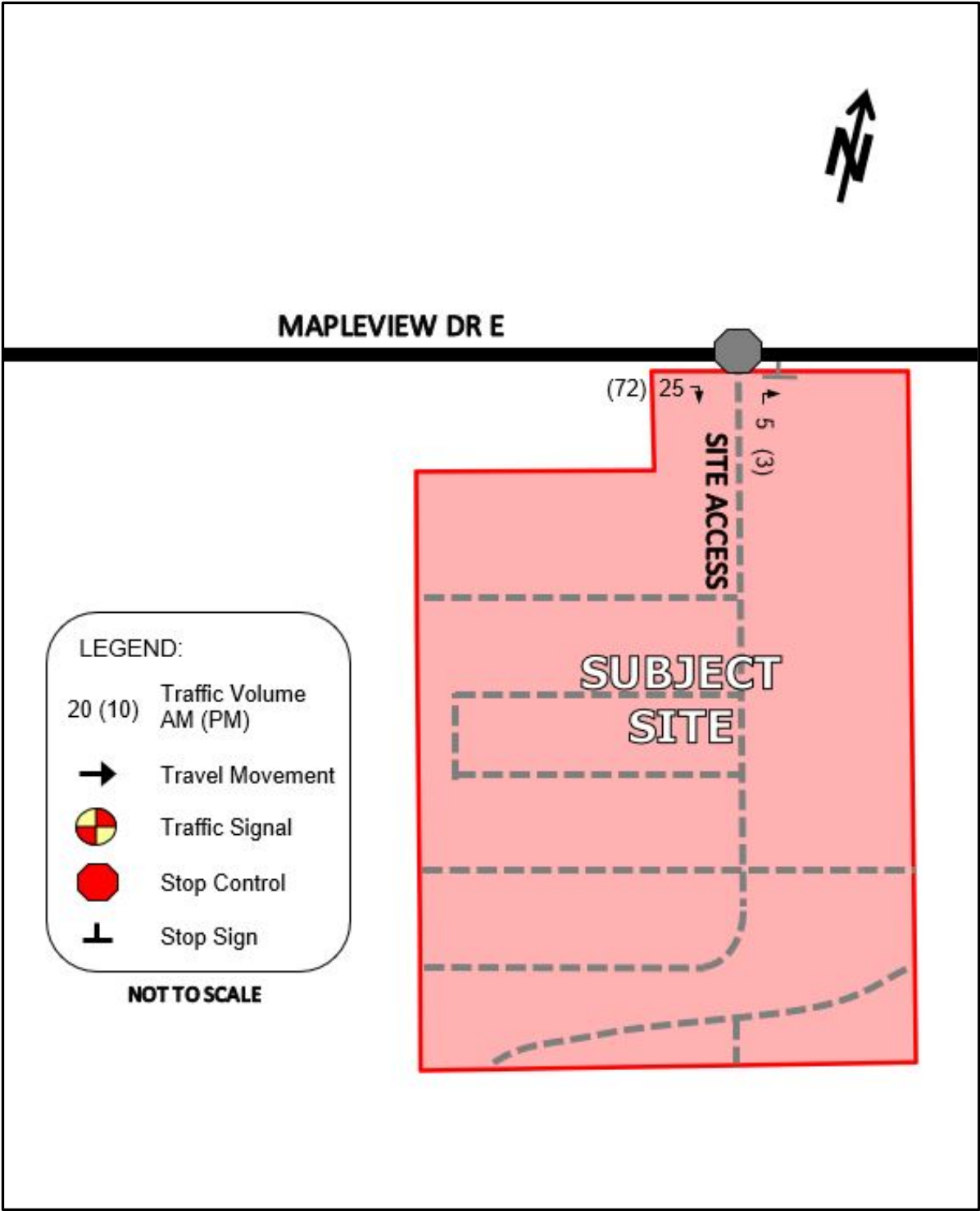
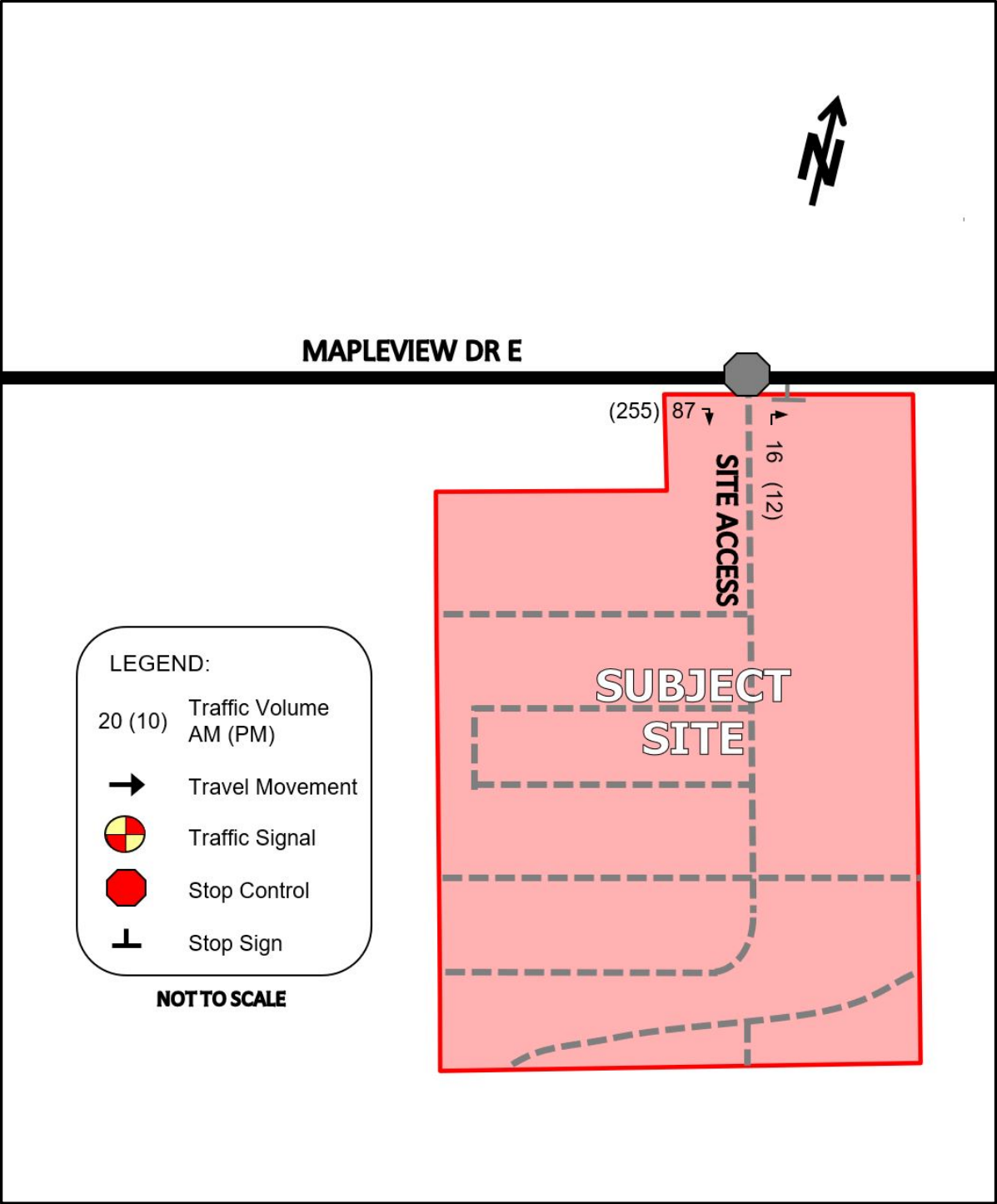


Figure 4 – Site Traffic Assignment (2031)



4 Horizon Year Traffic Volumes

Traffic volumes for the 2026 and 2031 horizon years were established based on the midblock EMME volumes (illustrated in **Table 1** and **Table 2**) in addition to the site generated traffic volumes.

Figure 5 and **Figure 6** illustrate the 2026 and 2031 peak hour traffic volumes within the study area.

Figure 5 – 2026 Horizon Year Traffic Volumes

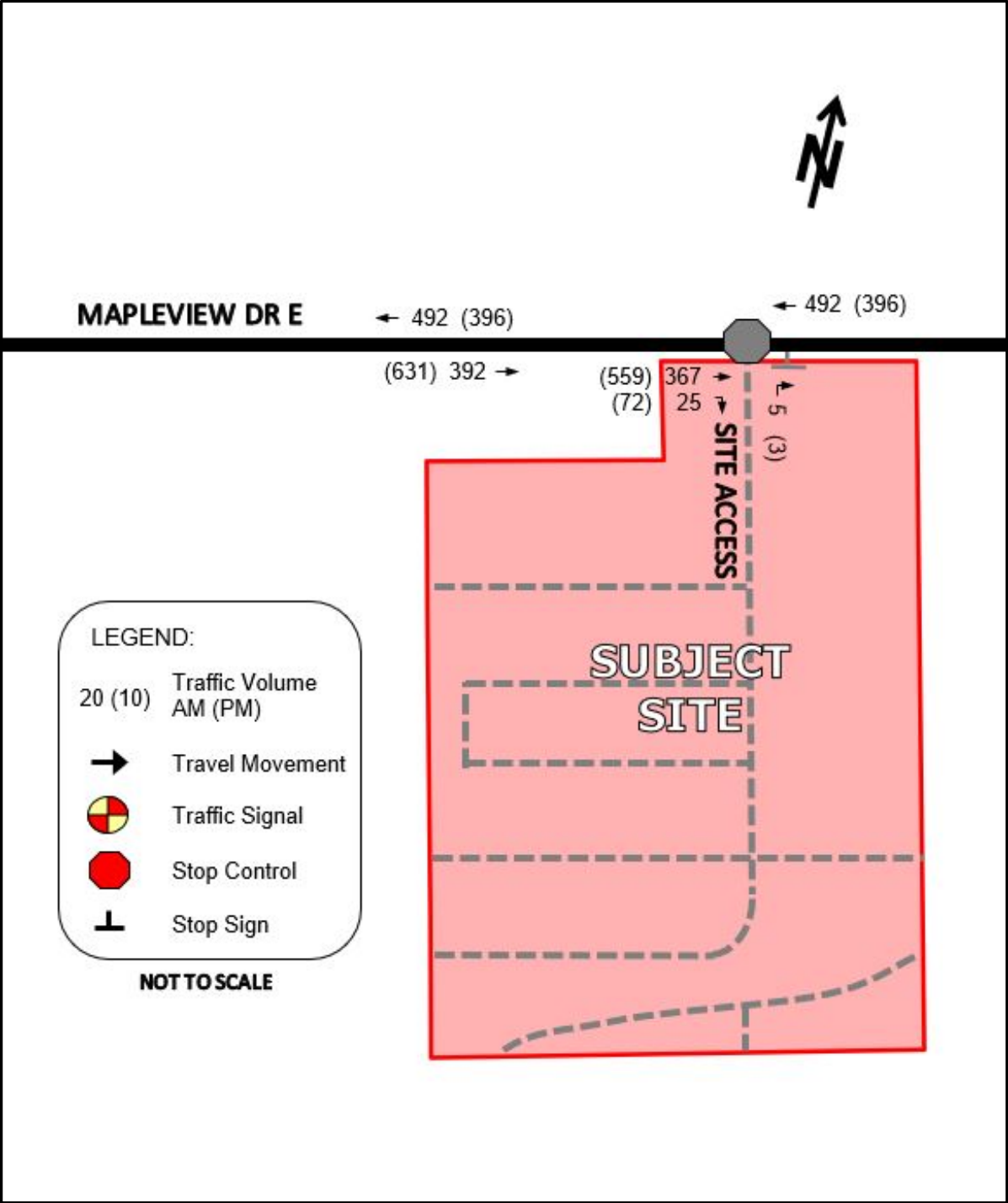
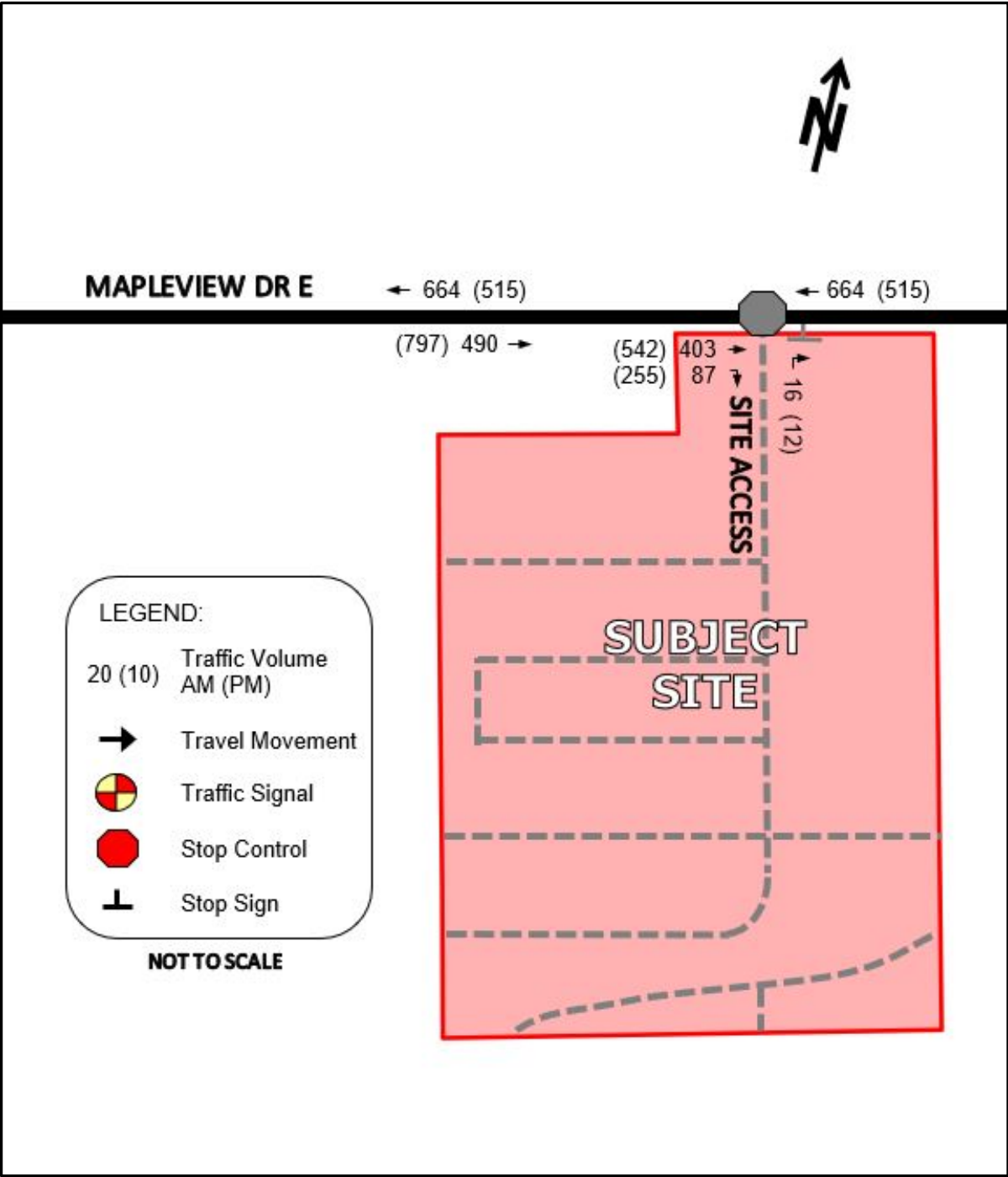


Figure 6 – 2031 Horizon Year Traffic Volumes



5 Future Operation Analysis

5.1 Introduction

Traffic operations within the study area were evaluated using the horizon year traffic volumes with the existing and future road configuration and traffic control. The intersection performance was measured using the traffic analysis software, Synchro 11, a deterministic model that employs Highway Capacity Manual and Intersection Capacity Utilization methodologies for analyzing intersection operations. These procedures are accepted by provincial and municipal agencies throughout North America.

Synchro 11 enables the study area to be graphically defined in terms of streets and intersections, along with their geometric and traffic control characteristics. The user is able to evaluate both signalized and unsignalized intersections in relation to each other, thus not only providing level of service for the individual intersections, but also enabling an assessment of the impact the various intersections in a network have on each other in terms of spacing, traffic congestion, delay, and queuing.

Individual turning movements with a volume-to-capacity [V/C] ratio of 0.85 or greater are considered to be critical movements and have been highlighted in the LOS tables.

The intersection operations were also evaluated in terms of the LOS. LOS is a common measure of the quality of performance at an intersection and is defined in terms of vehicular delay. This delay includes deceleration delay, queue move-up time, stopped delay, and acceleration delay. LOS is expressed on a scale of A through F, where LOS A represents very little delay (i.e. less than 10 seconds per vehicle) and LOS F represents very high delay (i.e. greater than 50 seconds per vehicle for a stop sign controlled intersection and greater than 80 seconds per vehicle for a signalized intersection).

The LOS criteria for signalized and stop sign-controlled intersections are shown in **Table 5**. A description of traffic performance characteristics is included for each LOS.

Table 5 – Level of Service Criteria for Intersections

LOS	LOS Description	Control Delay (seconds per vehicle)	
		Signalized Intersections	Stop Controlled Intersections
A	Very low delay; most vehicles do not stop (Excellent)	less than 10.0	less than 10.0
B	Higher delay; more vehicles stop (Very Good)	between 10.0 and 20.0	between 10.0 and 15.0
C	Higher level of congestion; number of vehicles stopping is significant, although many still pass through intersection without stopping (Good)	between 20.0 and 35.0	between 15.0 and 25.0
D	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; many vehicles stop (Satisfactory)	between 35.0 and 55.0	between 25.0 and 35.0
E	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of acceptable delay	between 55.0 and 80.0	between 35.0 and 50.0
F	This level is considered to be unacceptable to most drivers; occurs when arrival flow rates exceed the capacity of the intersection (Unacceptable)	greater than 80.0	greater than 50.0

5.2 Horizon Year (2026) Intersection Operation

The results of the LOS analysis under 2026 horizon year traffic volumes during the AM and PM peak hour can be found below in **Table 6** (existing Mapleview Drive 2-lane cross-section) and **Table 7** (improved Mapleview Drive 3-lane cross-section). Stop control has been assumed at the Site Access egress movements. Detailed output of the Synchro analysis can be found in **Appendix D**.

Table 6 – 2026 LOS (2-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Mapleview Dr E / Site Access	-	0.1	A	-	0.0	A
EB	0.25	0.0	A	0.40	0.0	A
WB	0.31	0.0	A	0.25	0.0	A
NB	0.01	10.7	B	0.01	12.7	B

Table 7 – 2026 LOS (3-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Mapleview Dr E / Site Access	-	0.1	A	-	0.0	A
EB	0.25	0.0	A	0.40	0.0	A
WB	0.31	0.0	A	0.25	0.0	A
NB	0.01	10.7	B	0.01	12.7	B

The results of the LOS analysis indicate that the study intersection will operate within the typical design limits noted in Section 5.1 under both the existing (2-lane) configuration and improved (3-lane) configuration.

The criterion outlined in Section E.7 of the Ministry of Transportation [MTO] Geometric Design Supplement for Ontario Highways [GDSOH] (60vph minimum right turn volume warrant) has been used to assess whether an auxiliary right turn lane is required at the unsignalized study area intersection. The eastbound right-turn volume in the PM peak hour at the Mapleview Drive East / Site Access intersection exceeds the minimum volume threshold; however, this infrastructure improvement is not recommended based on the excellent LOS for this movement and the overall intersection operation under both the existing (2-lane) configuration and improved (3-lane) configuration.

No infrastructure improvements are recommended within the study area to facilitate the 2026 horizon year volumes.

5.3 Horizon Year (2031) Intersection Operation

The results of the LOS analysis under 2031 horizon year traffic volumes during the AM and PM peak hour can be found in **Table 8**. The improved Mapleview Drive 3-lane cross-section was utilized. Stop control has been assumed at the Site Access egress movements. Detailed output of the Synchro analysis can be found in **Appendix D**.

Table 8 – 2031 LOS (3-lane cross-section)

Location (E-W Street / N-S Street)	Weekday AM Peak Hour			Weekday PM Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
Maplevue Dr E / Site Access	-	0.2	A	-	0.1	A
EB	0.31	0.0	A	0.51	0.0	A
WB	0.42	0.0	A	0.33	0.0	A
NB	0.03	11.4	B	0.03	13.8	B

The results of the LOS analysis indicate that the study intersection will within the typical design limits noted in Section 5.1.

The eastbound right-turn volume in the PM peak hour at the Maplevue Drive East / Site Access intersection exceeds minimum threshold (as per Section E.7 of the MTO GDSOH); however, this infrastructure improvement is not recommended based on the excellent LOS for this movement and the overall intersection operation.

No infrastructure improvements are recommended within the study area to facilitate the 2031 horizon year volumes.

5.4 Sight Distance Review

A sight distance review has been provided in **Appendix B** to illustrate that the minimum sight stopping distance (85 metres for 60km/h design speed) is provided at the Site Access.

5.5 Swept Path Analysis

A swept path analysis has been provided in **Appendix E** to illustrate that the following vehicles can access the site as intended:

- Passenger Vehicle (TAC P);
- Fire Truck; and
- City of Barrie Recycling Truck.

6 Parking Study

The proposed parking supply for the subject site meets the parking requirements specified in the City's Zoning By-law 2009-141 for the proposed neighbourhood mixed-use zone [NMU]. The residential apartment units will provide slightly more than 1.0 spaces per unit and the commercial parking is provided at a rate of one space per 24 square metres of gross floor area. The proposed parking breakdown is provided in **Table 20**.

Table 9 – Parking Statistics

Category	Zoning By-Law Section	Parking Standard	Size	Parking	
				Required	Provided
Residential Apartment	4.6.1	1.0 spaces per dwelling unit	100 units	100 spaces	107 spaces
Commercial	14.4.1		350 sq.m.	15 spaces	15 spaces
TOTAL PARKING				115 spaces	122 spaces
Resident Bicycle Parking	14.4.2	0.2 spaces per unit	100 units	20 spaces	29 spaces
Commercial Bicycle Parking	14.4.2	7% of commercial parking supply	15 spaces	1 space	2 spaces
Accessibility Parking	4.6.4	1 spaces plus 3% of required parking spaces	115 spaces	Type A: 2 spaces Type B: 2 spaces	Type A: 2 spaces Type B: 2 spaces

The proposed parking supply meets the minimum parking requirements specified in the City's Zoning By-law 2009-141 and is acceptable for the intended use.

7 Construction Traffic Management Plan

A construction traffic management plan was completed to identify the proposed management of traffic related to parking of trades people, delivery of construction material, maintenance of adjacent property access, pedestrian movements and City infrastructure. A Construction Traffic Management Plan is provided in **Appendix F**.

Construction access for development within the 953 Maplevue Drive East subdivision will be provided via the Site Access intersection on Maplevue Drive East. The proposed Site Access will be the primary access throughout the entire construction period (i.e., demolition, site preparation, servicing and erection etc.). Construction access will be limited to right-in / right-out movements on Maplevue Drive East.

Construction access onto Block 193 will be provided via a dedicated gravel construction driveway onto the right-of-way for the proposed north / south local road within the 953 Maplevue Drive East subdivision (Dallaire Street).

Deliveries and trades parking associated with the construction of Block 193 can be accommodated within the southeast area of Block 191, which will be developed after Block 193. A gravel parking area and gravel driveway will be constructed to provide access into the Street 'E' right-of-way which connects onto Dallaire Street and the Site Access onto Maplevue Drive East.

Construction traffic and parking will not impede or prevent access to the neighboring lots. Construction work will occur within the property limits and outside of the boulevard. Pedestrian movements adjacent

to the Subject Site will be unaffected by the construction of the proposed development. No sidewalk closures are expected.

Construction activities within the site (including start-up and warm-up of equipment) will only occur between 07:00 and 19:00 on weekdays and Saturdays, per City of Barrie by-law. No construction activities will occur outside the above-noted periods without approval from the City.

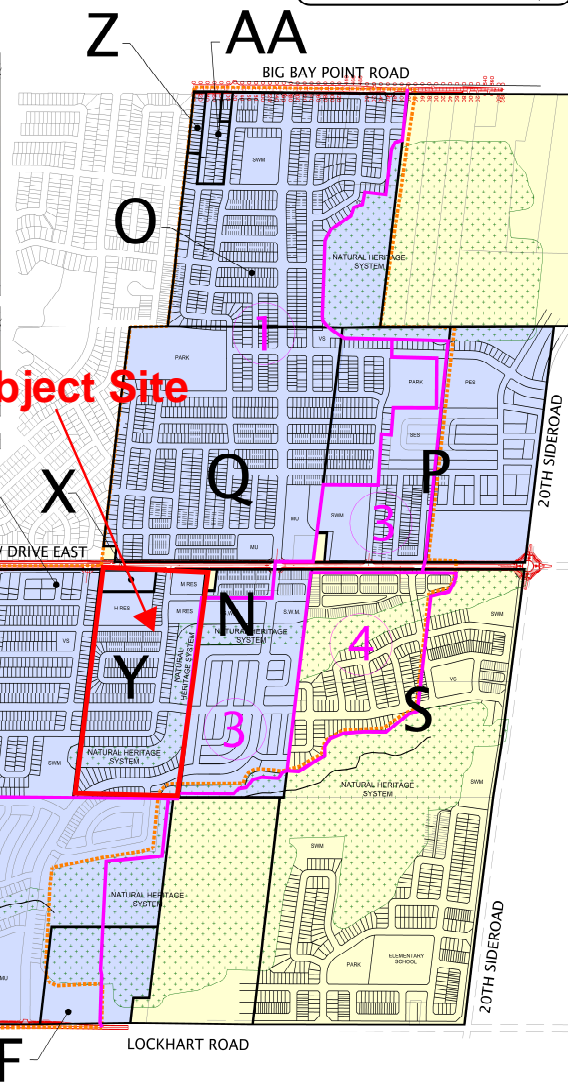
Signage shall be posted at all work zone entrances as required, notifying visitors that check-in at the site office is mandatory. Signage will also be provided to identify the area as a 'construction site', requiring all visitors be equipped with personal protection equipment suitable for a construction zone (hard hat, footwear, high visibility gear). Signage will also be provided informing that access to the site is limited to authorized personnel only.

8 Summary

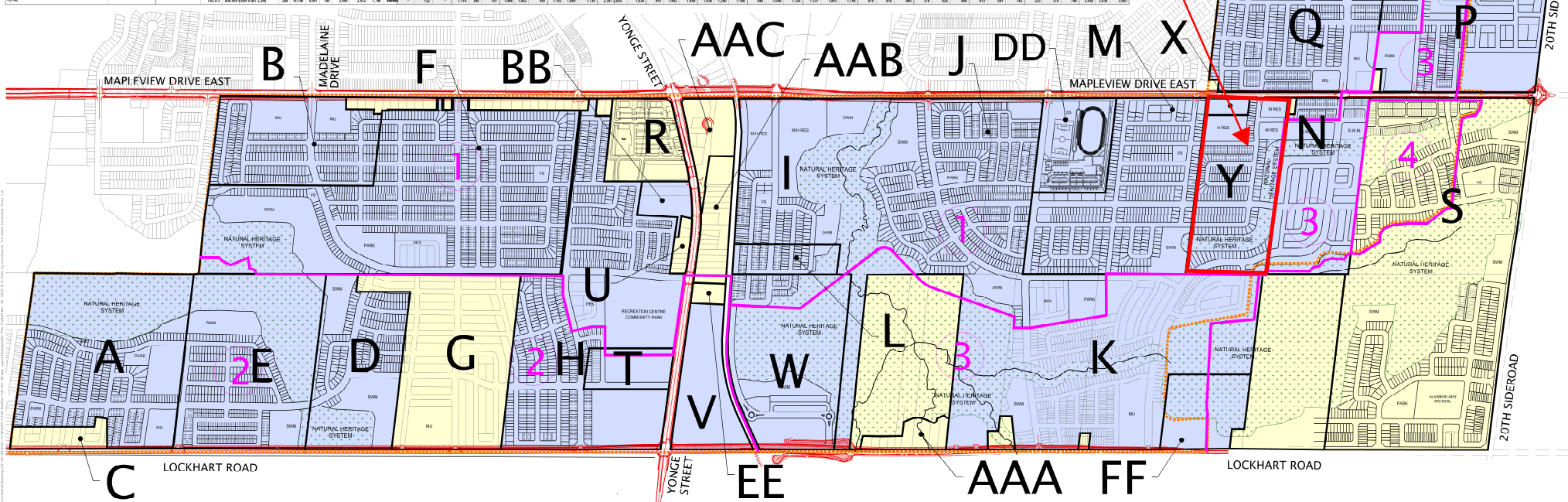
Maplevue South (Innisfil) Ltd. retained **JD Engineering** to prepare this traffic brief in support of the residential subdivision located within the Hewitt's Secondary Planning Area in the City of Barrie. The proposed Draft Plan of Subdivision is shown in **Appendix B**. This chapter summarizes the conclusions and recommendations from the study.

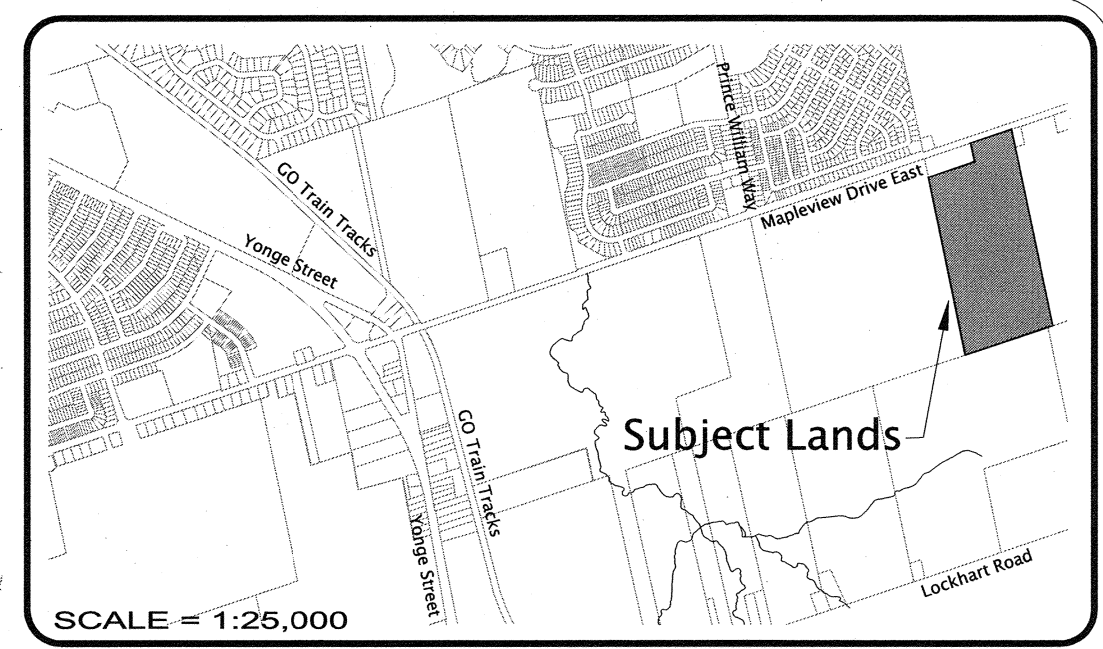
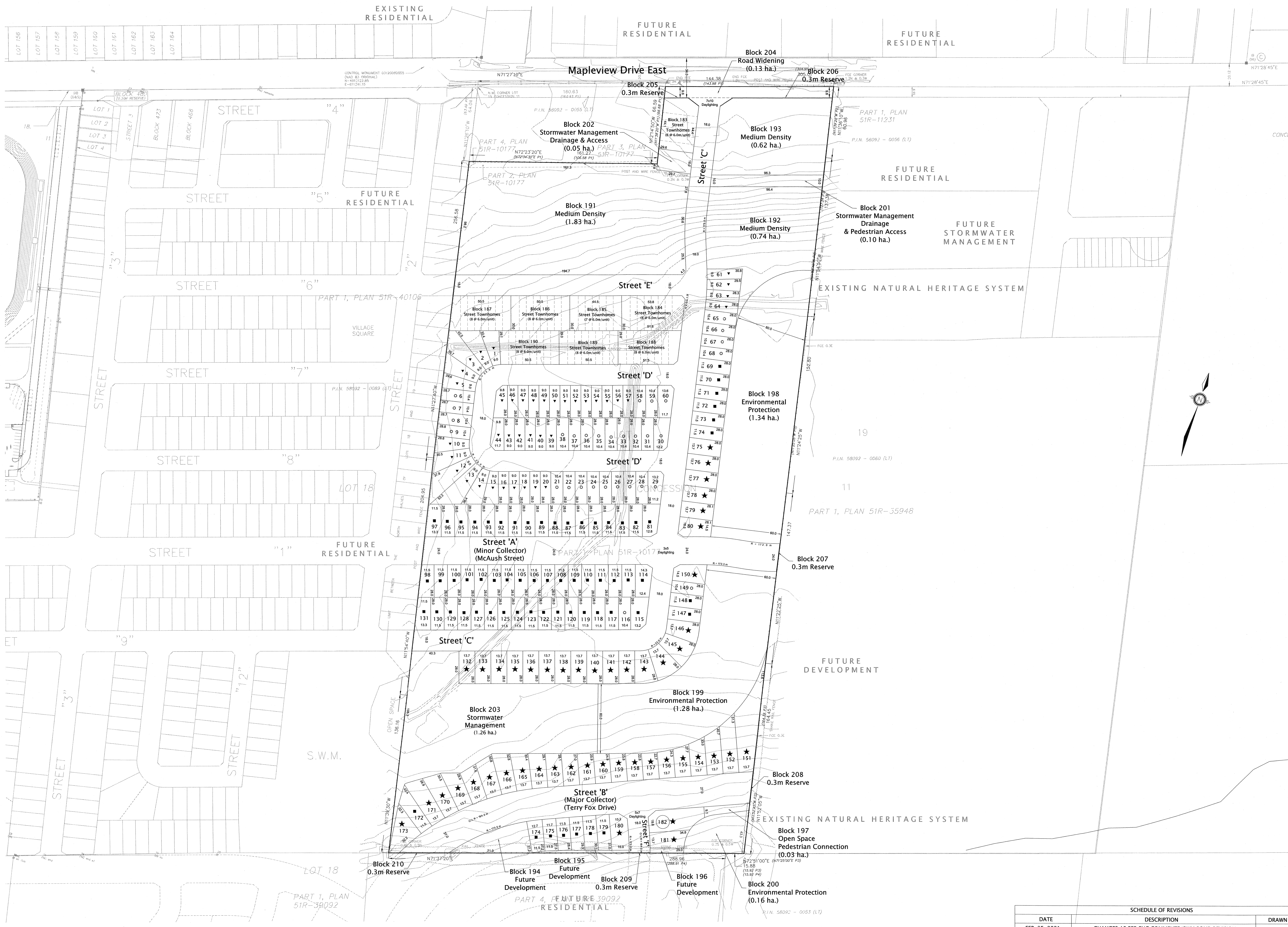
1. Block 193 includes a total of 100 medium-density residential units.
2. As shown, the Subject Site is estimated to generate a total of 374 AM and 514 PM peak hour trips during the 2031 horizon year. Block 193 will attribute 48 AM and 66 PM peak hour trips to the total.
3. The 2026 and 2031 horizon year volumes were developed based on the City's Emme model volumes and anticipated build-out of the Subject Site.
4. An intersection operation and turn lane analysis was completed under the 2026 and 2031 horizon year traffic volumes with the anticipated developments operational at the study area intersections. No infrastructure improvements are recommended.
5. In summary, the proposed development will not cause any operational issues and will not add significant delay or congestion to the local roadway network.

Appendix A – Hewitt Transportation Study Excerpts & 953 Maplevue Drive East - Draft Plan of Subdivision



Participant			Residential Partner				R&T Partner				Adult's Data		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		2743		2744		2745		2746		2747		2748		2749		2750		2751		2752		2753		2754		2755		2756		2757		2758		2759		2760		2761		2762		2763		2764		2765		2766		2767		2768		2769		2770		2771		2772		2773		2774		2775		2776		2777		2778		2779		2780		2781		2782		2783		2784		2785		2786		2787		2788		2789		2790		2791		2792		2793		2794		2795		2796		2797		2798		2799		2800		2801		2802		2803		2804		2805		2806		2807		2808		2809		2810		2811		2812		2813		2814		2815		2816		2817		2818		2819		2820		2821		2822		2823		2824		2825		2826		2827		2828		2829		2830		2831		2832		2833		2834		2835		2836		2837		2838		2839		2840		2841		2842		2843		2844		2845		2846		2847		2848		2849		2850		2851		28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Participant	Age	Participating Lifetime Name	Current Name(s)	Status	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses)	Total Assets	Total Liabilities	Net Worth (Assets - Liabilities)	Total Income	Total Expenses	Net Income (Income - Expenses																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																





Proposed Draft Plan of Subdivision
Part of Lot 19, Concession 11
Geographic Township of Innisfil,
Now in the
City of Barrie 2022

OWNER'S CERTIFICATE
I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZING THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE NOV 4, 2022
RUDY MAK, O.L.S.

- ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT**
- a) SHOWN ON DRAFT PLAN
 - b) SHOWN ON DRAFT PLAN
 - c) SHOWN ON KEY PLAN
 - d) RESIDENTIAL, OPEN SPACE, STORMWATER MANAGEMENT, & ENVIRONMENTAL PROTECTION
 - e) SHOWN ON DRAFT PLAN
 - f) SHOWN ON DRAFT PLAN
 - g) SHOWN ON DRAFT PLAN
 - h) MUNICIPAL PIPED WATER TO BE PROVIDED
 - i) SANDY/CLAY LOAM
 - j) SHOWN ON DRAFT PLAN
 - k) ALL MUNICIPAL SERVICES TO BE PROVIDED
 - l) SHOWN ON DRAFT PLAN

STATISTICS	Area (ha.)	Units
★ 13.7 m Singles		47 units
■ 11.5 m Singles		65 units
○ 10.4 m Singles		31 units
▼ 9.0 m Singles		39 units
(LOTS 1 - 182)		
SUB TOTAL	6.33 ha.	182 units
Street Townhomes (6.0m)	1.18 ha.	61 units
Medium Density Residential	3.19 ha.	223 units
(BLOCKS 191 - 193 @ 70 uph)		
Future Lots & Blocks	0.15 ha.	4 units
(BLOCKS 194 - 196)		
Open Space / Pedestrian Connection	0.03 ha.	
(BLOCK 197)		
Environmental Protection	2.78 ha.	
(BLOCKS 198 - 200)		
Stormwater Management & Drainage	1.41 ha.	
(BLOCKS 201 - 203)		
Widening & Reserve	0.15 ha.	
(MINOR COLLECTOR, STREET 'A' (MCAUSH STREET))		
Roads	3.81 ha.	
(MAJOR COLLECTOR, STREET 'B' (TERRY FOX DRIVE))		
(LOCAL STREETS 'C' - 'F')		
TOTAL	19.03 ha.	470 units

0 10 50 100M
SCALE 1 : 1500 (A1)

MAPLEVIEW SOUTH (INNSIFIL) LTD.
953 MAPLEVIEW DRIVE, BARRIE, ONTARIO

PROPOSED DRAFT PLAN OF SUBDIVISION

Raymond J. Dufour
REGISTERED PROFESSIONAL PLANNER
R.P.P.

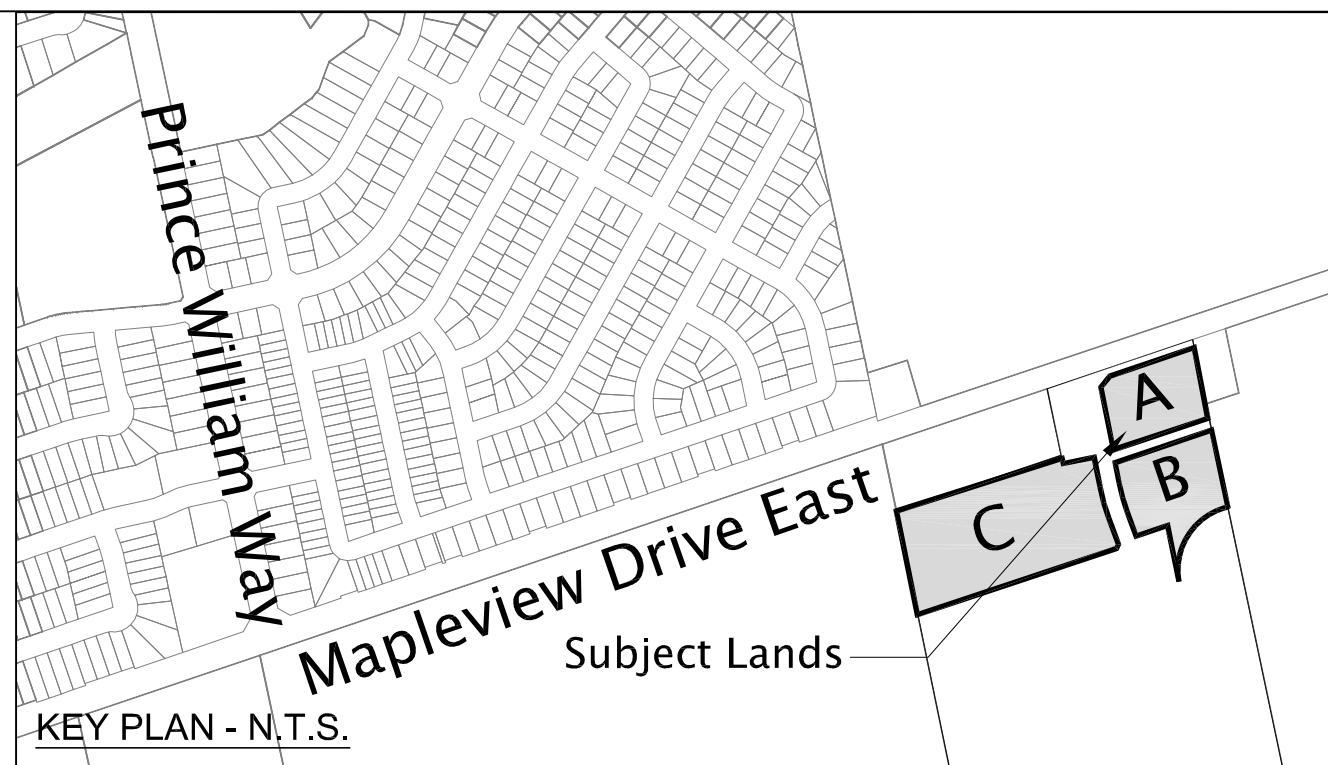
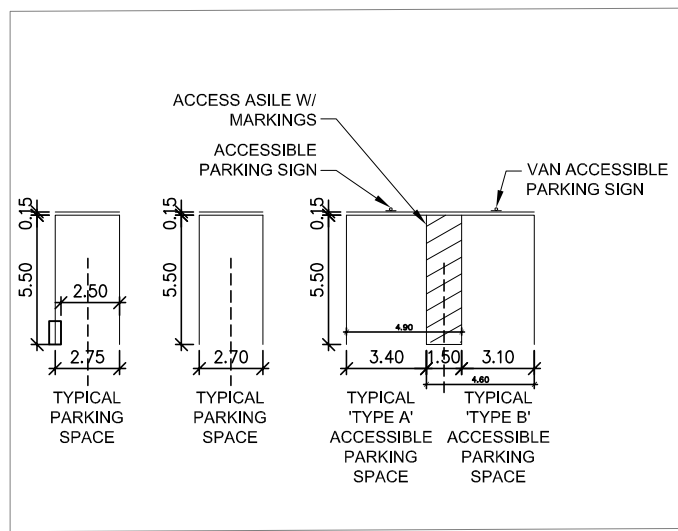
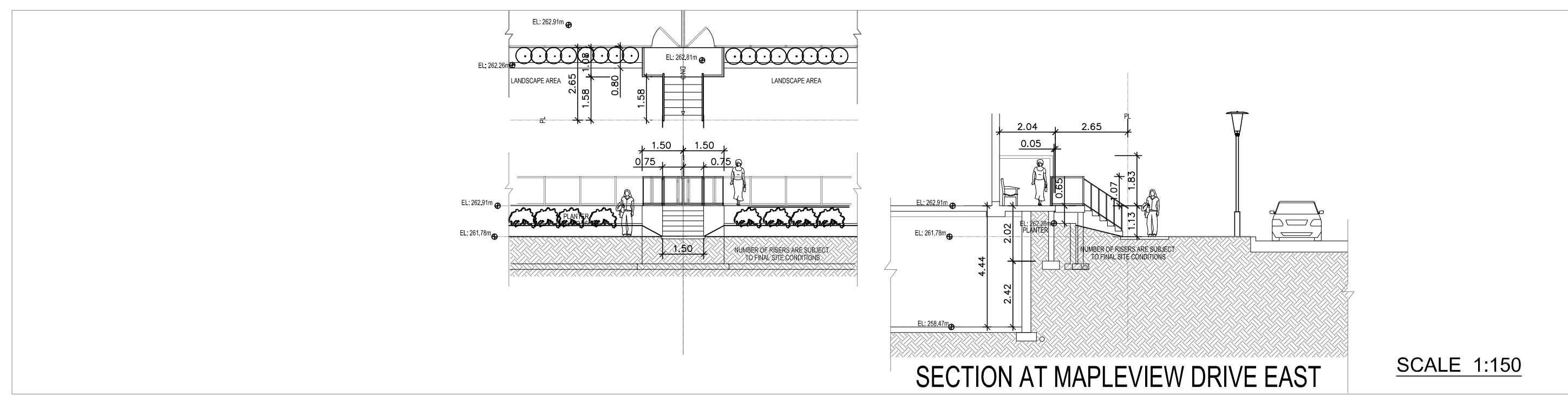
Date Issued: DEC. 13, 2019
Checked By: RD
Project No.: REI-17055
Drawn By: m.c.r.
Drawing Name: REI-17055-DP-8.dwg

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Drive East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2538
www.jonesconsultinggroup.com Fax: 705-734-1056

DATE	DESCRIPTION	DRAWN
FEB. 25, 2021	CHANGES AS PER ENG COMMENTS/SWM POND REVISION	m.c.r.
MARCH 5, 2021	REVISION TO LOTS 172 & 173	m.c.r.
APRIL 1, 2021	MINOR CHANGES TO TITLE BLOCK ONLY	m.c.r.
MARCH 10, 2022	CHANGES PER CITY COMMENTS	m.c.r.
MARCH 16, 2022	REVIEW OF RIGHT OF WAY WIDTHS AND DAYLIGHTING	m.c.r.
MARCH 21, 2022	UPDATED ADJACENT LANDS WITH CURRENT DP LINWORK	m.c.r.
MARCH 22, 2022	CHANGES AS PER CITY COMMENTS	m.c.r.
MARCH 30, 2022	CHANGES AS PER CITY COMMENTS	m.c.r.

MAPLEVIEW SOUTH (INNSIFIL) LTD.
953 MAPLEVIEW DRIVE BARRIE, ONTARIO

Appendix B – Block 193 - Site Plan



Block 'A' Details

Unit Count:
BLOCK 'A' Apartment Building (5 Storey) 100 units

A BUILDING FOOT
(3.2.2.43A GROUP C)
ALLOWABLE 1,800 m²
PROPOSED 1,649 m²

Total	REQUIRED	PROPOSED
Site Plan Area	-	0.63 ha (6,267.66m ²)
Lot Frontage	24.0 m	85.4 m
Front Yard	3.0 m	5.33 m
Interior Side Yard	5.0 m	5.31 m
Exterior Side Yard	2.0 m	7.50 m
Rear Yard	5.0 m	38.98 m
Lot Coverage	max 50 % (0.931 ha.)	26 % (0.18 ha.)
Accessory Structures	max 10 % (0.06 ha.)	0 % (0.00 ha.)
Landscape Open Space	min. 25 % (0.16 ha.)	39 % (0.25 ha.)
Paved Area	max 35 %	35 % (0.22 ha.)
Density Index	min 120 max 300	158.73
Floor Space Index	min 0.5 max 2.5	1.31
Commercial Area	50% of the ground floor	21.45%
	816 m ²	350 m ²

Commercial Floor to Floor Height Required 4.5m Provided 4.5m

5m setback at street frontage

Percentage of building at the 5m setback to all street frontage Required min 50% Provided 74%

Percentage of building with in the 5m setback to all street frontage Required max 50% Provided 26%

Building		8184 m ²
· GFA		5
· Height in Stories		100
· Units		

Parking Calculations	Required	Provided
Required Parking (100(units) x 1.0)	100 spaces	107 spaces
Required Parking Commercial (1 per 24m ²)(350/24=15)	15 spaces	15 spaces
Total Required	115 spaces	122 spaces

*Parking Breakdown	
Typical Surface Spaces	22 spaces
Typical Surface Spaces Commercial	15 spaces
Surface Barrier Free Spaces	2 spaces
Underground Barrier Free Spaces	2 spaces
Typical Underground Spaces	81 spaces
Total Provided	122 spaces

Barrie Zoning Bylaw 4.6.4 Barrier Free Parking
Barrier Free spaces calculated using Accessibility Parking for Barrie Ont.
Required over 100 spaces 1 space plus 3% of the required parking spaces
3% of 122 = 3.66 (4) plus 1 = 5 (5 required, provided 5)
(Type A - 3.4 x 1.5 - 2 spaces)
(Type B - 3.1 x 1.5 - 3 spaces)

Bicycle Rack Storage (0.2 x 100)	20 Required	16 Secure Storage Provided 14 Surface Bike Racks Provided
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Total 30 Bikes

Required Outdoor Amenity Area (12m²/unit-12x100) 1200 m²

Proposed Outdoor Amenity	
Patio area at ground floor Apartments, Plus Patio area over parking structure	161.08 m ²
Balcony area at typical floors	551.96 m ²
Roof Deck	544.00 m ²
Total Outdoor Amenity	1257.04 m ²

Proposed Indoor Amenity	
lounge/meeting rooms and 1st and 5th Floor washroom	197.50 m ²
Total Indoor Amenity	197.50 m ²

Fire Route

Unit type and area per floor AFFORDABLE UNIT *

Unit	Area	Unit Type	Main floor	2nd floor	3rd floor	4th floor	5th floor
A	55m	1 bed 1 bath	2	2	2	2	10
B*	34m	Studio	2	4	4	4	18
C	55m	1 bed/1 bath/den	2	4	4	4	18
D	49m	1 bed/1 bath	1	1	1	1	4
E	57m	1 bed/1 bath/den	3	2	2	2	11
F	81m	2 bed/2 bath	2	4	4	4	18
F+	83m	2 bed/2 bath	1	1	1	1	5
G	109m	3 bed/2.5 bath	1	1	1	1	3
G+	111m	3 bed 2.5 bath					1
H	70m	2 bed 2 bath	1	1	1	1	3
H+	72m	2 bed/2 bath					1
I	103m	2 bed/2 bath/den	1	1	1	1	4
J	57m	1 bed/1 bath	1	1	1	1	3
K	52m	1 bed/1 bath					1
			12	22	22	22	100

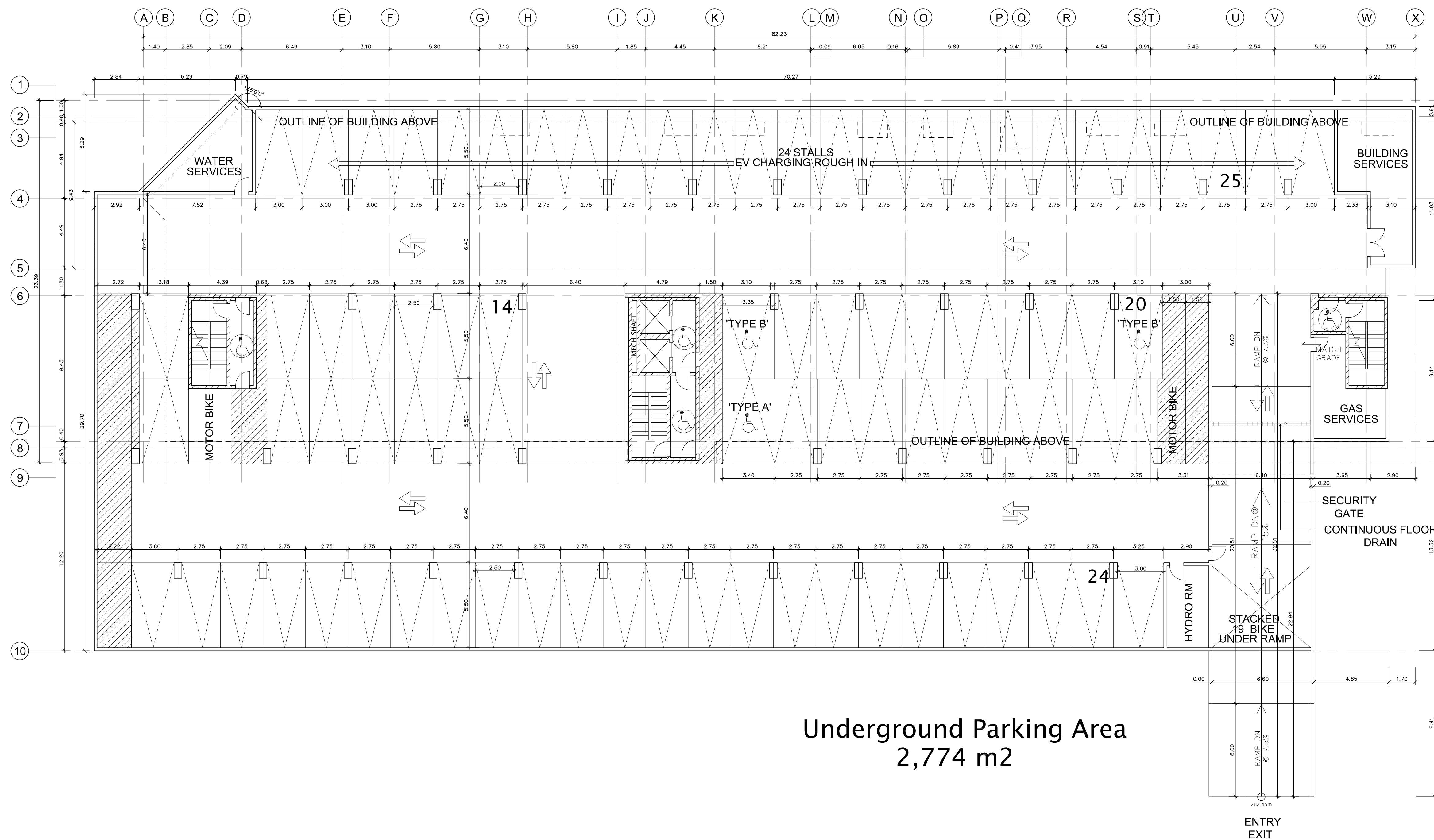
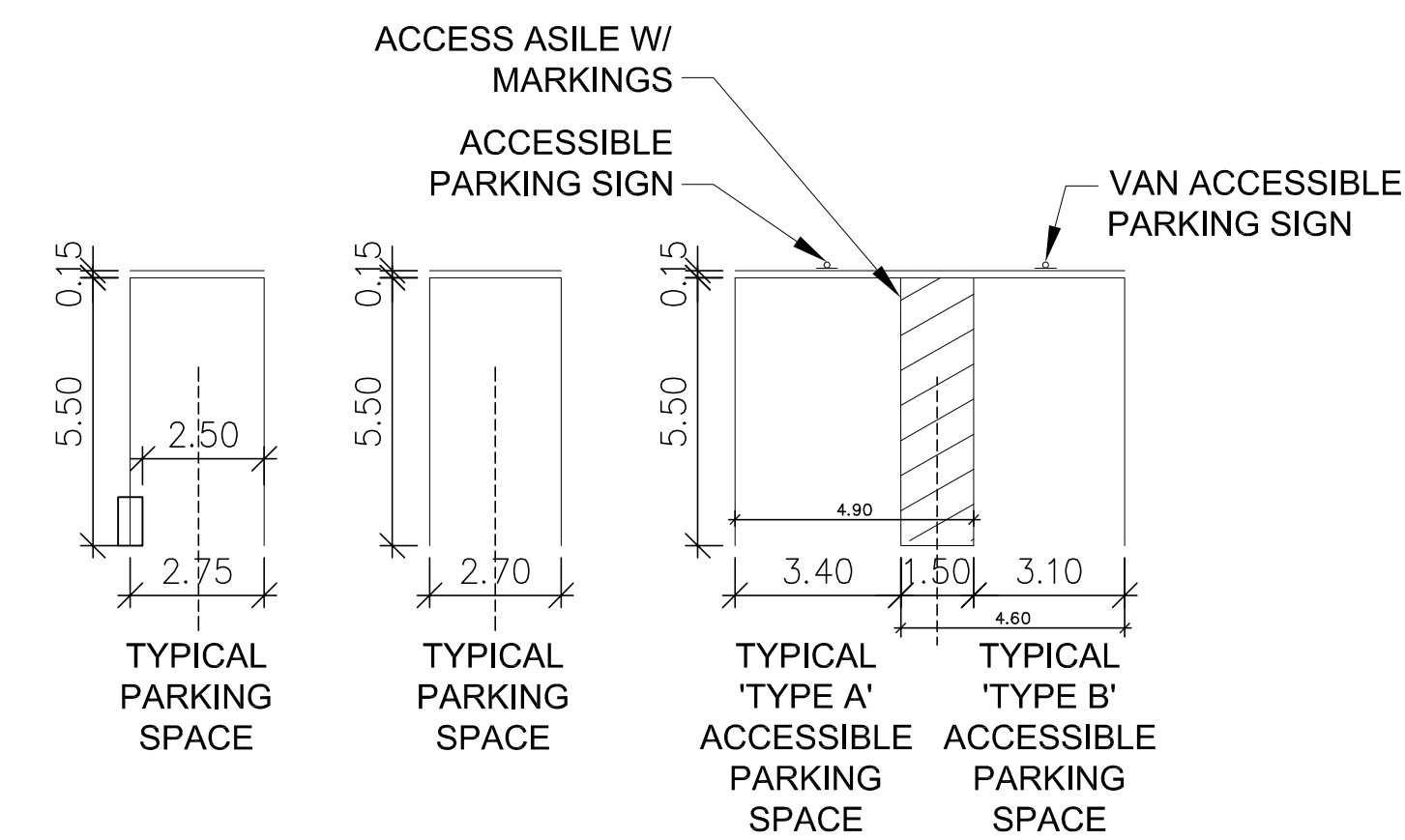
Total Units	100
Affordable Units *	18

22	EAST RETAINING WALL REVISED	JAN 06, 2024
21	DALLAIRE ST. PLANTER REVISED	JAN 05, 2024
20	DALLAIRE ST. PLANTER REVISED	MAY 27, 2024
19	DALLAIRE ST. PLANTER REVISED	APRIL 22, 2024
18	ISSUED FOR PRE-CONSULTATION MEETING	APRIL 15, 2024
17	ISSUED FOR PRE-CONSULTATION MEETING	APRIL 10, 2024
16	ISSUED FOR PRE-CONSULTATION MEETING	APRIL 11, 2024
15	ISSUED FOR PRE-CONSULTATION MEETING	APRIL 05, 2024
14	ISSUED FOR PRE-CONSULTATION MEETING	MARCH 08, 2024
13	ISSUED FOR PRE-CONSULTATION MEETING	FEB. 26, 2024
12	ISSUED FOR PRE-CONSULTATION MEETING	FEB. 21, 2024
11	ISSUED FOR PRE-CONSULTATION MEETING	FEB. 07, 2024
10	ISSUED FOR PRE-CONSULTATION MEETING	NOV. 30, 2023
9	ISSUED FOR PRE-CONSULTATION MEETING	NOV. 27, 2023
8	ISSUED FOR PRE-CONSULTATION MEETING	NOV. 23, 2023
7	ISSUED FOR PRE-CONSULTATION MEETING	NOV. 23, 2023
6	ISSUED FOR PRE-CONSULTATION MEETING	OCT. 24, 2023
5	ISSUED FOR PRE-CONSULTATION MEETING	OCT. 04, 2023
4	ISSUED FOR PRE-CONSULTATION MEETING	JULY 18, 2023
3	ISSUED FOR CLIENT AND CONSULTANT REVIEW	MAY 23, 2023
2	ISSUED FOR CLIENT AND CONSULTANT REVIEW	APRIL 20, 2023
1	ISSUED FOR CLIENT AND CONSULTANT REVIEW	MARCH 30, 2023 - 1st Reg.

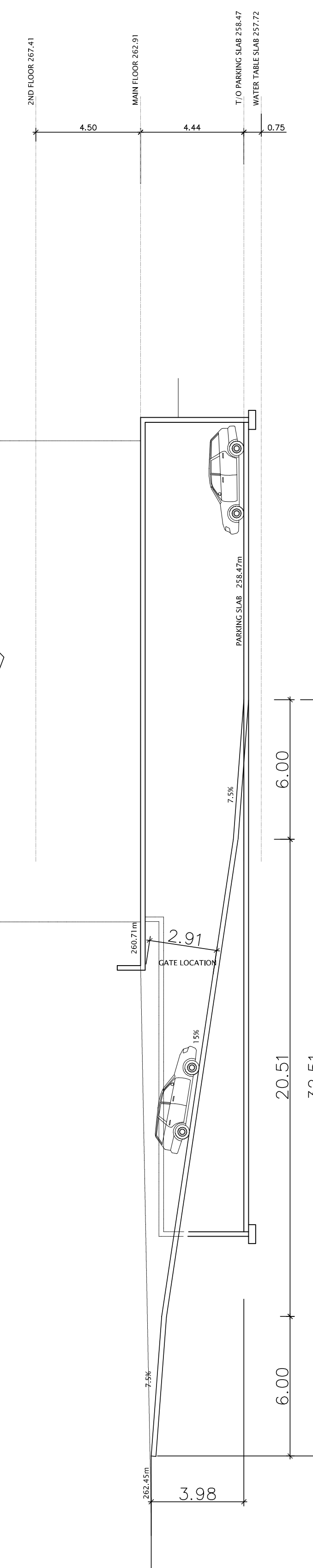
PROJECT #	2023-05	MARKETING NAME	-	S&C ARCHITECTS INC.
SCALE	1:200	CITY OF BARRIE		7 (416) 848-1091 F: (416) 863-6101 INFO@S&CARCHITECTS.CA 60 RANDALL DRIVE, SUITE 10 AUX, ONTARIO L1S 6L5
TOTAL AREA	MAPLEVIEW SOUTH (INNISFIL) LTD.			DRAWING NO. A-101
	953 MAPLEVIEW DRIVE-BLOCK-193			DATES: March 30, 2023
	SITE PLAN			



83 parking stall
AREA 2,779 m2
AREA 29,913 sq.ft.



Underground Parking Area
2,774 m2



13	ISSUED FOR PRE-CONSULTATION MEETING	April 14, 2024
12	ISSUED FOR PRE-CONSULTATION MEETING	April 10, 2024
11	ISSUED FOR PRE-CONSULTATION MEETING	March 28, 2024
10	ISSUED FOR PRE-CONSULTATION MEETING	Feb. 26, 2024
9	ISSUED FOR PRE-CONSULTATION MEETING	Feb. 21, 2024
8	ISSUED FOR PRE-CONSULTATION MEETING	Feb. 17, 2024
7	ISSUED FOR PRE-CONSULTATION MEETING	Nov. 23, 2023
6	ISSUED FOR PRE-CONSULTATION MEETING	Nov. 16, 2023
5	ISSUED FOR PRE-CONSULTATION MEETING	Oct. 04, 2023
4	ISSUED FOR PRE-CONSULTATION MEETING	July 16, 2023
3	ISSUED FOR CLIENT AND CONSULTANT REVIEW	May 23, 2023
2	ISSUED FOR CLIENT AND CONSULTANT REVIEW	Apr. 20, 2023
1	ISSUED FOR CLIENT AND CONSULTANT REVIEW	March 3, 2023
0	Description	Date

MAPLEVIEW SOUTH (INNISFIL)

953 MAPLEVIEW DRIVE-BLOCK-193

CONCEPTUAL UNDERGROUND PARKING PLAN

REVISED: **A-1**

DATE: **March 30, 2024**

PROJECT #

2023-05

DATE

ARCHITECTING FIRM

-

CLIENT

1:150

S&C ARCHITECTS

(416) 698-1991 / F (416) 698-1992

INFO@S&CARCHITECTS.CA

60 RANDRIVE DRIVE SUITE 110

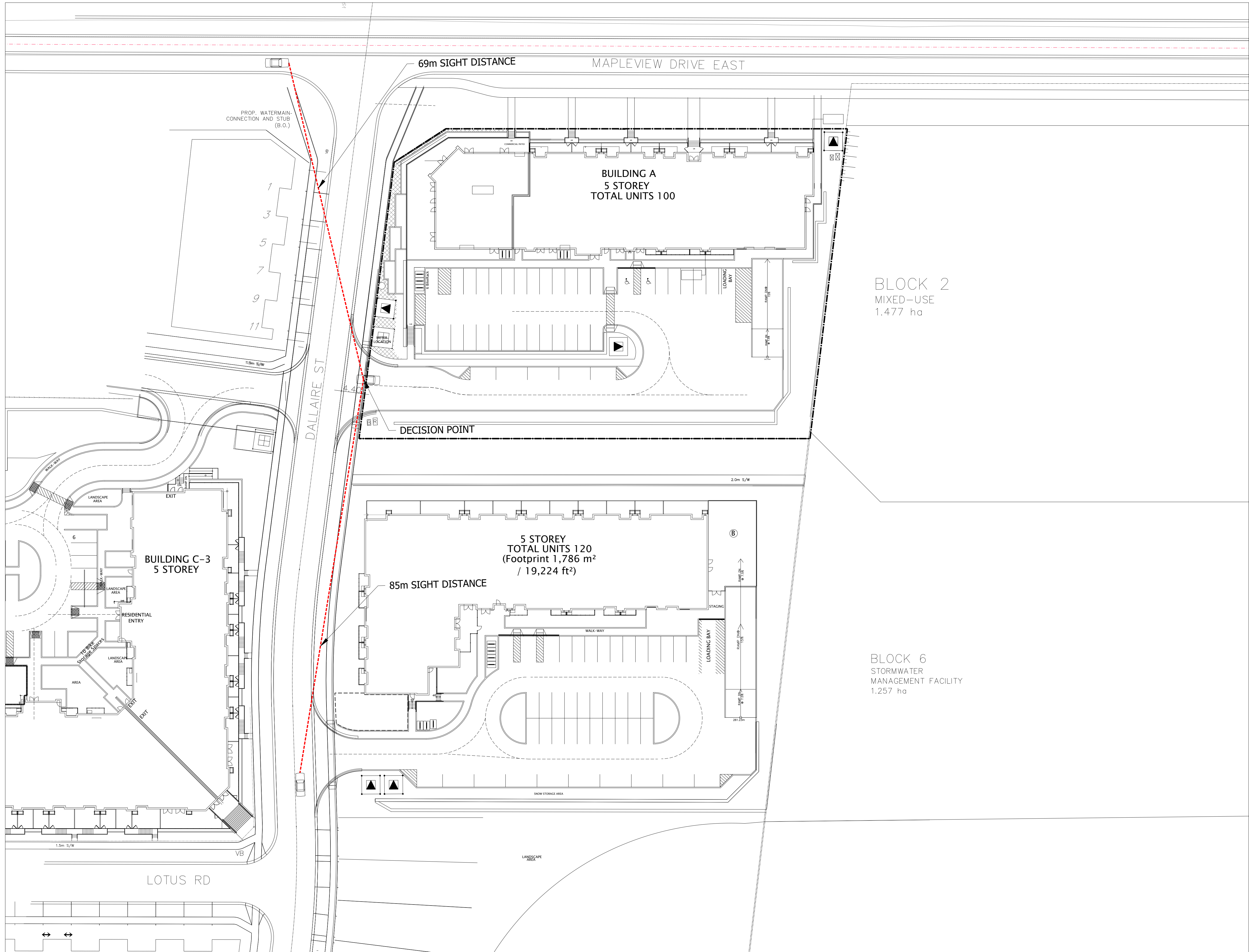
AJAX, ONTARIO L1S 6B6

PROJECT LOCATION

City of Barrie

DATE

March 30, 2024



 SIGHTLINE
 SUBJECT SITE PROPERTY BOUNDARY

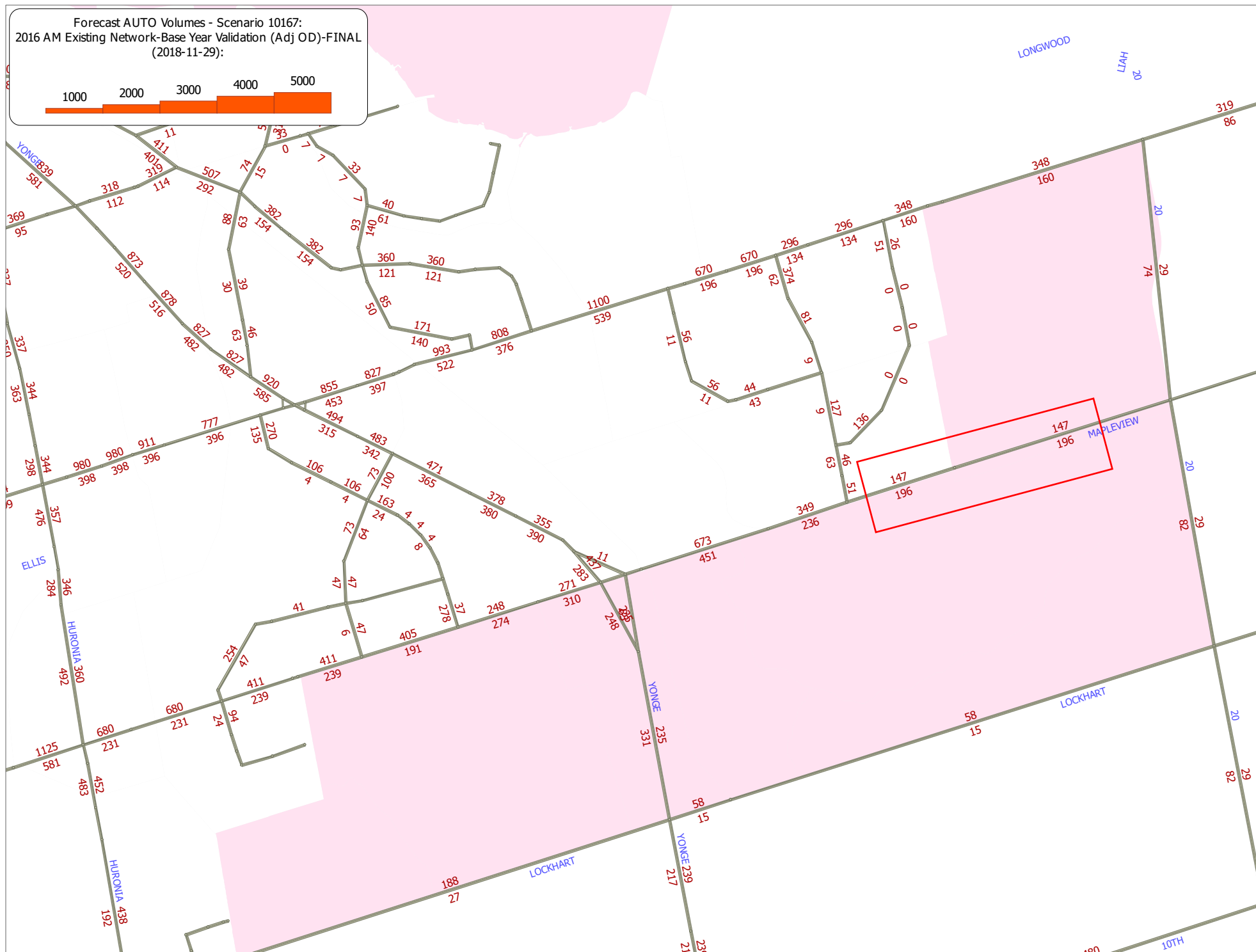
1.	JUNE 2024	JN	FIRST SUBMISSION
NO.	DATE	APPROVED	REVISIONS



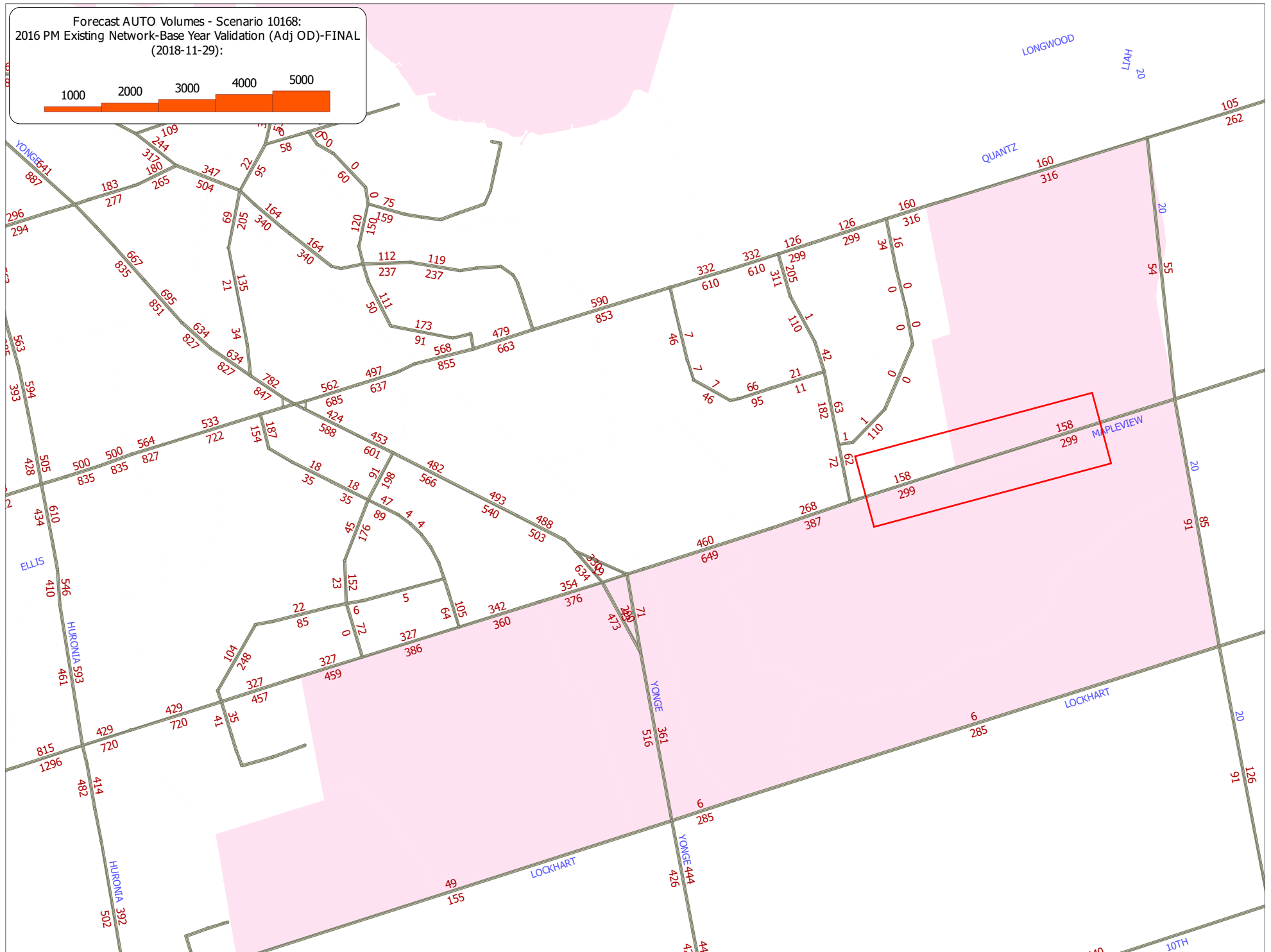
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DRAWN: RH	DATE: 06/24
REVIEWED: RH	DATE: 06/24
SCALE HOR. 1:400	SCALE VERT. N/A
SHEET NO. 1302 - BLOCK 193	

Appendix C – Traffic Data

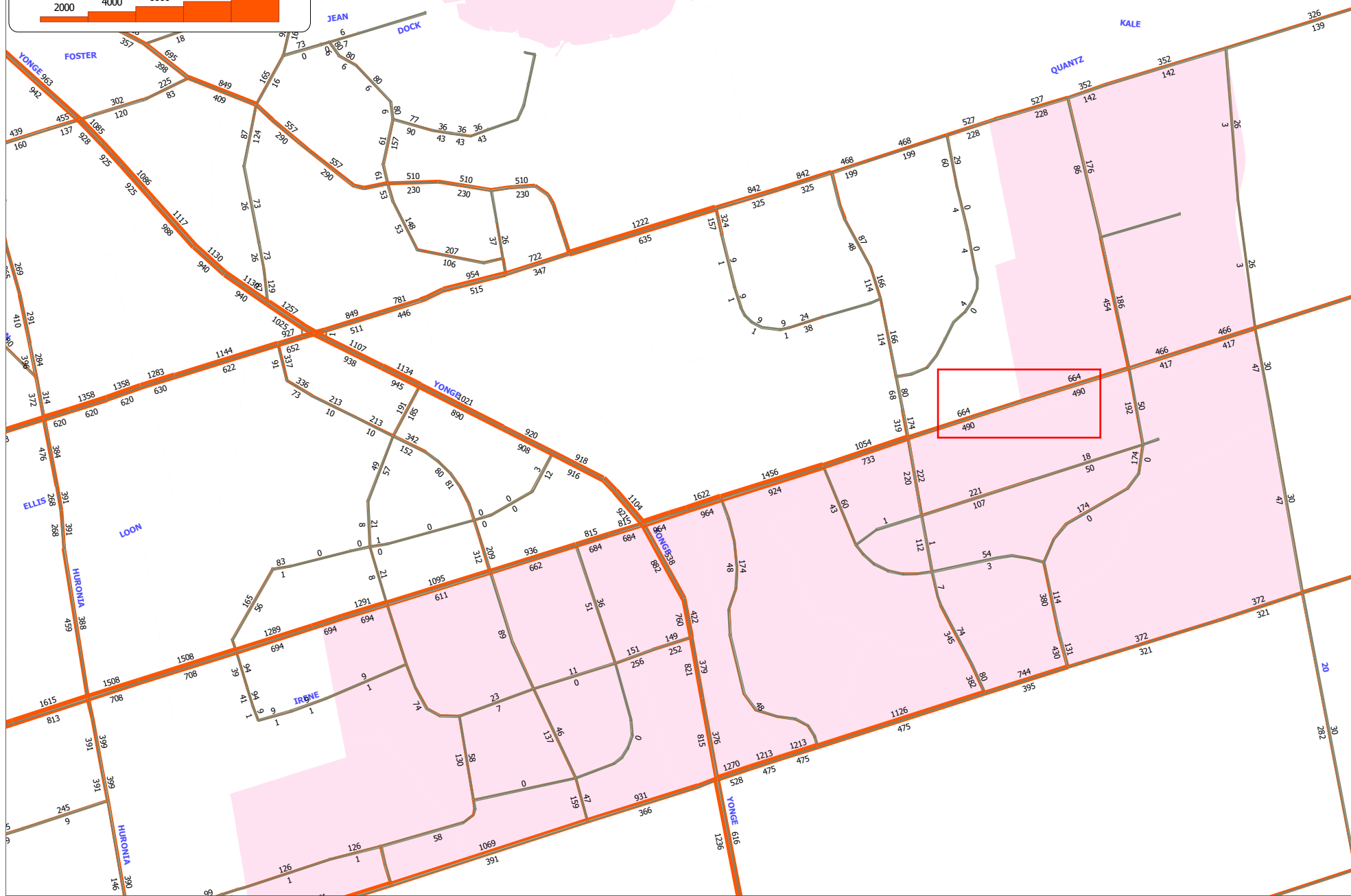
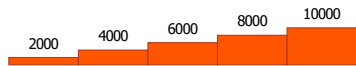
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2016 AM Existing Network-Base Year Validation (Adj OD)-FINAL
(2018-11-29):



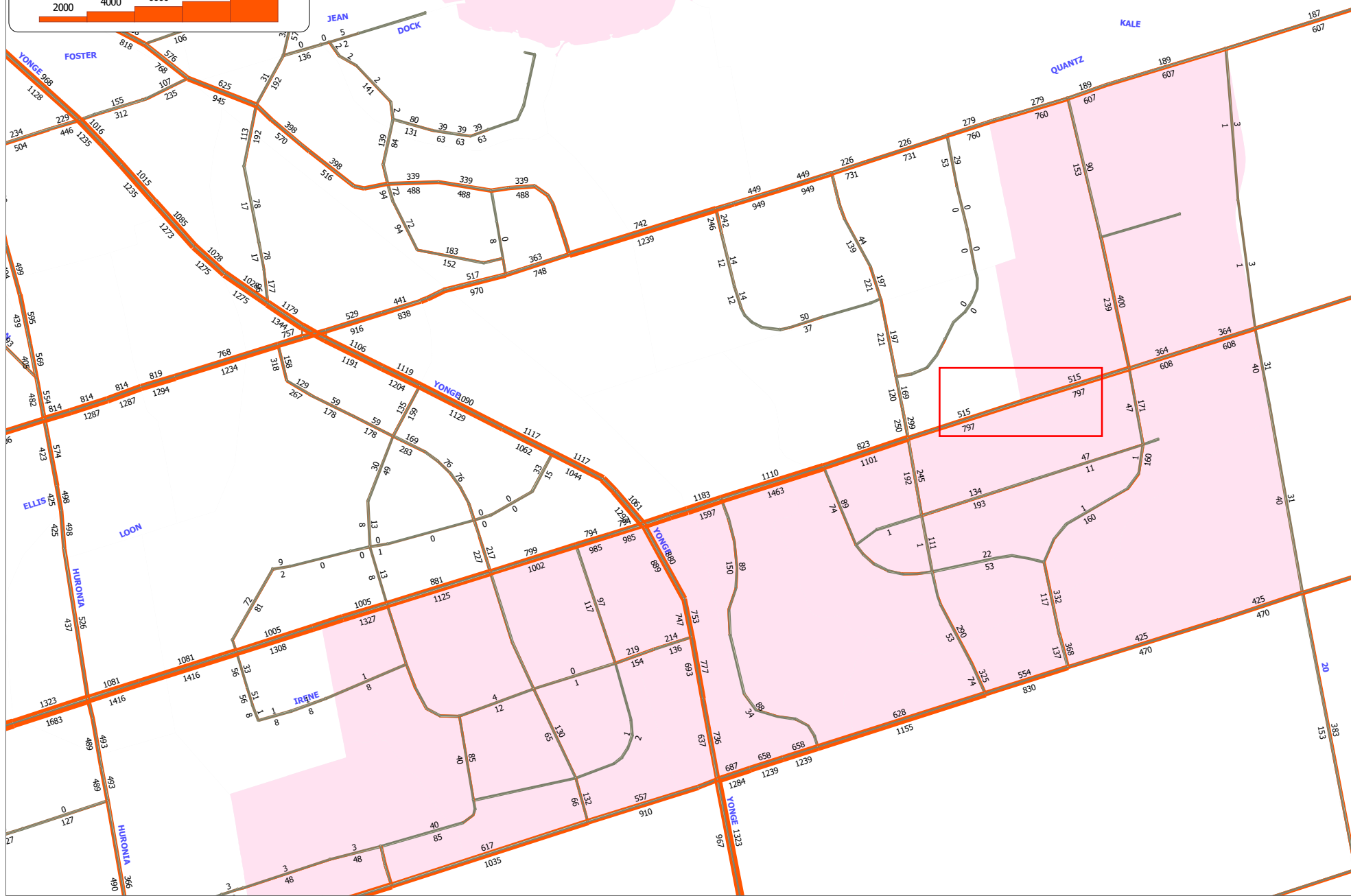
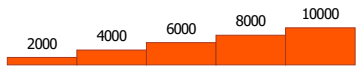
Forecast AUTO Volumes - Scenario 10168:
2016 PM Existing Network-Base Year Validation (Adj OD)-FINAL
(2018-11-29):



Forecast AUTO Volumes - Scenario 44317:
2031 AM TMP Preferred (MED-Alt3D4)wo/HOV+Hwy6Ln-FINAL
(2019-04-04)



Forecast AUTO Volumes - Scenario 44318:
2031 PM TMP Preferred (MED-Alt3D4)wo/HOV+Hwy6Ln-FINAL
(2019-04-04)



Appendix D – Synchro Analysis Output

HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD










05-07-2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖		↗
Traffic Volume (veh/h)	367	25	0	492	0	5
Future Volume (Veh/h)	367	25	0	492	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	399	27	0	535	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			426		948	412
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			426		948	412
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1133		290	640
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	426	535	5			
Volume Left	0	0	0			
Volume Right	27	0	5			
cSH	1700	1700	640			
Volume to Capacity	0.25	0.31	0.01			
Queue Length 95th (m)	0.0	0.0	0.2			
Control Delay (s)	0.0	0.0	10.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	10.7			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.8%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD










05-07-2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			686		1077	647
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			686		1077	647
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			908		242	471
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	686	430	3			
Volume Left	0	0	0			
Volume Right	78	0	3			
cSH	1700	1700	471			
Volume to Capacity	0.40	0.25	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	12.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.7			
Approach LOS			B			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		43.8%	ICU Level of Service	A		
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD










05-07-2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			686		1077	647
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			686		1077	647
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			908		242	471
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	686	430	3			
Volume Left	0	0	0			
Volume Right	78	0	3			
cSH	1700	1700	471			
Volume to Capacity	0.40	0.25	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	12.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.7			
Approach LOS			B			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		43.8%	ICU Level of Service	A		
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD

05-07-2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	559	72	0	396	0	3
Future Volume (Veh/h)	559	72	0	396	0	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	608	78	0	430	0	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			686	1077	647	
vC1, stage 1 conf vol				647		
vC2, stage 2 conf vol				430		
vCu, unblocked vol			686	1077	647	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)				5.4		
tF (s)			2.2	3.5	3.3	
p0 queue free %			100	100	99	
cM capacity (veh/h)			908	451	471	
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	686	430	3			
Volume Left	0	0	0			
Volume Right	78	0	3			
cSH	1700	1700	471			
Volume to Capacity	0.40	0.25	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	12.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.7			
Approach LOS			B			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.8%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD

05-07-2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰		↰
Traffic Volume (veh/h)	403	87	0	664	0	16
Future Volume (Veh/h)	403	87	0	664	0	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	438	95	0	722	0	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			533		1208	486
vC1, stage 1 conf vol					486	
vC2, stage 2 conf vol					722	
vCu, unblocked vol			533		1208	486
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1035		412	582
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	533	722	17			
Volume Left	0	0	0			
Volume Right	95	0	17			
cSH	1700	1700	582			
Volume to Capacity	0.31	0.42	0.03			
Queue Length 95th (m)	0.0	0.0	0.7			
Control Delay (s)	0.0	0.0	11.4			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.4			
Approach LOS			B			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			38.3%	ICU Level of Service		A
Analysis Period (min)			15			

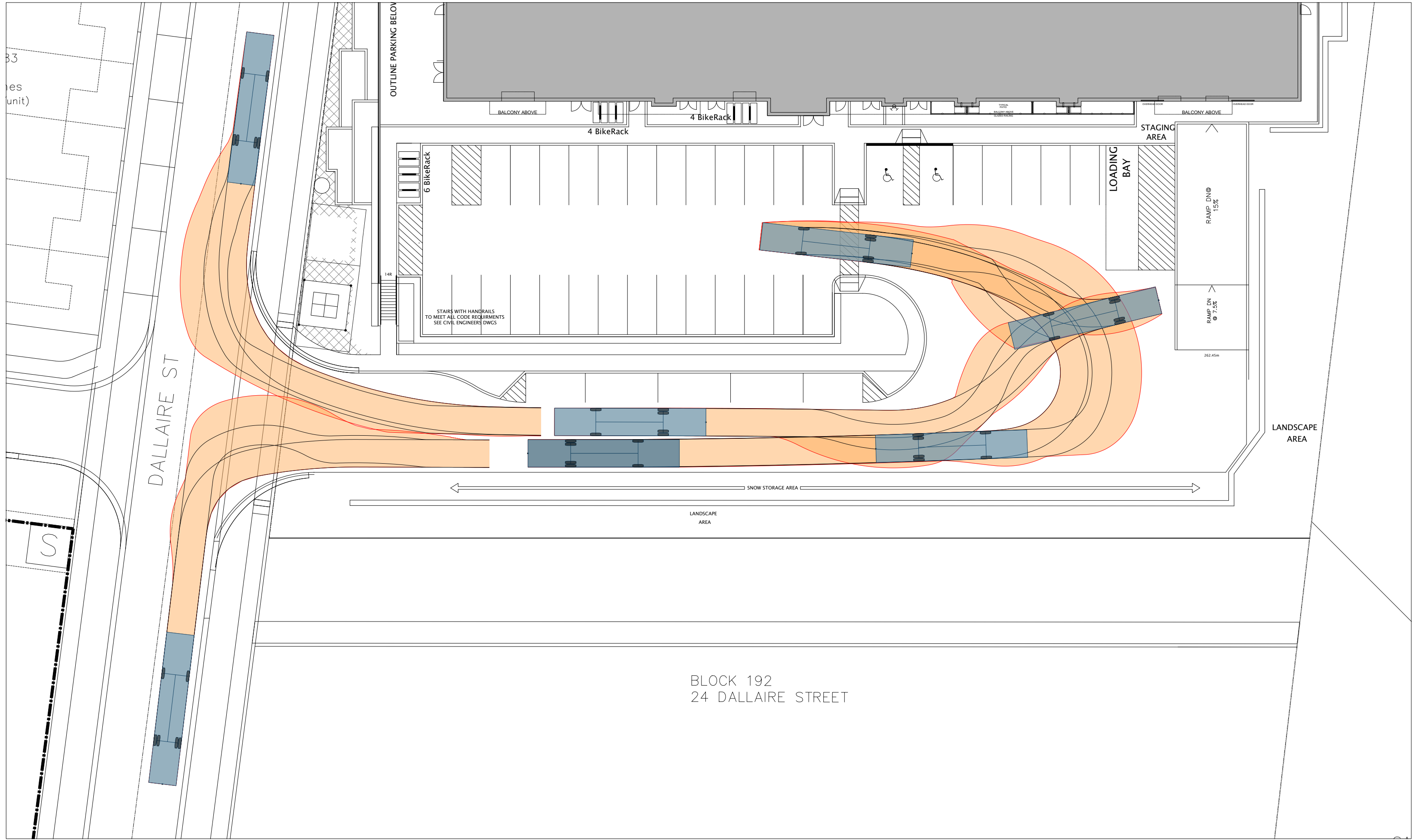
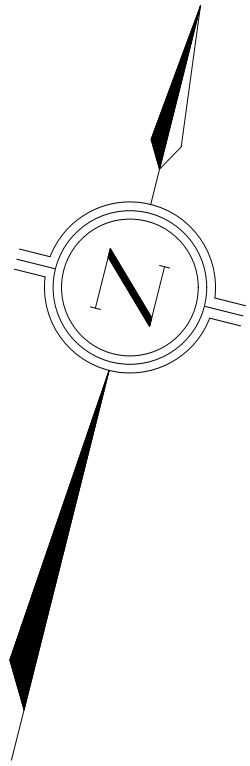
HCM Unsignalized Intersection Capacity Analysis

1: Site Access & MVD

05-07-2024

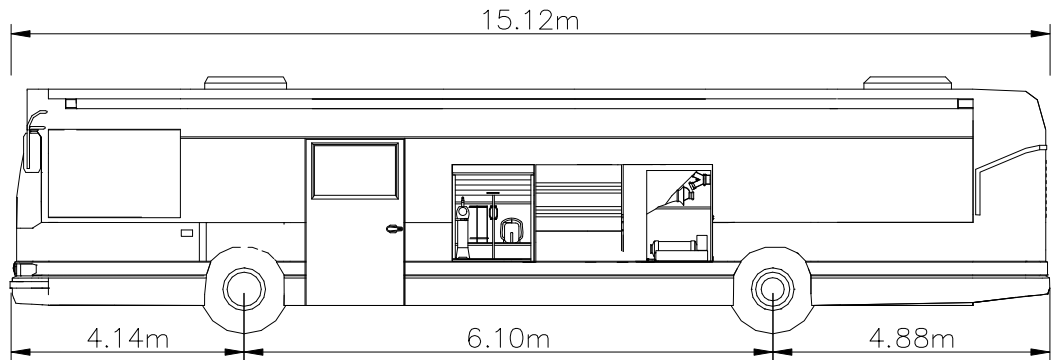
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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰		↱
Traffic Volume (veh/h)	542	255	0	515	0	12
Future Volume (Veh/h)	542	255	0	515	0	12
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	589	277	0	560	0	13
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT			TWLT		
Median storage veh	2			2		
Upstream signal (m)	252					
pX, platoon unblocked						
vC, conflicting volume			866		1288	728
vC1, stage 1 conf vol					728	
vC2, stage 2 conf vol					560	
vCu, unblocked vol			866		1288	728
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			777		395	424
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	866	560	13			
Volume Left	0	0	0			
Volume Right	277	0	13			
cSH	1700	1700	424			
Volume to Capacity	0.51	0.33	0.03			
Queue Length 95th (m)	0.0	0.0	0.7			
Control Delay (s)	0.0	0.0	13.8			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	13.8			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.1%	ICU Level of Service		A
Analysis Period (min)			15			

Appendix E – Swept Path Analysis



DESIGN VEHICLE

FIRE TRUCK (SMEAL)
VEHICLE WIDTH: 2.50m
OUTSIDE TURNING RADIUS: 16.00m



GENERAL NOTES
1. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. THE DRAWINGS ARE THE PROPERTY OF JD ENGINEERING AND MUST BE RETURNED ON COMPLETION OF THE PROJECT.
4. BASE DRAWING PROVIDED BY S&C ARCHITECTS INC. ON JUNE 7, 2024.

1.	JUNE 2024	JN	FIRST SUBMISSION
NO.	DATE	APPROVED	REVISIONS



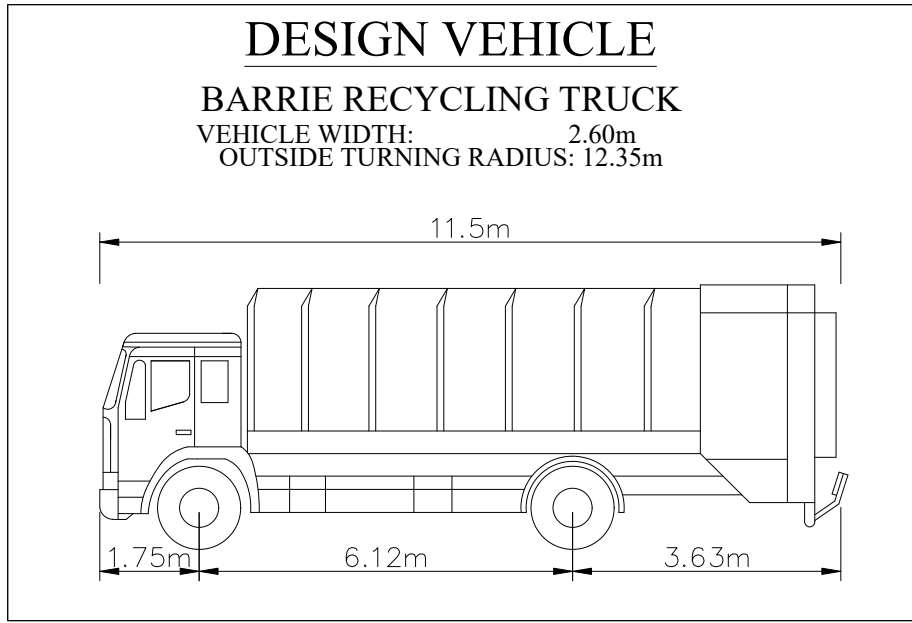
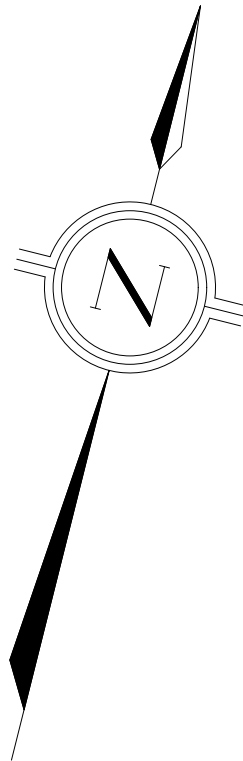
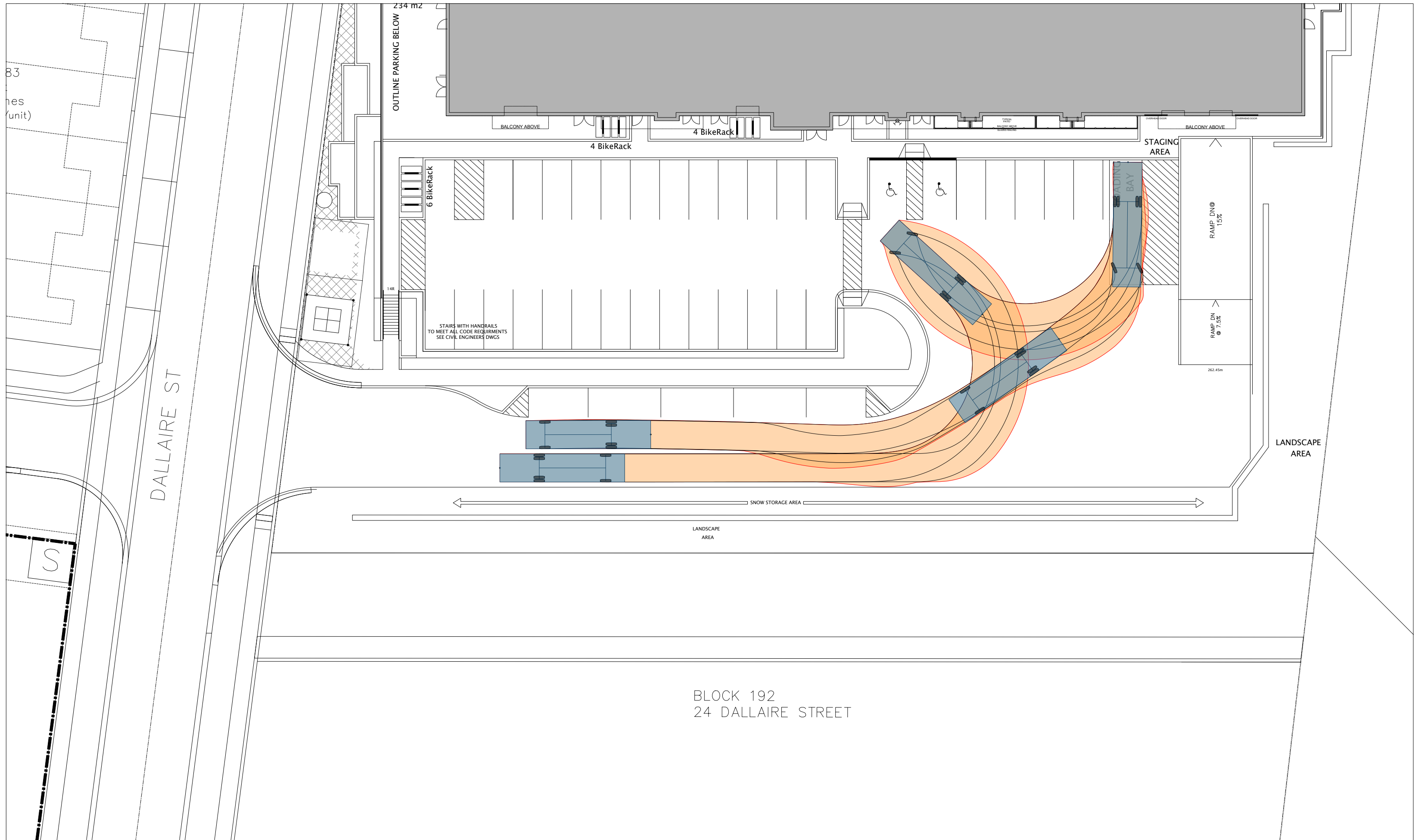
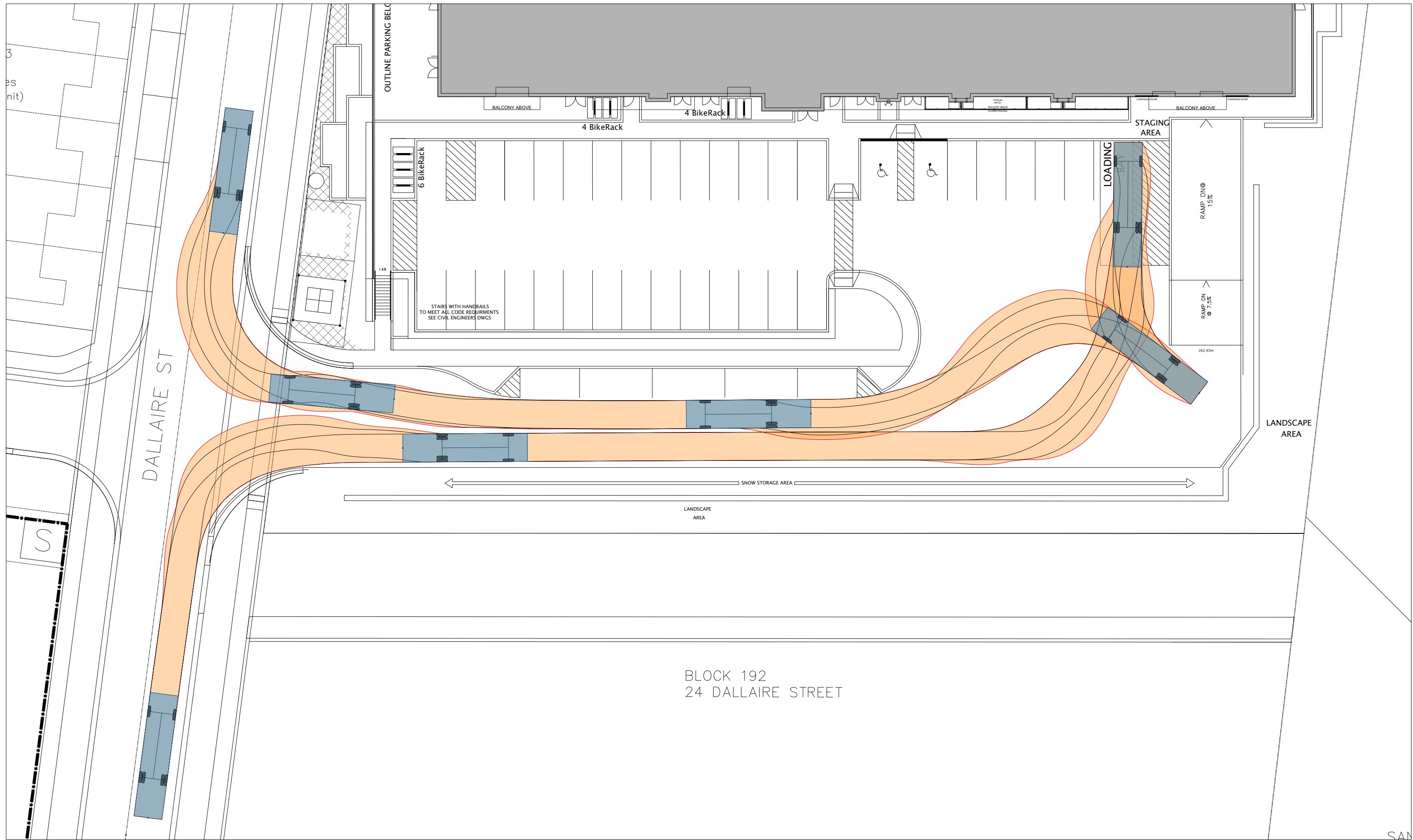
JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

AREA MUNICIPALITY
CITY OF BARRIE

953 MAPLEVIEW DRIVE EAST
BLOCK 193

EMERGENCY VEHICLE
TURNING MOVEMENTS

DESIGN: JN	DATE: 06/24
DRAWN: JN	DATE: 06/24
REVIEWED: JN	DATE: 06/24
SCALE HOR. 1:300	SCALE VERT. N/A
SHEET NO. 1302 - TURN 1	



GENERAL NOTES
1. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. THE DRAWINGS ARE THE PROPERTY OF JD ENGINEERING AND MUST BE RETURNED ON COMPLETION OF THE PROJECT.
4. BASE DRAWING PROVIDED BY S&C ARCHITECTS INC. ON JUNE 7, 2024.

1.	JUNE 2024	JN	FIRST SUBMISSION
NO.	DATE	APPROVED	REVISIONS



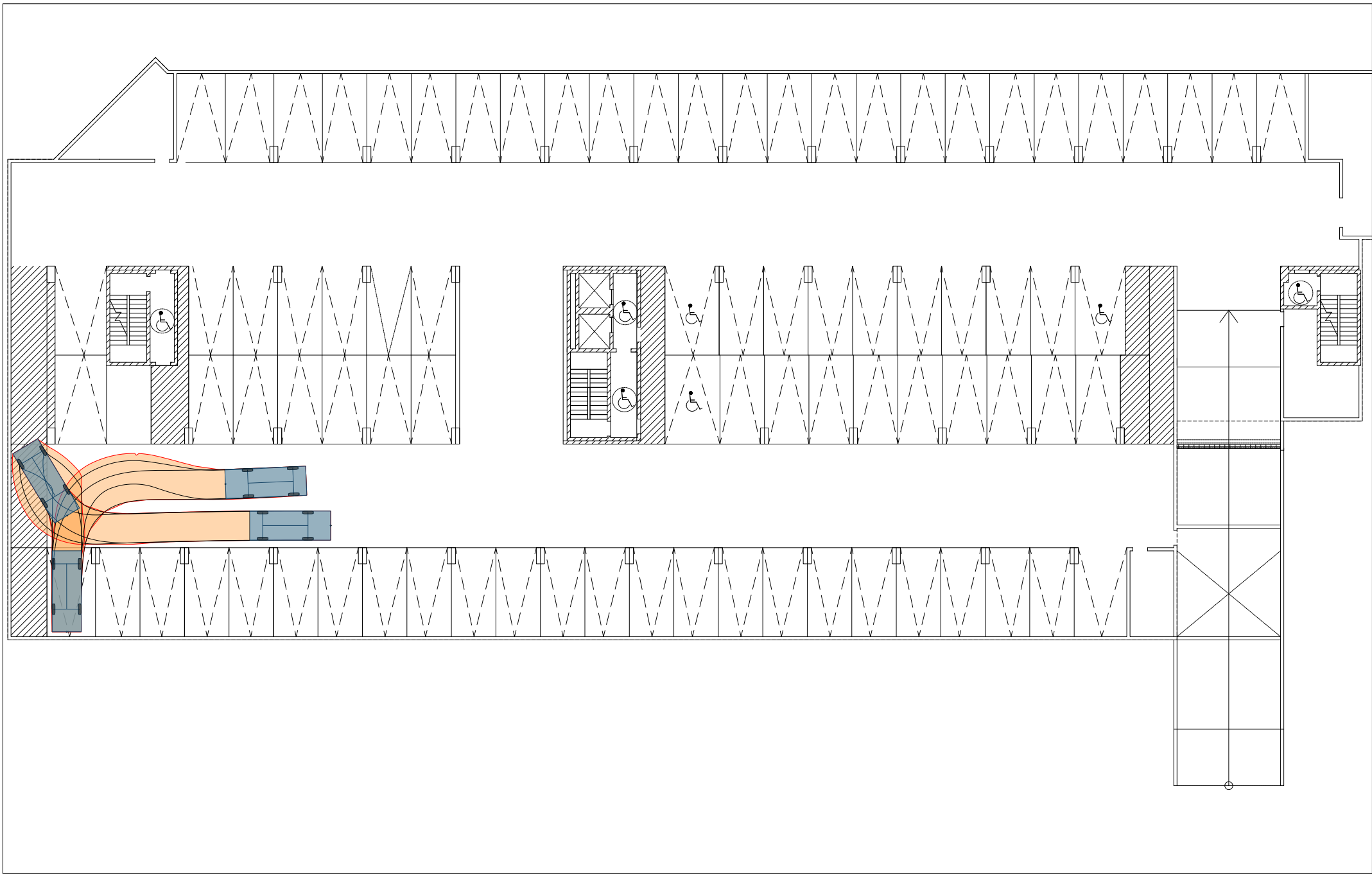
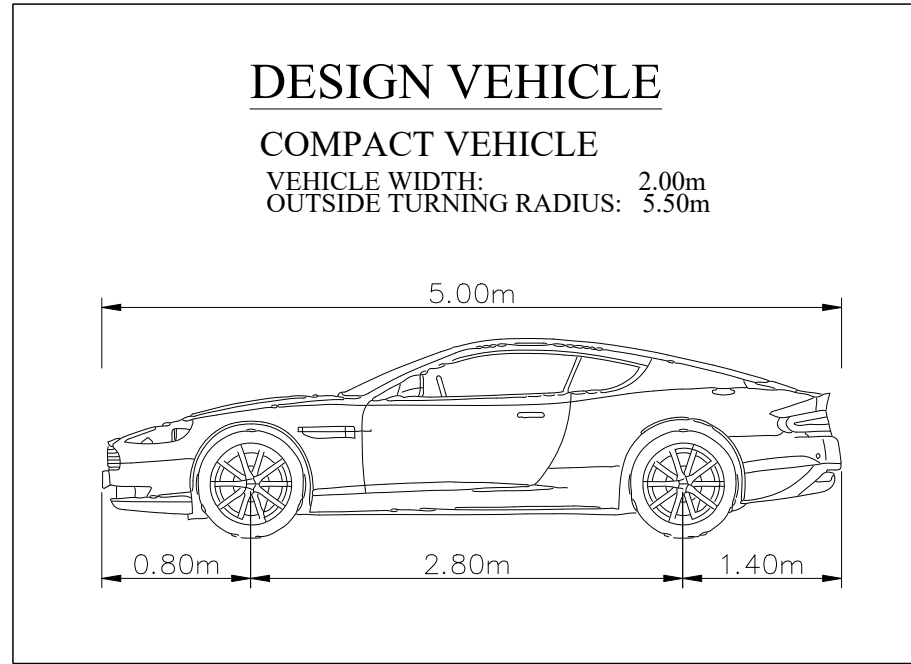
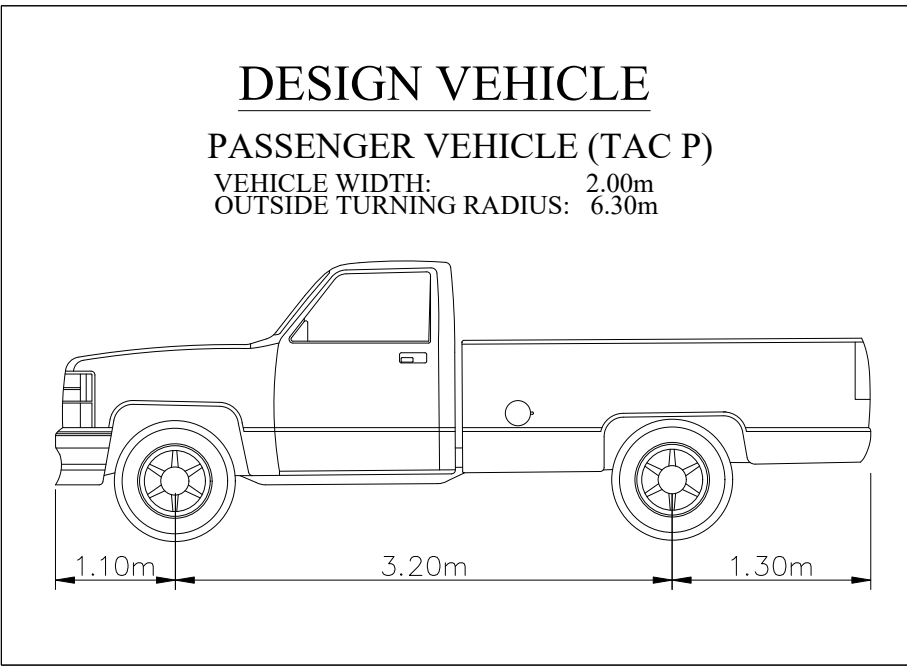
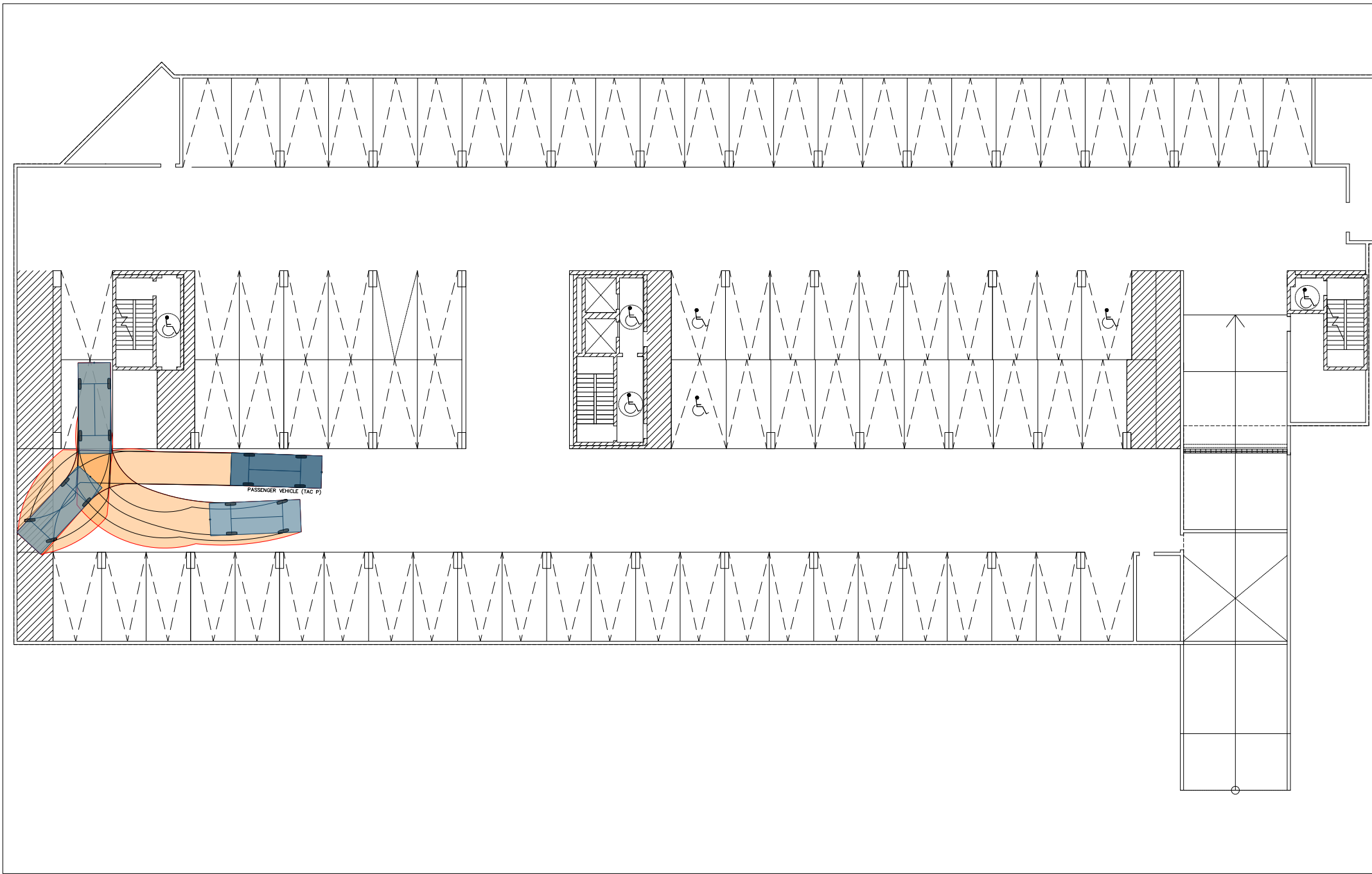
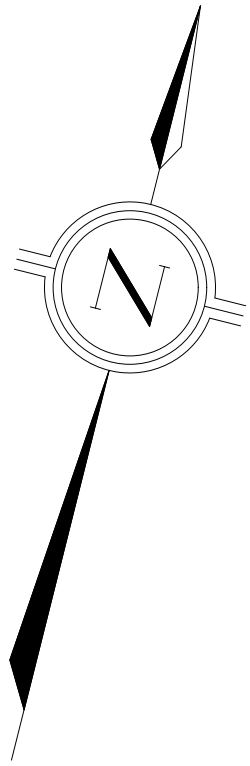
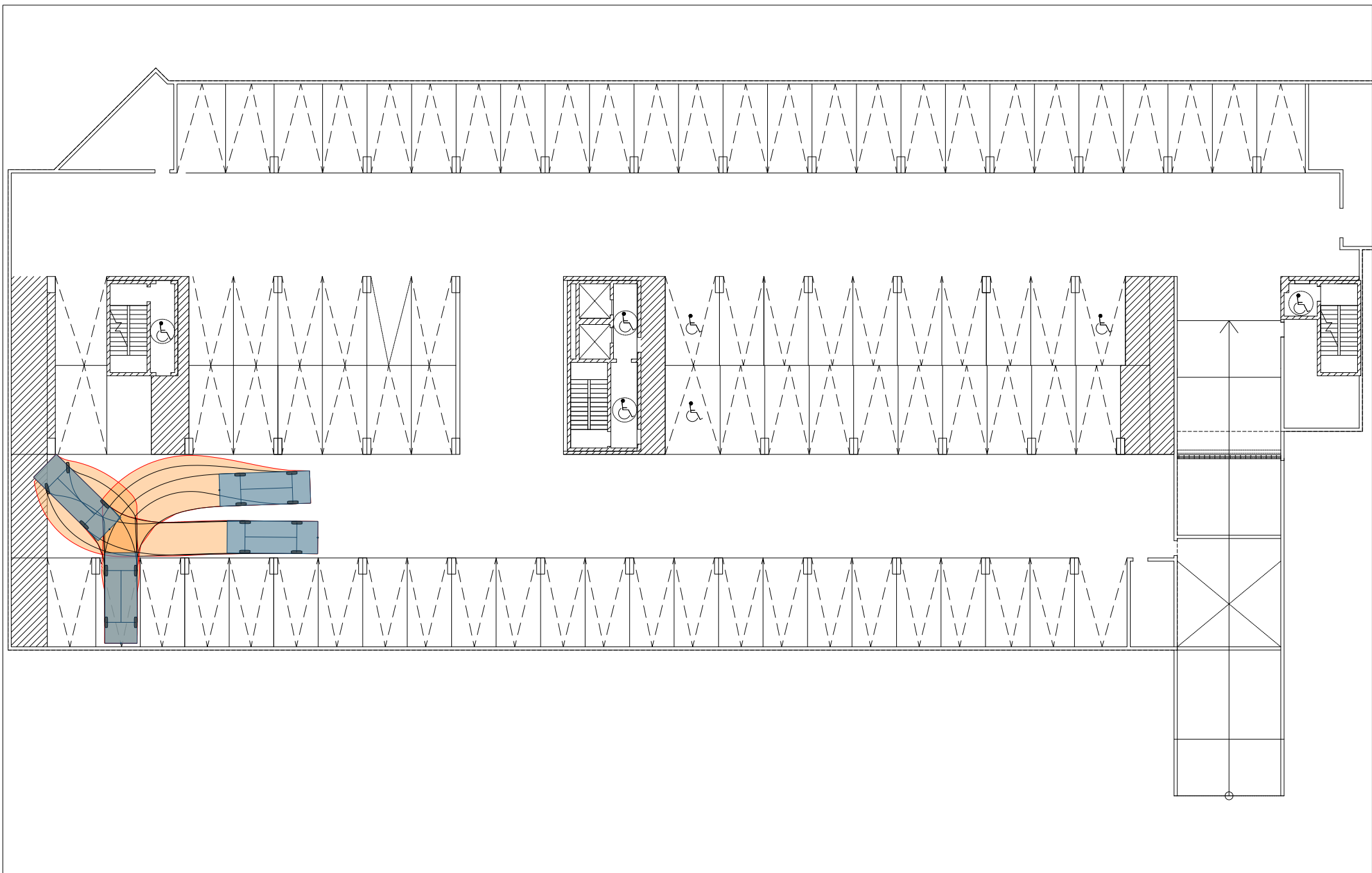
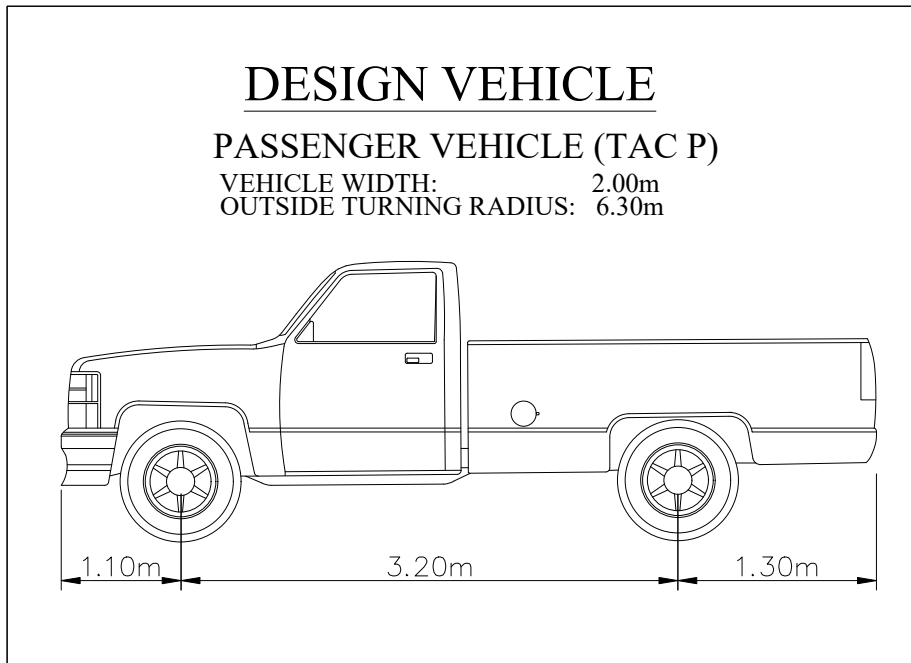
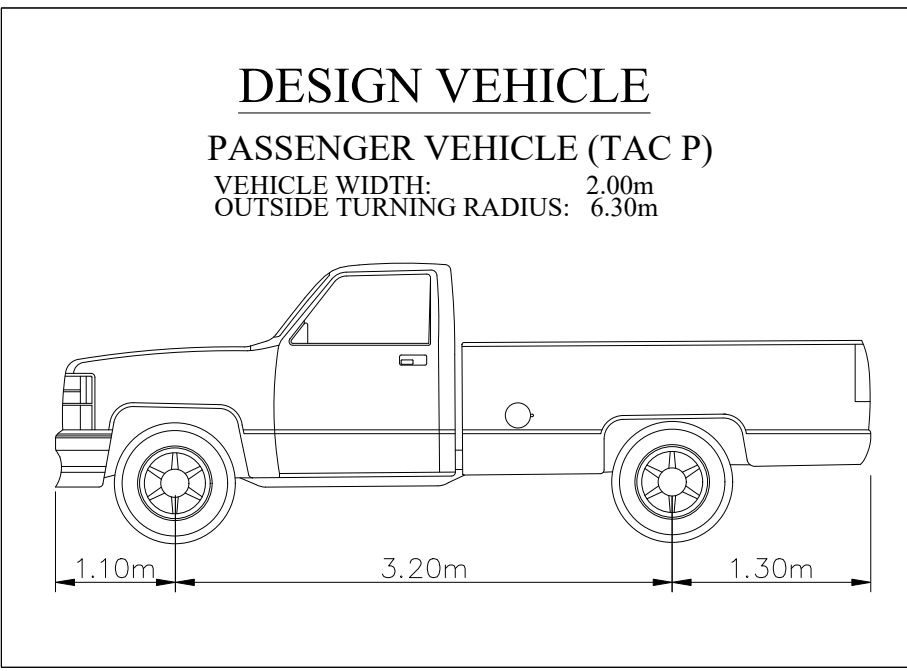
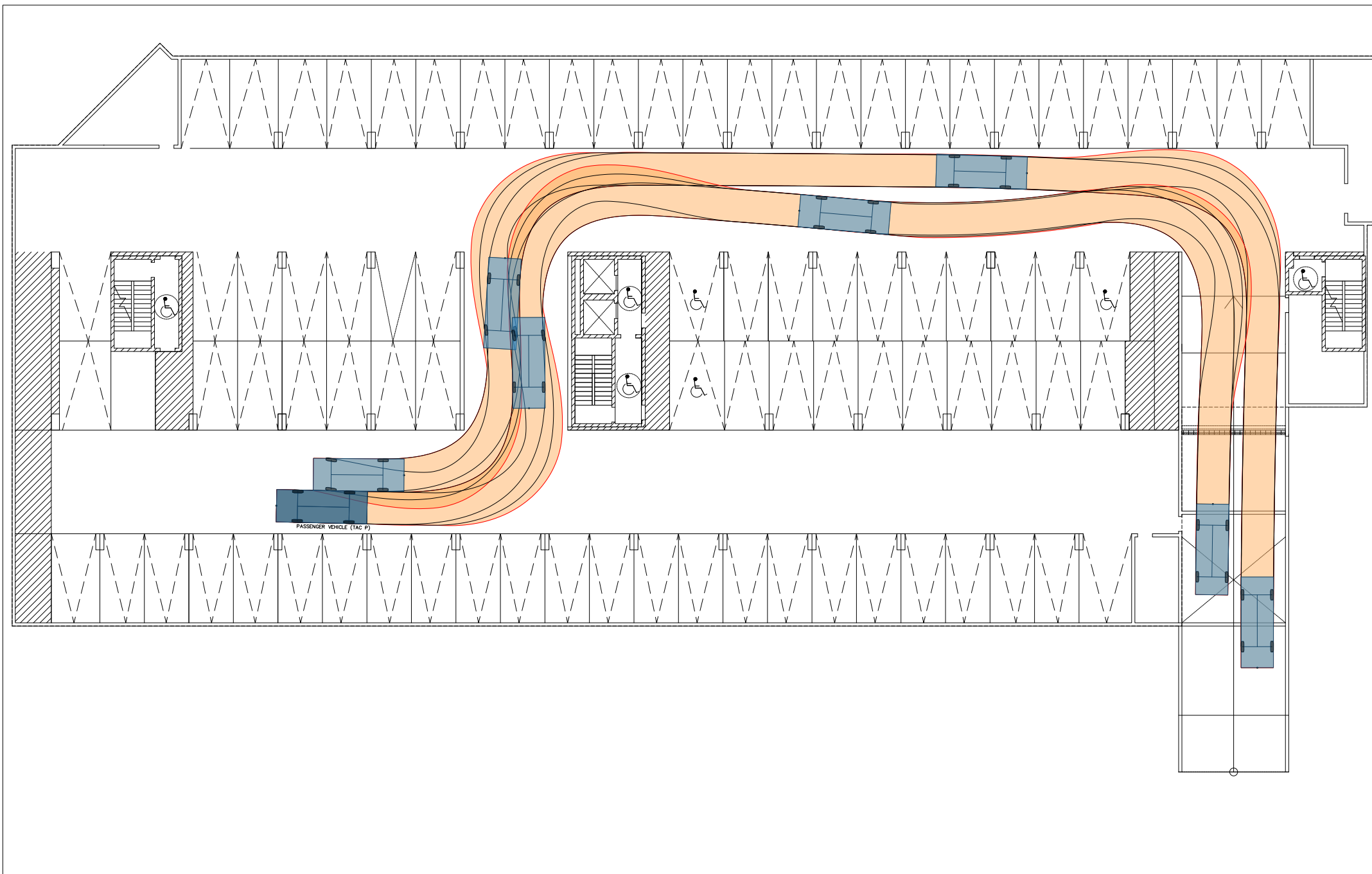
JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

AREA MUNICIPALITY
CITY OF BARRIE

**953 MAPLEVIEW DRIVE EAST
BLOCK 193**

**WASTE VEHICLE
TURNING MOVEMENTS**

DESIGN: JN	DATE: 06/24
DRAWN: JN	DATE: 06/24
REVIEWED: JN	DATE: 06/24
SCALE HOR. 1:300	SCALE VERT. N/A
SHEET NO. 1302 - TURN 2	



GENERAL NOTES
1. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. THE DRAWINGS ARE THE PROPERTY OF JD ENGINEERING AND MUST BE RETURNED ON COMPLETION OF THE PROJECT.
4. BASE DRAWING PROVIDED BY S&C ARCHITECTS INC. ON JUNE 7, 2024.

1.	JUNE 2024	JN	FIRST SUBMISSION
NO.	DATE	APPROVED	REVISIONS



JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

AREA MUNICIPALITY
CITY OF BARRIE

**953 MAPLEVIEW DRIVE EAST
BLOCK 193**

**PASSENGER VEHICLE
TURNING MOVEMENTS**

DESIGN: JN	DATE: 06/24
DRAWN: JN	DATE: 06/24
REVIEWED: JN	DATE: 06/24
SCALE HOR. 1:300	SCALE VERT. N/A
SHEET NO. 1302 - TURN 3	

Appendix F – Construction Traffic Management Plan

