



January 12, 2021

Ref: 2020-35

Town of Oakville

c/o Syed Rizvi

1225 Trafalgar Road

Oakville, ON L6H 0H3

By email: syed.rizvi@oakville.ca

Re: Trinison Docasa – Neighbourhood 9/10/11 Transportation Impact Study Addendum – Comment Response

Dear Syed:

CGH Transportation has received the comments provided on the TIS Addendum for Trinison's Docasa, dated July 25, 2021. The attached report has been updated to reflect those comments along with the minor changes to the draft plan.

The following comments have been received and our responses are included below each comment:

Sustainable Transportation

1. [Circ. 1] Staff has no comments at this time.

Response: Noted.

Oakville Transit

1. [Circ. 1] Burnhamthorpe Road, Preserve Drive and Settlers Road are transit corridors according to the North Oakville Secondary Plan. Staff found the Transit Facilities Concept Plan in the TIS very difficult to follow. The subject site is not highlighted on the plan and the shades of blue are overlapping each other, difficult to locate the proposed bus stops in the area.

Response: The Transit Facilities Plan has been revised to reduce the opacity of the blue highlight.

Transportation Impact Assessment (TIA) Comments

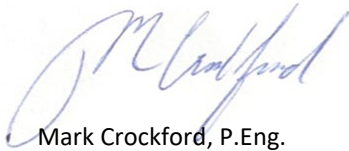
1. [Circ. 1] The LUC for the trip generation of newly added mid-rise multifamily housing that has a ground floor commercial space component is not considered correctly in the Land use. The traffic consultant is advised to use the correct LUC from the ITE trip gen manual and report the net trip percentage change due to addition and revision of original site development plan.

Response: The trip generation has been revised to include the ground floor commercial. However, this has a very minor impact on the trip generation, and no impact on the conclusions of the addendum.

The traffic memo should be revised and submitted for review and comments by the Transportation Services.

If you have any comments or questions, please do not hesitate to contact the undersigned.

Yours truly,



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Technical Memorandum

To:	Syed Rizvi – Town of Oakville	Date:	2021-12-09
Cc:	Chris Matson – Matson McConnel Ltd. Zhengxuan Lai – CGH Transportation		
From:	Mark Crockford, P.Eng.	Project Number:	2020-36

Re: Trinison Docasa – Neighbourhood 9/10/11 Transportation Impact Study Addendum

1 Introduction

To support several residential developments in the Neighbourhood 9/10/11 areas of North Oakville, a Transportation Impact Study (TIS) was prepared and finalized in late May 2020. This study used the initial concept plan for each development to develop a TIS that examined the overall impact of the subject developments on the transportation network. The Neighbourhood 9/10/11 TIS, referred to herein as the TIS, forms the basis for this memo. This addendum acts as a covering letter for the Neighbourhood 9/10/11 TIS.

This addendum has been prepared to support Trinison’s Docasa development and will examine the changes between the original concept plan considered in the TIS and the current plan that is being put forward. This includes examining the unit count and type, preparing an updated trip generation (using the same factors as those presented in the TIS), and, if significant changes to the trip generation are noted, providing updated Synchro results at key Study Area intersections.

2 Site Plan Comparison

The original concept plan considered in the TIS is included as Attachment 1. The updated plan, to be analyzed through this memo, is included as Attachment 2. Table 1 summarizes the unit count changes between the original concept and the updated plan.

Table 1: Land Use Statistic Comparison

	Single Detached LUC 210	Multifamily Housing (Low-Rise) LUC 220	Multifamily Housing (Mid-Rise) LUC 221	Strip Retail Plaza (<40k) LUC 822
Original	200	110	0	0
Updated	114	168	128	Max. 300 m ²
Change	-86	58	128	Max. 300 m ²
% Change	-43%	53%	-	-

As shown above, the revised plan would reduce the single detached units by 86 (43% of the total number of single detached houses), and add 58 townhouses, 128 mid-rise apartment units, and a ground floor commercial area of 300 square metres at maximum. Due to the change in unit counts the trip generation has been examined to determine if the proposed changes would significantly change relative to the trip generation originally considered. The trip generation equations for the single family detached units and low-rise multifamily units were used in the TIS as the rates produced using these equations were within the range of rates listed in the ITE Trip Generation Manual data statistics for each land use code. To calculate the trips generated by the mid-rise multifamily residential building with ground floor commercial space, the corresponding land use, LUC 231, in the ITE Trip Generation Manual should be used. However, the sample size of this land use category is very small

(≤5 sites), and trip generation data is only provided for the walking, biking, and transit modes, which renders an estimation of vehicle trips not possible due to the lack of data. Therefore, the methodology used to estimate the total vehicle trips generated by the mid-rise residential building with ground floor commercial space is to calculate the residential trips separately from the commercial trips using the appropriate land use category for each and apply the internalization reduction factors to accommodate the synergy effect created by a mixed-use development. The Mid-rise Multifamily Housing land use category is used for the residential units while the Strip Retail Plaza is used for commercial space given that the future site plan will contain a commercial space no larger than 300 square metres. The trip generation factors used for each of the land uses are summarized in Table 2.

Table 2: ITE Trip Generation Factor

Peak	Single Detached LUC 210	Multifamily Housing (Low-Rise) LUC 220	Multifamily Housing (Mid-Rise) LUC 221	Strip Retail Plaza (<40k) LUC 822
AM	$T=0.71(X)+4.8$	$\ln(T) = 0.95 \ln(T) - 0.51$	$\ln(T) = 0.98 \ln(T) - 0.98$	2.36
PM	$\ln(T) = 0.96 \ln(T) + 0.20$	$\ln(T) = 0.89 \ln(T) - 0.02$	$\ln(T) = 0.96 \ln(T) - 0.63$	$\ln(T) = 0.71 \ln(T) + 2.72$

For the Strip Retail Plaza land use, using the fitted curve equation yielded an AM peak hour trip generation rate that was uncharacteristically high and fell outside of the range of rates listed in the ITE Trip Generation Manual, given the limited commercial space proposed as part of this development. The ITE Manual also identified the AM peak hour fitted curve rate should be used with caution due to its small sample size of 5 studies. Therefore, the average rates were used to better reflect the AM peak hour trip generation of the proposed development.

The internal person trip capture rates are taken from the ITE Trip Generation Handbook 3rd Edition for the residential to/from retail cases. No pass-by trip reduction is applied to the AM peak commercial trips. The pass-by rate of 40% for the commercial space during PM peak hours is the average pass-by rate taken from the ITE Trip Generation Handbook for the Shopping Plaza land use (LUC821) as data for the Strip Retail Plaza land use is unavailable. Since the data plot in the Handbook (Figure E.7) displays a negative correlation between the pass-by rates and the gross floor area, the commercial space in the proposed development would likely to have a larger pass-by rate comparing to the sites in the Shopping Plaza land use which have larger gross floor areas. The 40% rate being applied is a conservative estimation.

Using the above trip generation rates and the reduction rates, the total vehicle trip generation for the site has been recalculated. The following tables document the impacts of the changes:

- Table 3 compares the original and revised trip generation of the Docasa site
- Table 4 summarizes the changes to the overall TIS resulting from the Docasa site
- Table 5 presents all the changes to developments (as of the date of this memo)

Table 3: Vehicle Trip Generation Comparison – Docasa Site Only

Scenario	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Original TIS	40	124	164	138	81	218
Updated	45	133	178	145	87	233
Residential	42	130	173	138	83	221
Commercial	4	3	6	15	15	29
Internal Capture	-1	0	-1	-1	-4	-5
Pass-by reduction	0	0	0	-6	-6	-12
Difference	5	9	14	7	6	15
% Difference	14%	7%	9%	5%	8%	7%

Table 4: Vehicle Trip Generation – Original TIS Comparison

Scenario	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Original TIS	346	1090	1437	1184	703	1888
Updated	353	1103	1456	1192	710	1904
Difference	5	9	14	7	6	15
% Difference	1.56%	0.78%	0.97%	0.61%	0.92%	0.78%

Table 5: Vehicle Trip Generation – Updates Available to Date

Scenario	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Original TIS	346	1090	1437	1184	703	1888
ARGO Change	4	8	11	12	11	23
Digram Change	17	48	65	51	32	83
Remington Change	0	1	0	1	0	1
Star Oak Change	2	5	7	3	2	5
Timsin Ph 2 Change	0	3	3	2	0	3
Docasa Change	5	9	14	7	6	15
Total Change	28	74	100	76	51	130
Total to Date	374	1164	1537	1260	754	2018
Overall Change % Difference	8%	7%	7%	6%	7%	7%

As shown above, the changes to the trip generation of the Docasa site, independent of the other developments, will result in a net increase less than 10% in total vehicle traffic during AM and PM peak hours. When the entire trip generation of all developments in the Neighbourhood 9/10/11 TIS is considered, the resulting changes to the trip generation will result in a net increase of less than 1% change in total vehicle traffic. When considering all the changes to the area developments the changes result in a total increase in traffic of 6-8% over the original TIS. This is a relatively minor change, and the results of the original TIS hold validity. Additionally, the changes to the subject development, Docasa, would result in a very minor impact on traffic volumes (less than 2%), therefore no updated operational analysis is required.

3 Parking

Off-street parking will be provided in accordance with the North Oakville Parking Zoning By-Law requirements for the townhouses, single detached residential units, and mid-rise apartment units. Off-street parking summary can be seen in Table 6.

Table 6: Parking Summary

Land Use	Parking Rate	Min/Max	Units	Required Parking	Parking Provided	Difference
Single Detached	2.0 / unit	Minimum	114	228	228	0
Townhouse	1.0 / unit	Minimum	168	168	168	0
Apartment Resident	1.25 / unit	Maximum	128	160	160	0
Apartment Visitor	0.2 / unit	Maximum	128	26	26	0

Additionally, 234 parking spaces will be provided via on-street parking throughout the development. The location and number of on-street parking stalls is subject to minor changes and will need to be refined as part of the detailed engineering submission once curb locations, utilities, and fire hydrants have been established. The proposed parking plan can be found in Attachment 3.

4 Site Specific Transportation Review

This memo has been prepared to address some site-specific considerations for Trinison's Docasa development including Transit Facilities Plan, Road Cross-Sections, Pedestrian Circulation Plan, Cycling Facilities Plan, and Parking Provisions.

4.1 Transit Facilities Plan

A Transit Facilities Plan was created as part of the Neighbourhood 9/10/11 TIS. The Transit Facilities Plan has been recreated, focusing on the Trinison's Docasa development. This plan is included in Drawing 001, Attachment 4. Per the Transit Facilities Plan, all of the residential units are within 400 metres of at least one proposed transit station.

4.2 Road Cross-sections

The proposed right-of-ways and cross-sections are illustrated in Drawing 002, Attachment 4. These cross-sections are proposed to be consistent with the North Oakville Urban Design and Open Space Guidelines. The cross-sections used in this plan from these guidelines have been included in Attachment 5.

4.3 Pedestrian Concept Plan

A pedestrian circulation plan has been created to illustrate the sidewalk locations. Sidewalk provisions are generally per the road cross-section. Drawing 003, Attachment 4, illustrates the sidewalk locations and key pedestrian crossing locations.

4.4 Cycling Facilities Plan

A Cycling Facilities Plan was created as part of the Neighbourhood 9/10/11 TIS. The Cycling Facilities Plan has been recreated, focusing on the Trinison's Docasa development. This plan is included in Drawing 004, Attachment 4. Per the Cycling Facilities Plan, a signed route is provided along Street B and bike lanes are provided along Burnhamthorpe Road.

5 Conclusions

The proposed development concept has been refined since the original TIS was prepared. This addendum has verified that the changes to the unit counts and land uses will have no impact on the operational analysis and that the Neighbourhood 9/10/11 TIS remains valid.

This addendum has also addressed the site-specific issues including, parking, multi-modal transportation facilities, and roadway cross-sections. Through the plans prepared as part of this work it has been shown that the proposed development will have adequate cycling, pedestrian, and transit facilities and that the proposed right of ways are sufficient to support the appropriate cross-sections.

If you have any questions or comments, please do not hesitate to contact the undersigned.

Prepared By:

Reviewed By:



Mark Crockford, P. Eng.
P: 905-251-4070

Mark.Crockford@CGHTransportation.com



Christopher Gordon, P. Eng.
P: 343-999-9117

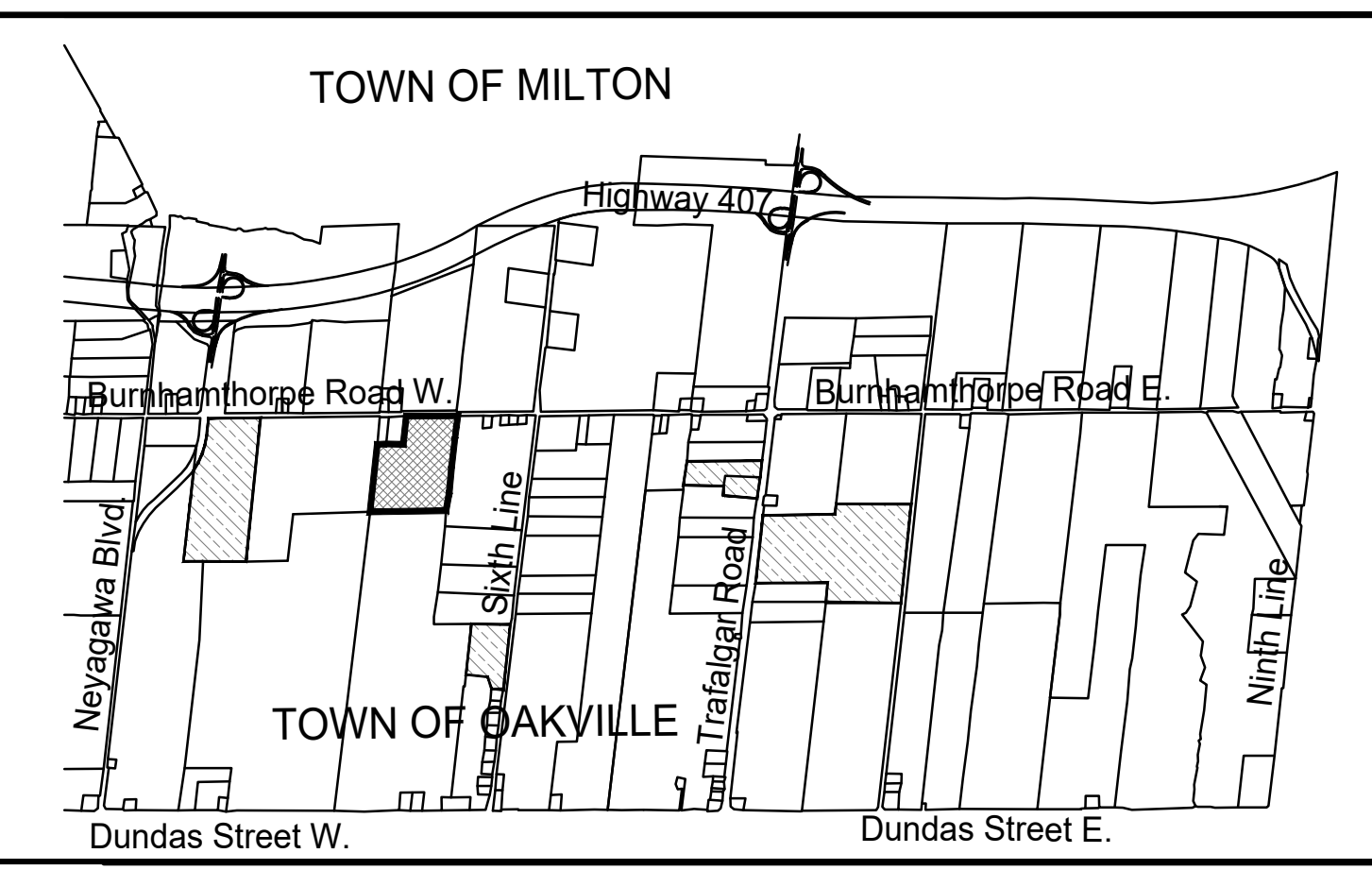
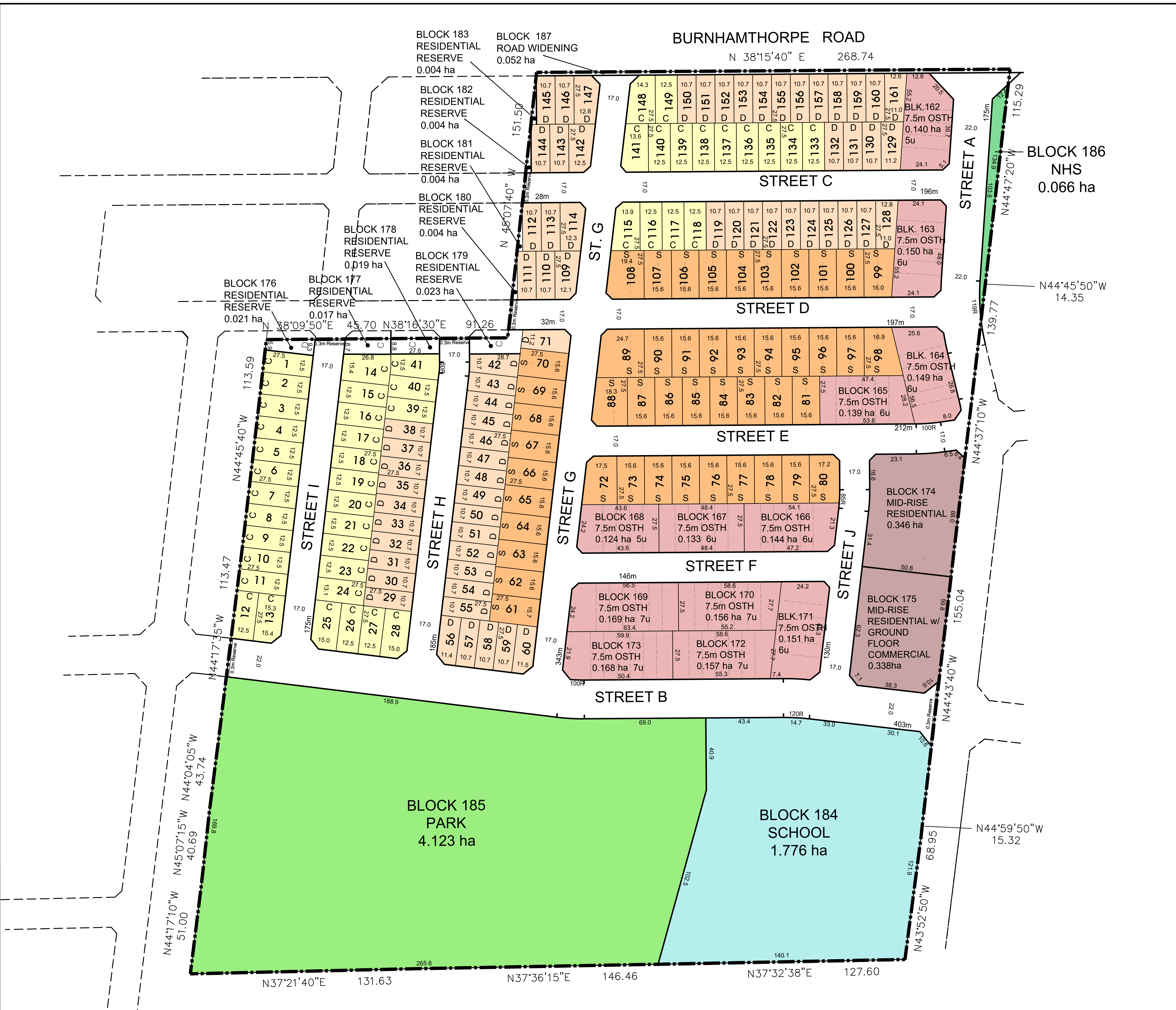
Christopher.Gordon@CGHTransportation.com

Attachment 1

Original Concept Plan

Attachment 2

Updated Draft Plan



KEY PLAN

	Subject Property
	Additional Lands Owned

AREA TABLE 9544-4-24dp October 29, 2021

Residential Singles	Lots 1-161	3.699 ha±
Residential Semi-detached		2.088
On Street Townhouses	Blocks 162-173	1.782
Mid-Rise Residential	Blocks 174, 175	0.684
Residential Reserve	Blocks 176-183	0.096
School	Block 184	1.776
Park	Block 185	4.123
NHS	Block 186	0.066
Road Widening	Block 187	0.052
Roads		4.123
Total		18.489 ha±

ROADS

22m R.O.W.	578 m	1.301
17m R.O.W.	1644 m	2.822
Total		2222 m 4.123 ha

UNIT COUNT

12.5m Single-Detached	C	46
10.4m Single-Detached	D	68
7.8m Semi-Detached	S	94
7.5m OSTH		74
Mid-Rise Residential		128
Total		410 units

LEGEND
 Subject Property

NOTES
 All dimensions are in metres.
 All area measurements are computer generated.
 All elevations refer to Geodetic Datum.

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT
 C. Additional land owned by the applicant in the vicinity is as shown on the key plan
 D. Residential singles, semis, towns, residential reserve, mid-rise res., school, park, NHS, roads.
 H. Piped water to be provided.
 I. Clay loam soil.
 K. Sanitary & storm sewers to be provided.

SURVEYOR'S CERTIFICATE
 I certify that: the boundaries of the lands to be subdivided and their relationship to the adjacent lands are correctly shown.

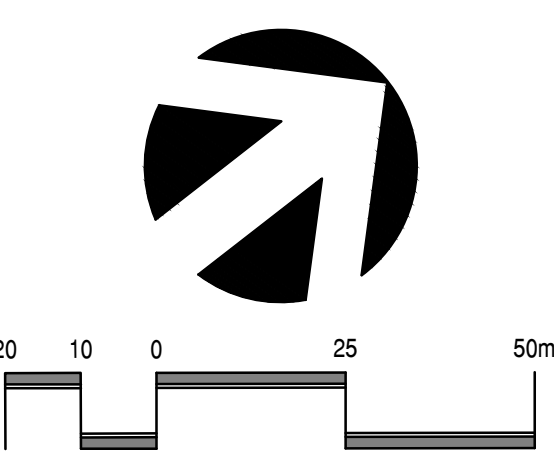
Paul Edward O.L.S.
 Paul Edward O.L.S. Signature 27 April 2021
 Day Month Year

OWNER'S AUTHORIZATION
 I/we, **Docasa Group Ltd.**
 being the registered owner(s) of the subject lands hereby authorize **BOUSFIELDS INC.** to prepare and submit a draft plan of subdivision for approval.
Mouso Baldassarri
 Mouso Baldassarri Signature 27 April 2021
 Day Month Year

Revision Table

Aug. 30, 2017	Preliminary Draft Plan of Subdivision	FP
March 25, 2020	Draft Plan Subdivision	FP
June 30, 2020	Draft Plan Subdivision - Road Widening	FP
July 23, 2020	Re-Aligned draft plan to new RPE alignment	FP
Jan. 7, 2021	Re-Aligned St. G at Burnhamthorpe, re-rotting	FP
Oct 29, 2021	Revised School Block	MS

DRAFT PLAN OF PROPOSED SUBDIVISION
PLAN OF SURVEY OF PART OF LOT 17, CONCESSION 1 NORTH OF DUNDAS STREET (GEOGRAPHIC TOWNSHIP OF TRAFALGAR) TOWN OF OAKVILLE REGIONAL MUNICIPALITY OF HALTON



BOUSFIELDS INC.
 3 Church Street, Suite 200
 Toronto, Ontario M5E 1M2
 P (416) 947-9744
 F (416) 947-0781

1 : 1000
 October 29, 2021
 9544-4-24dp
 Scale Date Drawing Number

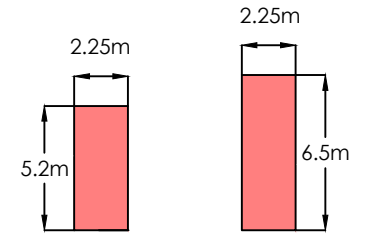
Attachment 3

On-Street Parking Concept Plan



Notes:

TYPICAL ON STREET PARKING SPACES



Single and End Interior

- * Subject to adjustment during detailed engineering design
- ** Per North Oakville Parking Strategy

On Street Townhouse Dwellings

89 Residential Units

Semi-Detached Dwellings

94 Residential Units

Single Detached Dwellings

114 Residential Units

Mid Rise Dwellings

128 Residential Units

Street Parking Within Development

+/- 234 Parking Spaces

01	Issued for Review	BB	2021-12-09
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
 628 Haines Road
 Newmarket, ON
 L3Y 6V5
 (905) 251-4070

CLIENT: Docasa Group Ltd

ARCHITECT:

SITE: Docasa North Oakville			
TITLE: On-Street Parking Concept Plan			
SCALE AT A3: NTS	DATE: 2021-12-07	DRAWN: BB	CHECKED: MC
PROJECT NO: 2020-36	DRAWING NO: 005	REVISION: 01	

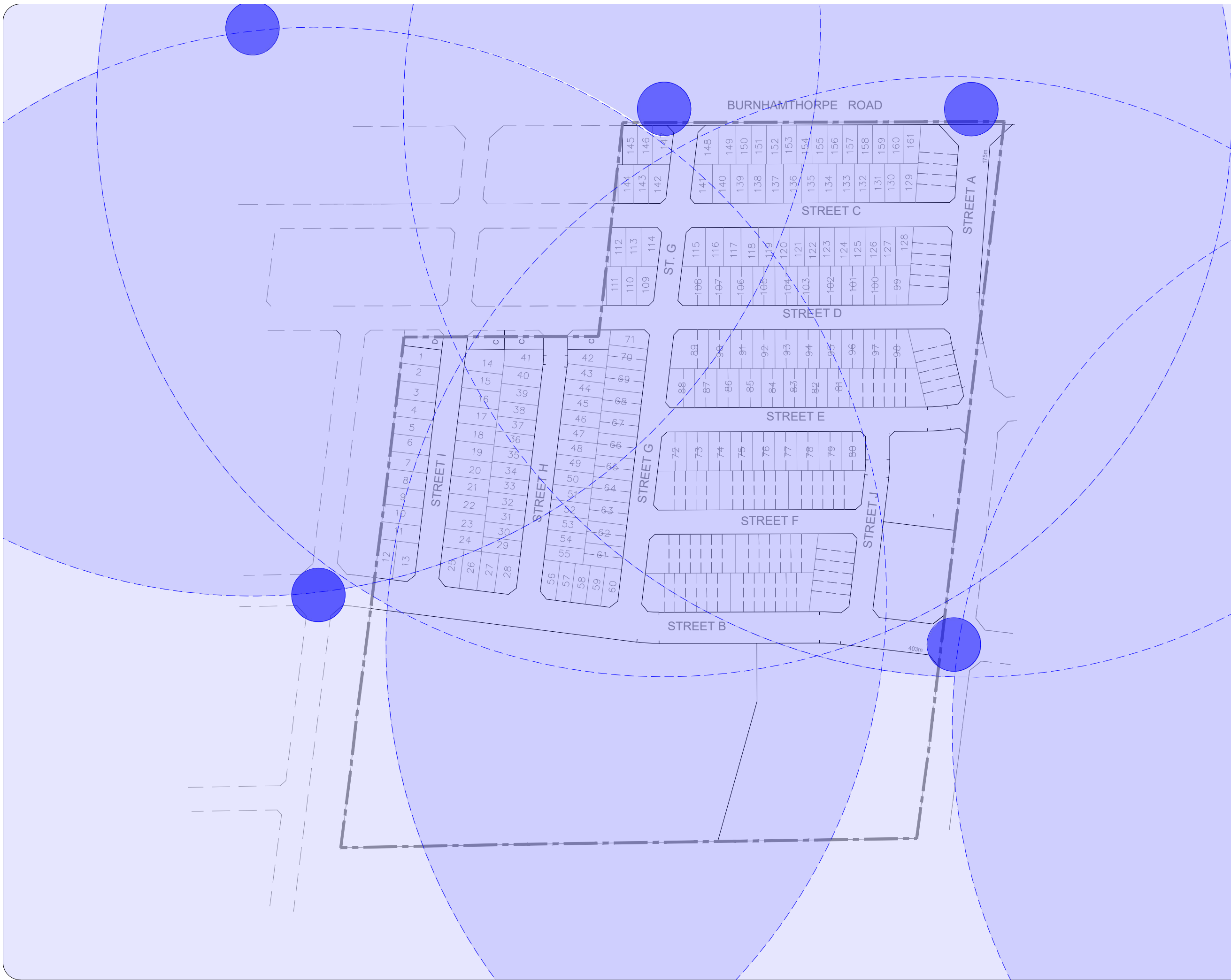
Attachment 4

Transit Facilities Plan

Road Cross-Section Plan

Pedestrian Concept Plan

Cycling Facilities Plan



Notes:

LEGEND:

-  400m Transit Walking Distance
-  Proposed Transit Stop Locations

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STATUS:			



CGH Transportation
 628 Haines Road
 Newmarket, ON
 L3Y 6V5
 (905) 251-4070

CLIENT: Docasa Group Ltd

ARCHITECT:

SITE: Docasa North Oakville

TITLE: Transit Facilities Concept Plan

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2021-12-09	BB	MC
PROJECT NO:	DRAWING NO:	REVISION:	
2020-36	001	01	



Notes:

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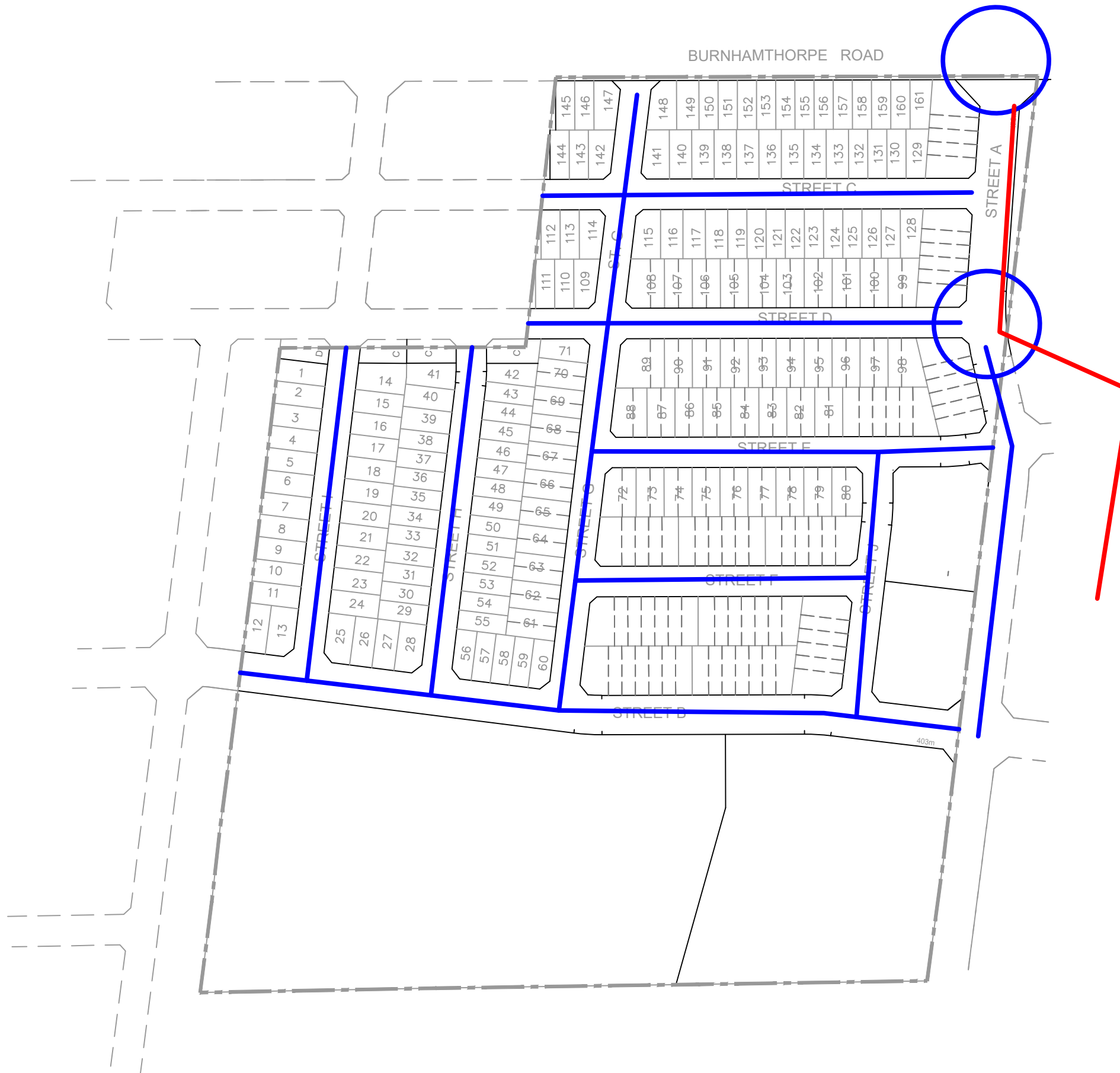
CLIENT: Docasa Group Ltd

ARCHITECT:

SITE: Docasa North Oakville



TITLE: Road Cross-Section
 Concept Plan

SCALE AT A3: NTS	DATE: 2021-12-09	DRAWN: BB	CHECKED: MC
PROJECT NO: 2020-36	DRAWING NO: 002	REVISION: 01	



Notes:

LEGEND:

-  Single Side Sidewalk
-  Both Side Sidewalk
-  Pedestrian Crossing
-  Major Trails

01	Issued for Review	By	2021-12-09
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
 628 Haines Road
 Newmarket, ON
 L3Y 6V5
 (905) 251-4070

CLIENT: Docasa Group Ltd

ARCHITECT:

SITE:
 Docasa North Oakville

TITLE:
 Pedestrian Facilities
 Concept Plan

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2021-12-09	BB	MC
PROJECT NO:	DRAWING NO:	REVISION:	
2020-36	003	01	



Notes:

LEGEND:

- Signed Route
- Bicycle Lane

01	Issued for Review	BB	2021-12-09
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			

CGH Transportation
 628 Haines Road
 Newmarket, ON
 L3Y 6V5
 (905) 251-4070

CLIENT: Docasa Group Ltd

ARCHITECT:

SITE: Docasa North Oakville

TITLE: Cycling Facilities
 Concept Plan

SCALE AT A3: NTS	DATE: 2021-12-09	DRAWN: BB	CHECKED: MC
PROJECT NO: 2020-36	DRAWING NO: 004	REVISION: 01	

Attachment 5

Proposed Cross-Sections – North Oakville Urban Design and Open Space Guidelines

5.2.2. Avenue/Transit Corridor

Between the Arterial/Transit Corridors, the Avenue/Transit Corridors provide a finer grid of connection within and between neighbourhoods. These connections provide alternative routes for access to Neighbourhood Centres and serve to disperse traffic on a smaller street section.

Avenue/Transit Corridors serve mainly intermediate volumes of intra-neighbourhood/district travel, accommodate local transit, connect Urban Centres Areas and serve as a major internal connector for Urban Core Areas.

The treatment of the boulevard will reflect adjacent land use and whether on-street parking is provided.

Specific technical details of the cross-section (i.e. plant material, soil type, engineering standards) will be determined through the appropriate design review process.

Transit Supportive Uses

Transit supportive land uses are to be encouraged along the right-of-way, such as:

- Walk-up apartments;
- Townhouses; and,
- Small-lot detached homes.



Figure 5.4: Typical Avenue/Transit Corridor section through the General Urban and Sub Urban Design. Street tree height at maturity will vary according to species and the availability of optimum growing conditions (i.e. adequate water, sunlight, soil volume), the protection from compacted soils, salt spray, mechanical damage, pests, and maintenance programs. Please refer to tree habitat design guidelines found in Table 9 of Oakville's Urban Forest: Our Solution to Our Pollution (2006).

5.2.4. Local Road

Local Roads will be designed to provide access to individual properties and serve internal residential neighbourhood, Core Area or Employment District travel demands. Local Roads will also connect individual properties to other Local Roads, Avenue/ Transit Corridors or Connector/Transit Corridors.

Specific technical details of the cross-section (i.e. plant material, soil type, engineering standards) will be determined through the appropriate design review process.

The treatment of the boulevard will reflect adjacent land use and whether on-street parking is provided.

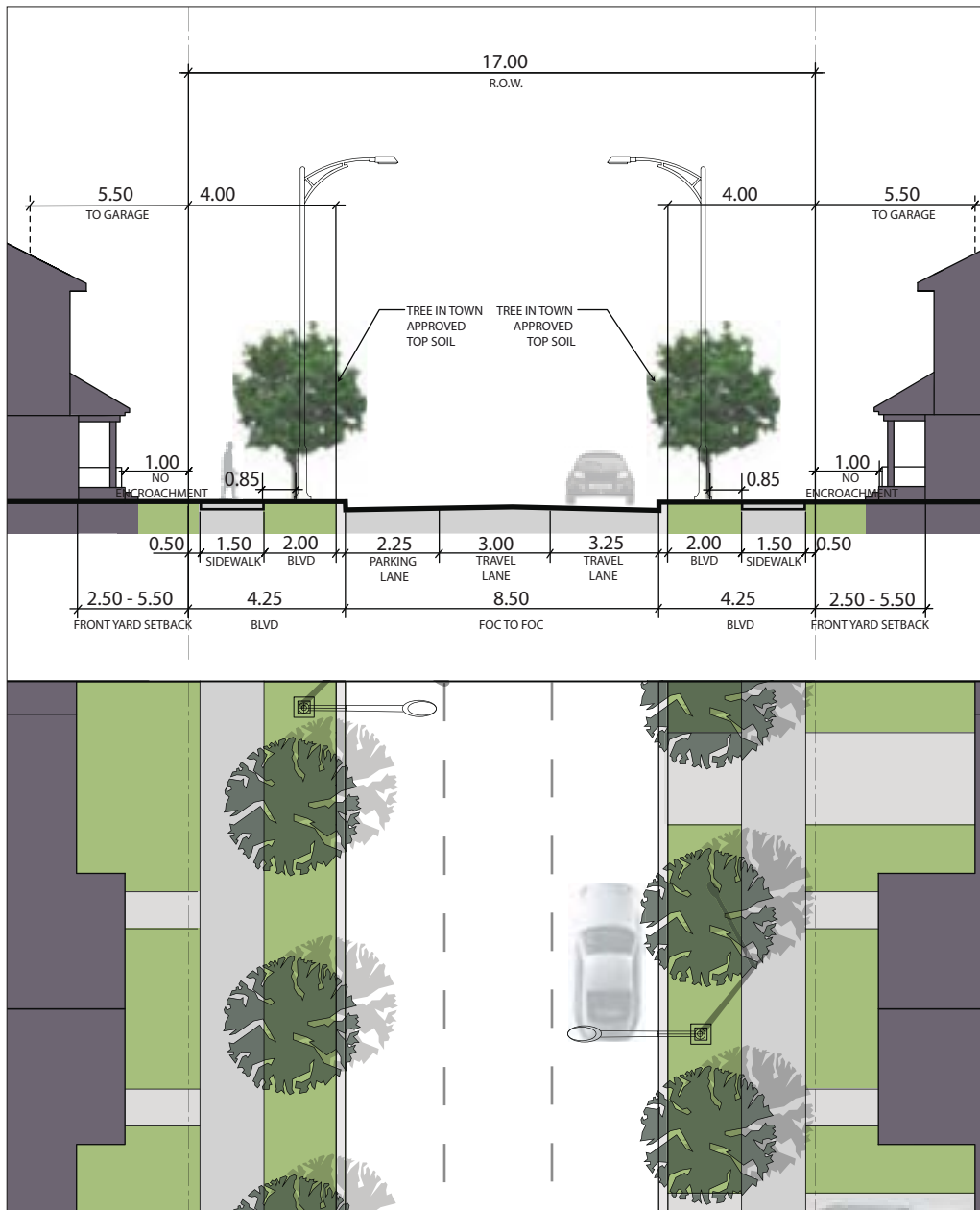


Figure 5.6: Typical Local Road section through the General Urban and Sub Urban Designation. Street tree height at maturity will vary according to species and the availability of optimum growing conditions (i.e. adequate water, sunlight, soil volume), the protection from compacted soils, salt spray, mechanical damage, pests, and maintenance programs. Please refer to tree habitat design guidelines found in Table 9 of Oakville's Urban Forest: Our Solution to Our Pollution (2006).