Item: 3

HERITAGE VAUGHAN REPORT

DATE: Wednesday, October 17, 2018 **WARD(S):** 2

TITLE: NEW CONSTRUCTION – DETACHED GARAGE
49 NASHVILLE ROAD, KLEINBURG-NASHVILLE HERITAGE CONSERVATION DISTRICT

FROM:
Jason Schmidt-Shoukri, Deputy City Manager, Planning and Growth Management

ACTION: DECISION

Purpose

To seek a recommendation from the Heritage Vaughan Committee regarding the proposed construction of a detached garage located at 49 Nashville Road, a property located in the Kleinburg-Nashville Heritage Conservation District Plan and designated under Part V of the *Ontario Heritage Act.*

Report Highlights

- The Owner is proposing a detached garage located at 49 Nashville Road.
- The proposal is consistent with the relevant policies of the Kleinburg-Nashville Heritage Conservation District Plan ('KNHCD Plan').
- Heritage Vaughan consideration and Council approval is required under the *Ontario Heritage Act*.
- Staff are recommending approval of the proposal as it conforms with the KNHCD Plan.

Recommendations

1. THAT Heritage Vaughan recommend approval to Council for the proposed detached garage at 49 Nashville Road under Section 42 of *Ontario Heritage Act*, subject to the following conditions:

    a) That a Landscape Plan and Tree Protection Plan depicting the Tree Protection Zone of remaining trees be submitted to the satisfaction of the Vaughan Development Planning Department, Urban Design and Cultural Heritage Division prior to the approval of a Heritage Permit;

    b) All Tree Protection Barriers specified on the Tree Protection Plan shall be monitored on a weekly basis by a certified arborist until all site activities including landscaping are complete;

    c) Any significant changes to the proposal by the Owner may require reconsideration by the Heritage Vaughan Committee, which shall be determined at the discretion of the Director of Development Planning and Manager of Urban Design and Cultural Heritage;

    b) That Heritage Vaughan Committee recommendations to Council do not constitute specific support for any Development Application under the *Ontario Planning Act* or permits currently under review or to be submitted in the future by the Owner as it relates to the subject application; and

    c) That the applicant submit Building Permit stage architectural drawings and building material specifications to the satisfaction of the Vaughan Development Planning Department, Urban Design and Cultural Heritage Division.

Background

The subject property is municipally known as 49 Nashville and is located on the south side of Nashville Road, adjacent to the Kleinburg Cemetery to the west (Attachment #1).

The subject property currently contains an existing two-storey wood-clad dwelling. Previous Cultural Heritage staff review of the property determined that the dwelling varies in age from the early 20th century to the mid-20th century, as the front gable portion dates from the 1920's – 1930's and the east portion of the house dates from the mid-20th century due to the concrete block foundation. Renovations to the main dwelling were approved at the Heritage Vaughan meeting on September 16, 2009. These renovations included new wood cladding, roofing, the addition of front and rear porches and the removal of the existing attached garage.

Previous Reports/Authority

Not available.

Analysis and Options

The Owner is proposing a detached garage in the front yard

The Owner is proposing a new detached garage to be located in the front yard of 49 Nashville Road. The proposed garage is 62.14 m in area, resulting in 3.19% lot coverage. The proposed garage and existing dwelling will result in a total lot coverage of 9.3%. The garage will be 4.14 m in height and will be set back 16.06 m from the front lot line. The garage will be oriented towards the east lot line and the internal driveway with 3 separate single-bay garage doors. The proposed garage will be wood clapboard siding to match the main dwelling and include wood double-hung windows and one wood-paneled access door on the south elevation.

The proposal includes the slight reconfiguration of the existing driveway and will require the removal of one White Spruce tree. The submitted Arborist Report confirms that one tree replacement will be necessary for the tree removal required for this development. A Landscape Plan showing the species and location of this replacement tree must be submitted to the satisfaction of the Vaughan Development Planning Department, Urban Design and Cultural Heritage Division prior to the approval of a Heritage Permit. A Tree Protection Plan showing Tree Protection Zone (TPZ) for the remaining trees is required.

No Minor Variances are required to permit the proposed new construction

The applicant has confirmed with the Building Standards Department that no variances will be required for this proposal.

The proposed garage is consistent with the following relevant sections of the KNHCD Plan, with justification provided where the proposal does not meet certain polices in their entirety.

Outbuildings for Heritage Buildings

Section 9.3.8 Outbuildings for Heritage Buildings

"New garages should respect traditional siting as separate rear outbuildings."

- The proposed garage is located at the front of the property but is set off to the side of the main dwelling and is a separate outbuilding.

"Connected garages should minimize their street presence. For example, a garage may be turned so that the doors face a side lot line, or it may be set well back from the main frontage, with the connection to the main building disguised or hidden."

- The proposed garage faces the east side lot line and the internal driveway. The proposed garage is placed in front of the main dwelling, and is set back 16.05 m from the front lot line. The north elevation of the proposed garage is designed

with window openings and light fixtures that are consistent with the main dwelling. Based on these design considerations, Cultural Heritage staff are satisfied that the proposed garage will not have a negative impact on the subject property or the character of the District.

"Design garages to traditional outbuilding forms, with gable roofs, and frame or brick construction."

- The proposed garage is a frame construction with a gable roof, designed to reflect the style of the main dwelling. Therefore, this policy has been met.

"Use single bay garage doors, compatible with traditional designs. Suitably designed overhead doors are now widely available. The doors shown above are manufactured in the City of Vaughan."

- The proposed single bay garage doors are designed in a traditional style as shown in Section 9.3.8 of the KNHCD Plan. Therefore, this policy has been met.

"Other outbuildings, such as garden and storage sheds, should be of traditional wood construction when visible from the street."

- The proposed garage will be visible from the street and will be of a traditional wood construction. Therefore, this policy has been met.

Materials

Section 9.10.1 Heritage Buildings – Appropriate Materials

"Exterior Finish: Wood clapboard, 4" to the weather.

Roofs: Hipped or gable roof as appropriate to the architectural style.
Cedar, slate, simulated slate, or asphalt shingles of an appropriate colour.

Doors: Wood doors and frames, panel construction, may be glazed.
Single-bay wood panelled garage doors.

Windows: Wood frames; double hung; lights as appropriate to the architectural style."

- The proposed wood clapboard siding, wood windows, wood doors and wood shingles are appropriate materials as per the above policies.

Timeline

This Application is subject to the 90-day review under the *Ontario Heritage Act.* This Application was declared complete on October 3, 2018 and must be deliberated upon by January 1, 2019 to meet the 90-day timeline.

Financial Impact

There are no requirements for new funding associated with this report.

Broader Regional Impacts/Considerations

There are no broader Regional impacts or considerations.

Conclusion

The Urban Design and Cultural Heritage Division has reviewed the proposal for a detached garage on the property municipally known as 49 Nashville Road and is satisfied the proposal is consistent with the Kleinburg-Nashville Heritage Conservation District Plan. Accordingly, the Urban Design and Cultural Heritage Division of the Development Planning Department can support the approval of the proposed alteration under Section 42 of the *Ontario Heritage Act,* subject to the recommendations in this report.

For more information, please contact: Shelby Blundell, Cultural Heritage Coordinator, ext. 8813

Attachments

1. Location Map
2. Subject Property
3. Site Photos
4. Site Plan, Schiller Engineering Ltd., August 2018
5. Elevations, Schiller Engineering Ltd., June 2018
6. Arborist Report, Arborist Group, September 5, 2018

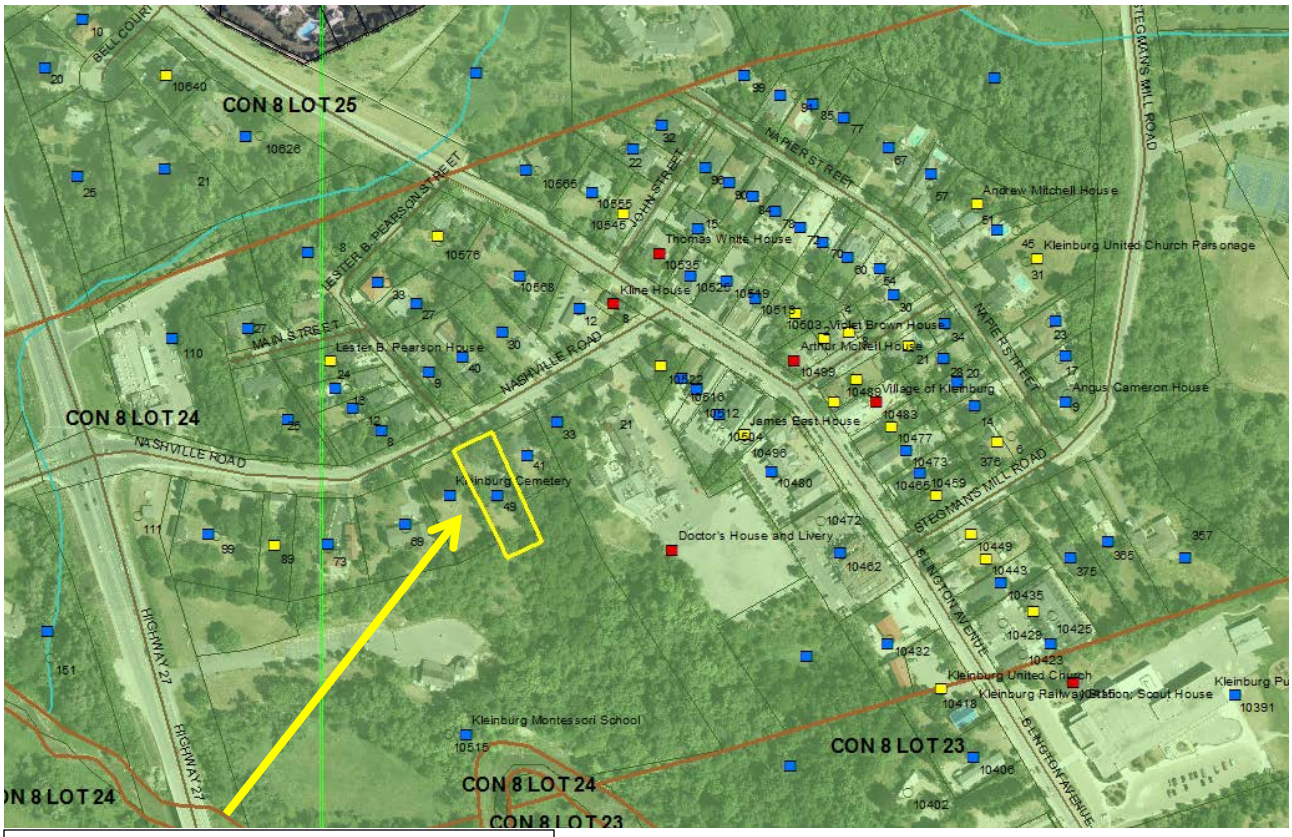
Prepared by

Shelby Blundell, Cultural Heritage Coordinator, ext. 8813
Shahrzad Davoudi-Strike, Senior Urban Designer, ext. 8653
Rob Bayley, Manager of Urban Design & Cultural Heritage, ext. 8254

/CM

Attachment 1

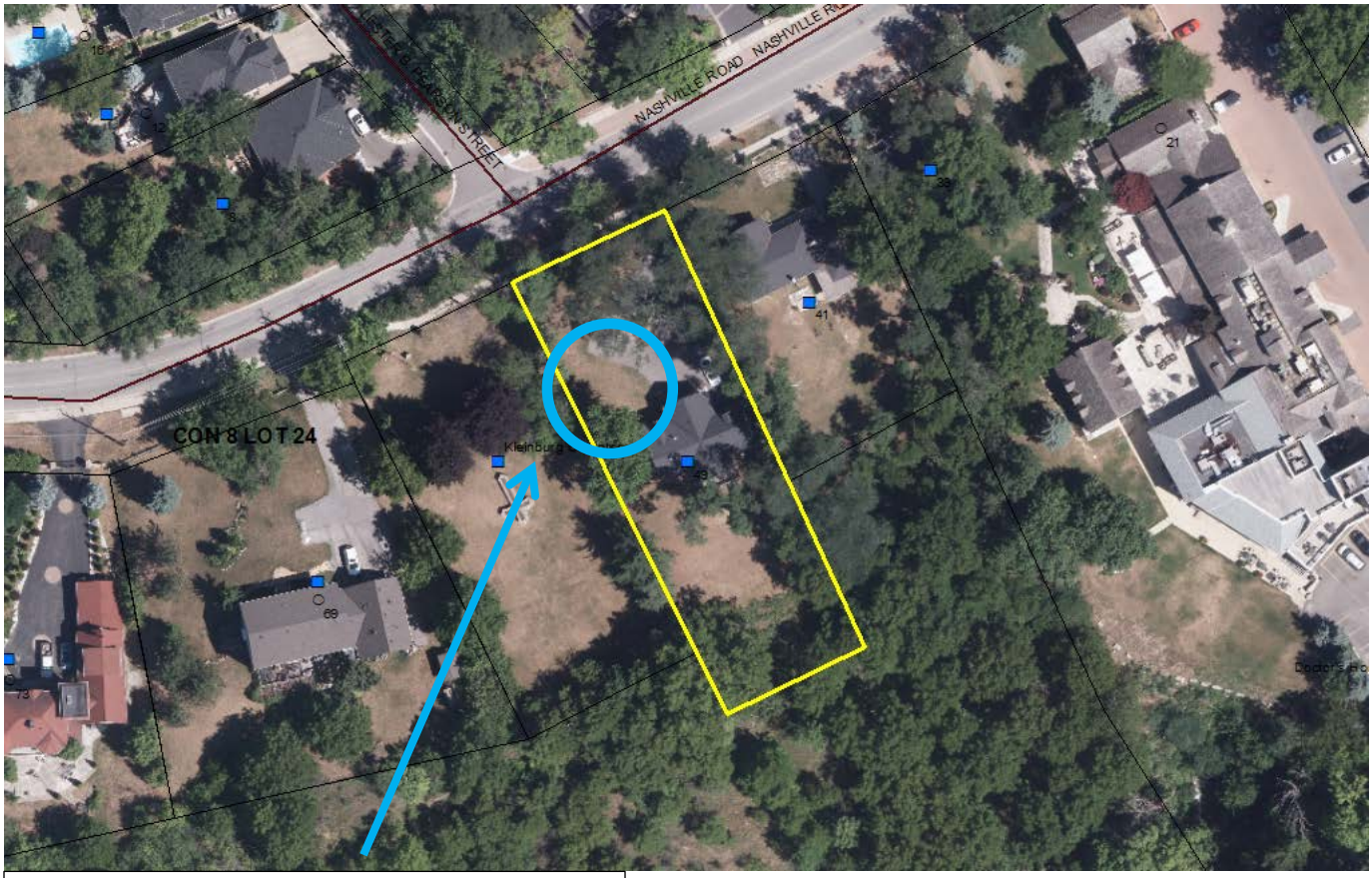
Location Map



49 Nashville Road

Attachment 2

Subject Property



Location of Proposed Garage

Attachment 3

ZONING BY-LAW

ACCESSORY BUILDINGS

10% OF LOT AREA OR 67M2 COVERAGE
MAX HEIGHT 4.5M FROM GRADE TO HIGHEST POINT
MAX HEIGHT OF SOFFIT - 3.0M

4.1.8. SECONDARY SUITS

PERMITTED ON A LOT WITH MIN. 9.0M LOT FRONTAGE
ONLY 1 SECONDARY SUITE PERMITTED
MIN. 35M2 GFA
CANNOT EXCEED 45% GFA OF SFD

R1 - ZONING

MIN. LOT FRONTAGE	ZONING	PROPOSED
FRONT YARD SETBACK	7.5M	16.06M
REAR YARD SETBACK	7.5M	50.44M
INTERIOR SIDE YARD SETBACK	1.5M	1.60M
EXTERIOR SIDE YARD SETBACK	4.5M	17.81M
LOT COVERAGE	35%	9.30%
MAX BUILDING HEIGHT	4.5M	4.14M

SITE STATISTICS

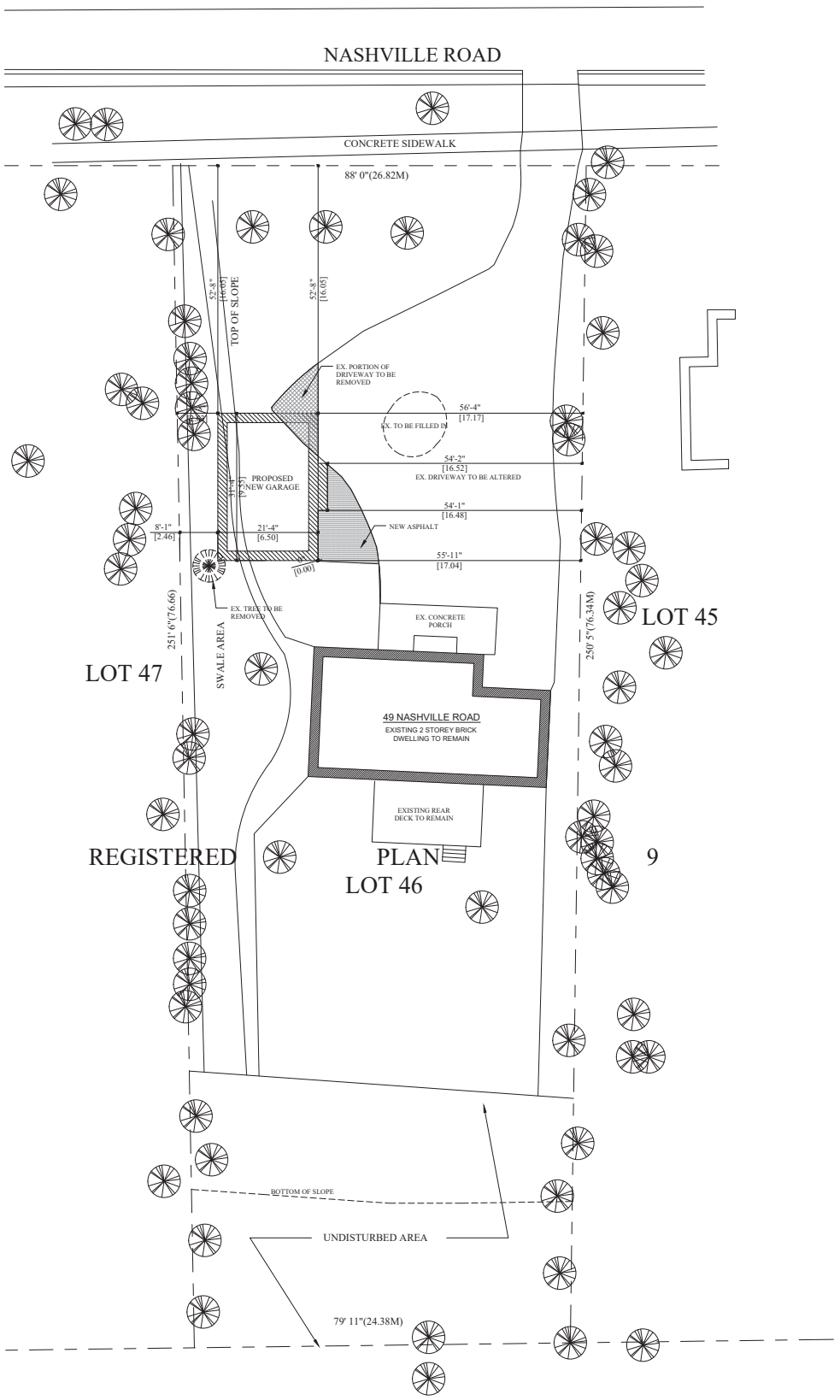
	IMPERIAL	METRIC
LOT AREA	20986.69 FT. SQ.	1949.73 M2
COVERAGE	1953.20 FT. SQ.	181.46 M2

EXISTING BUILDING SITE STATISTICS

	IMPERIAL	METRIC
EXISTING GROUND FLOOR AREA	1284.80 SQ.FT.	119.36 M2
EXISTING SECOND FLOOR AREA	1284.80 SQ.FT.	119.36 M2
EX. GFA	2569.60 SQ.FT.	238.72 M2

PROPOSED GARAGE STATISTICS

	IMPERIAL	METRIC
GARAGE AREA	668.84 SQ.FT.	62.14 M2



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DRAWINGS SHALL NOT BE SCALED. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE REQUIRED BUILDING PERMITS HAVE BEEN ISSUED.

No.	DATE:	REVISION
1	AUG. 14, 2018	FOR REVIEW

NORTH ARROW

SEALS

PROJECT
49 NASHVILLE ROAD,
KELINBURG, ON.

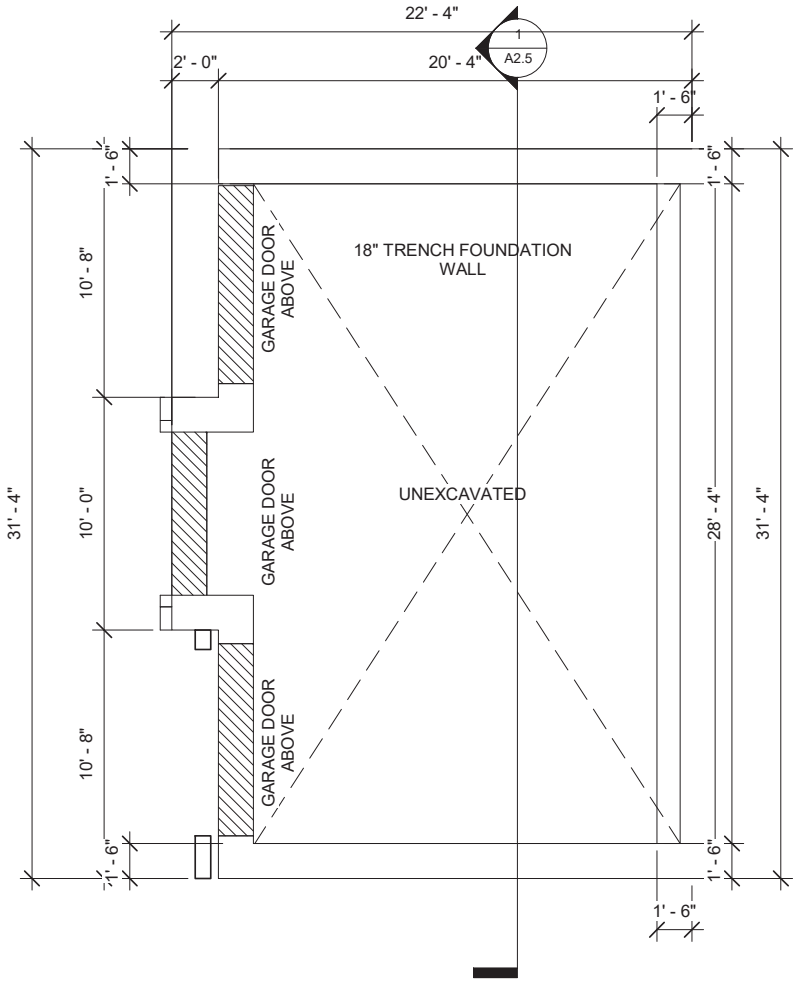
PAGE
SITE PLAN

APPROVED BY:	TS
DATE:	AUG. 2018
SCALE	1/8" = 1' 0"
PROJECT No.	2018SE165

A0.1

SCHILLER ENGINEERING
2157 ROYAL WINDSOR DRIVE, UNIT 4
MISSISSAUGA, ON L5J 1K5
PHONE: 905-822-1666
EMAIL: TRAVIS@SCHILLERENGINEERING.CA

CLIENT
ROSEDALE GROUP



2 FOUNDATION PLAN
3/16" = 1' - 0"

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SEAL

LICENSED PROFESSIONAL ENGINEER
T. SCHILLER
100186874
JUNE 21, 2018
PROVINCE OF ONTARIO

SE SCHILLER ENGINEERING LTD.

PROJECT

49 NASHVILLE ROAD

PAGE

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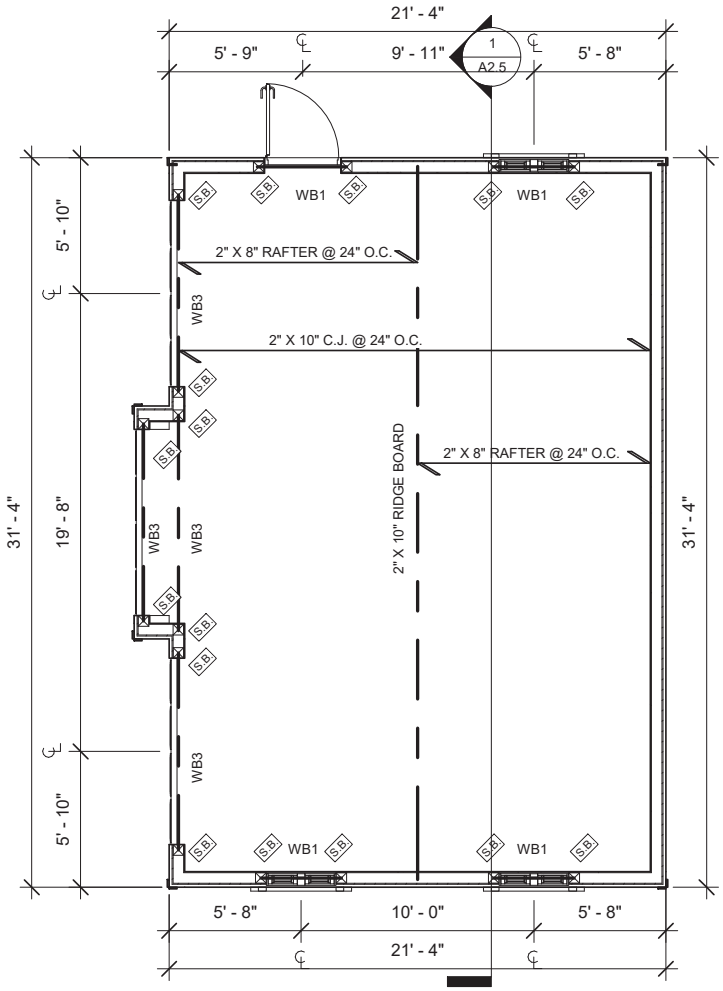

3 GROUND FLOOR PLAN

3/16" = 1' - 0"

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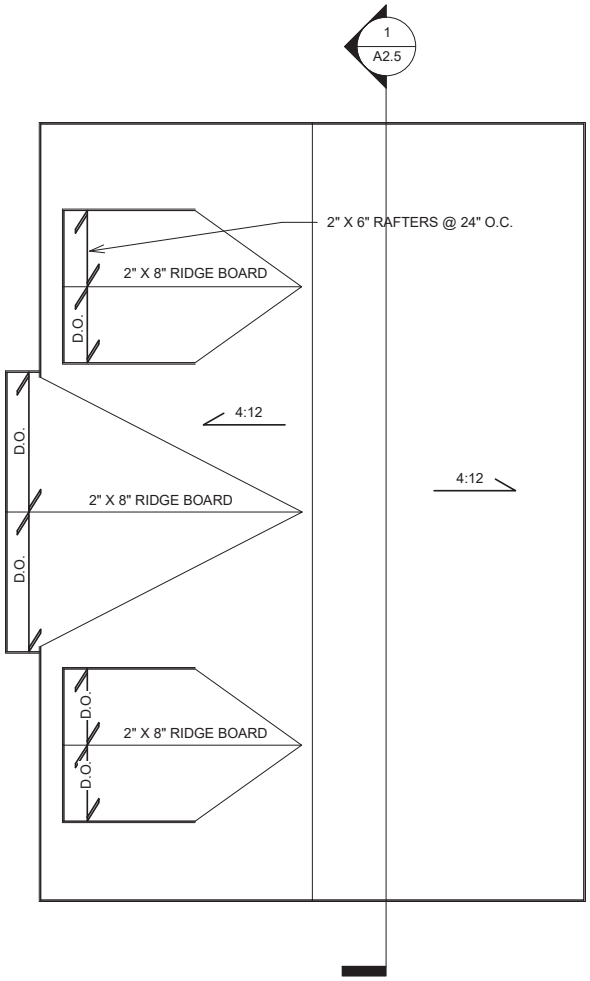

4 ROOF PLAN

3/16" = 1' - 0"

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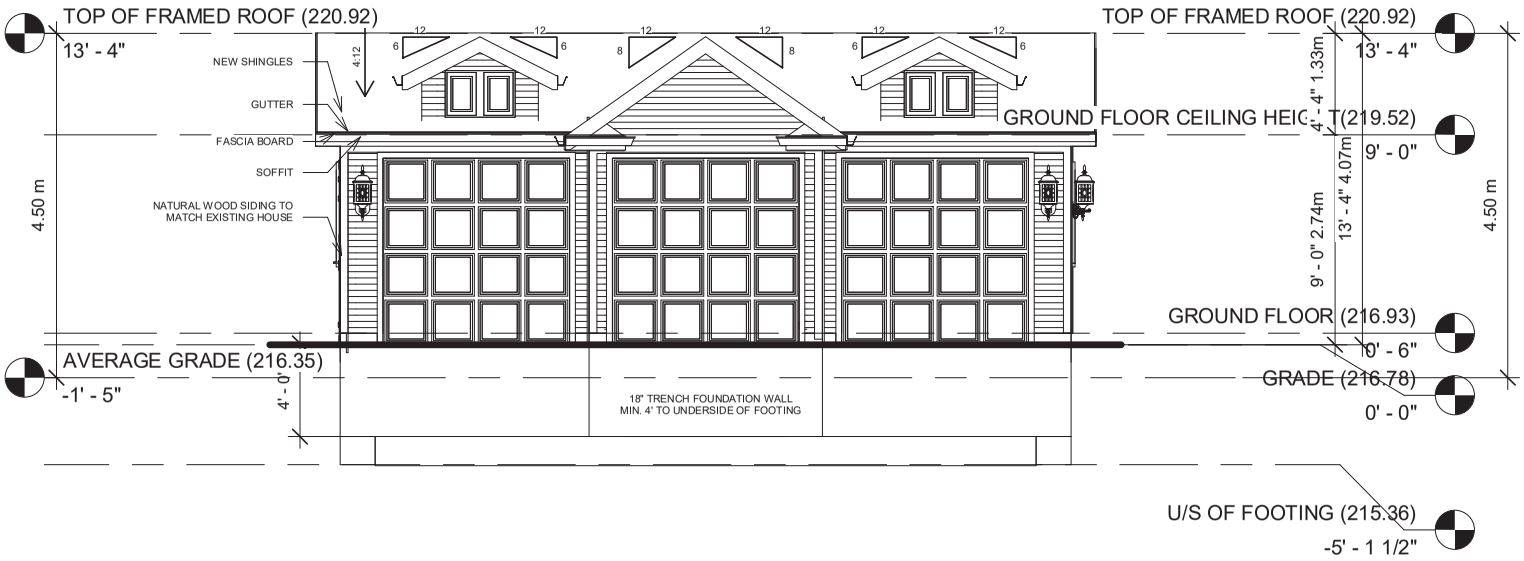

5 EAST ELEVATION
3/16" = 1' - 0"

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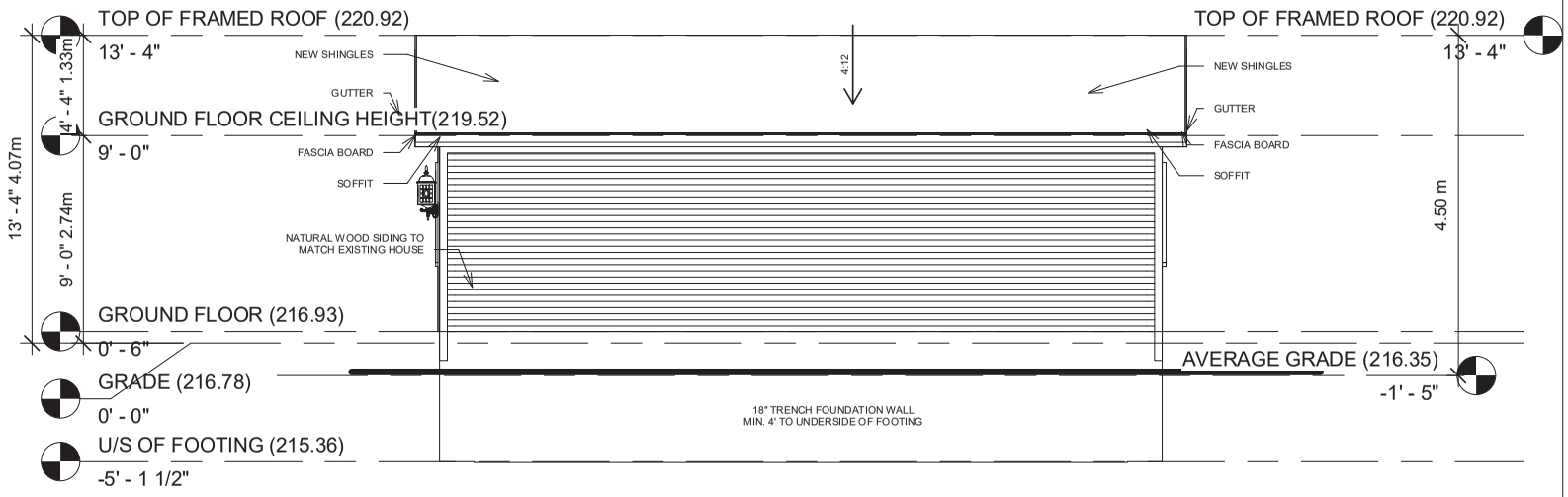

6 WEST ELEVATION
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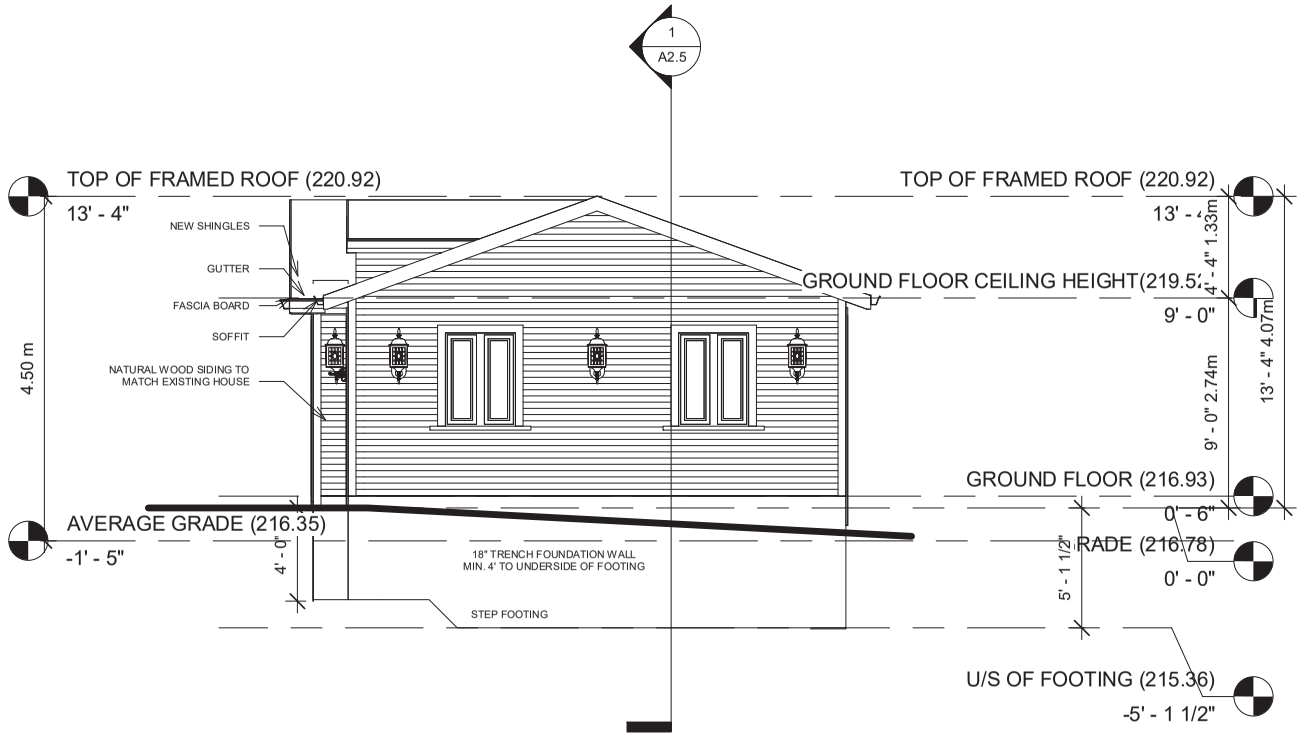

7 NORTH ELEVATION
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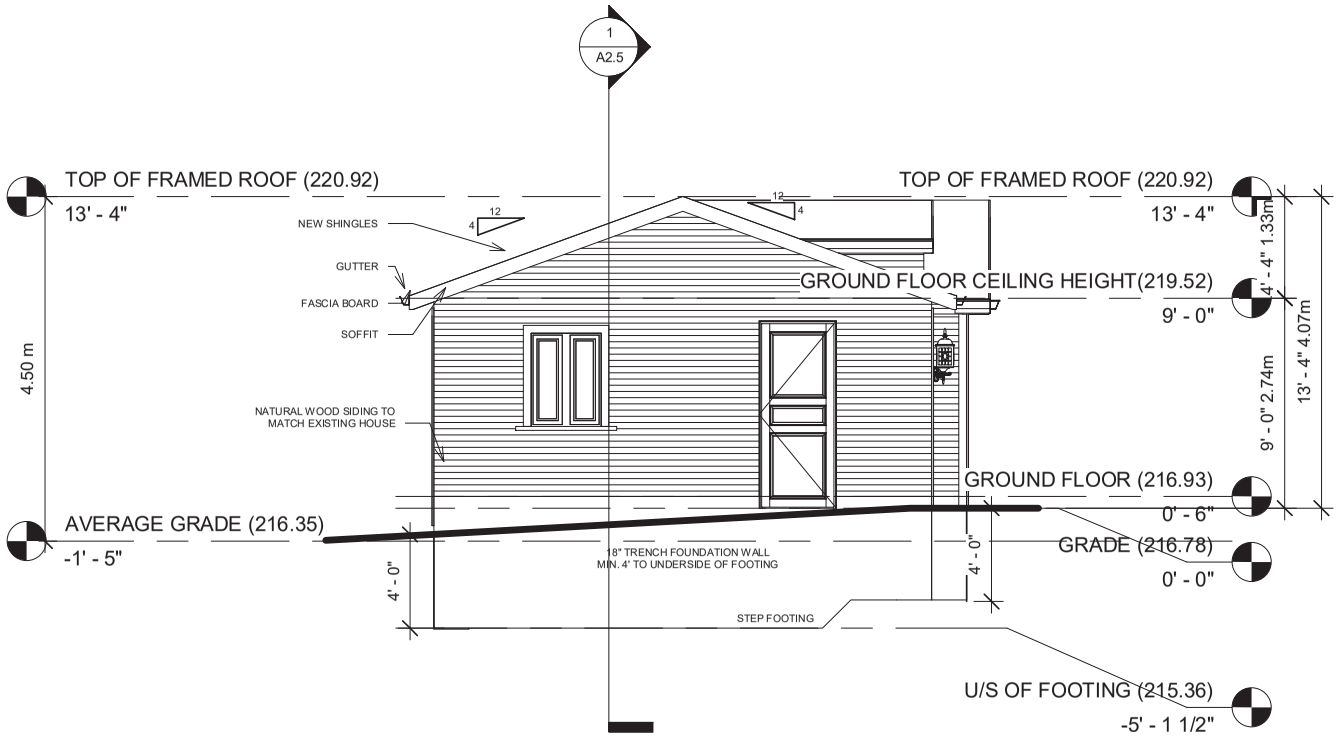

8 SOUTH ELEVATION
3/16" = 1' - 0"

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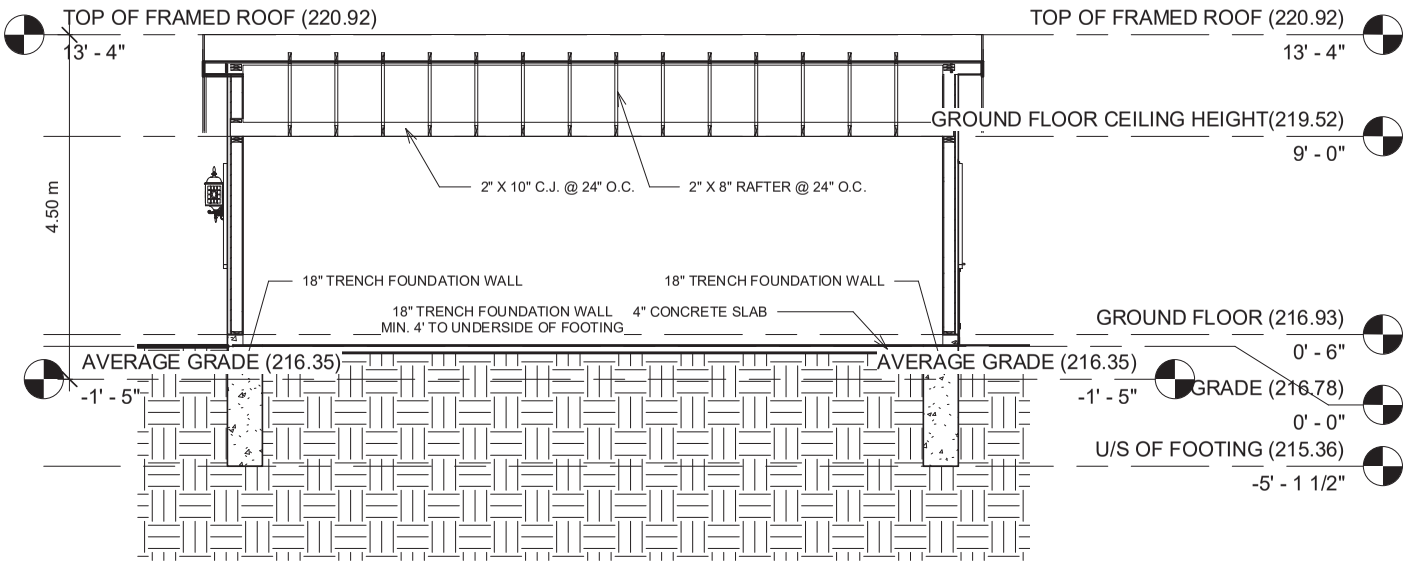

9 CROSS SECTION
3/16" = 1' - 0"

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49 NASHVILLE ROAD

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CONSTRUCTION NOTES

UNLESS OTHERWISE NOTED
2012 OBC O. REG. 332/12
ALL CONSTRUCTION PRACTICES TO COMPLY WITH ONTARIO BUILDING CODE (O.B.C.) REGULATIONS

1. ROOF CONSTRUCTION
ASPHALT SHINGLES ON 9.5mm (3/8")PLYWOOD SHEATHING WITH "H" CLIPS. ENGINEERED APPROVED WOOD ROOF TRUSSES @ 600mm (24")O.C. MAX. APPROVED EAVES PROTECTION TO EXTEND MIN. 900mm (2'-11")UP ROOF SURFACE TO LINE NOT LESS THAN 300mm (12")BEYOND INNER FACE OF EXTERIOR WALL FOR ROOF SLOPES LESS THAN 8:12. 38mm X 89mm (2 X 4) TRUSS BRACING @ 2130mm (7'-0")O.C. @ BOTTOM CHORD. PREFIN. ALUM. EAVES TROUGH ON PREFIN. ALUM. CLAD FASCIA BOARD & VENTED SOFFIT. ATTIC VENTILATION 1:300 OF INSULATED CEILING AREA WITH 50% AT EAVES.

2. FRAMED WALL CONSTRUCTION (2"X6" STUDS)
SIDING AS PER ELEVATIONS, 0.7 kg/m2 (No. 15) BLDG PAPER, 12.7mm (1/2") EXTERIOR TYPE SHEATHING UNLESS OTHERWISE SPECIFIED) 38mm x 140mm (2" x 6") STUDS @ 400mm (16") O.C., RSI 3.35+0.88 (R19+5ci)BATT INSULATION AND 6 mil. AIR/VAPOUR BARRIER, 12.7mm (1/2" INT. DRYWALL FINISH).

2A. STUCCO (EIFS) WALL CONSTRUCTIONU (2"X6" STUDS)
CCMC APPROVED EXTERIOR INSULATION FINISHING SYSTEM (EIFS) AS PER MANUFACTURER, EXTERIOR TYPE SHEATHING (UNLESS OTHERWISE SPECIFIED) 38mm x 140mm (2" x 6") STUDS @ 400mm (16") O.C., RSI 3.35+0.88 (R19+5ci) BATT INSULATION AND 6 mil. AIR/VAPOUR BARRIER, 12.7mm (1/2") INT. DRYWALL FINISH.

3. BRICK VENEER CONSTRICTION (2"X6" STUDS)
90mm (3 1/2") OR 75mm (3") FACE BRICK, 25mm (1") AIR SPACE, 22 x 180 x 0.76mm (7/8" x 7" x 22 ga) GALV. METAL TIES @ 400mm (16") O.C. HORIZ. 600mm (24") O.C. VERTICAL,.0.7 kg/m2 (No. 15) BUILDING PAPER, 12.7mm (1/2)EXT. TYPE SHEATHING (UNLESS OTHERWISE SPECIFIED),38mm x 140mm (2" x 6") STUDS @ 400mm (16") O.C., RSI 3.35+0.88 (R19+5ci) BATT INSULATION AND 6 mil. AIR/VAPOUR BARRIER, 12.7mm (1/2") INT. DRYWALL FINISH. PROVIDE WEEP HOLES @ 800mm (30") O.C. HORIZ. @ BOTTOM COURSE ONLY & OVER OPENINGS, PROVIDE BASE FLASHING UP MIN. 150mm (6")BEHIND SHEATHING PAPER. MIN. 150mm (6") CLEARANCE BETWEEN MASONRY AND GRADE.

4. INTERIOR STUD PARTITIONS
12.7mm (1/2")INT. DRYWALL ON BOTH SIDES (FOR FIN. AREAS) 2 TOP PLATES & 1 BOTTOM PLATE TO MATCH STUD WIDTH.
LOAD BEARING WALLS
38mm x 89mm (2" x 4") OR 38mm x 140mm (2" x 6") @ 400mm (16") O.C.
NON-LOAD BEARING WALLS
38mm x 89mm (2" x 4") OR 38mm x 140mm (2" x 6") @ 600mm (1'-11") O.C.

5. FOUNDATION WALL
200 mm (8") OR 250 mm(10") (AS INDICATED ON DRAWINGS) POURED CONC. FOUNDATION WALL WITH 20 MPA (2900 PSI) CONC. STRENGTH AND BITUMINOUS DAMP PROOFING, DRAINAGE LAYER, ON 610 MM X 200 MM (24" X 8") CONTINUOUS KEYED CONC. FTG. BACKFILL WITH NON-FROST SUSCEPTIBLE SOIL. (FOOTING SIZE MAY VARY, SEE SITE PLAN) (FOR REINFORCEMENT, SEE TYPICAL WALL SECTIONS)

6. 100 mm (4") DIA. DRAINAGE PIPE, 150 mm (6") CRUSHED STONE OVER AND AROUND ALL DRAINAGE PIPE

7. 100 mm (4") 20 MPA. (2900 PSI) CONC. SLAB WITH DAMP PROOFING ON 125 MM (5") CRUSHED STONE ON COMPACTED FILL.

8. FIN. FLOOR ON 15.9mm (5/8") T&G SUBFLOOR ON WOOD FLOOR JOISTS. MIN. 15.9mm (5/8") PANEL TYPE UNDERLAY UNDER CERAMIC TILE.

9. RSI 8.81 (R60) ROOF INSULATION AND 6 mil. AIR/VAPOUR BARRIER, 15.9mm (5/8") INT. DRYWALL FINISH.

10. ALL STAIRS (EXTERIOR & INTERIOR)
MIN. RISE = 125mm (4 7/8") MAX. RISE= 200mm (7 7/8")
MIN. RUN = 210mm (8 1/4") MAX. RUN= 355mm (14")
MIN. TREAD = 235mm (9 1/4") MAX. TREAD = 355mm (14")

FOR CURVED STAIRS
MIN. RUN = 150mm (5 7/8")
MIN. AVERAGE RUN = 200mm (7 7/8")

MIN. HEADROOM OVER STAIRS = 1950mm (6'-5")
MIN. WIDTH = 860mm (2'-10")
NOSING (MAX CURVED OR BEVELED EDGE = 25mm (1")

11. GUARDS & HANDRAILS
ALL GUARDS AND HANDRAILS ARE TO COMPLY WITH THE REQUIREMENTS OF THE O.B.C SUBSECTION 9.8.7 AND 9.8.8

GUARD @ INT. LANDING/STAIR OR FLOORS = 900mm (2'-11")
HANDRAIL @ INT. STAIR....MIN= 800(2' 7")MAX.= 965mm (3'-2")
GUARD/HANDRAIL @ EXT. LANDING/BALCONY (GREATER THAN 1800mm ABOVE FINISH GRADE) = 1070mm (3'-6")
GUARD/HANDRAIL @ EXT. LANDING/STAIR = 900mm (2'-11")
HANDRAIL @ EXT. STAIR...MIN= 800(2'-7")MAX.= 965mm (3'-2")
PICKETS MAX. 100mm (4")BETWEEN

12. 38mm X 140mm (2" X 6") SILL PLATE WITH 12.7 mm (1/2") DIA. ANCHOR BOLTS, 300 mm (12") LONG MIN., W/ 100 mm (4") EMBEDMENT INTO CONC. @ 1200 mm (4'-0") O.C. CONTINUOUS CAULKING OR GASKET BETWEEN SILL PLATE, AIR BARRIER AND CONCRETE WALL.

13. RSI 3.52 (R20) BLANKET INSULATION W/ 6 mil.. AIR/VAPOUR BARRIER (MAX. 150 FLAME SPREAD RATING) OR RSI 3.52 (R20) BATT INSULATION WITH 38mm x 89mm (2" x 4") @ 600mm (2'-0") O.C. WOOD STRAPPING AND 6 mil. AIR/VAPOUR BARRIER (MAX. 150 FLAME SPREAD RATING) TO 600 mm (2'-0") BELOW GRADE & MAX. 200 mm (8") ABOVE FINISHED FLOOR LEVEL OF BASEMENT. PROVIDE 0.7 kg/m2 (No. 15) BLDG. PAPER BETWEEN FOUNDATION WALL AND INSULATION.

14. BEARING STUD PARTITION
38mm x 89mm (2"x 4") OR 38mm X 140mm (2"x 6") STUDS @ 400mm (16") O.C., (AS PER WORKING DRAWINGS) WITH 2 TOP PLATES AND SINGLE SILL PLATE TO MATCH STUD WIDTH ON DAMP PROOFING MATERIAL, 12.7mm (1/2") DIA. ANCHOR BOLTS @ 2400mm (7'-10") O.C. ON 100mm (4") HIGH CONC. CURB ON 350mm x 150mm (14" x 6") CONC. FOOTING.

15. STEEL ROUND HSS COLUMN & FOOTING
CSA G40.21 CLASS "C" GRADE 350W
NON-ADJUSTABLE 90mm (3 1/2") DIA. WITH 4.76mm (3/16") WALL THICKNESS STEEL HSS COLUMN WITH 6mm (1/4") BENT 'U' PLATE CLIPS W/ 150mm x 150mm x 9.5mm (6"x 6"x 3/8") TOP PL., AND 120mm x 254mm x 9.5mm (5" x 10" x 3/8") BASE PLATE W/ 2-12mm DIA. ANCHOR BOLTS x 300mm LONG AND 50mm HOOK (2-1/2" x 12" x 2") WELDED TO BASE OF STEEL COLUMN. (36" x 36" x 16") CONC. FTG. 15MPa (2200 psi) CONC. STRG. FOOTING SIZE AND COLUMN TYPE MAY VARY-SEE PLANS.

16. BEAM POCKET

17. 19mm x 89mm (1" x 4) LATERAL BRACING WOOD STRIP ON BOTH SIDES OF STEEL BEAM.

18. 100 mm (4") CONC. SLAB SLOPE TO FLOOR DRAINS. CONC. STRG. 32 MPA. (4650 PSI) WITH 5-8 % AIR ENTRAINMENT. MOISTURE BARRIER ON 6" CRUSHED STONE FILL BENEATH SLAB TO BE COMPACTED TO PROVIDE UNIFORM SUPPORT.

19. -15.9 mm (5/8") GYPSUM BD. ON WALLS AND CEILING BETWEEN HOUSE AND GARAGE. RSI 3.87 (R22) BATT INSULATION IN WALLS, RSI 5.46 (R31) IN CEILING. TAPE AND SEAL ALL JOINTS GAS TIGHT & VAPOUR PROOF, 6 MIL AIR / VAPOUR BARRIER ON WARM SIDE.

20. DOOR GAS PROOFED WITH SELF CLOSER AND WEATHER STRIPPING.

21. PRECAST CONCRETE STEP (DESIGN BY PRECAST MANU.)

22. CAPPED DRYER VENT. MAX UNPROTECTED OPENING AREA OF 130 cm2 (20 sq. in.)

23. ATTIC ACCESS HATCH 545mm x 700mm (22" x 28") WITH WEATHER STRIPPING AND INSULATED.

24. TOP OF FIREPLACE CHIMNEYS SHALL BE 900mm (2'-11") ABOVE HIGHEST AT WHICH IT COMES IN CONTACT WITH THE ROOF AND 600mm (23 5/8") ABOVE ROOF SURFACE OR STRUCTURE (INCLUDING ADJACENT BUILDINGS) WITHIN A HORIZONTAL DISTANCE OF 3000mm (9'-10") FROM THE CHIMNEY. MAX. HEIGHT OF UNSUPPORTED CHIMNEY IS 3600mm (11'-10") ABOVE LAST POINT OF LATERAL SUPPORT.

25. LINEN CLOSET 4 SHELVES MIN. 350mm (1'-2") DEEP.

26. ROOMS WHERE SPECIFIED TO BE MECHANICALLY VENTED TO PROVIDE AT LEAST ONE AIR CHANGE PER HOUR.

27. JOISTS, BEAMS & TRUSSES TO BE STAGGERED & FIRE CUT AT PARTY WALL OR FIREWALL. MIN. 100mm (4")SOLID MASONRY SEPARATION AT STAGGERED CONDITION OR END-TO-END CONDITION.

28. U.L.C. RATED CLASS 'B' VENT, HEIGHT SHALL BE IN ACCORDANCE WITH ONTARIO GAS UTILIZATION CODE.

29. WOOD COLUMN
140mm x 140mm (6" x 6") WOOD COL. OR BUILT-UP WD. COL. ON METAL BASE SHOE AND 12.7mm (1/2") DIA. THRU BOLT, 610mm x 610mm x 200mm (24" x 24" x 8)CONC. FTG., 15 MPa (1500 PSI) CONC. STRG.

30. STEPPED FOOTING
HORIZONTAL STEP = 600mm (23 5/8") MIN.
VERTICAL STEP = 600mm (23 5/8") MAX. FOR FIRM SOILS & 400mm FOR SAND & GRAVEL.

31. MIN. 100mm (5")CONCRETE SLAB-ON-GRADE ON 125mm (5") CRUSHED STONE, REINFORCED WITH 6 x 6-W2.9 x W2.9 MESH AND SUCH REINFORCEMENT SHALL BE LOCATED NEAR MID-DEPTH OF SLAB. CONC. STR. 32 MPa (4650 psi)AND WITH 5-8% AIR ENTRAINMENT. 75mm (3")MIN. SLAB BEARING @ PERIMETER.

32. PROVIDE 200mm (8") DEEP SOLID MASONRY UNDER ALL BEAMS.

33. MASONRY PARTY WALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK OR SHEATHING & CAULKED MIN. 1 HOUR FIRE RATING. PROVIDE SMOKE TIGHT JOINT.

34. ALL JOISTS TO BE BRIDGED WITH 38mm x 38mm (2" x 2") CROSS BRIDGING OR SOLID BLOCKING AT 2100mm (7'-0") O.C. MAX. STRAPPING SHALL BE 19mm x 64mm (1" x 3") SPACED AT 2100mm (7'-0") O.C. WHERE SPECIFIED. PROVIDE SOLID BLOCKING @ 1200mm (3'-11") MAX. BELOW WALLS RUNNING PARALLEL TO JOISTS.

35. WOOD FRAMING MEMBERS THAT ARE NOT PRESSURE TREATED AND ARE IN CONTACT WITH CONCRETE THAT IS LESS THAN 150mm (6") ABOVE GROUND OR SLAB, PROVIDE 6 mil. POLYETHYLENE FILM OR No. 50 (45l)ROLL ROOFING DAMP PROOFING BETWEEN WOOD AND CONCRETE.

36. BLOCK VENEER WALL
100mm (4") CONCRETE BLOCK TO SUPPORT BRICK ABOVE. AIR SPACE, METAL TIES, BLDG. PAPER ETC. AS PER NOTE 3 EXCEPT NO WEEP HOLES.

37. COMBUSTION AIR SUPPLY TO FIREPLACE MIN. 100mm (4") DIA. INSULATED NON-COMBUSTIBLE DUCT WITH OPERABLE DAMPER AND INSECT SCREEN 50mm (2") CLEARANCE TO COMBUSTIBLES.

38. LATERAL SUPPORT OF MASONRY WALLS
BOTTOM OF ROOF JOIST AND BOTTOM OF FLOOR JOIST TO BE STRAPPED TO PARTY WALL AT MAX. INTERVALS OF 2000mm (6'-7") WITH 40mm x 4.76mm (1 9/16" x 3/16") THICK CORROSION RESISTANT STRAPS. FOR FLOOR JOIST PARALLEL TO PARTY WALL EXTEND STRAPS ACROSS BOTTOM OF AT LEAST 3 JOISTS.

39A. GARAGE WALLS
SAME AS NOTE No. 2 OR 3 WITH THE FOLLOWING EXCEPTIONS: STUDS TO BE 38mm x 89mm (2" x 4") @ 400mm (16") O.C., WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. DELETE INSULATION, 6 mil. AIR/VAPOUR BARRIER & DRYWALL. MAXIMUM STUD HEIGHT OF 3000mm (9'-10")

39B. GARAGE WALLS
SAME AS NOTE No. 2 OR 3 WITH THE FOLLOWING EXCEPTIONS: STUDS TO BE 2-38mm x 89mm (2-2" x 4") @ 400mm (16") O.C., WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. DELETE INSULATION, 6 mil. AIR/VAPOUR BARRIER & DRYWALL. MAXIMUM STUD HEIGHT OF 3250mm (10'-8")

39C. GARAGE WALLS
SAME AS NOTE No. 2 OR 3 WITH THE FOLLOWING EXCEPTIONS: STUDS TO BE 2-38mm x 89mm (2" x 6") @ 300mm (16") O.C., WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. DELETE INSULATION, 6 mil. AIR/VAPOUR BARRIER & DRYWALL.

40. PORCH SLAB - 5" THICK
130mm (5") POURED CONC. 32MPa (4650 psi) PORCH SLAB WITH 5 - 8% AIR ENTRAINMENT AND 10M REBARS @ 200mm (7 7/8") EACH WAY WITH MIN. 40mm (1 1/2") CLEAR COVER FROM THE BOTTOM OF THE SLAB TO THE FIRST LAYER OF BARS AND THE SECOND LAYER OF BARS LAID DIRECTLY ON TOP OF THE LOWER LAYER IN THE OPPOSITE DIRECTION, 75mm (3") MIN. SLAB BEARING, 10M DOWELS 600mm X 600mm (23 5/8" X 23 5/8") @ 600mm (23 5/8") O.C. AROUND PERIMETER. REINFORCING STEEL GRADE 400 - CAN/CSA-G30.18-M

41. PORCH SLAB - 6" THICK
150mm (6") POURED CONC. 32MPa (4650 psi) PORCH SLAB WITH 5 - 8% AIR ENTRAINMENT AND 15M REBARS @ 300mm (12") EACH WAY WITH MIN. 40mm (1 1/2") CLEAR COVER FROM THE BOTTOM OF THE SLAB TO THE FIRST LAYER OF BARS AND THE SECOND LAYER OF BARS LAID DIRECTLY ON TOP OF THE LOWER LAYER IN THE OPPOSITE DIRECTION, 75mm (3") MIN. SLAB BEARING, 10M DOWELS 600mm X 600mm (23 5/8"X 23 5/8") @ 600mm (23 5/8)O.C. AROUND PERIMETER. REINFORCING STEEL GRADE 400 - CAN/CSA-G30.18-M

42. EXPOSED FLOOR
RSI 5.46 (R31) BATT INSULATION OR SPRAY FOAM INSULATION WITH AIR/VAPOUR BARRIER DRAFT STOP AND PRE-FINISHED ALUMINUM SOFFIT TO EXPOSED FLOOR ABOVE.

43A. 2 STOREY WALLS - DOUBLE VOLUME
38mm x 140mm (2" x 6") SPR. # 2 CONTINUOUS STUDS @ 300mm (12") O.C. FROM SILL PLATE TO TOP PLATE. WOOD GIRTS @ 1200mm (3'-11")O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

43B. 2 STOREY WALLS - DOUBLE VOLUME
2-38mm x 140mm (2-2" x 6") SPR. # 2 CONTINUOUS STUDS @ 400mm (16") O.C. FROM SILL PLATE TO TOP PLATE. WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

43C. 2 STOREY WALLS - DOUBLE VOLUME
2-38mm x 140mm (2-2" x 6") SPR. # 2 CONTINUOUS STUDS @ 300mm (12") O.C. FROM SILL PLATE TO TOP PLATE.WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

43D. 2 STOREY WALLS - DOUBLE VOLUME
38mm x 184mm (2" x 8") SPR. # 2 CONTINUOUS STUDS @ 400mm (16") O.C. FROM SILL PLATE TO TOP PLATE. WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

43E. 2 STOREY WALLS - DOUBLE VOLUME
2-38mm x 184mm (2-2" x 8")SPR. # 2 CONTINUOUS STUDS @ 300mm (12") O.C. FROM SILL PLATE TO TOP PLATE. WOOD GIRTS @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

44. EXTERIOR WALL LESS THAN 1.2m TO PROPERTY LINE (45 MINUTE F.R.R.) (BRICK VENEER WALL OR FRAMED WALL CONSTRUCTION)
CONSTRUCTION OF WALLS AS PER NOTES No. 2 & 3 OR 40 EXCEPT AS PER THE FOLLOWING NOTES. INSULATION CONFORMING TO CAN/ULC-S702 AND HAVING A MASS OF 4.8 kg/m2 FOR 150mm THICKNESS & 2.8 kg/m2 FOR 89mm THICKNESS, 12.7mm (1/2") TYPE 'X' INT. DRYWALL FINISH.

NOTES

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CONSTRUCTION NOTES

45 EXTERIOR NON-COMBUSTIBLE CLAD WALL LESS THAN 0.6m TO PROPERTY LINE (45 MIN F.R.R.)
CONSTRUCTION OF WALLS AS PER NOTES No. 2 OR 40 EXCEPT AS PER THE FOLLOWING NOTES. INSULATION CONFORMING TO CAN/ULC-S702 AND HAVING A MASS OF 4.8 kg/m2 FOR 150mm THICKNESS & 2.8 kg/m2 FOR 89mm THICKNESS, 12.7mm (1/2") TYPE 'X' INT. DRYWALL FINISH, 12.7mm (1/2") EXT. GYPSUM SHEATHING ON 11mm (7/16") OSB FOR EXT.

46 CONVENTIONAL ROOF FRAMING
38 X 140 (2" X 6") SP#2 RAFTERS @ 400 MM (16" O.C.), 38 X 184 (2" X 8") RIDGE BD., HIP & VALLEY RAFTERS, 38 X 89 (2" X 4") COLLAR TIES @ MIDSPAN. CEILING JOISTS TO BE 38 X 89 ("2 X 4") @ 400 MM (16") O.C. FOR A MAX. 2430 MM (8'0") SPAN & 38 X 140 (2" X 6") @ 400 MM (16") O.C. FOR A MAX. 4450 MM (14'-7") SPAN. RAFTERS FOR BUILT-UP ROOF TO BE 38 X 89 (2" X 4") @ 600 MM (24") O.C. W/ A 38 X 89 (2" X 4") COLLAR TIE AS REQUIRED FOR STABILITY.

47 COLD CELLAR
FULL HEIGHT INSULATION ON INTERIOR SIDE OF FOUNDATION WALLS SEPARATING HEATED SPACE FROM COLD CELLAR. INSULATED DOOR WITH WEATHER STRIPPING. 100mm (4") DIA. PVC PIPE SLEEVE VENT W/ PAINTED INSECT SCREEN, PULL CHAIN LIGHT FIXTURE AND FLOOR DRAIN.

48 OVAL TUB AS SHOWN - 1530mm (5'-0") X 1070mm (3'-6") OR 1530mm (5'-0") X 1530mm (5'-0") CORNER TUB ON CERAMIC TILE DECK W/ 2 ROWS OF TILE ON WALL AROUND DECK MINIMUM 400mm (1'-4") HIGH.

49 140mm X 140mm (6"X6") PRESSURE TREATED WOOD POST WITH STAINLESS STEEL CAP ANCHORED TO BEAM ABOVE AND STAINLESS STEEL SHOE ANCHORED TO PORCH SLAB OR MASONRY PIER BELOW

50 WET WALL PROTECTION
CERAMIC AND PLASTER TILE INSTALLED ON WALL AROUND BATHTUBS AND SHOWERS SHALL BE APPLIED OVER MOISTURE RESISTANT BACKING. JOINTS BETWEEN WALL TILES AND BATHTUBS SHALL BE CAULKED WITH MATERIAL CONFORMING TO CGSB 19-GP-22M "SEALING COMPOUND, MILDEW RESISTANT FOR TUBS AND TILES"

51 LIGHTING T ENTRANCE
EVERY ENTRANCE SHALL BE PROVIDED WITH AN EXTERIOR LIGHTING OUTLET FIXTURE CONTROLLED BY A WALL SWITCH LOCATED INSIDE THE BUILDING.

52 OUTLETS IN DWELLING UNITS
EVERY ROOM IN A DWELLING SHALL BE PROVIDED WITH A LIGHTING OUTLET WITH FIXTURE CONTROLLED BY A WALL SWITCH. EVERY 323 ft^2 (30m^2) OF UNFINISHED BASEMENT SHALL BE PROVIDED WITH A LIGHTING OUTLET WITH FIXTURE.

53 DV GAS FIREPLACE
DIRECT VENT GAS FIREPLACE TO COMPLY WITH MANUFACTURES SPECIFICATIONS

LEGEND

COLD CELLAR VENT
FURNACE VENT
STOVE VENT
FIRE PLACE VENT
DRYER VENT
HWT VENT
FURNACE INTAKE
HWT INTAKE
LIGHT FIXTURE (WALL MOUNTED)
U/S UNDER SIDE
FG FIXED GLASS
BG BLACK GLASS
BPB BLACK PAPER BEHIND

POT LIGHT
LIGHT FIXTURE
LIGHT FIXTURE (PULL CHAIN)
LIGHT FIXTURE (WALL MOUNTED)
SWITCH
3 WAY SWITCH
SMOKE ALARM (60)
CARBON MONOXIDE DETECTOR (61)
DUPLEX OUTLET (12" HIGH)
DUPLEX OUTLET (HEIGHT AS NOTED)

WATERPROOF DUPLEX OUTLET
HEAVY DUTY OUTLET
T.V. OUTLET
CENTRAL VACUUM
TELEPHONE OUTLET
VENTS AND INTAKES
EXHAUST FAN
HOSE BIB
FLOOR DRAIN
REINFORCED STUD WALL AS PER NOTE (21)

SJ SINGLE JOIST
DJ DOUBLE JOIST
TJ TRIPLE JOIST
P.T. PRESSURE TREATED
GT GIRDER TRUSS
F.A. FLAT ARCH
E.A. EACH WAY
SOLID BEARING
POINT LOAD ABOVE
ROOF VENT
SLOPE DIRECTION
(A) DOOR TYPE
209.30 ELEVATION
B.L.L. BOTTOM LOWER LEVEL
B.U.L. BOTTOM UPPER LEVEL

LINTELS

WOOD LINTELS SPF #2 GRADE	LVL LINTELS 2.0E GRADE	STEEL LINTELS G40.21 GRADE
WB1: 2-2"x8"	LVL1:2PLY 1-$\frac{3}{4}$"x7-$\frac{1}{4}$"	L1: L3-$\frac{1}{2}$"x3-$\frac{1}{2}$"x$\frac{1}{4}$
WB2: 2-2"x10"	LVL2:2PLY 1-$\frac{3}{4}$"x9-$\frac{1}{2}$"	L2: L4"x3-$\frac{1}{2}$"x$\frac{1}{4}$"
WB3: 2-2"x12"	LVL3:2PLY 1-$\frac{3}{4}$"x11-$\frac{7}{8}$"	L3: L4-$\frac{7}{8}$"x3-$\frac{1}{2}$"x$\frac{5}{16}$"
WB4: 3-2"x8"	LVL4:3PLY 1-$\frac{3}{4}$"x7-$\frac{1}{4}$"	L4: L4-$\frac{7}{8}$"x3-$\frac{1}{2}$"x$\frac{3}{8}$"
WB5: 3-2"x10"	LVL5:3PLY 1-$\frac{3}{4}$"x9-$\frac{1}{2}$"	L5: L5-$\frac{7}{8}$"x4"x$\frac{3}{8}$"
WB6: 3-2"x12"	LVL6:3PLY 1-$\frac{3}{4}$"x11-$\frac{7}{8}$"	L6: L7-$\frac{1}{8}$"x4"x$\frac{3}{8}$"

CONCRETE PAD FOOTINGS

PAD1:	18"x18"x8"
PAD2:	24"x24"x10"
PAD3:	30"x30"x14"
PAD4:	36"x36"x16"
PAD5:	42"x42"x20"
PAD6:	48"x48"x22"
PAD7:	54"x54"x24"
PAD8:	60"x60"x28"

NOTES

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DATE:	JUN. 2018
PROJECT No.	2018SE165

A3.2

ARBORIST GROUP

Arborist Report for 49 Nashville Rd

Prepared on behalf of the owner.

On October 3rd, 2018.

By Serg V. Litvinov, B.Sc, ISA Registration ON-2281A

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ARBORIST GROUP

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ARBORIST GROUP

Section 1: Introduction

This report will assess and detail the condition of the trees at 49 Nashville Road in regard to the proposed construction on the property in Vaughan. Recommendations as to the appropriate course of action is provided. These recommended actions take into account tree condition, site plans, environmental factors, and the desires of the property owner.

Overall, **42** bylaw-protected trees are on the property or within 6m of it and were visually assessed by Arborist Group. **1** tree in Private ownership will require removal, with the addition of **3** Private trees that will require injury permit. A site plan delineating the location of the trees and proposed tree protection zones in relation to the planned construction is provided.

This Arborist Report is to be reviewed in conjunction with provided Tree Protection Plan.

Section 2: Methodology

The most recent on-site inspection was made in the week of September 3rd, 2018. Visual Tree Assessment (VTA) was undertaken on all trees located on the property and within six meters of the property. This method of tree evaluation is adapted from Matheny and Clark, 1994 and is recognized by The International Society of Arboriculture and the American Society of Consulting Arborists. The diameter at breast height (DBH) was measured by a diameter tape at 1.4m above ground level. Several close-up and wide-angle pictures were taken and are displayed in Section 6. Higher resolution pictures can be obtained by emailing info@arboristreporter.ca.

Tree inventory has been compiled based on the trees of size both on within and immediately adjacent to the subject property. These trees have been assessed in terms of their general health from good to poor:

1. GOOD – trees in good overall health and condition with desirable structure,

2. FAIR – trees in moderate health and condition with less desirable structure, and

3. POOR – trees displaying prominent health issues such as decay and disease and/or poor form and structure.

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Limitations of methodology:

- The inspection was conducted at surface level. Certain tree health indicators which manifest in the upper crown and at the sub-surface level are not identifiable from this vantage point.

Section 3: Tree Protection

A tree protection zone (TPZ) must be established around each tree not slated for removal, extending in all directions from the base of the tree to a minimum distance of approximately six times the diameter of the tree. TPZs shall be 1.2 metres (4 feet) high and consist of plywood or plastic web hoarding or equivalent (as approved by the city). Solid barriers such as ¾" plywood should be used for all private trees. Orange plastic web snow fencing on 2"x4" wooden top and bottom frames is to be located in the case of trees situated on the city road allowance to allow for sightlines for the city. No t-bars are to be used to secure the TPZs as they could injure roots or interfere with underground utilities. TPZs must have the required signage (to be picked up at the city offices) must remain in place for the duration of any construction or demolition occurring on the property. Inside the TPZ no construction, storage or disposal of material of any kind, adding of fill, or excavation may occur.

For each TPZ that falls below the minimum size stipulated by city bylaws in order to accommodate construction, an Application to Injure or Destroy Trees will be made and the city appropriately compensated.

Establishing a TPZ is necessary to prevent physical harm to the stem and branches of the tree which may otherwise be incurred due to proximity to construction or demolition activities. The TPZ will encompass the tree's critical root area, protecting the roots from being damaged during excavation and from soil compaction which may occur due to the presence of heavy machinery.

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Ravine specific requirements

Where the worksite is up-slope from a ravine or protected natural feature areas, sediment control fence is to be used. The 4 ft. high sediment control fence would be installed between the worksite and protected area down-slope.

Removals

It is recommended that any vegetation removal be conducted outside of the sensitive breeding bird season (May 1st to July 31st) in order to mitigate any impacts to breeding birds.

Root trimming/Work within the TPZ

If any tree roots are uncovered within the TPZ the supervising arborist is to prune them back to the extent of the excavation using appropriate arboricultural methods. If roots over 1" are uncovered outside of the TPZ, excavation should immediately cease and an arborist used to trim the root in such a manner as to mitigate damage to the tree.

At risk Species

No regionally rare tree species or endangered species that quality for protection under the provinces Species at Risk Act were found.

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Overall post-construction impact

A visit by a professional arborist will be required at the completion of construction to ensure that proper protection has been provided and that no trees suffered unforeseen damage.

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Section 4: Data

TREE #	Species	Botanical Name	DBH (cm)	Direction	TPZ (m)	Condition Rating	Ownership Category	Comments *denotes approximate location
1	Sugar Maple	Acer saccharum	23.5	Protect	2.4	Good-Fair	Town	Minor amount of small diameter deadwood present.
2	Black Locust	Robina pseudoacacia	85	Protect	5.4	Fair	Neighbour	Moderate amount of small diameter deadwood present. Included bark at main stem unions.
3	Black Locust	Robina pseudoacacia	21	Protect	2.4	Good-Fair	Private	Minor-moderate amount of small diameter deadwood present.
4	Black Locust	Robina pseudoacacia	46	Protect	3	Good-Fair	Neighbour	Trunk lean.
5	Black Locust	Robina pseudoacacia	72	Protect	4.8	Good-Fair	Neighbour	Branches overhanging house. Minor amount of small diameter deadwood present. Epicormic growth in crown.
6	*Black Locust*	*Robina pseudoacacia*	*120*	*Injury*	*7.2*	*Fair-Poor*	*Private*	*Significant amount of small diameter deadwood present. Rot at several points on trunk. Large fruiting bodies present.*
7	Black Locust	Robina pseudoacacia	47	Protect	3	Good-Fair	Neighbour	Minor-moderate amount of small diameter deadwood present.
8	Black Locust	Robina pseudoacacia	Approx. 40, 70	Protect	4.2	Fair	Neighbour	Previously pruned. Moderate amount of small diameter deadwood present. Shaded by adjacent trees.
9	Black Locust	Robina pseudoacacia	Approx. 50	Protect	3	Fair	Neighbour	Large diameter stem dead in crown. Moderate amount of small diameter deadwood present.

10	Black Locust	Robina pseudoacacia	26	Protect	2.4	Good-Fair	Neighbour	Minor-moderate amount of small diameter deadwood present. Shaded by adjacent trees.
11	Black Locust	Robina pseudoacacia	40	Protect	2.4	Good-Fair	Neighbour	Minor-moderate amount of small diameter deadwood present. Shaded by adjacent trees.
12	Black Locust	Robina pseudoacacia	28	Protect	2.4	Good-Fair	Neighbour	Minor-moderate amount of small diameter deadwood present. Shaded by adjacent trees.
13	Black Locust	Robina pseudoacacia	33	Protect	2.4	Fair	Neighbour	Minor-moderate amount of small diameter deadwood present. Shaded by adjacent trees. Trunk lean.
14	Black Locust	Robina pseudoacacia	Approx. 54	Protect	3.6	Good-Fair	Neighbour	Minor-moderate amount of small diameter deadwood present. Shaded by adjacent trees.
15	Black Walnut	Juglans nigra	36.5	Protect	2.4	Poor	Private	Moderate amount of small-medium diameter deadwood present.
16	Black Locust	Robina pseudoacacia	60	Retain	3.6	Fair	Neighbour	Codominant stems. Moderate-significant amount of small diameter deadwood present.
17	Black Locust	Robina pseudoacacia	16, 16, 47	Retain	3	Fair	Neighbour	Moderate-significant amount of small diameter deadwood present.
18	Black Walnut	Juglans nigra	33	Protect	2.4	Good-Fair	Neighbour	Moderate-significant amount of small diameter deadwood present.
19	Dead		23	Protect	2.4	Poor	Private	
20	White Spruce	Picea glauca	19	Protect	2.4	Poor	Private	Nearly dead.

21	White Spruce	Picea glauca	27	Protect	2.4	Good-Fair	Neighbour	Codominant stems. Minor amount of small diameter deadwood present. Asymmetrical crown due to adjacent trees.
22	White Spruce	Picea glauca	21, 24.5	Protect	2.4	Fair-Poor	Private	Codominant stems. Minor amount of small diameter deadwood present. Asymmetrical crown due to adjacent trees.
23	White Spruce	Picea glauca	22	Protect	2.4	Fair-Poor	Private	Moderate amount of small diameter deadwood present. Shaded by adjacent trees.
24	White Pine	Pinus strobus	46	Protect	3	Good-Fair	Private	Minor amount of small diameter deadwood present.
25	White Pine	Pinus strobus	30	Protect	2.4	Good-Fair	Private	Minor amount of small diameter deadwood present.
26	White Spruce	Picea glauca	20	Protect	2.4	Good-Fair	Private	Asymmetrical crown. Mechanical damage to base of trunk.
27	Silver Maple	Acer saccharinum	44, 76	Protect	4.8	Fair	Private	Large diameter stem previously pruned. Moderate amount of small diameter deadwood present.
28	**White Spruce**	**Picea glauca**	**28**	**Remove**	**N/A**	**Fair**	**Private**	**Moderate amount of small diameter deadwood present. Minor trunk lean.**
29	Apple	Malus sp.	32	Retain	2.4	Fair-Poor	Neighbour	Significant amount of small diameter deadwood present. Cavities forming.
30	Apple	Malus sp.	36	Retain	2.4	Fair-Poor	Neighbour	Significant amount of small diameter deadwood present.
31	Apple	Malus sp.	15, 30	Retain	2.4	Fair	Neighbour	Significant amount of small diameter deadwood present. Epicormic growth.

32	Apple	Malus sp.	32	Protect	2.4	Fair-Poor	Neighbour	Significant rot at base of trunk. Minor-moderate amount of small diameter deadwood present.
33	*White Spruce*	*Picea glauca*	*17.5*	*Injury*	*2.4*	*Fair*	*Private*	*Minor curve in trunk. Damage to base of trunk. Asymmetrical crown. Raised crown.*
34	*White Spruce*	*Picea glauca*	*20*	*Injury*	*2.4*	*Good-Fair*	*Private*	*Raised crown. Minor amount of small diameter deadwood present.*
35	White Spruce	Picea glauca	25	Protect	2.4	Good-Fair	Private	Raised crown. Minor amount of small diameter deadwood present.
36	White Spruce	Picea glauca	25	Protect	2.4	Fair	Private	Moderate amount of small diameter deadwood present.
37	Norway Maple	Acer platanoides	55	Retain	3.6	Good	Neighbour	Botanically in good condition.
38	Apple	Malus sp.	28	Protect	2.4	Fair	Neighbour	Significant epicormic growth present.
39	White Elm	Ulmus americana	18	Retain	2.4	Good-Fair	Town	Minor amount of small diameter deadwood present.
40	Siberian Elm	Ulmus pumila	40	Protect	2.4	Fair	Private	Curve in trunk. Exposed damaged roots. Epicormic growth present.
41	Horse Chestnut	Aesculus hippocastanum	25	Protect	2.4	Fair	Private	Cavity present at approx. 2m up trunk. Several dead branches in crown. Damaged trunk.
42	Black Locust	Robina pseudoacacia	57, 60, 62	Protect	4.2	Fair-Poor	Private	Stem closest to house is rotting from inside out. Weak stem unions with cracks present. Completely hollow/rotten interior trunk.

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Section 5: Conclusion

It is my recommendation that **1** tree at 49 Nashville Road be removed, and **3** additional trees injured in order to allow for construction. The rest of the trees of note are to be protected by TPZ's, as outlined in the site plan. No other municipally owned trees of any size, private trees, or neighbouring trees with diameters at breast height greater than 30 centimeters are located within the vicinity of the planned construction.

Injuries

Tree 6 is a mature Private tree located in the front yard of the property that will require minor injury for existing driveway to be altered. A minor portion of roots within the TPZ will likely be damaged during shallow excavation that will occur before filling of existing soil patch. The patch will be filled in with asphalt to match existing driveway.

Less than 5% of the TPZ will require injuries and considering that work envelope is more than 6.5m away from the trunk of the tree, excavation is not expected to have any impact on health of the tree.

Additionally, considering the distance between the tree and the work envelope and due to unfavorable conditions the driveway created, distribution of any significant roots of the tree in the area of work is highly unlikely.

Trees 33 and 34 are Private trees located in close vicinity of footprints of the proposed garage.

Tree 33 is almost 1.5m away from the proposed footprint and will require injuries in around 15% of the roots within the TPZ.

Total root loss is expected in around 10% of the TPZ however considering that the tree is young and vigorous, injuries are not likely to have major impact on its health in the future. Excavation within the TPZ should be done by hand and by Root Sensitive Excavation principles described below. The tree should be protected by combination of horizontal and vertical tree protection to secure maximum protection for the tree and also allow access to the construction envelope.

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Tree 34 will require only minor injuries from soil compaction to allow for construction of the proposed garage. The tree is around 2.4m away from the footprint of the garage and it is highly unlikely that expected injuries will have any impact on health of the tree in the future.

Excavation should not be deeper than absolutely necessary. All excavation within the TPZ should be done by hand and supervised by certified arborist.

Root sensitive excavation reduces root injuries to trees and involves trenching along the line of proposed excavation to the depth required for the proposed hardscaping, utility or site feature being installed, prior to mechanical excavation of the rest of the area. Location and Dimensions of proposed root sensitive excavation are to be provided to Urban Forestry in advance for their review.

All Root sensitive excavation must be performed under the supervision of a qualified arborist. All roots exposed must be documented by the supervising arborist. Every effort should be made to preserve as many exposed roots as possible. Roots approved for pruning should be cleanly cut with a sharp, non-vibrating tool at face of trench such that no further disturbance of the roots are to be expected once mechanical excavation begins. All root pruning is to be performed by the arborist only, as per guidelines below.

When Root sensitive excavation is performed in regards to the installation of a deep site feature such as a foundation, roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the Tree Protection Zone (TPZ) of bylaw trees they should be preserved and Urban Forestry must be notified to discuss the expected impacts of pruning such significant roots on the tree's health or stability.

When Root sensitive excavation is performed in regard to the installation of site features such as driveways, walkways, curbs, etc. roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the TPZ of bylaw trees they should be preserved and Urban Forestry must be notified to discuss the expected impacts of pruning such significant roots on the tree's health or stability, or to arrange the proposed site feature to be moved farther away from the tree and its significant roots.

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Removals

Tree 28 is a Private tree located directly adjacent to the footprint of the proposed garage (less than 1.5m away). Considering that removal of the trunk will be necessary to allow for access to the construction site, pre-emptive removal of the tree is recommended.

The owners will be obligated to one replacement tree if DBH of removed tree is between 20 and 30cm, at least 2 trees if DBH of removed tree is between 31 and 40cm, at least 3 trees if DBH of removed tree is between 41 and 50cm or at least 4 trees if DBH of removed tree is bigger than 51cm.

One replacement tree will be planted on the property (60mm+ caliper, nursery grown stock) to accommodate for removal of one existing tree (DBH 20-30cm) in accordance with City of Vaughan requirements. **1** will be planted on the property, with **no** remaining trees to be paid as cash in lieu payments.

Heavy machinery should be operated at the maximum distance from the trees consistent with the timely completion of construction. The driveway is to be used for material storage. No trimming of crowns is necessary for the work.

Addendum 1: Replanting Plan

Tree Replanting 1 (R1)	*Acer nigrum*

Following the removal of **1** tree (present location marked on the site plan), **1** replacement trees will be planted in the back yard of 49 Nashville Road (planned location marked in green on the site plan).

Serg V. Litvinov

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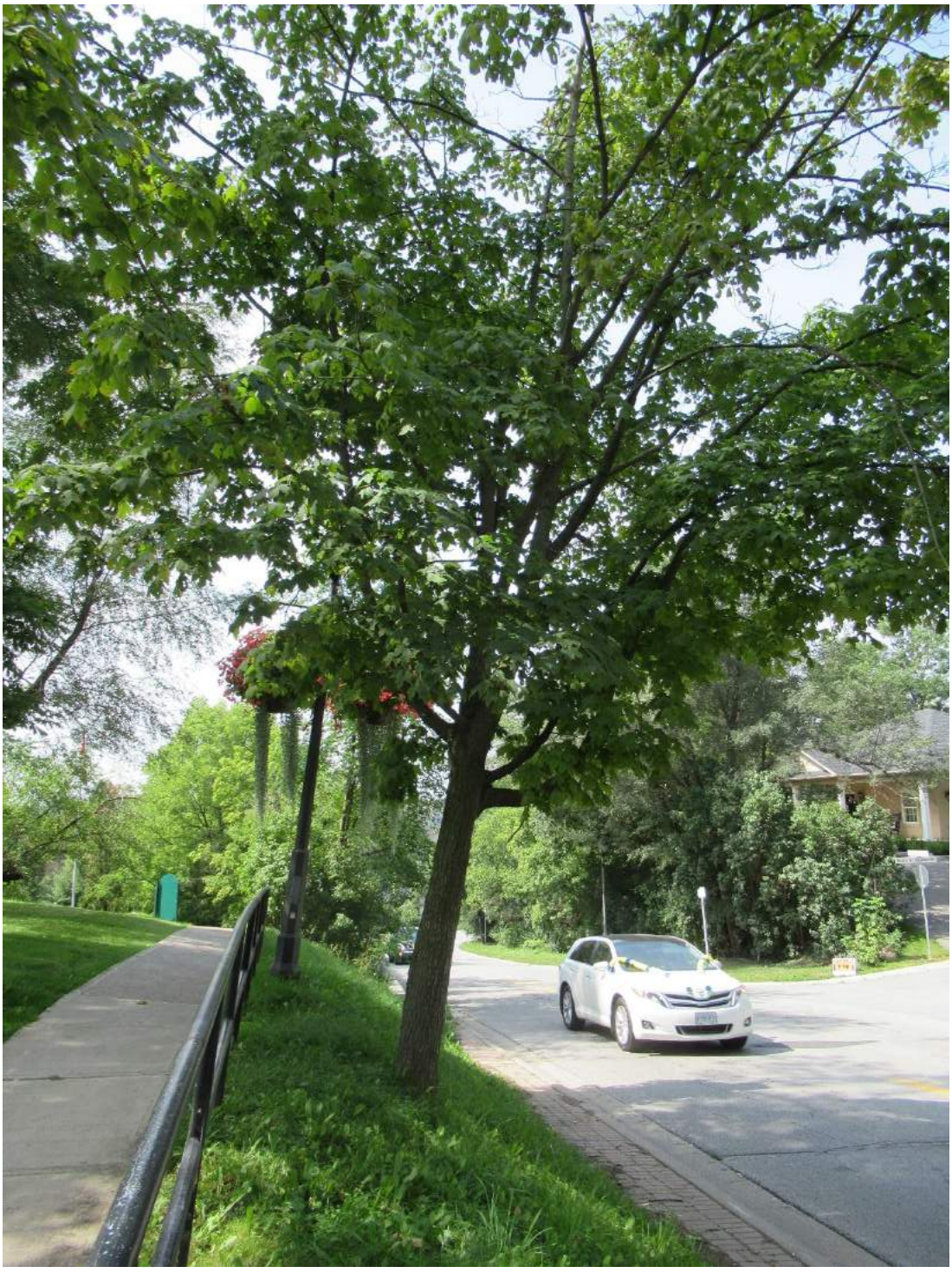
Section 6: Photo Documentation

Picture 1: Tree 1



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Picture 2: Trees 2-5

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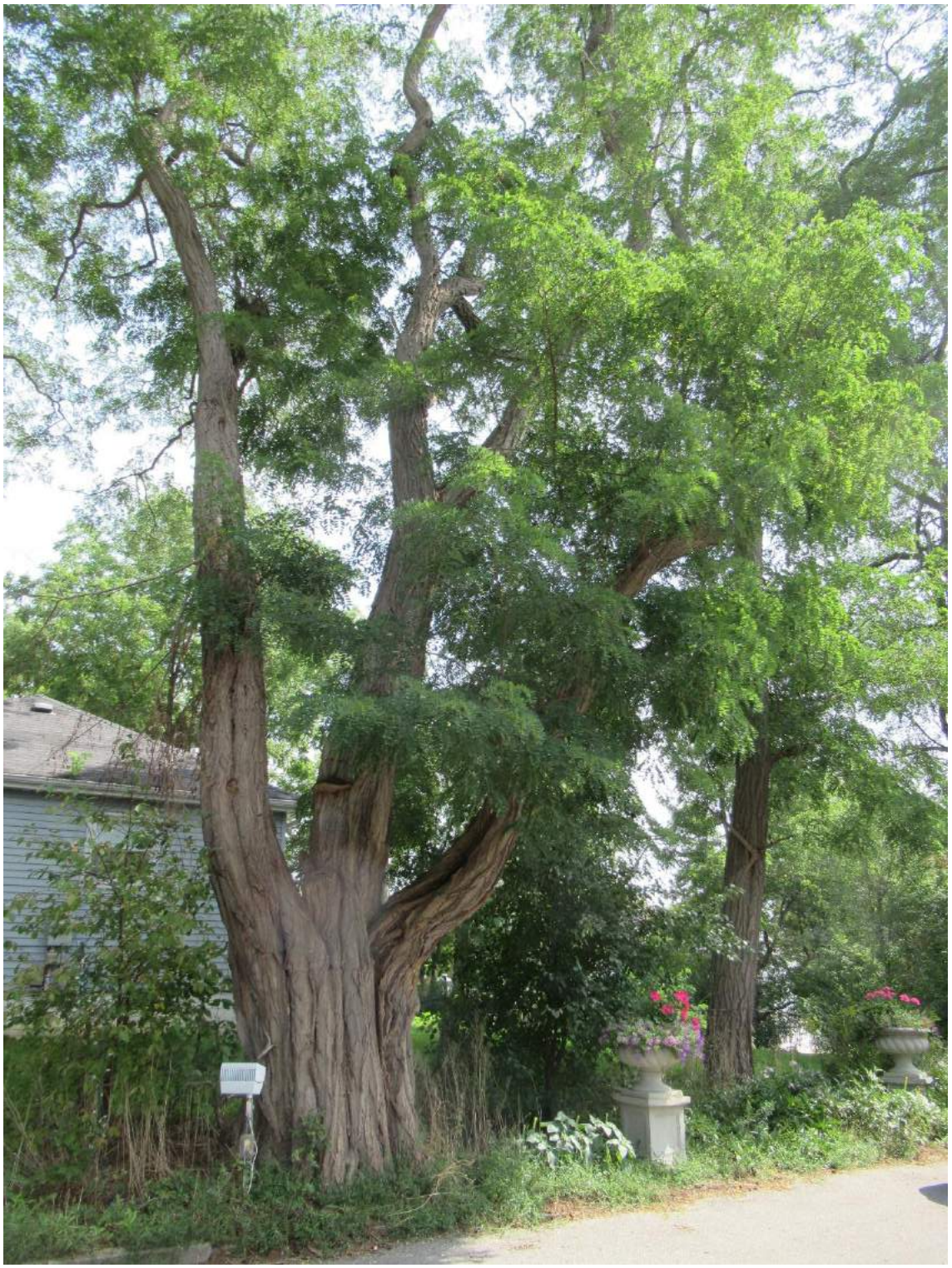
Picture 3: Tree 6



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Picture 4: Tree 7

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Picture 5: Tree 8

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Picture 6: Tree 9

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Picture 7: Trees 10-14

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Picture 8: Trees 15-18

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Picture 9: Trees 19 and 20

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Picture 10: Trees 21-25

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Picture 11: Tree 26

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Picture 12: Tree 27

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Picture 13: Tree 28

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Picture 14: Trees 29-31

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Picture 15: Trees 32-36

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Picture 16: Tree 37

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Picture 17: Trees 38 and 39

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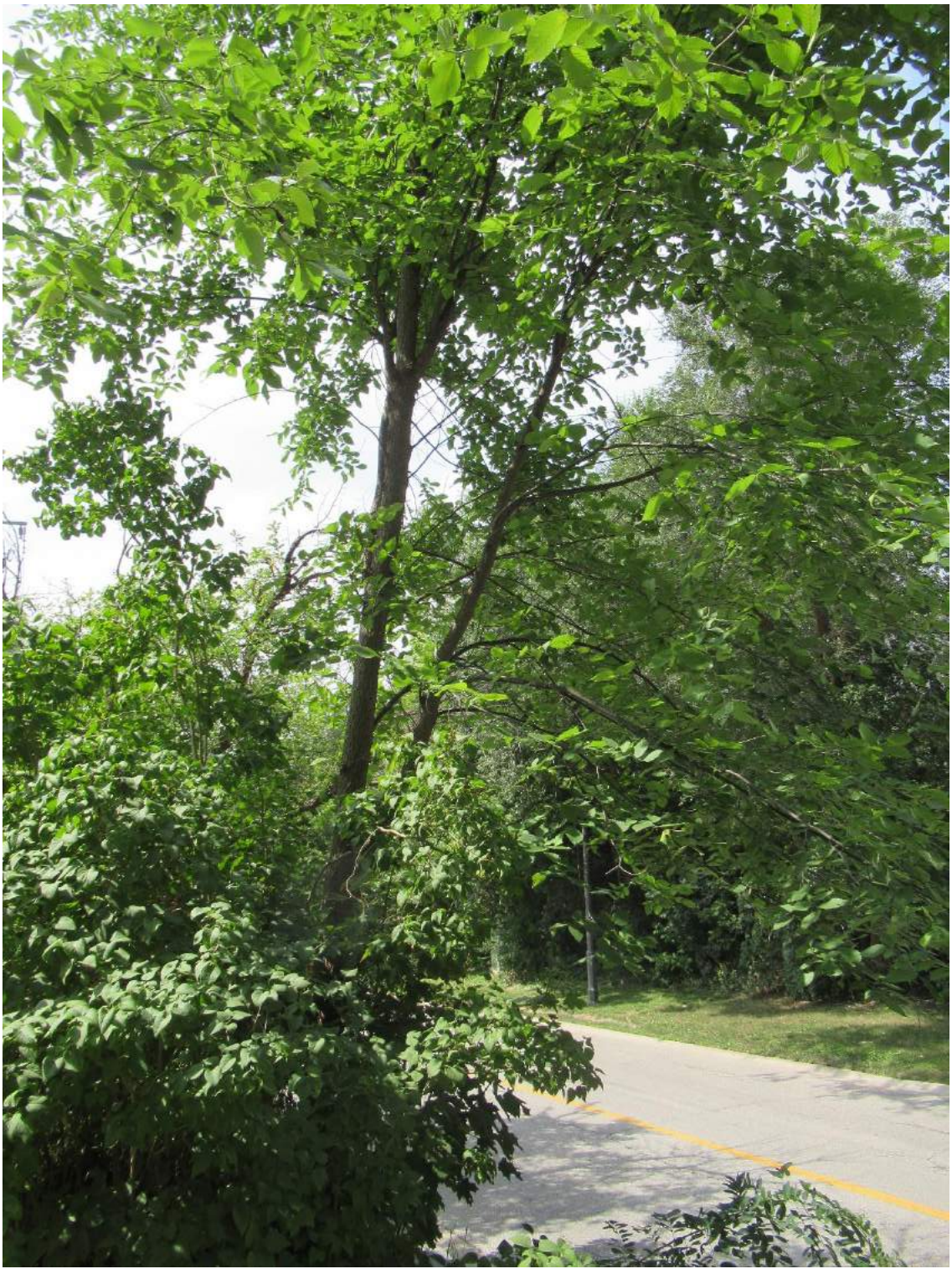
Picture 18: Tree 40



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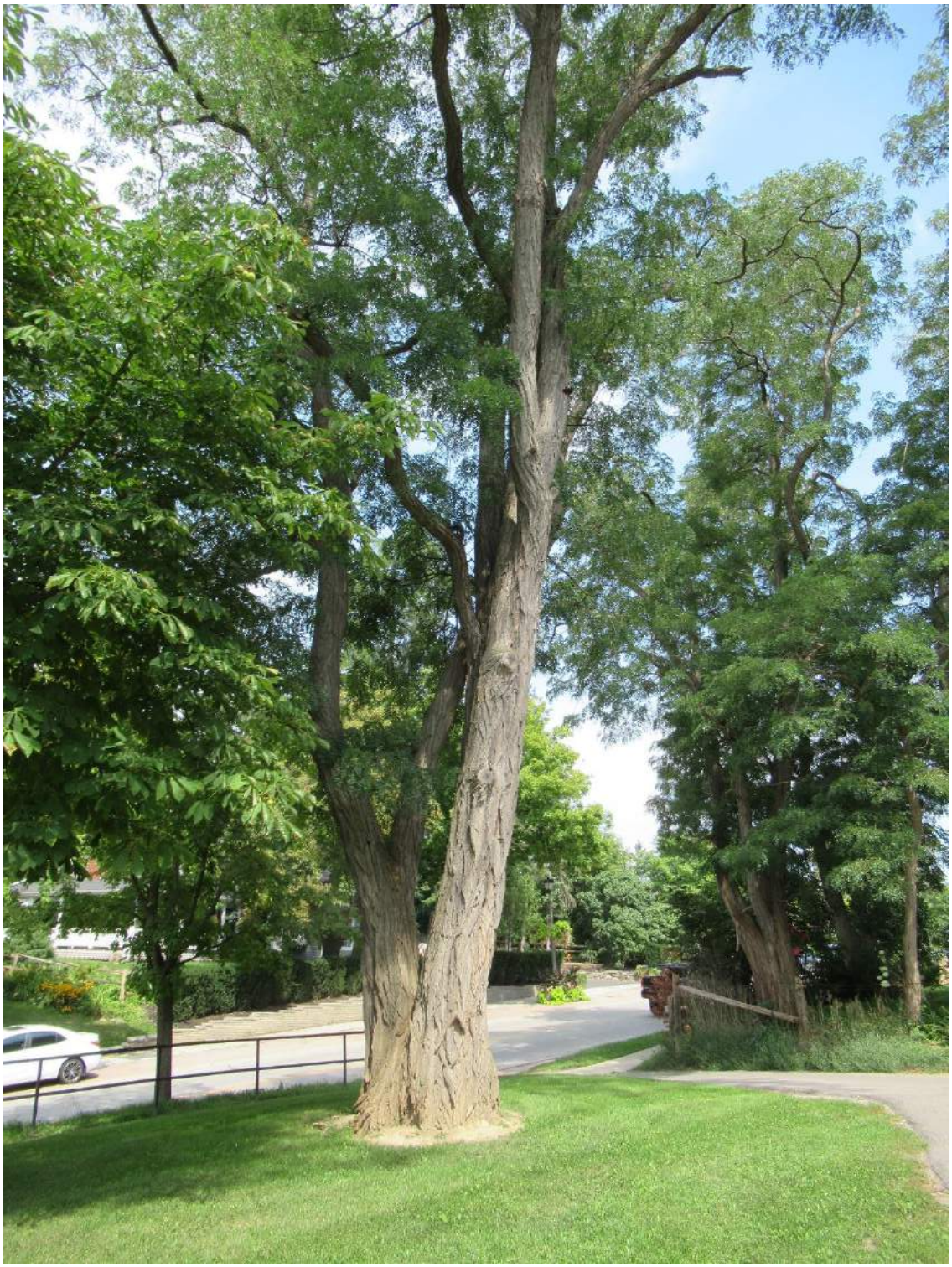
Picture 19: Tree 41



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Picture 20: Tree 42

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Picture 21: Tree 43

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