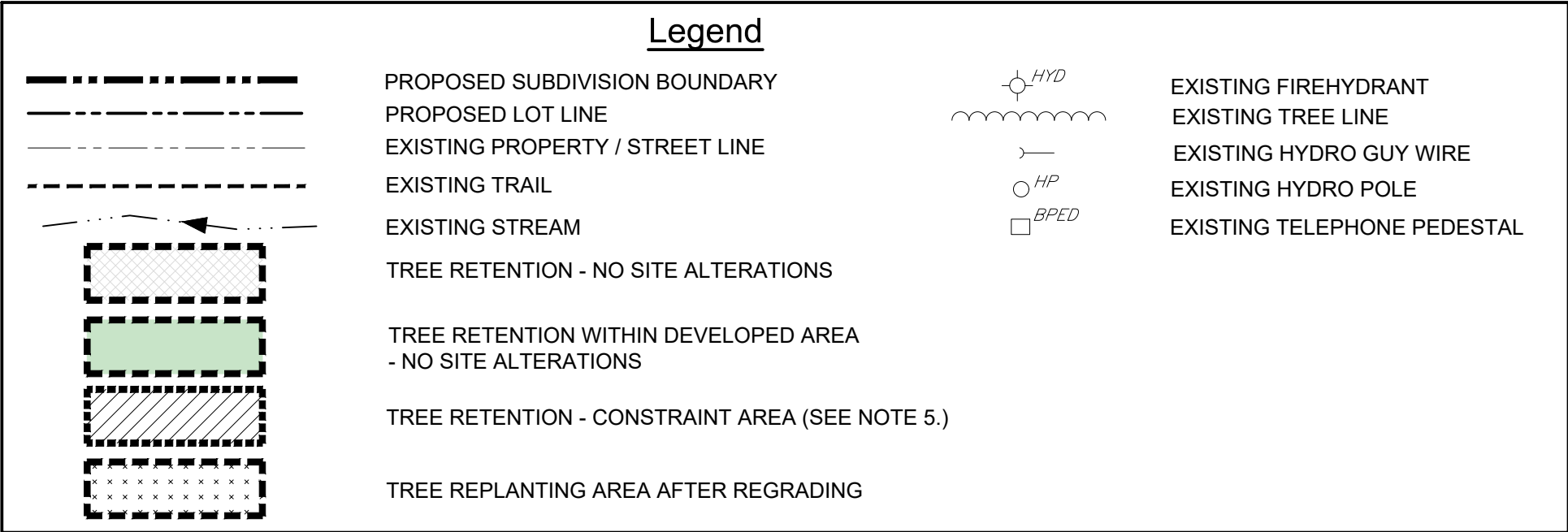
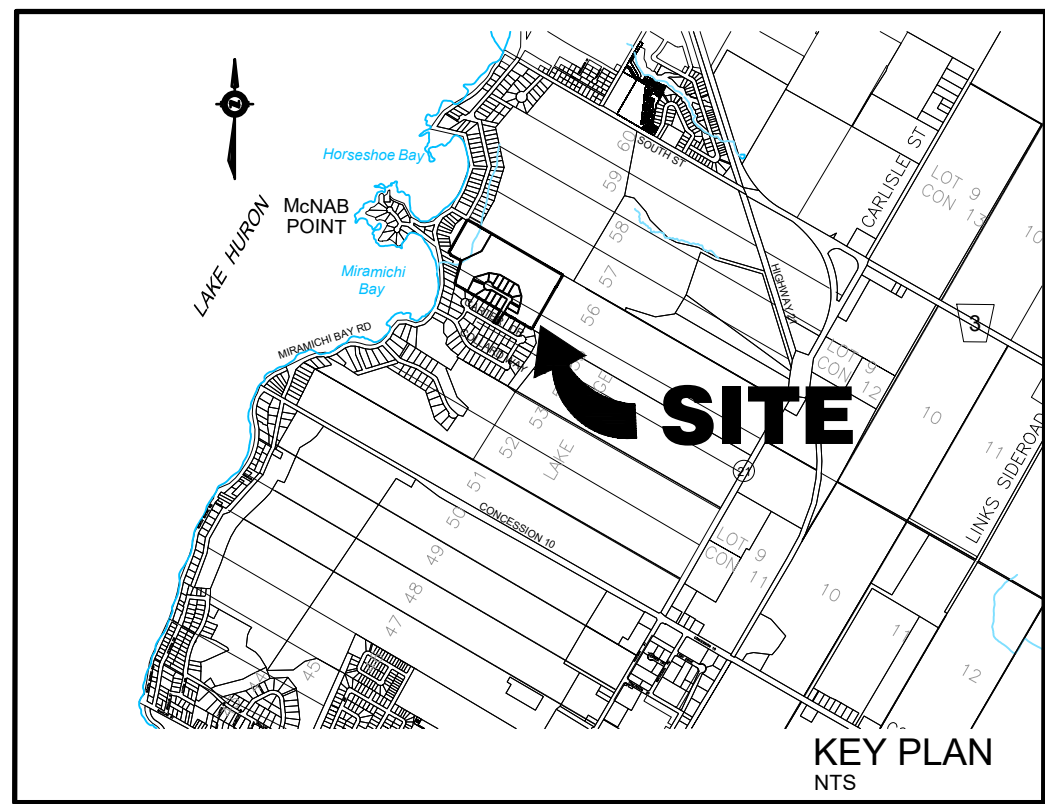


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TREE PRESERVATION AND REPLANTING INFORMATION	
TOTAL PROPOSED SUBDIVISION	16,252 ha.
TOTAL DEVELOPED AREA	3,845 ha.
TREE RETENTION WITHIN DEVELOPED AREA	6,446 m <sup>2</sup>
TREE RETENTION WITHIN CONSTRAINT AREA	1,806 m <sup>2</sup>
TREE REPLANTING AREA	1,449 m <sup>2</sup>
TOTAL TREE RETENTION & REPLANTING AREA	9,701 m <sup>2</sup> = 25.23% OF DEVELOPED AREA

Table 1: Suitable Species for Replanting Areas			
VEGETATION TYPE	SPECIES	SIZES	APPROPRIATE SPACING
TREES	Red Oak ( <i>Quercus rubra</i> )	saplings (> 60 cm)	3.0 – 3.5 m
	Sugar Maple ( <i>Acer saccharum</i> )	saplings (> 60 cm)	2.0 – 2.5 m
	Eastern White Cedar ( <i>Thuja occidentalis</i> )	30 – 60 cm	2.0 – 2.5 m
	Black Walnut ( <i>Juglans nigra</i> )	30 – 60 cm	2.0 – 2.5 m
	Red Maple ( <i>Acer rubrum</i> )	30 – 60 cm	2.0 – 2.5 m
	Eastern Hemlock ( <i>Tsuga canadensis</i> )	30 – 60 cm	2.0 – 2.5 m
	Eastern White Pine ( <i>Pinus strobus</i> )	30 – 60 cm	2.0 – 2.5 m
	Nannyberry ( <i>Viburnum lentago</i> )	25 – 60 cm	0.75 – 1.5 m
	Pin Cherry ( <i>Prunus pennsylvanica</i> )	25 – 60 cm	0.75 – 1.5 m
	Serviceberry ( <i>Amelanchier</i> spp.)	25 – 60 cm	0.75 – 1.5 m
SHRUBS	Alternate-leaved Dogwood ( <i>Cornus alternifolia</i> )	25 – 60 cm	1.0 – 1.5 m
	Bush Honeysuckle ( <i>Lonicera</i> )	25 – 60 cm	1.0 – 1.5 m
	Gray goldenrod ( <i>Solidago nemoralis</i> )		
	Wild Bergamot ( <i>Monarda fistulosa</i> )		
	New England Aster ( <i>Symphyotrichum novae-angliae</i> )		
	Heath Aster ( <i>Symphyotrichum ericoides</i> )		
	Where branches overhang access routes or the storm sewer alignment and may be impacted by machinery, the branches are to be pruned before excavation activities are commenced. Pruning is to be limited to less than 20% of the trees crown and to be completed by a certified arborist or qualified tree professional.		
	DAMAGE TO TREES, INCLUDING BROKEN LIMBS, DAMAGE TO ROOTS, OR WOUNDS TO THE MAIN TRUNK MUST BE REPORTED TO THE CONSULTING ARBORIST IMMEDIATELY SO THAT MITIGATION MEASURES CAN BE PROMPTLY IMPLEMENTED.		
	TREES ARE TO BE FELLED INTO THE CONSTRUCTION AREA SO AS TO REDUCE THE POTENTIAL FOR INJURY/DAMAGE TO NEIGHBOURING TREES. TREE, BRANCHES AND BRUSH ARE TO BE REMOVED FROM THE SITE.		
	SHOULD ANY WORK BE REQUIRED WITHIN THE TREE RETENTION AREA, THE CONTRACTOR AND THE CONSULTING ARBORIST SHALL CONTACT THE APPROPRIATE REGULATING AGENCIES FOR APPROVAL.		
GROUND COVER	320-540 seeds per square metre		

#### Notes

1. THE TREE PRESERVATION AND EDGE MANAGEMENT PLAN WAS PROVIDED BY COBIDE ENGINEERING INC. AND REVIEWED BY WSP CANADA INC.
2. BASE PLAN WAS PROVIDED BY COBIDE ENGINEERING INC.
3. NUMBERING OF LOTS ON THE FINAL PLAN MAY VARY FROM THAT SHOWN ON THIS PLAN.
4. THROUGH DEVELOPER ARCHITECTURAL CONTROL AGREEMENTS, FUTURE LANDOWNERS WILL BE ENCOURAGED TO MAXIMIZE TREE RETENTION.
5. ALONG THE FRONTAGE OF EACH LOT, A 5.0m DEPTH OF UNDISTURBED VEGETATION SHALL BE MAINTAINED EXCEPT FOR THE FOLLOWING:
  - a) DRIVEWAY ACCESS, UTILITY SERVICES (WATER, STORM, HYDRO)(MAXIMUM 8m)
  - b) LOT FILLING TO ACHIEVE LOT GRADING REQUIREMENTS.

#### TREE RETENTION AREAS

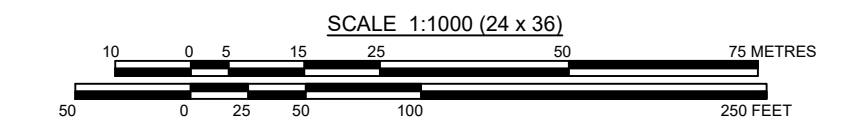
- CLEARLY IDENTIFIED TREE PROTECTION MARKINGS (CAUTION TAPE, EXCLUSION MARKINGS, ETC.) BETWEEN THE WORK AREAS AND THE TREE RETENTION AREA TO BE INSTALLED ALONG THE DRILLPIE OF THE RETAINED TREES BEFORE WORK ON THE SITE BEGINS AND INSPECTED REGULARLY TO ENSURE IT IS PERFORMING ITS INTENDED FUNCTION. IT IS TO BE CLEARLY SIGNED AS A VEGETATION PROTECTION ZONE. IF SECTIONS ARE FOUND TO BE DAMAGED OR NON-FUNCTIONAL, THEY ARE TO BE REPLACED IMMEDIATELY.
- TEMPORARY SNOW OR CONSTRUCTION TREE PROTECTION FENCINGS TO BE USED TO DELINEATE THE FOREST EDGE FOR TREES WITHIN THE VICINITY OF THE CONSTRUCTION SITE THAT ARE TO BE PRESERVED. SUCH FENCING SHALL ACT AS A BARRIER TO PREVENT INADVERTENT DISTURBANCES TO RESTRICTED AREAS. TREE PROTECTION BARRIERS MUST REMAIN IN EFFECTIVE CONDITION UNTIL ALL CONSTRUCTION AND LOT GRADING ACTIVITIES INCLUDING LANDSCAPING HAVE BEEN COMPLETED ON THAT PARTICULAR LOT.
- THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN THE RETAINED TREE AREAS: CONSTRUCTION; STORAGE OR STOCKPILING OF MATERIALS; DISPOSAL OF ANY LIQUIDS; GRADING; EXCAVATING; PARKING OF VEHICLES; AND OPERATION OF HEAVY MACHINERY.
- WHERE BRANCHES OVERHANG ACCESS ROUTES OR THE STORM SEWER ALIGNMENT AND MAY BE IMPACTED BY MACHINERY, THE BRANCHES ARE TO BE PRUNED BEFORE EXCAVATION ACTIVITIES ARE COMMENCED. PRUNING IS TO BE LIMITED TO LESS THAN 20% OF THE TREES CROWN AND TO BE COMPLETED BY A CERTIFIED ARBORIST OR QUALIFIED TREE PROFESSIONAL.
- DAMAGE TO TREES, INCLUDING BROKEN LIMBS, DAMAGE TO ROOTS, OR WOUNDS TO THE MAIN TRUNK MUST BE REPORTED TO THE CONSULTING ARBORIST IMMEDIATELY SO THAT MITIGATION MEASURES CAN BE PROMPTLY IMPLEMENTED.
- TREES ARE TO BE FELLED INTO THE CONSTRUCTION AREA SO AS TO REDUCE THE POTENTIAL FOR INJURY/DAMAGE TO NEIGHBOURING TREES. TREE, BRANCHES AND BRUSH ARE TO BE REMOVED FROM THE SITE.
- SHOULD ANY WORK BE REQUIRED WITHIN THE TREE RETENTION AREA, THE CONTRACTOR AND THE CONSULTING ARBORIST SHALL CONTACT THE APPROPRIATE REGULATING AGENCIES FOR APPROVAL.
- TO AVOID INTERFERENCE WITH THE EGGS, NESTS OR YOUNG OF BIRDS PROTECTED UNDER THE FEDERAL MIGRATORY BIRDS CONVENTION ACT (1994), TREE AND VEGETATION REMOVAL SHOULD NOT OCCUR DURING BREEDING SEASON (APRIL 1ST TO AUGUST 31ST), UNLESS A SURVEY BY A QUALIFIED AVIAN BIOLOGIST CONFIRMS THAT THERE ARE NO ACTIVE NESTS WITHIN THE VEGETATION TO BE REMOVED.

#### SITE RESTORATION

- TOPSOIL REMOVED DURING SITE GRADING SHOULD BE STORED IN A DESIGNATED STOCKPILING AREA AND USED DURING SITE RESTORATION, IF POSSIBLE.
- FOLLOWING COMPLETION OF THE CONSTRUCTION ACTIVITIES DISTURBED AREAS TO BE GRADED TO MATCH PRECONSTRUCTION CONDITION, WHERE POSSIBLE. IF REQUIRED, UP TO 15 CM OF CONTAMINANT-FREE AND WEED-FREE TOPSOIL TO BE APPLIED TO THE DISTURBED AREA PRIOR TO APPLYING THE SEED MIX.
- ANY COMPACTED SOILS SHOULD BE DECOMPACTED BY SCARIFICATION OR A SIMILAR APPROVED METHOD PRIOR TO PLANTING.
- UPON COMPLETION OF THE CONSTRUCTION ACTIVITIES, EROSION AND SEDIMENT CONTROL MEASURES TO BE MAINTAINED UNTIL SITE RESTORATION ACTIVITIES ARE COMPLETED AND DISTURBED AREAS ARE NO LONGER SUSCEPTIBLE TO EROSION AND SILTATION. EXPOSED/DISTURBED SOILS SHOULD BE STABILIZED AND RE-VEGETATED USING A NATIVE SEED MIX WITH AN ANNUAL NURSE CROP, SUCH AS ANNUAL RYEGRASS (*LOLIUM MULTIFLORUM*).

#### REPLANTING AREAS

- SUITABLE SPECIES FOR PLANTING IN THE REPLANTING AREAS ARE PROVIDED WITHIN THE ACCOMPANYING REPLANTING TABLE.
- STOCK AND SEED TO BE OBTAINED FROM A REPUTABLE NATIVE PLANTS NURSERY. THE SCIENTIFIC SPECIES NAME SHOULD BE REFERENCED TO ENSURE THAT NATIVE PLANT STOCK IS BEING OBTAINED (MANY PLANTS HAVE NATIVE AND NON-NATIVE SPECIES WHICH SHARE A COMMON NAME).
- PLANTINGS SHOULD BE DONE BY HAND TO REDUCE MECHANICAL COMPACTION OF SOILS AND DAMAGE TO EXISTING VEGETATION. HYDRO SEEDING IS ACCEPTABLE FOR GROUND COVER. PLANTING SHOULD BE PERFORMED BY A QUALIFIED AND KNOWLEDGEABLE LANDSCAPER TO ENSURE PLANTINGS ARE SPACED APPROPRIATELY AND PLACED IN SUITABLE SUN EXPOSURES AND MOISTURE REGIMES.
- PLANTING TO BE DONE WITHIN THE GROWING SEASON AS SOON AS THE CONSTRUCTION HAS FINISHED. SPRING PLANTING AND SEEDING IS RECOMMENDED. FALL PLANTINGS ARE SUITABLE FOR THESE SPECIES AND SHOULD PROVE SUCCESSFUL, PROVIDED HEALTHY STOCK IS USED. PLANTING FOLLOWS RECOMMENDATIONS FOR INDIVIDUAL SPECIES, AND PLANTS RECEIVE SUFFICIENT WATER PRIOR TO THE WINTER MONTHS.
- A MONITORING PLAN TO BE IMPLEMENTED TO MANAGE REGENERATION OF INVASIVE SPECIES AND TO CONFIRM THAT THE RESTORATION EFFORTS HAVE BEEN SUCCESSFUL. SUPPLEMENTARY PLANTINGS SHOULD BE COMPLETED IF SURVIVAL RATES ARE BELOW 50%.
- A MINIMUM OF 25% POST-CONSTRUCTION FOREST COVER SHOULD REMAIN ON THE SITE. IT IS UNDERSTOOD THAT MINOR CHANGES TO THE PLAN MAY BE NECESSARY BASED ON FINAL SITE CONDITIONS AND GRADING, HOWEVER, IF REQUIRED, ANY MAJOR CHANGES TO BE REVIEWED AND APPROVED BY RELEVANT REGULATING AGENCIES PRIOR TO BEING IMPLEMENTED.



1	FEB 16/21	FIRST SUBMISSION	SJC	SJC
0	FEB 8/21	PRELIMINARY SUBMISSION	SJC	SJC
No.	DATE	DESCRIPTION	BY	APPD
REVISION / ISSUE				
517 10th Street, Hanover, Ontario N4N 1R4 Telephone: (519) 506-5959 www.cobideeng.com				
Title: MIRAMICHI SHORES PHASE 4 TOWN OF SAUGEEN SHORES, ONT.				
Client: MIRAMICHI SHORES LAND DEVELOPMENT LTD.				
Design:	TLB	Scale:	1:1000	
Drawn:	JAF	Approved:		
Checked:	SJC			
Date:	FEB 2021		Design Engineer	
DRAWING No.		00104-TP1		