401-417 MARTHA STREET, BURLINGTON

RESIDENTIAL REDEVELOPMENT

SCOPED ENVIRONMENTAL IMPACT ASSESSMENT

2413350 Ontario Inc. on behalf of Landform Development Group Inc.



SEPTEMBER 2020

MYLER ECOLOGICAL CONSULTING

Introduction

Myler Ecological Consulting was retained by 2413350 Ontario Inc. on behalf of Landform Development Group to prepare an Environmental Impact Assessment (EIA) for the proposed residential redevelopment of the site comprising the six properties at 401 – 417 Martha Street in downtown Burlington, Ontario (the site).

Despite the otherwise entirely built character of the downtown location, a remnant natural feature exists within the eastern edge of the site as a segment of the open channel of Lower Rambo Creek and its banks. The Lower Rambo Creek natural feature triggered the Scoped EIA requirement at the second Pre-Consultation that was held for the project on 08 April 2020.

Before contacting the City, Region and Conservation Halton (CH) to determine a Scoped EIA Terms of Reference (ToR), Myler attended the site and the Lower Rambo Creek corridor from Lakeshore Road to James Street to conduct a preliminary reconnaissance of the watercourse and riparian area. Myler also reviewed existing information including CH regulation mapping, policies and schedules of the City of Burlington Official Plan (OP) and the Halton Region OP, and mapping and reports (notably the 2019 Dillon EIA) of the City of Burlington's Downtown Mobility Hub Study.

During consultation to establish a Scoped EIA ToR (attached), Region staff confirmed the relevance of the 2019 Dillon EIA in terms of existing information and guidance and recommendations for individual EIAs for planned redevelopment within the Downtown Hub study area, which includes the site. This Scoped EIA for 401-417 Martha Street cites the 2019 Dillon EIA where applicable and has addressed each of the screening data gaps and potential impacts that was identified in the Dillon report.

Myler undertook observations at the site on the following dates:

- 10 & 21 April 2020 – reconnaissance and joint visit with project Arborist;
- 26 & 30 May 2020 – tree and woodland observations;
- 12 July 2020 – follow-up fisheries / fish habitat observations;
- 16 & 17 July 2020 – evening bat detection.

Myler's observations were used to supplement existing information and to address recommendations in the Dillon EIA with site-specific information.

Existing Conditions and Constraints Analysis

Site Characteristics

The site comprises six existing single residential lots on the east side of Martha Street, with a combined total area of approximately 0.32 hectares (0.79 acres). Dwellings remain on five of the lots and are currently occupied by tenants. The northernmost dwelling was previously removed. Unlike the surrounding developments and the raised Waterfront Trail, the rear yards within the six lots appear not to have been filled to the water's edge, so the Lower Rambo Creek's western bank is low across the entire site.

The manicured rear yards extend from the rear of the dwellings to the creek bank. Their current condition was observed to range from tidy to weedy, owing to the current range of attention to landscaping by the existing tenants of the respective dwellings.

The rear yards formerly contained a mix of non-native and native amenity shade trees, some of which were planted specimens and others likely so-called "volunteers" that were naturally-dispersed seedlings that were left to grow and contribute to the rear yard amenity space. Among these, a single line of trees occurred along the eastern limit of the rear yards, above the creek bank. Removal of rear yard trees was conducted at the site in 2018, prior to the enactment of the City of Burlington Private Tree By-law in 2020 and prior to the Lower Rambo Creek corridor being recommended as Significant Woodland and part of the Regional Natural Heritage System (NHS) in Dillon's 2019 EIA and subsequently in SGL's June 2020 recommended modified schedules to the Adopted Official Plan.

Several trees were not removed, including three Ash killed by Emerald Ash Borer and one Norway Maple, to avoid the disruption of their removal on the tenant's ongoing use of the property as a manicured garden and amenity space. The three large dead Ash and the Norway Maple are recommended for removal in the updated Arborist Report (Shayne Plowman, 2020).

Myler observed no sign of intrusion within or disruption of the watercourse and its banks within the site.

Representative photos of the site and adjacent Lower Rambo Creek features are attached.

Lower Rambo Creek

Anthropogenic History and Physical Characteristics

Lower Rambo Creek was created when the Hager-Rambo Diversion Channel flood diversion project was completed in 1976. What remained of Rambo Creek within Downtown Burlington became the "Lower" Rambo Creek as it was disconnected from its upper reaches and was left with a small urban drainage area.

The 2019 Dillon EIA reported that a substantial portion of the flow in Lower Rambo Creek is from storm sewers. Lower Rambo Creek upstream of the site is either enclosed or is very narrowly channelized and functions essentially as a storm sewer surrounded by parts of downtown Burlington.

Culvert crossings are located immediately upstream of the site beneath the Waterfront Trail and beneath Martha Street. The open channel upstream of the Waterfront Trail is confined by rip-rap lined banks and by a vertical concrete retaining wall. At James Street the channel is enclosed in an underground storm sewer.

The open reach of Lower Rambo Creek downstream of the site extends to Lake Ontario, a distance of approximately 400 metres, with a culvert crossing beneath Lakeshore Road. Much of the Lower Rambo Creek corridor along the open reach at and downstream of the site was narrowed by the historic deposition of fill associated with the construction of the existing mix of multi-storey residential buildings that back onto the creek. In some places the toe of the fill slope has been armoured with gabion baskets or poured concrete retaining walls, behind which fill was placed. In other places the fill is neither contained nor armoured and its anthropogenic origin is evident in materials visible in the generally steep banks and in the substrates of the creek. Brick and concrete rubble and pieces of scrap metal are evident within

those banks. Where the creek bed isn't scoured down to shale bedrock, substrates include broken glass and ceramics, brick and concrete rubble, and scrap steel/iron along with finely broken weathered native shale.

Flow and water level within Lower Rambo Creek were observed by Myler to be generally very low, even during the spring season. Aside from a few shallow pools, it was generally possible to walk up the bed of Lower Rambo Creek in low boots without getting wet feet. Observations following a rainfall event indicated very flashy flow characterized by an apparently short-lived increase of flow volume/velocity and a rise in water level followed by a rapid return to very low flow and water level.

Riparian Conditions and Wildlife Habitat

Beyond the built and manicured features at the rear of the various residential properties along Lower Rambo Creek, the naturally vegetated riparian area is limited to a very narrow strip of trees and shrubs, mostly one or two trees wide. Much of the riparian vegetation is non-native or "exotic" species, many of which are undesirable invasive species, including the Norway Maple which Dillon reported as the dominant tree species. The narrowness and poor floristic quality of the riparian corridor provides very limited opportunities for wildlife. The Dillon EIA concluded "Due to the surrounding urbanized area and the disturbed nature of the Study Area, the creek corridor (including the woodland) provides limited habitat function for urban tolerant flora and fauna". The Dillon EIA reported only common, urban tolerant bird species observed during the breeding bird survey and that "no incidental wildlife species were observed", including no amphibians, reptiles or mammals. Only 10 bird species were observed, of which three were simple "flyovers" that were observed above the site but not interacting with site features and habitat. Dillon's results and general conclusions regarding the limited wildlife habitat function and corresponding low species diversity are consistent with the habitat characteristics observed by Myler and are considered to be accurate.

Aquatic / Fish Habitat and Fisheries

Regarding aquatic habitat, the 2019 Dillon EIA confirmed that there is no established benthic invertebrate monitoring station in Lower Rambo Creek. It is reasonable to assume that Lower Rambo Creek's benthic invertebrate community is of low diversity and abundance and characterized by only very tolerant species due to poor aquatic habitat conditions. These include the storm sewer origin of much of the creek's flow, the extensive enclosed reaches, the extremely narrow riparian corridor, and unsuitable streambed substrate conditions of scoured bedrock, weathered shale and anthropogenic rubble.

Dillon did not undertake fish collections and reported no visual observations of fish within Lower Rambo Creek in the 2019 Dillon EIA. Dillon instead cited CH fish collection records and provided a list of ten fish species reported in Lower Rambo Creek. Two CH fish collection stations are mapped in the Dillon report, including one downstream of Lakeshore Road near the mouth of Lower Rambo Creek, and one upstream of the site in the channelized reach just downstream of the enclosure at James Street. Dillon did not specify at which station each of the ten species were captured, but each of those fish species is known to be associated with Lake Ontario and none are species that would be resident within Lower Rambo Creek

at or near the site, due to aquatic habitat limitations including insufficient depth, cover and food production within the creek.

Dillon did not report which fish species, if any, were captured by CH upstream of the site at James Street. The list of reported species appears to be consistent with conditions at the CH sampling station downstream of Lakeshore Road, but not those of the channelized reach upstream at James Street. Additionally, fish migration barriers occur between Lakeshore Road and James Street. Upstream of the site and the Waterfront Trail, a steep gradient rubbly channel leads up to the concrete sill of the Martha Street culvert and appears to present at least a partial barrier to upstream fish migration. Additionally, a large woody debris jam downstream of the site has blocked the channel, creating a weir of wood and accumulated bedload materials that is a barrier to upstream fish migration.

Myler's observations of Lower Rambo Creek, extending from Lakeshore Road upstream to James Street, included sightings of only a very few individual Threespine Stickleback, a Lake Ontario species, in the creek's clear water downstream of the debris jam. No fish were observed upstream of the debris jam and past the site to the James Street enclosure, despite clear and shallow water conditions and sparse instream cover that favoured visual observations of fish. Myler's observations revealed a limited upstream extent of fish presences and, where fish were observed, apparently very sparse fish occurrence of only a single species in Lower Rambo Creek upstream of Lakeshore Road.

Dillon cited CH's conclusion that Lower Rambo Creek has "poor aquatic ecosystem health". Dillon described Lower Rambo Creek as "direct fish habitat", but uncertainty in the reported extent of fish species occurrence in the CH collections and Myler's observations of fish absence upstream of the debris jam, and very sparse fish presence below, suggest that the fish habitat in Lower Rambo Creek is indeed poor and that direct fish habitat is marginal and is limited to lower reaches downstream of the site.

Significant Wildlife Habitat Screening

The Significant Wildlife Habitat (SWH) screening in the Dillon EIA concluded no confirmed SWH associated with Lower Rambo Creek, but speculated on unconfirmed or "candidate" SWH for non-SAR bats and for woodland-breeding amphibians in Lower Rambo Creek's narrow riparian corridor. Dillon's recommendation that subsequent site-specific EIAs explore these identified candidate SWH types was included by Myler in the ToR and is addressed in this scoped EIA.

Non-Species At Risk Bat Maternal Roost SWH

Myler observed no trees on site that would provide suitable maternal roost habitat for a colony of non-Species At Risk (non-SAR) bat species. Descriptions in the 2017 Arborist Report of the trees that were removed from the site were not indicative of candidate maternal roost habitat, as those trees were not snags, were generally in good condition and lacked cavities. None of the four remaining trees next to the watercourse possesses cavities or loose bark suitable as hiding places for roosting bats and their young. The dead Ash have only a few very narrow cracks in the bark and did not exhibit separation of the bark from the underlying trunk that could provide shelter for roosting bats. Non-SAR bats may roost within

parts of the five remaining dwellings on the site, but the Ecoregion 7e SWH Criteria Schedules specify that buildings do not qualify as SWH.

Myler used a Wildlife Acoustics Echo Meter Touch 2 ultrasonic microphone and associated identification software to conduct real-time ultrasonic acoustic surveys at and near the site on 16 & 17 July 2020 on roving surveys from the Waterfront Trail down to Lakeshore Road. A total of 39 bat calls were identified, of which the majority (25 calls) were Big Brown Bat, a species that commonly roosts in buildings. Hoary Bat calls were second most abundant (10 calls), followed by two calls each of Silver-Haired Bat and Red Bat. Most of the calls were recorded beneath lampposts in the adjacent municipal parking lot and near external lights of the Martha Terrace 12-storey apartment building. A couple calls were picked up beneath a lamppost on the Waterfront Trail. No bat calls were recorded on site near the watercourse or near the four remaining trees.

Myler's observations of the site's trees and of evening bat species presence indicate that although some non-SAR bat species occur in the vicinity of the site, there is no evidence that maternal roosts occur on site and therefore no non-SAR bat maternal roost SWH occurs on site.

The occurrence of relatively few calls does not suggest that numbers of bats meeting or exceeding the SWH threshold of >10 Big Brown Bat or >5 Silver-Haired Bat are roosting along Lower Rambo Creek. Accordingly, it is doubtful that off-site portions of Lower Rambo Creek contain non-SAR bat maternal roost SWH. This is not surprising given the extreme narrowness of the riparian corridor and the limited extent of natural foraging habitat. Myler's observations indicated that the few bats in the neighbourhood were focusing their foraging efforts on artificial lights and not over natural habitat.

Woodland-Breeding Amphibian SWH

Ecoregion 7e SWH Criteria Schedules describe woodland-breeding amphibian SWH as "wetland, pond or woodland pool (including vernal pools) >500m^2". The Dillon EIA states there is no wetland within the study area, and Myler's review of existing wetland mapping and Myler's field observations likewise confirmed an absence of wetland along Lower Rambo Creek. Additionally, there are no ponds or woodland pools within the extremely narrow riparian corridor. The Lower Rambo Creek watercourse cannot be described as wetland, pond or woodland pool, and is instead a flashy stream.

Given the immediately obvious lack of suitable aquatic amphibian breeding habitat and a clear lack of substantial area of suitable adult amphibian habitat, it is therefore puzzling that Dillon identified candidate woodland-breeding amphibian SWH as an information gap.

Additionally, Myler observed no frogs, toads, tadpoles or salamanders within the Lower Rambo Creek corridor over seven site visits in spring/summer 2020 and Dillon likewise reported no observations of amphibians.

There is no woodland-breeding amphibian SWH at the site, or anywhere within the Lower Rambo Creek corridor from Lakeshore Road to James Street.

Species at Risk Screening

The Dillon EIA discussed Butternut, Chimney Swift and Endangered Bats as potential Species at Risk (SAR) at Lower Rambo Creek. Each of these species is discussed below, in addition to screening for occurrence of aquatic SAR in Lower Rambo Creek.

Aquatic SAR

DFO online Aquatic SAR mapping shows no occurrence or critical habitat of aquatic SAR (i.e., fish or freshwater mussels) within Lower Rambo Creek.

Butternut

The Dillon EIA reported that no specimens of the Endangered Butternut tree were observed within the Downtown Mobility Hub study area. Myler likewise observed no Butternut specimens at the site or anywhere within the Lower Rambo Creek corridor from Lakeshore Road to James Street.

Chimney Swift

The Dillon EIA cited MECP confirmation of occurrence in the Downtown Mobility Hub study area of the Threatened bird species Chimney Swift. Dillon observed no Chimney Swift habitat aside from the locations of known roosts provided by CH, none of which coincide with the site. Myler observed that none of the existing dwellings possess a chimney that is potentially suitable (i.e., large enough) for use by Chimney Swift. Chimney Swift occurs neither on the site nor within the Lower Rambo Creek natural feature.

SAR Bats

Dillon did not conduct snag tree surveys to identify potential bat roosting habitat nor acoustic bat surveys to confirm presence/absence of SAR bat species by their calls. Nevertheless, Dillon cited the unconfirmed potential for SAR bat roosting habitat as a reason for including the Lower Rambo Creek woodland in the Regional NHS.

As discussed above for non-SAR bats, Myler's observations confirmed a lack of maternal roost habitat within on-site trees and identified only non-SAR bats at/near the Lower Rambo Creek corridor through real-time acoustic observations.

The narrow Rambo Creek corridor offers only very limited potential area of bat foraging habitat. The creek's poor benthic invertebrate habitat is unlikely to produce substantial flying insect forage for bats. The strip of trees along Lower Rambo Creek is dominated by the tight-barked non-native Norway Maple, which offers few if any cavities and crevices and therefore very little potential maternal roost habitat. The Norway Maple and other weedy non-native species of the corridor such as Tree of Heaven and Japanese Knotweed do not support a high diversity of insects and are therefore unlikely to contribute substantially to the insect forage base required to sustain SAR or non-SAR bat maternal roosts. The surrounding built

environment contributes little for bats, except for artificial lights that may attract and concentrate a few flying insects to sustain the observed minor occurrence of non-SAR bats.

Dillon's conclusion of potential SAR bat presence was unsupported by a technical analysis of habitat. Myler's observations did not indicate the presence of SAR bats and maternal roost habitat.

Significant Woodland

During consultation with Halton Region to determine the Scoped EIA ToR, the Region's correspondence included mention of the tree removal that was completed at the site and indicated that "woodlands have been removed on the subject lands".

It is noteworthy that Dillon's assessment of the Lower Rambo Creek riparian vegetation community identified it as Fresh-Moist Norway Maple Lowland Deciduous Forest (ELC code FODM7-8). It is unfortunate that the non-native and invasive Norway Maple is the dominant tree species within the Lower Rambo Creek riparian corridor. The City of Burlington no longer allows the planting of Norway Maple on City streets or in new developments. CH lists Norway Maple as an invasive species, notes that its effect on the environment includes dominating the forest canopy, and lists it among invasive species that are not suitable for planting anywhere in Halton. Norway Maple has poor value for native insects and wildlife and it suppresses the growth of other plants in ground and shrub layers that could otherwise stabilize soils and provide a measure of floristic and habitat diversity. The Dillon EIA describes the herbaceous layer beneath the Lower Rambo Creek Norway Maples as: "dominated by invasive species such as Japanese Knotweed, Common Buckthorn and Garlic Mustard" and recommended removal of those invasive species without acknowledging that the Norway Maple is a similarly undesirable invasive species that detracts from the quality and function of the riparian area.

Additionally, the treed riparian area on each bank of Lower Rambo Creek is so narrow, at generally one or two trees width, that the wildlife habitat functions associated with a true woodland could not be realized. The narrow feature is instead like a hedgerow and can only offer habitat for urban-tolerant and edge-tolerant wildlife species.

The quality of the Lower Rambo Creek riparian vegetation community is clearly poor, from ground layer to canopy, and would therefore not seem to support a designation of Significant Woodland. However, the City of Burlington Official Plan (OP) and the Halton Region Offical Plan (ROP) define Significant Woodland without direct reference to floristic quality, simply as:

Significant Woodland - A Woodland 0.5 ha or larger, determined through a *Watershed* Management Plan, a Sub-*watershed* Study or a site-specific Environmental Impact Assessment to meet one or more of the four following criteria: OPA 55

(1) the Woodland contains forest patches over 99 years old;

(2) the patch size of the Woodland is 2 ha or larger if it is located in the Urban Planning Area or 4 ha or larger if it is located outside the Urban Planning Area but below the Escarpment Brow; or 10 ha or larger if it is located outside the Urban Planning Area but above the Escarpment Brow;

(3) the Woodland has an interior core area of 4 ha or larger, measured 100 m from the edge; or

(4) the Woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150 m of the Escarpment brow. ***D36**

The treed riparian corridor of Lower Rambo Creek, reported in the Dillon EIA at 0.72 hectares total area, satisfies the minimum size threshold of 0.5 hectares, but satisfies none of the listed Significant Woodland age/size criteria #1-3. The sole criterion that qualifies the treed riparian corridor as Significant Woodland is #4, proximity to a "major creek". A major creek is defined in the ROP as a watercourse within Conservation Authority Regulation Limits. Although the reach of Lower Rambo Creek at the site is not regulated, the regulation limit extends a short distance upstream of Lakeshore Road, to a point approximately 120 metres downstream of the site. As such, the southernmost part of the riparian treed corridor occurs within the "major creek" designation and it was therefore interpreted by Dillon that the whole of the treed riparian corridor satisfies criterion #4.

The City of Burlington OP and the ROP define Woodland as:

Woodland - Land with at least: 1000 trees of any size per ha, or 750 trees over 5 cm in diameter per ha, or 500 trees over 12 cm in diameter per ha, or 250 trees over 20 cm in diameter per ha but does not include an active cultivated fruit or nut orchard, a Christmas tree plantation, a plantation certified by the Region, a tree nursery, or a narrow linear strip of trees that defines a laneway or a boundary between fields. For the purposes of this definition, all measurements of the trees are to be taken at 1.37 m from the ground and trees in regenerating fields must have achieved that height to be counted. OPA 55

The Woodland definition is based primarily on tree density that is described according to four size classes of trees. The definition lists several specific anthropogenic treed features that are excluded.

In considering the removal of trees at the site in the context of Woodland and/or Significant Woodland removal and impact, it seemed counterintuitive that a narrow single line of well-spaced trees situated in the landscaped residential rear yards adjacent to the watercourse would necessarily be considered Woodland. A density calculation was performed with the assistance of SRM Architects Inc., using canopy dimensions of live trees provided in the 2017 Arborist Report, and the result is depicted on the attached SRM Figure A1.2. The total canopy coverage was plotted and measured representing the live trees that were situated along the watercourse in 2017 and excluding dead trees and the anthropogenic

hedgerow/boundary amenity trees situated on boundaries between the rear yards. It was determined that 14 live trees (including 13 trees that were removed and the one remaining Norway Maple) occurred along the watercourse prior to tree removal and possessed a total canopy area of approximately 0.11 hectares. This corresponds to a calculated tree density prior to tree removal of approximately 127 trees/hectare, which is only about half of the minimum density criterion in the Woodland definition. The result of the density analysis indicates that the tree removal on the site was not, in fact, removal of Woodland (or Significant Woodland). Additionally, of the 14 trees, only one is a Norway Maple characteristic of the FODM7-8 Norway Maple Deciduous Forest, 10 were other exotic invasive species (2 Tree of Heaven, 2 White Willow, 1 Crack Willow and 5 Manitoba Maple) and 3 were native Black Walnut.

It could be argued, however, that while the on-site group/line of trees was not of sufficient density to be designated Woodland, and was not characteristic of the Norway Maple Deciduous Forest vegetation community, perhaps it was an uncharacteristic part of a larger treed area that, on the whole, meets the Woodland density criteria. Accordingly, on 30 May 2020, Myler conducted a riparian tree count extending from Lakeshore Road to the Waterfront Trail, encompassing the entire extent of the Significant Woodland that was mapped in the Dillon EIA. All live, naturally occurring trees were included in the count. The thirteen live trees that were removed in 2018 from the rear of the site bordering on the watercourse were added to the count to provide an estimate of total density of the treed riparian corridor prior to the tree removal. Planted landscape amenity trees in adjacent manicured areas were excluded. The count was divided among the tree size classes specified in the Woodland definition. A total of 597 trees was counted and adding the 13 trees previously removed from the site brought the total to 610 trees. The count was divided among the definitive size classes, with size class totals and corresponding densities calculated based on the reported 0.72 hectares total area as follows:

- 610 trees of any size – 847 trees/ha or ~85% of required density
- 321 trees over 5 cm diameter – 445 trees/ha or ~59% of required density
- 197 trees over 12 cm diameter – 273 trees/ha or ~55% of required density
- 115 trees over 20 cm diameter – 160 trees/ha or ~64% of required density

The results of the tree count demonstrate that the treed riparian area of Lower Rambo Creek between Lakeshore Road and the Waterfront Trail does not satisfy the density criteria of the Burlington OP and ROP Woodland definition. As such, despite that Lower Rambo Creek has generally treed banks, the trees do not constitute a Woodland, and therefore cannot be Significant Woodland.

Assessment and conservation of trees and other natural vegetation on the banks of Lower Rambo Creek would more appropriately be considered in the context of a fisheries/watercourse buffer and not as a Significant Woodland.

Constraints Summary

Natural Hazards

Although the CH regulated area does not extend upstream to the site, the floodplain and stable top of slope hazard limits were staked and surveyed in 2016 by the proponent, the City and CH. The staked limits have been used to guide design of the residential redevelopment to avoid the flood and stable slope limits

and to provide a 6 metre setback between the closer of the two and built elements of the development. The 6 metre setback conforms with CH policy regarding natural hazard setback width.

Natural Heritage

Review of the City OP revealed no natural heritage, "Watercourse" or "Greenlands" features mapped at or near the site or associated with Lower Rambo Creek on Schedule B (Comprehensive Land Use Plan – Urban Planning Area). "Watercourse" is the sole natural heritage designation applied to Lower Rambo Creek on Schedule E (Downtown Mixed Use Centre Land Use Plan).

Review of the ROP revealed no mapped NHS at or near the site or associated with Lower Rambo Creek on Map 1 – Regional Structure or on Map 1G – Key Features Within the Greenbelt and Regional Natural Heritage Systems.

Screening for potential SAR and SWH natural heritage constraints initiated in the Dillon EIA and completed by Myler confirmed no such constraints at the site.

Myler's technical analysis of the treed riparian corridor as Woodland and Significant Woodland according to definitions of the City OP and ROP confirmed that it is neither Woodland nor Significant Woodland.

Accordingly, the natural heritage constraint at the site is the Watercourse / Fish Habitat of Lower Rambo Creek. The treed and otherwise vegetated riparian area along Lower Rambo Creek is not a distinct designated natural heritage feature. However, between Lakeshore Road and James Street the treed and vegetated area generally occurs within the bounds of as-yet-undefined watercourse / fish habitat buffers and in many places on steep slopes that could not be developed.

Redevelopment Plan

The Official Plan amendment and rezoning will permit the redevelopment of the subject site for an 11-storey (plus mezzanine) residential apartment building with a total of 130 residential units, including four at-grade units with direct access to Martha Street (the "proposal")(see attached SRM Site Plan Figure A1.1). Four levels of underground parking will be constructed. The redevelopment will be serviced by existing water and sanitary sewage systems. Downstream of on-site quantity and quality controls, stormwater will be discharged to the existing storm sewer, which outlets to Lower Rambo Creek at Lakeshore Road.

Consideration of Key Design Alternatives

The design process initially considered channelization of Lower Rambo Creek as an alternative to avoidance of the existing extent of the watercourse. The proponent's consultation with staff of the City of Burlington Engineering Department indicated support for channelization as a viable option. Nearby reaches of Lower Rambo Creek have been artificially channelized. However, the less intrusive alternative of watercourse avoidance was selected, and the Site Plan shows the building set close to Martha Street such that it and its ground-level hardscape and amenity landscape features avoid Lower Rambo Creek and

do not intrude within the surveyed limits of stable slope and floodplain plus a 6 metre setback. The selected Site Plan thereby affords space for the creation of an ecological buffer along Lower Rambo Creek.

Hydrogeological Assessment of Dewatering Requirements

A Hydrogeological Assessment was prepared in 2018 by Wood Environment & Infrastructure Solutions (Wood) to address the excavation and dewatering required to construct the building and the underground parking. The Wood report described low permeability competent shale bedrock underlying Lower Rambo Creek and the site, for which it was assumed that excavation "will require the use of heavy equipment outfitted with rock teeth and hoe-ramming equipment" and that the sound and stable bedrock could be excavated vertically, without sloping.

No confined aquifer was found within the proposed depth of the excavation. Dewatering during construction was determined to be limited to potential seepage through weathered bedrock near the top of the excavation face and with direct capture of precipitation. To mitigate reduction in Lower Rambo Creek flow, Wood recommended release of construction period dewatering discharge to the watercourse, subject to water quality.

Wood's analysis of groundwater and surface water quality indicated that surface water in Lower Rambo Creek exceeds provincial guidelines for Phosphorus and the local groundwater exceeds provincial guidelines for Phosphorus, Total Suspended Solids (TSS) and several metals. The metals exceedences, which ranged from very minor to an order of magnitude above guidelines, were considered by Wood to be associated with the elevated TSS (or turbidity) of the collected groundwater, which is considered to be an artefact of the sample collection. Accordingly, Wood concluded that treatment measures to reduce TSS prior to discharge of water collected in the excavation would have the potential to reduce metals concentrations below the guideline thresholds.

To address potential dewatering requirements after construction, Wood recommended watertight structure design to remove the need for permanent dewatering, or lining of the excavation walls closest to Lower Rambo Creek with low permeability material to substantially limit and reduce subsurface flow from the watercourse to the building's drainage system.

Stormwater Management

A Functional Stormwater Management Report was prepared by Wood in 2020. The Wood report described the provision of on-site quantity control /flow using an underground storage tank situated in the uppermost underground parking level (P1) fitted with an appropriately sized orifice tube. Quality control (i.e., 80% TSS removal) is proposed to be achieved using rooftop and landscaped areas. Wood concluded that the "landscaping areas around the proposed building can also use rainwater as a watering source and provide significant water quality, erosion and water balance benefits". Most of the landscaped area in the Site Plan is located between the building and the adjacent reach of Lower Rambo Creek that will benefit directly from the water quality and water balance measures.

Landscape Plan

A detailed Landscape Plan (GSP Group Drawings L1 and L2, attached) has been prepared to complement the Site Plan with a retaining wall and landscaped amenity space including walkways and gardens between the building and the adjacent surveyed stable slope and flood line, whichever is closest.

Between the amenity space and the surveyed edge of the watercourse, the Landscape Plan specifies creation of an ecological buffer in the riparian area. Native species vegetation will be established within the buffer through a combination of application of seed mixes and planting of shrubs and trees.

The buffer plantings will provide a substantial local improvement in the diversity and wildlife quality of riparian vegetation that is otherwise dominated by exotic invasive species. Plantings will include 12 native trees of four species (Bur Oak, Red Oak, Ironwood and Chokecherry) and 816 native shrubs of four species (Red Osier and Gray Dogwood, Ninebark and Elderberry) set within areas seeded with native species grasses, sedges and forbs contained in the specified "Retention Pond or Storm Pond Slope Mix" and "Native Upland Forage & Meadow Mix".

Buffer width is variable, being a transitional area between the slightly irregular watercourse edge and the relatively linear retaining wall, walkway and gardens. The attached Landscape Plan provides spot measurements of buffer width that indicate that the proposed buffer is generally in the range of 5 to 7 metres width and ranges to approximately 12.1 metres at the widest point and approximately 2.9 metres at a single narrow point.

Impact Assessment

The 2019 Dillon Downtown Mobility Hub Scoped EIA included an analysis of potential direct and indirect impacts of anticipated development in the Downtown Mobility Hub study area. The identified potential impacts were recommended to be addressed in subsequent site-specific EIAs, and each is addressed in this Scoped EIA, below.

Tree and Vegetation Removal – Direct Impact

Dillon cited the "marginal wildlife habitat" and "minimal ecological function" of the intensification and redevelopment area of the Downtown Mobility Hub and concluded that "potential removal of select isolated trees and other vegetation (with exception to the woodland) may result in minimal habitat loss, minimal reduction of natural cover in the area, and minimal reduction in ecological function".

The density analysis of trees that were removed at the site and of the trees comprising the Lower Rambo Creek riparian corridor confirmed that no woodland was removed at the site. The isolated row of rear yard trees that was removed did not represent a loss of woodland or of substantial wildlife habitat, particularly as they occurred in a manicured rear yard setting that lacked functional woodland features of depth/extent and natural ground, shrub and understorey layers.

The impact of tree and vegetation removal at the site in the area adjacent to Lower Rambo Creek will be more than offset by implementation of the ecological buffer component of the Landscape Plan. Mostly non-native trees and plants will be replaced with a diverse array of native trees, shrubs and herbaceous

plants with high wildlife value to create a highly functional segment of the riparian corridor. There will be a substantial net improvement in riparian vegetation at the site, representing a positive effect of redevelopment and avoidance of net impact.

Diversion of Surface Water Flows – Direct Impact

The Dillon EIA cites potential impacts of increased stormwater discharge on flooding and erosion along Lower Rambo Creek. In evaluation of alternatives, the proponent abandoned the idea of channelizing the adjacent reach of Lower Rambo Creek, which could have presented a more complicated situation for conveyance, flooding and erosion.

Instead they developed a plan to avoid channel alterations and to respect and provide a structural setback from the surveyed flood limit. The Lower Rambo Creek banks will be retained at the site in their natural form, in contrast to the steep filled banks and the gabion, concrete and rip-rap hardened banks that occur along much of the watercourse.

The proposed Landscape Plan complements the plan to avoid intrusion within the watercourse and floodplain by contributing the establishment of an ecological buffer of dense shrub and herbaceous plantings and associated trees within the flood limit that will stabilize soils and is comprised of species that can withstand brief periods of flood.

Additionally, the proponent's SWM plan includes quantity control measures that will avoid exacerbating flashy event flows within Lower Rambo Creek.

Erosion and Sedimentation of Natural Features – Direct Impact

Erosion and sedimentation controls are proposed to control surface runoff from the site during construction. Notably, the dewatering mitigation measures outlined in Wood's Hydrogeological Assessment will mitigate potential impacts of dewatering quantity and quality during construction.

Landscaped amenity and ecological buffer areas between the building and the watercourse will promote infiltration of precipitation and runoff from walkways and other hard surfaces and will stabilize soils against erosion.

Loss of and/or Disturbance to Wildlife – Direct Impact

Dillon listed potential wildlife impacts as including:

- Direct "displacement, injury, or death resulting from contact with heavy equipment during clearing and grading activities";
- Disturbance due to noise, "particularly during breeding periods"; and
- "Loss of general wildlife habitat."

The watercourse represents the only wildlife habitat on site, and there will be no intrusion into the watercourse during construction and no loss of general wildlife habitat.

Vegetation clearing and grading will occur within the residential rear yards where encounters with wildlife are unlikely. As some residual tree removal will be required, including the sole live Norway Maple and three dead Ash trees, incidental wildlife impacts will be avoided through seasonal timing of site preparation outside of the April – August bird nesting season, which will also avoid the summer maternal roost season of bats that could incidentally occur on site. Alternatively, observations by an experienced biologist could confirm presence/absence of nesting birds and roosting bats prior to tree removal. To address the potential occurrence of roosting common (non-SAR) bat species within the existing dwellings, demolition should be scheduled to avoid the summer maternal roost season. Ideally the dwellings would be vacated, and heat/utilities disconnected well prior to fall/winter demolition to avoid incidental occurrence of Big Brown Bat that could be attracted to artificially warmed attics, basements, or cavities within exterior walls.

Regarding potential noise impacts, it is worth noting that Dillon reported only urban-tolerant bird species in the study area. There are no shy forest-interior species at Lower Rambo Creek. Construction at the site is unlikely to prevent local bird species from nesting in adjacent areas. Myler's evening bat observations revealed common (non-SAR) bat species that are adapted to and characteristic of urban areas, notably Big Brown Bat and Hoary Bat. Additionally, the hearing range of bats does not include the low frequencies characteristic of mechanized heavy equipment, so there is no expectation of off-site noise impacts on incidental occurrences of roosting bats in riparian trees or within neighbouring buildings.

Anthropogenic Disturbance – Indirect Impact

Dillon cited "noise, light, vibration and human presence" as potential causes of indirect impacts on "the population size and breeding success of local wildlife". However, Dillon concluded that the Downtown Mobility Hub development area is "already disturbed" such that there is no anticipation of negative impact through anthropogenic disturbance. This conclusion is supported by observations of only urban-tolerant wildlife within the study area by Dillon and Myler.

Colonization of Non-native and/or Invasive Species

Dillon noted the dominance of invasive plant species in the creek corridor and Greenlands area, including Japanese Knotweed, Common Buckthorn and Garlic Mustard. Myler observed these and other invasive non-native species at and near the site, not the least of which is the Norway Maple that is the dominant tree species along Lower Rambo Creek. Dillon neglected to acknowledge that Norway Maple is an undesirable non-native species that inhibits the growth of many desirable ground cover and shrub species, resulting in bare exposed soils that can be colonized by aggressive exotic weed species.

Dillon recommended "removal of invasive species paired with planting of native tree and shrub species". Tree removal at the site involved mostly undesirable invasive tree species. Site preparation at the site will remove the remaining non-native grasses, weeds and trees. The ecological buffer described in the Landscape Plan will replace existing rear yard and opportunistic weedy vegetation with native tree, shrub

and herbaceous species. The Landscape Plan shows amenity landscaping with sod and non-native trees, shrubs and plants close to the building and separated from the watercourse by the ecological buffer. As such, the redevelopment will both remove existing invasive species and prevent future colonization by invasive species.

Recommended Mitigation and Restoration

The fundamental mitigation and restoration measures associated with redevelopment of the site involve complete avoidance of intrusion within Lower Rambo Creek, retention of the adjacent reach of Lower Rambo Creek in its existing open form without channelization, and creation of a native species riparian buffer within the stable slope and flood limits adjacent to the creek.

Additional mitigation measures include the erosion and sedimentation controls and the dewatering measures recommended by Wood in the Hydrogeological Assessment and the quantity and quality controls recommended in the SWM Report.

Recommended measures to mitigate impacts on wildlife species that may incidentally occur at the site were mentioned above and can be summarized as:

- Tree and vegetation removal outside of the April – August bird nesting season (*or bird nesting survey by an experienced biologist during nesting season immediately prior to planned removals to confirm no active nests and identify temporary avoidance and temporary buffers for any active nests that are found*).
- Simultaneous avoidance of incidental roosting bats in the few trees remaining on site by timing tree removal to avoid the bird nesting season (*or survey by an experienced biologist during bat roosting season immediately prior to planned removals to confirm no roosting activity and identify temporary avoidance and temporary buffers for any trees that appear to host roosting bats*).
- Demolition of existing dwellings during late fall or winter, outside of the spring and summer bat roosting season and following disconnection of heat/utilities to avoid attraction of Big Brown Bat (in particular) to warmed spaces where they may attempt to overwinter.

The Dillon EIA includes recommended “mitigation and opportunities for enhancement”, including:

- Natural heritage feature buffers;
- Landscaping and planting plan;
- Integrated SWM and Low Impact Design (LID);
- Wildlife Impact Mitigation Plan;
- Erosion and Sediment Control Plan; and
- Environmental Monitoring Plan.

The proposed redevelopment at the site addresses each of these points as appropriate. The Site Plan includes avoidance of the watercourse and provision of a buffer that is generally in the range of 5 to 7 metres width and ranges to approximately 12.1 metres at the widest point and approximately 2.9 metres at a single narrow point, and the planting of which is described by the Landscape Plan.

Wood described detailed erosion and sedimentation controls and dewatering measures to be implemented during construction and described SWM measures that included the LID function of landscaped areas to achieve quality control and to passively promote watering of landscape and buffer vegetation and shallow infiltration.

Environmental monitoring will be a component of erosion and sediment control and dewatering activities to regularly check, maintain and repair the various measures that are implemented. Environmental monitoring will extend to implementation of the Landscape Plan and will address the survival of seeded/planted native species and colonization by invasive species with corrective actions where necessary.

Dillon's recommendations to monitor breeding birds and to conduct amphibian call surveys as part of monitoring are not supported because Dillon's breeding bird survey already confirmed the presence of only common urban-tolerant bird species and neither Dillon nor Myler found any evidence whatsoever of amphibian presence or suitable amphibian breeding habitat.

Dillon's wildlife impact mitigation plan recommendations include the seasonal avoidance of nesting birds mentioned above. Avoidance of light impacts on birds and wildlife within the adjacent Lower Rambo Creek corridor is a design matter that is addressed through the specification of light fixtures on the building exterior and within the landscaped amenity area and pathway that are downward facing and do not cast light towards the creek or onto adjacent properties. Given the marginal character of wildlife habitat, it seems unlikely that wildlife occurrence within the construction area will be a substantial concern, but workers can be instructed to report the occurrence of any wildlife that does not immediately exit work areas to the site supervisor who may then contact an experienced biologist to assess whether specific mitigation is required. Regarding bird strike, it should be noted that the proposed building design includes bird-friendly measures in that it does not include expansive glazed areas that could confuse birds and result in collisions. Planted trees on the watercourse side of the building are set back from the building in a manner that will reduce the likelihood of bird strike. As Dillon noted that the expected magnitude of bird strike impact is very low, additional bird-friendly measures are neither required nor recommended. Finally, the proposed ecological buffer included as part of the Landscape Plan satisfies the Dillon recommendation to create wildlife habitat enhancements in association with development.

Policy Compliance

Natural Hazards

The reach of Lower Rambo Creek adjacent to the site is not within CH Regulated Area and is under the City's jurisdiction. Policy compliance is achieved for the redevelopment through avoidance of intrusion within the surveyed stable slope and flood limits, plus provision of a 6 metre structural setback consistent with CH policy that would apply if the site included Regulated Area.

Regional Official Plan

ROP Section 115.3 identifies the Key Features that comprise the Regional NHS. This Scoped EIS has identified the presence of Fish Habitat in Lower Rambo Creek and through additional screening and

analysis has confirmed the absence of SAR, SWH and Significant Woodland. The redevelopment plan includes avoidance, mitigation and restoration/enhancement measures to retain and protect the identified Fish Habitat natural heritage key feature and to create natural riparian corridor where none previously occurred.

ROP Section 115.4 identifies that Regulated Floodplains are included in the Regional NHS. The site does not contain Regulated Floodplain and is not within CH Regulated Area. However, the flood limit was surveyed with the City and CH and the redevelopment plan includes avoidance and six metre structural setback from the flood limit. Additionally, within the flood limit the redevelopment plan includes a Landscape Plan that specifies a native species ecological buffer to be created in the floodplain/riparian area.

This Scoped EIA has satisfied ROP Section 118.3 that requires identification of Key Features on or near the subject site and demonstration that the proposed redevelopment will result in no negative impacts to the Key Features of the Regional NHS, through the implementation of avoidance, mitigation and enhancement measures.

The analysis provided in this Scoped EIA confirmed that neither the treed area that was removed at the site nor the treed riparian corridor of Lower Rambo Creek satisfy the definition of Woodland in ROP Section 295. Therefore, the treed area along Lower Rambo Creek does not satisfy the Significant Woodland definition in ROP Section 277, because it is not Woodland.

City of Burlington Official Plan

Compliance with City of Burlington OP Part II Section 2.3 is achieved through limiting development (redevelopment in this case) to the lands on site that are environmentally suited for the proposed use. This is achieved through avoidance of and setback from slope and flood natural hazard limits and from the identified fish habitat natural heritage feature.

Compliance with City OP Part III Section 6 (Natural Features and Open Space) is achieved through avoidance, mitigation and enhancement measures in the redevelopment plan that recognize and address applicable elements of Section 6.1 (Principles) namely “the long-term preservation and protection of significant natural features” and that “watercourses with their associated valleys and floodplains provide a source of natural habitat and wildlife corridors and are essential to the movement of storm water run-off”.

Additionally, compliance with City OP Part III Section 6.4 (Watercourses) is achieved by the redevelopment plan that:

- Avoids and provides a setback from the surveyed floodplain limit.
- Includes SWM measures that will not exacerbate flooding.
- Promotes the net gain of fish habitat through avoidance of in-water works and creation of an enhanced riparian fish habitat buffer.
- Avoids development (redevelopment in this case) within the Watercourse designation, the on-site limit of which was surveyed with the City and CH.
- Provides a setback from the stable top of bank and the floodplain limit.

- Includes appropriate zoning of the Watercourse lands and proposed dedication of the Watercourse lands to the City.

Provincial Policy Statement

The proposed redevelopment complies with the PPS (2020) policy of no negative impact on identified natural heritage features and functions through the combined measures of avoidance, mitigation and enhancement contained in the proposal and its Site Plan, Landscape Plan and supporting studies (e.g., SWM, Hydrogeology, Scoped EIA).

Conclusion

The proposed redevelopment avoids, and provides a structural setback from, the greater of surveyed stable slope and flood hazard limits adjacent to the on-site segment of Lower Rambo Creek. Likewise, the proposed redevelopment avoids intrusion within the Lower Rambo Creek watercourse / fish habitat natural heritage feature and will create an ecological buffer planted with native trees, shrubs and herbaceous plants to extend and enhance the riparian corridor adjacent to the watercourse where none previously occurred. The buffer therefore represents a substantial contributions of riparian habitat length, area and quality to the Lower Rambo Creek riparian corridor.

Additional screening for SAR and SWH confirmed that neither occurs at the site. Analysis of tree removal impact on the candidate Significant Woodland confirmed that the treed area at the site and along the Lower Rambo Creek corridor does not satisfy the Woodland and Significant Woodland definitions in the City OP and ROP.

Measures have been identified to mitigate potential impacts on the marginal fish and wildlife habitat on and near the site during construction and post-construction periods. Creation of the ecological buffer will represent a net increase in the quality and extent of wildlife habitat while protecting water quality and fish habitat within Lower Rambo Creek.

Accordingly, the redevelopment will comply with applicable policies of City OP, ROP and the PPS (2020) and is recommended for approval.

Terms of Reference

Myler Ecological Consulting

7 Olive Crescent, Stoney Creek, ON L8G 2T2 | (289)700-3038 | bmyler@cogeco.ca

20 July, 2020

Melissa Morgan
Planning and Building Department
City of Burlington
426 Brant Street
Burlington ON L7R 3Z6

cc: Kyle Plas (City of Burlington), Adam Huycke (Halton Region), Heather Ireland (Halton Region), Emma DeFields (Conservation Halton) and Ola Panczyk (Conservation Halton)

RE: Scoped Environmental Impact Assessment Terms of Reference, Residential Redevelopment at 401-417 Martha St., Burlington ON

Hello Melissa,

Following initial submission of a proposed Scoped Environmental Impact Assessment (Scoped EIA) Terms of Reference (ToR) for proposed residential redevelopment at the site comprised of 401-417 Martha Street in Burlington (the site), consultation with Halton Region (Heather Ireland, Adam Huycke) and Conservation Halton (Emma DeFields and Ola Panczyk) resulted in Heather Ireland identifying additional elements to be considered and included in a revised ToR. I addressed all of Heather's points in a revised ToR submitted 15 June 2020. Minor review comments received from the Region's Adam Huycke on 14 July 2020, and from Conservation Halton's Ola Panczyk on 16 July 2020 are addressed in the final ToR, below:

The Scoped EIA will be prepared in accordance with Halton Region's EIA Guidelines (2014). This ToR was developed for the Scoped EIA according to the considerations listed in the EIA Guidelines Section 2.1.2 to identify issues and tasks required to address the development proposal, and recognizes the availability of recent information and inventories completed for the Lower Rambo Creek corridor and documented in the 2019 Dillon EIS (EIA) for the Downtown Mobility Hub, as follows (*scoping considerations for redevelopment of the site in italics for each EIA Guidelines subsection, below*) :

a) the likely significance of the RNHS features and functions in the area of the proposed development; (*The 2019 Dillon EIA listed fish habitat and significant woodland at Lower Rambo Creek and presented the results of vegetation and wildlife inventories, but concluded that "the creek corridor (including the woodland) provides limited habitat function for urban tolerant flora and fauna".*)
b) the boundary of the area(s) to be included in the EIA; (*The proposed redevelopment involves a single site, comprised of six small residential properties. The Scoped EIA will focus on the site, with reference to conditions on adjacent properties and to the Lower Rambo Creek corridor that was studied and described by Dillon in the 2019 Downtown Mobility Hub EIA.*)

c) the scale of the development and the magnitude of potential negative impacts; (*The proposed redevelopment involves a single site, comprised of six small residential properties, and potential effects involve on-site and adjacent portions of the Lower Rambo Creek corridor.*)
d) the availability of detailed sub-watershed studies and/or other field work which reflect current conditions to avoid unnecessary duplication of effort where inventories and studies have been completed within the past five years or where studies are currently underway and the timing of their completion satisfies the requirements of the EIA process; (*The 2019 Dillon EIA characterized the Lower Rambo Creek corridor on the basis of recent vegetation, breeding bird and wildlife inventories completed by Dillon and supplemented with recent existing information from other sources including Conservation Halton.*)
e) the presence of areas with special designation, such as Areas of Natural and Scientific Interest (ANSI) or Environmentally Sensitive Areas (ESA), noting the specific attributes and rationale for the designation; (*The Lower Rambo Creek corridor is not an ANSI or ESA.*)
f) the presence or potential presence of provincially designated Species at Risk (SAR) and/or their habitat including endangered, threatened and special concern species as well as the presence of provincially, regionally and locally rare species (note: in addition to consulting the Natural Heritage Information Centre (NHIC) database proponents should contact the MNR Aurora District SAR Biologist to obtain the most current information); (*Dillon's 2019 EIA identified only common species, but speculated on the potential occurrence of SAR bat habitat in the woodland. The Scoped EIA will include a screening evaluation of SAR bat habitat occurrence at the site (i.e., visual confirmation of presence/absence of snag trees and of the potential for seasonal presence of roosting bats in existing homes on the site). Note: The Ministry of Environment, Conservation and Parks (MECP) currently administers the provincial Endangered Species Act.*)
g) the presence of federally designated SAR and their critical habitat, protected under the Canada Species at Risk Act (SARA), where protection applies (in accordance with the requirements of SARA); (*No federally designated SAR or their critical habitat are known to occur at the site.*)
h) the presence of Woodland patches 0.5 ha or larger, which requires the proponent to apply Halton Region's Significant Woodland criteria to determine significance and identify/confirm the boundaries of the Woodland; (*Dillon's 2019 EIA included an evaluation of woodland significance for the reported 0.72 hectares of woodland along Lower Rambo Creek. The Scoped EIA will reference and discuss significant woodland extent at the site.*)
i) the presence of wetland, including Provincially Significant Wetlands (PSW) Evaluated Wetlands and Unevaluated Wetlands; (*The 2019 Dillon EIA stated that no wetland occurs at Lower Rambo Creek.*)
j) the presence or potential presence of Significant Wildlife Habitat; (*The 2019 Dillon EIA did not identify Significant Wildlife Habitat (SWH) but speculated on the potential occurrence of bat maternity colony and woodland amphibian breeding significant wildlife habitat. The Scoped EIA will include a screening evaluation of bat maternity colony SWH through visual confirmation of presence/absence of snag tree and woodland amphibian breeding habitat SWH through visual confirmation of breeding ponds/pools/wetland and incidental observations of amphibians at the site.*)
k) the presence of Significant Valleylands; (*The 2019 Dillon EIA stated that no significant valleyland occurs at Lower Rambo Creek.*)
l) the presence of Key Natural Heritage Features and/or Key Hydrologic Features as defined by Greenbelt Plan policies and supporting technical papers; (*The site and Lower Rambo Creek are not within the Greenbelt Plan boundary.*)
m) the likely presence of surface water and groundwater features and functions (in consultation with Halton Region staff, the proponent may be referred to the Region's Guidelines for Hydrogeological

Studies and Best Management Practices for Water Protection, if applicable); (*The Terms of Reference for the 2019 Dillon EIA identified that "hydrogeologic assessment will rely on available borehole information to screen for the feasibility and provide future design guidance (where proposed) for subsurface green infrastructure (LID's)", and included a summary of recommendations for stormwater management quantity and quality control to be considered during the site specific development application stage. The Scoped EIA will cite relevant aspects of the Hydrogeological Assessment (Wood, 2018) and will also include a description of stormwater management controls, as outlined in the Functional Stormwater Management Report (Wood, 2020), that are part of the redevelopment proposal.*)

n) the presence of linkage and enhancement areas; and (*Linkage is lacking in terms of connecting key natural heritage features, as the Lower Rambo Creek corridor "dead ends" near the site where it is enclosed beneath downtown Burlington. Linkage function is limited to within the Lower Rambo Creek corridor and south to Lakeshore Road and Lake Ontario. The 2019 Dillon EIA recommends determination of the occurrence of potential enhancement areas at the site-specific development application stage. Figure 5 of the Dillon EIA shows recommended tree planting ("Proposed Trees") on the site adjacent to Lower Rambo Creek. The Scoped EIA will include recommendations for on-site riparian habitat enhancement that will also contribute to local linkage function.*)

o) specific data collection methods and data analysis protocols required, including the need for a multi-season biophysical inventory. A summary of potential data collection methods and references is provided in Appendix E. (*The 2019 Dillon EIA included characterization of aquatic and terrestrial environments, including Conservation Halton fish collection records, and Dillon's vegetation, breeding birds and wildlife inventories. The watercourse and top-of-slope limits at the site were surveyed in 2016 by the proponent in cooperation with the City and Conservation Halton. A tree inventory was completed on behalf of the proponent for the site in 2017 and was updated in 2020. The Scoped EIA will make use of that existing information and will conduct habitat observations to describe the site (i.e., representative photographs of the residential rear yards adjacent to the creek and of the creek itself) and to screen for the potential bat SAR/SWH (i.e., snag tree presence/absence and potential for seasonal bat roosting in on-site homes) and amphibian woodland breeding habitat SWH (i.e., breeding pools/ponds/wetland and incidental observations of amphibians) that remained unconfirmed by Dillon in completion of the 2019 Downtown Mobility Hub EIA.*)

As the redevelopment is limited to a single site comprised of six small residential properties, the Scoped EIA study area is proposed to include primarily the site and immediately adjacent portions of the Lower Rambo Creek corridor. Broader contextual information will be referenced as existing information contained in the 2019 Dillon EIA and other existing information sources and mapping as appropriate.

Given the availability of recent information for the Lower Rambo Creek corridor provided in the 2019 Dillon EIA, and a lack of trees on the site, proposed field inventories to be conducted for the Scoped EIA include habitat observations as described above to characterize the current condition of the site and focused habitat observations to screen for potential bat SAR/SWH and amphibian woodland breeding habitat SWH as recommended in the Dillon EIA. The location, date and time, purpose/target species, weather conditions and personnel involved will be provided for each of these field surveys, and field datasheets/notes will be provided, as appropriate.

Region staff indicated that limits of key natural heritage and natural hazards features to be confirmed through this study may require in-field confirmation with appropriate agency staff. It is worth noting that Key Natural Heritage and Natural Hazard feature limits (i.e., watercourse and top of bank) were surveyed in 2016 by the proponent in cooperation with the City and Conservation Halton.

The Scoped EIA will include a summary description of elements of the proposed development that are relevant to natural heritage features and functions and to applicable natural hazards. The Scoped EIA will describe elements of the plan that were subject to consideration of alternatives earlier in the proponent's design process and selection of proposed measures in the current redevelopment plan that are intended to achieve natural heritage and natural hazard policy compliance. A site plan will be included for reference.

The Scoped EIA will include a policy assessment that identifies conformity with applicable legislation, plans and policies. At a high level, this will include an assessment of the proposed development against the natural heritage and natural hazard policies and the 'no negative impact' test set out in the Provincial Policy Statement (2020) and the ROP. At a detailed level, relevant specifics of the natural heritage planning context include confirmation of potential Endangered Species Act compliance (if bat SAR / SAR habitat is identified) and potential compliance regarding SWH (if bat and/or amphibian SWH is identified).

The Scoped EIA will assess compliance with Halton Region and City of Burlington Official Plan natural heritage and natural hazard policies, notably applicable policies of the ROP Sections 115.3, 115.4, 118.3 and definitions in Sections 277 and 295, and the City OP policies in Part II Section 2.3 and Part III Section 6. In particular, the Scoped EIS will identify watercourse / fish habitat and associated natural hazards and identify compliance with policies requiring development setbacks.

The Scoped EIS will also discuss the occurrence of Significant Woodland as identified in the 2019 Dillon EIA, will assess whether tree removal that was conducted at the site resulted in no negative impact to Significant Woodland in accordance with Section 118(3) of the ROP, and will make recommendations for restoration or enhancement measures as appropriate. It is noted that the reach of Lower Rambo Creek at, upstream and downstream of the site is not within Conservation Halton regulation limits and is therefore not subject to Conservation Halton policies; however the Scoped EIA will describe measures in the proposed design to address identified flood and stable slope limits.

I trust this revised ToR is acceptable and look forward to preparing the Scoped EIA for your review.

Sincerely,

Barry Myler
Senior Biologist

Representative Photos



Photo 01: Facing southeast across the rear yards of the site on 10 April 2020. The narrow riparian corridor is evident, as are surrounding high-rise and mid-rise buildings.



Photo 02: Facing upstream on the on-site reach of Lower Rambo Creek on 10 April 2020. The gentle slope of the on-site creek bank is evident to the left.



Photo 03: Lower Rambo Creek downstream of the site on 10 April 2020 showing gabion armouring of the bank. The narrowness of the treed riparian corridor is evident.



Photo 04: Lower Rambo Creek downstream of the site on 10 April 2020 showing a steep fill slope and rubble on the right bank and the close proximity of existing development on the left bank.



Photo 05: The Lower Rambo Creek culvert crossing upstream of the site beneath the raised former railbed of the Waterfront Trail. This is the upper limit of Dillon's mapped Woodland area.



Photo 06: The high rubble-filled bank across Lower Rambo Creek from the site on 14 May 2020. The narrowness of the riparian corridor, sparse tree density and the spring flush of invasive Garlic Mustard are evident.



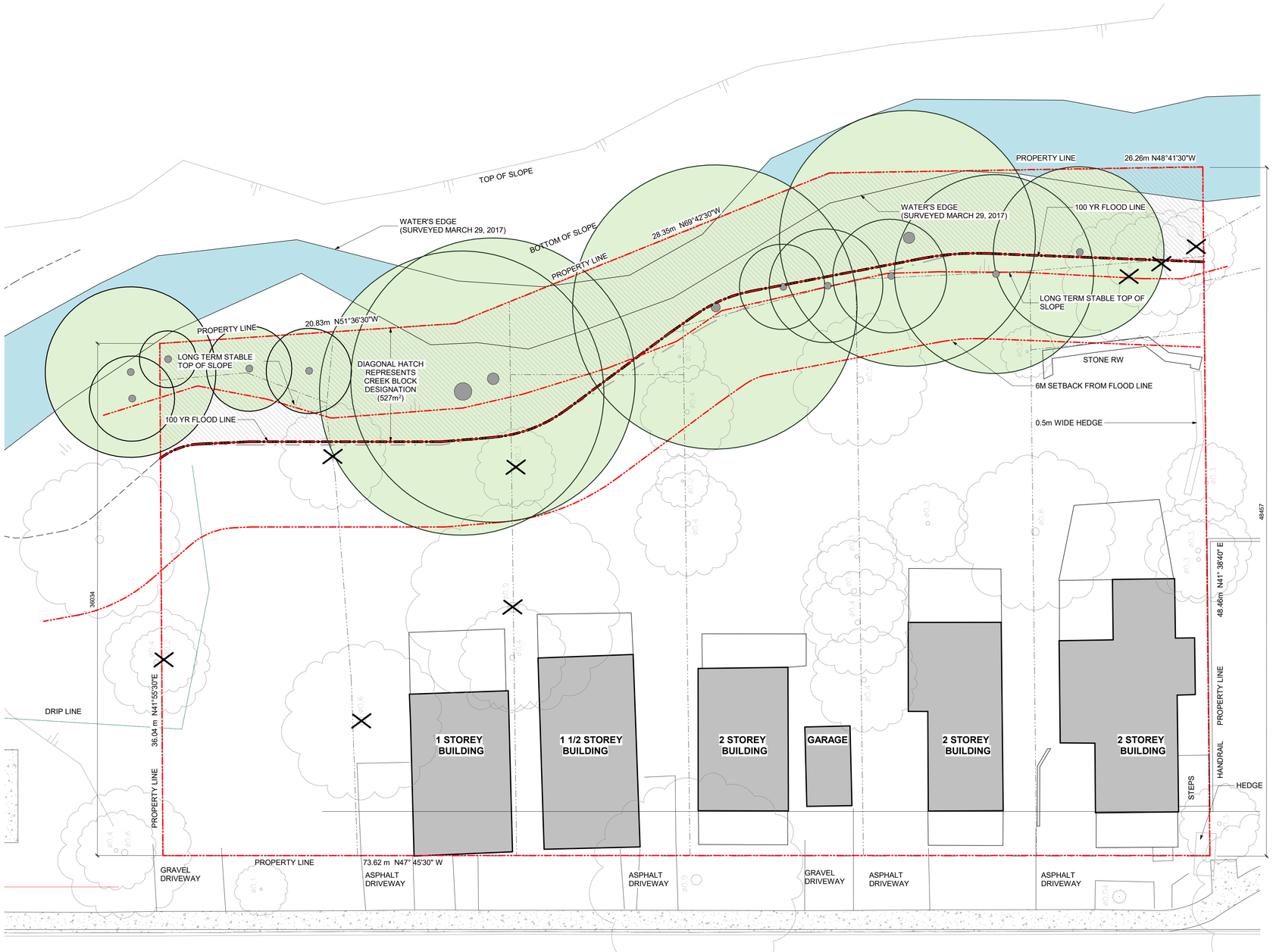
Photo 07: Bare soil and general lack of ground cover vegetation beneath Norway Maples on the Lower Rambo Creek west bank immediately downstream of the site at Martha Terrace on 14 May 2020.



Photo 08: Spring season flush of Garlic Mustard, Burdock and Japanese Knotweed growth on the banks of Lower Rambo Creek as seen at the site on 14 May 2020.

On-Site Tree Density Reconstruction

Do not scale drawings. Contractors must check and verify all dimensions and report any discrepancies to the Architect before proceeding with the work. All documents remain the property of the Architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The Contract Documents were prepared by the Consultant for the account of the Owner.
The material contained herein reflects the Consultants best judgement in light of the information available to him at the time of preparation Any use which a third party makes of the Contract Documents, or any reliance on or decisions to be made based on them are the responsibility of such third parties. The Consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the Contract Documents.



MARTHA STREET

CANDIDATE WOODLAND AREA = 12,195 SF (0.11 ha)

1 SITE PLAN - 2017 EXISTING PLAN
1 : 150

Project North

True North

SITE PLAN LEGEND

TREES OUTSIDE OF CANDIDATE WOODLAND AREA	
DEAD TREES	
TREES WITHIN CANDIDATE WOODLAND AREA	

No.	Date	Revision

srm ARCHITECTS INC.

Project No 17032
Issue Date
Drawn by CND
Checked by PG
Plot Date / Time 2020-06-01 10:13:47 AM

MARTHA STREET, BURLINGTON

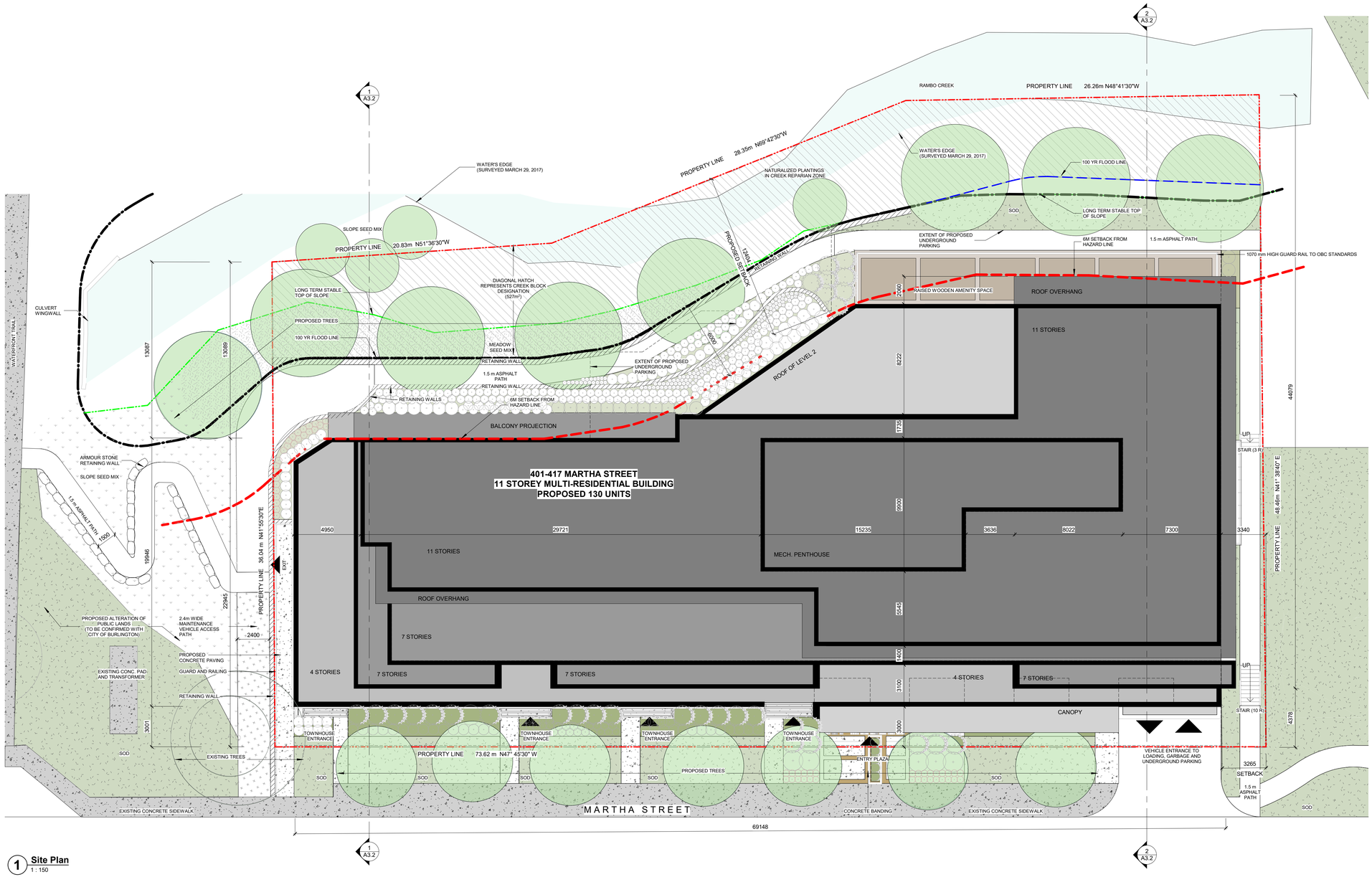
CANDIDATE WOODLAND AREA TREE DENSITY ASSESSMENT

PRELIMINARY

Drawing Scale As indicated
Status
Drawing No. A1.2 Revision No.

Site Plan

Do not scale drawings. Contractors must check and verify all dimensions and report any discrepancies to the Architect before proceeding with the work. All documents remain the property of the Architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. This Contract Documents were prepared by the Consultant for the account of the Owner.
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1 Site Plan
1 : 150

Project North

True North

FLOOR PLAN EFFICIENCY

DATA	FLOOR AREA	CIRC./SERV.	AMENITY	RESIDENTIAL	EFF.
LEVEL 1	17,528 ft²	9,726 ft²	1,756 ft²	6,046 ft²	34.5%
LEVEL 1 - MEZZ	6,046 ft²			6,046 ft²	
LEVEL 2-4	15,523 ft² (x3)	1,940 ft² (x3)	-	13,583 ft² (x3)	87.5%
LEVEL 5-7	13,085 ft² (x3)	2,167 ft² (x3)	-	10,918 ft² (x3)	83.4%
LEVEL 8-11	10,733 ft² (x4)	2,571 ft² (x4)	-	8,162 ft² (x4)	76.0%
LEVEL P1	20,588 ft²		-		
LEVEL P2- P4	23,349 ft² (x3)		-		
TOTALS	242,965 ft²		1,756 ft²	118,243 ft²	

UNIT DATA

UNIT TYPE	QTY.	AREA RANGE
1 BEDROOM	44 (33.8%)	602 - 770 ft²
1 BEDROOM + DEN	10 (7.7%)	907 - 915 ft²
2 BEDROOM	42 (32.3%)	715 - 1080 ft²
3 BEDROOM	20 (20.8%)	1,033 - 1,149 ft²
2 BEDROOM TOWN HOUSE	1 (0.77%)	1162 ft²
3 BEDROOM TOWN HOUSE	6 (4.62%)	1540 - 2076 ft²
TOTALS	130 (100 %)	492-1153 ft²

PARKING

DATA	QTY.
LEVEL P1	29
LEVEL P2- P4	46x3
TOTALS	**167**

BUILDING DATA

DATA	REQUIRED	PROVIDED
TOTAL DENSITY (# of units)	185 UNITS / HECTARE AT 0.32 ha = 59 units max	130 UNITS 0.32 ha = 407 units / ha
BUILDING AREA (m²)		**17,528 S.F (1,628 S.M.)**
BUILDING COVERAGE	1,628 S.M. of 3,162 sm = 51.5% coverage	
GROSS FLOOR AREA (m²)		**152,330 S.F. (14,152 S.M.)**
CONSTRUCTION FLOOR AREA (m²)		**242,965 S.F. (22,572 S.M.)**
NUMBER OF STOREYS	---	11
BUILDING HEIGHT (m)	22m MAX.	+/- 39.7m from Martha St.
COMMERCIAL/RETAIL AREA (m²)		N/A
AMENITY AREA (M²)	5 m² per unit = 5 m² x 130 = 650 m²	163 m² indoor + Terrace and Balconies

VEHICLE PARKING DATA

DATA	REQUIRED	PROVIDED
RESIDENTIAL PARKING	1.00 / UNIT = 130 stalls	134 stalls
BARRIER FREE PARKING (included)	3% OF REQ'D = 4	4 stalls (included in above)
VISITOR PARKING (additional)	0.25 / UNIT = 32.5	33 stalls
TOTAL PARKING	**163**	**167**
LOADING SPACES		1 SPACE
NUMBER OF VEHICLE ENTRANCES		1 ENTRANCE

SITE DATA

401-417 Marta Street, Burlington, Ontario
Part of Lot 92, Registered Plan 99

DATA		REQUIRED	PROVIDED
ZONING		ZONING - H-DRH	Site Specific
LOT AREA (m²)			3,162 m²
CREEK DEDICATION (m²)			527 m²
REVISED LOT AREA (m²)			2,635 m²
SETBACKS	FRONT YARD (meters)	6m (7.5m if street width= 26m)	3.0m
	INTERIOR SIDE YARD (m)	6m	1.4m NORTH
	INTERIOR SIDE YARD (m)	6m	3m SOUTH
	REAR YARD (m)	7.5m	11.96m
U/G SETBACKS	FRONT YARD (meters)	6m (7.5m if street width= 26m)	0m
	INTERIOR SIDE YARD (m)	6m	1.4m NORTH
	INTERIOR SIDE YARD (m)	6m	3m SOUTH
	REAR YARD (m)	7.5m	12.0m

PARKING STRUCTURE DOES NOT CONFORM TO SETBACKS STATED IN THE OLD ZONING APPLICATION - 1990



KEY PLAN
1 : 5000

SITE PLAN LEGEND

(EXISTING) CONCRETE SIDEWALK	
(PROPOSED) PROPOSED CONCRETE PATH	
(PROPOSED) MAINTENANCE VEHICLE PATH	
(PROPOSED) ASPHALT PATH	
PROPOSED UNDERGROUND PARKING LINE	
PROPERTY LINE/ SETBACK FROM HAZARD LINE (CLOSER OF EITHER: 100 YEAR FLOOD PLANE OR LONG-TERM STABLE TOP OF SLOPE	
RETAINING WALL	
CREEK BLOCK DESIGNATION	
MEADOW SEED MIX	
LANDSCAPED	
SOD	
WOODEN AMENITY	
EXISTING TREES	
PROPOSED TREES	
CONCRETE BANDING	
EXISTING CREEK	

No.	Date	Revision

srm ARCHITECTS INC.

Project No 17032
Issue Date
Drawn by PG
Checked by WC
Plot Date / Time 2020-09-08 1:57:13 PM

MARTHA STREET, BURLINGTON

SITE PLAN

PRELIMINARY

Drawing Scale As indicated
Status
Drawing No. A1.1
Revision No.

Landscape Plan
(Buffer Plantings)

PLANT SCHEDULE L1

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
AFJ	3	Acer freemanii 'Jeffersred' TM	Autumn Blaze Maple	60mm Cal.	W.B.	
GS	4	Gleditsia triacanthos inermis 'Shademaster' TM	Shademaster Locust	60mm Cal.	W.B.	
OV	2	Ostrya virginiana	American Hophornbeam	60mm Cal.	W.B.	
QMA	3	Quercus macrocarpa	Burr Oak	60mm Cal.	W.B.	
QR	3	Quercus rubra	Red Oak	60mm Cal.	W.B.	

BROADLEAF EVERGREENS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
Eg	36	Euonymus fortunei 'Emerald Gaiety' TM	Emerald Gaiety Wintercreeper	50cm	3 gal.	1m

CONIFEROUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
JI	7	Juniperus chinensis sargentii 'Glauca'	Blue Sargent Juniper	50cm	3 gal.	1.50m
Jg	11	Juniperus chinensis sargentii 'Viridis'	Green Sargent Juniper	50cm	3 gal.	1.50m
Jm	21	Juniperus chinensis 'Mint Julep'	Mint Julep Juniper	50cm	3 gal.	1.50m

DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
Bc	32	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry	60cm	3 gal.	0.80m
CsK	66	Cornus sericea 'Kelseyi'	Kelseyi Dogwood	60cm	3 gal.	0.60m
Rg	5	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	60cm	3 gal.	1.50m
SpC	38	Spiraea japonica 'Crispa'	Crisp Leaf Spirea	60cm	3 gal.	0.80m

ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
caK	32	Calamagrostis acutiflora 'Karl Foerster'	Feather Reed Grass	---	1 gal.	0.70m
Pc	5	Panicum virgatum 'Cheyenne Sky'	Switch Grass	---	1 gal.	0.70m
paH	108	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	---	1 gal.	0.60m

PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
hSO	56	Hemerocallis hybrid 'Stella de Oro'	Stella de Oro Daylily	---	1 gal.	0.50m
heC	126	Heuchera micrantha 'Chocolate Ruffles'	Chocolate Ruffles Coral Bells	---	1 gal.	0.30m
hoF	57	Hosta fortunei 'Fire and Ice'	Fire and Ice Hosta	---	1 gal.	0.60m

NATURAL_PLANTING_BUFFER

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
PV	4	Prunus virginiana	Common Chokecherry	--	1 gal.	

DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
CR	254	Cornus racemosa	Red Osier Dogwood	60cm	1 gal.	0.5m
CS	472	Cornus sericea	Gray Dogwood	60cm	1 gal.	0.5m
PO	30	Physocarpus opulifolius	Common Ninebark	60cm	1 gal.	0.5m
SC	40	Sambucus canadensis	Elderberry	60cm	1 gal.	0.5m

SEED MIX A - Retention Pond or Storm Pond Slope Mix

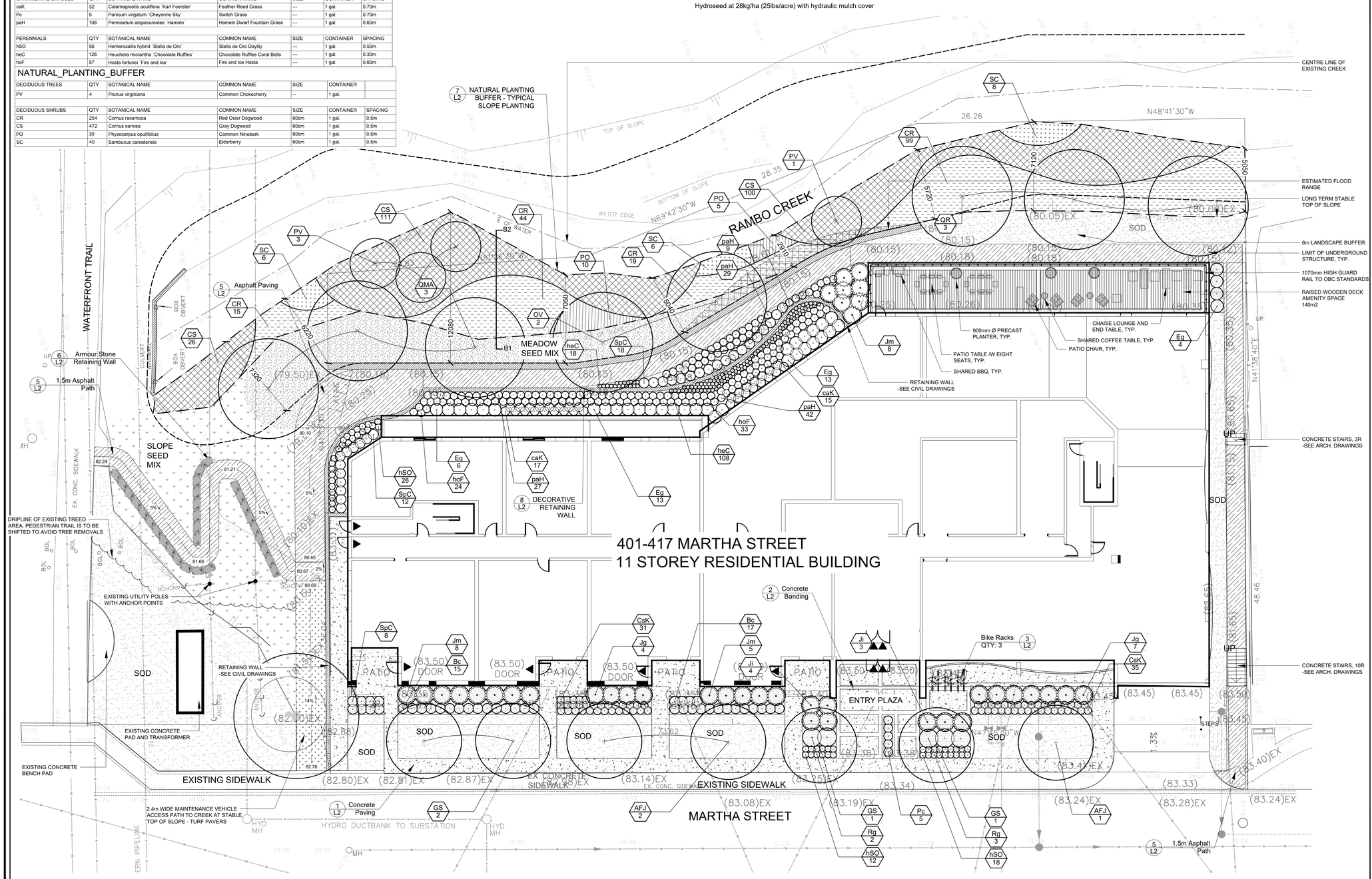
Anemone canadensis		Canada Anemone	10%
Rudbeckia hirta		Brown-eyed Susan	10%
Oenothera biennis		Evening Primrose	10%
Aster novae-angliae		New England Aster	10%
Elymus canadensis	30%	Canada Wild Rye	
Poa palustris	30%	Fowl Manna Grass	

Broadcast Rate 1.6kg/100sq.m. or 3.7lbs/1000 sq.ft.

SEED MIX B - Native Upland Forage & Meadow Mix

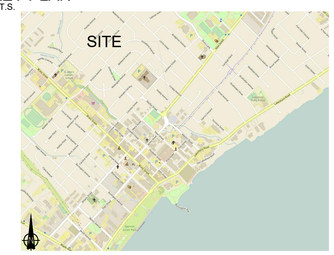
Canada Wild Rye (Elymus canadensis)	35%
Fowl Bluegrass (Poa palustris)	10%
Fox Sedge (Carex vulpinoidea)	5%
Little Bluestem (Schizachyrium scoparium)	5%
Sand Dropseed (Sporobolus cryptandrus)	10%
Virginia Wild Rye (Elymus virginicus)	35%

Hydroseed at 28kg/ha (25lbs/acre) with hydraulic mulch cover



KEY PLAN

N.T.S.



Legend

- PROPERTY LINE
- ESTIMATED FLOOD RANGE
- LONG TERM STABLE TOP OF SLOPE
- 6m LANDSCAPE BUFFER
- CENTRE LINE OF EXISTING CREEK
- LIMIT OF UNDERGROUND STRUCTURES
- PROPOSED CONCRETE PAVING
- PROPOSED SODDING
- PROPOSED PLANTED AREAS
- PROPOSED TREE
- EXISTING TREE

GENERAL NOTES:

1. Drawings not to be used for construction unless authorized by the Landscape Architect
2. Contractor shall report any discrepancies between the drawings and site conditions prior to commencement of the work
3. All utility locates are the responsibility of the Contractor. Hand dig within the limits recommended by the service utility. Utility conflicts with proposed tree locations must be reported immediately to the Landscape Architect
4. Base drawing provided by MacKay, MacKay and Peters Limited
5. For grading information, refer to drawings by Amec Foster Wheeler. For servicing information refer to drawings by Amec Foster Wheeler.
5. Landscape drawings show engineering information for design purposes only. Do not construct engineering works from these drawings.

LANDSCAPE PLAN

401-417 Martha St.
Burlington, Ontario

NOT FOR CONSTRUCTION

BRIAN H. ROTH — ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — OALA — 22 MAY 2018 — MEMBER

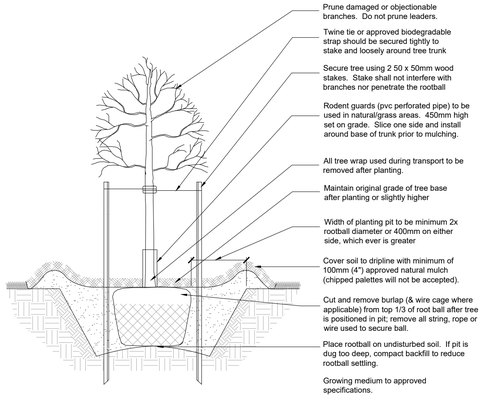
DATE	ISSUE	BY
Nov. 17, 2017	Issued for Coordination	CBI
Apr. 17, 2018	Issued for Coordination	CBI
Apr. 19, 2018	Issued for re-zoning application	CBI
Oct. 11, 2018	Issued for Coordination	CBI
Oct. 16, 2018	Issued for Coordination	CBI
Mar. 10, 2020	Issued for Coordination	OW
May. 22, 2020	Issued for re-zoning application	OW

DATE	REVISIONS	BY

GSP group
201-72 Victoria Street South, Kitchener, Ontario N2G 4Y9, T 519 569 8883, F 519 569 8643
162 Locke Street South, Suite 200, Hamilton, Ontario L8P 4A9, T 905 572 7477
www.gspgroup.ca

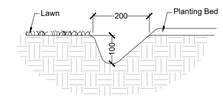
Date: October 16, 2017	Drawn By: CBI	Reviewed By: BR
Scale: 1:150	Project No.: 17190	

L1

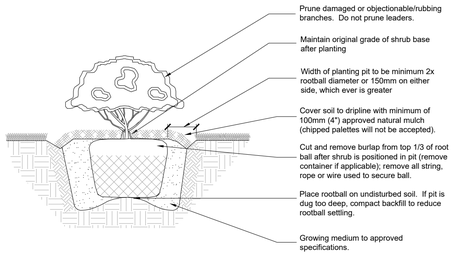


Notes
1. Growing medium mix: 4 parts topsoil, 1 part compost, 1 part shredded peat & application of high phosphorous fertilizer (0-20-0)
2. Plant material shall be thoroughly watered at time of planting.
3. Plant material shall be set plumb in the middle of the pit.
4. Tree shall bear same relation or slightly higher to finished grade as originally grown.
5. Plant stock moved while in leaf shall be covered while in transit. Roots should be kept moist until planted. Trees in leaf to be treated with anti-desicant.
6. Dimensions are in millimeters unless otherwise noted.
7. Staking is to occur only at the direction of the landscape architect.
8. 100mm high saucer except when planting in bed.

Deciduous Tree Planting B.B/W.B - Up to 80mm Caliper
N.T.S.

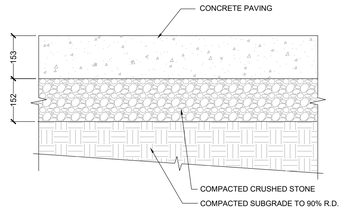


Typical Planting Bed Edge
Scale 1:10

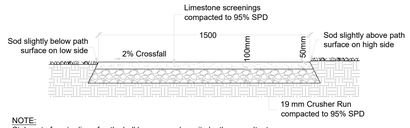


Notes
1. Growing medium mixture: 4 parts topsoil, 1 part compost, 1 part shredded peat & application of high phosphorous fertilizer (0-20-0).
2. Planting bed shall be thoroughly watered immediately after planting & prior to mulching.
3. For potted shrubs, saturate container/ roots/soil prior to removal of container before planting.
4. Shrubs are to be spaced as directed.
5. All dimensions are in millimeters.

B&B/Container Stock Shrub Planting
N.T.S.

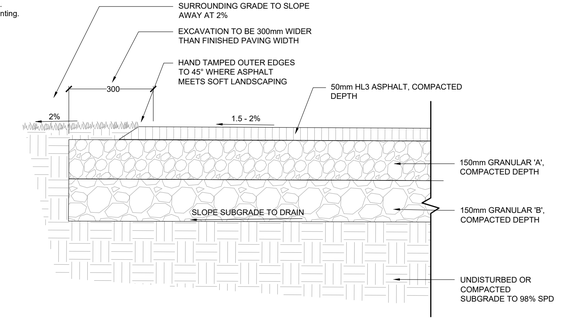


1 CONCRETE PAVING
1:10



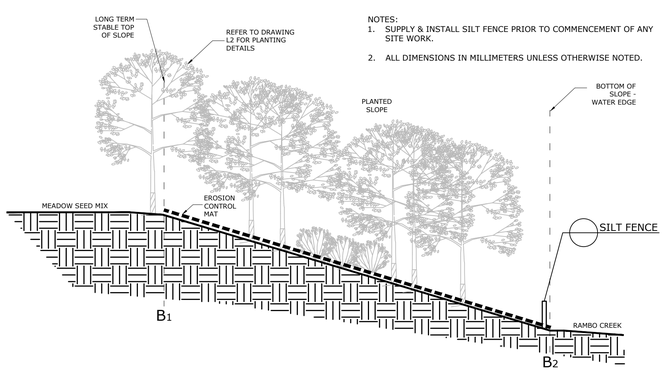
NOTE:
Stakeout of centre line of path shall be approved on site by the consultant.

4 1.5m LIMESTONE PATH
Scale 1:20



NOTES:
1. ALL DIMENSIONS SHOWN IN MILLIMETERS.
2. DO NOT BACKFILL AGAINST ASPHALT MINIMUM 48 HOURS UNTIL ASPHALT HAS CURED.
3. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH SPECIFICATIONS AND GEOTECHNICAL ENGINEERING REPORT.
4. DEPTH OF EXCAVATION AND GRANULAR BASE COURSE SHALL INCREASE AS REQUIRED DEPENDING ON LOCAL SOIL CONDITIONS.
5. CROSS SLOPES SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO PAVING.
6. PLACE CULVERTS TO PROVIDE POSITIVE DRAINAGE WHERE REQUIRED AND DIRECTED BY CITY'S REPRESENTATIVE.
7. REPAIR ALL DISTURBED AREAS WITH SEED MIX.

5 1.5m WIDE ASPHALT PATH
1:10

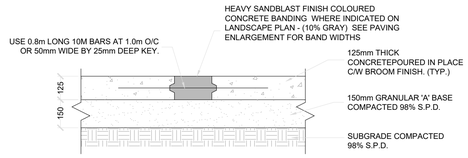


NOTES:
1. SUPPLY & INSTALL SILT FENCE PRIOR TO COMMENCEMENT OF ANY SITE WORK.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

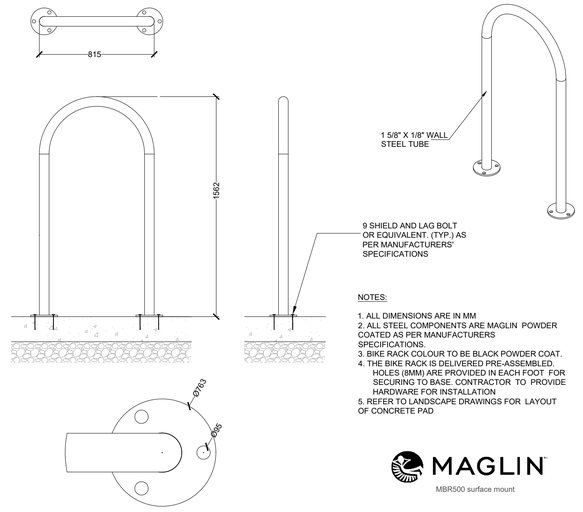
7 TYPICAL SLOPE PLANTING
N.T.S.

GROWING MEDIUM REQUIREMENTS:

1. Contractor to provide soil testing results of growing medium to landscape consultant for approval prior to installation.
2. Contractor shall prepare planting beds and tree pits with approved growing medium prior to installation of plant material.
3. Contractor shall pay all costs to correct growing medium and replacement of plant material if specified tests, amendments, and written approval of the landscape consultant are not obtained.



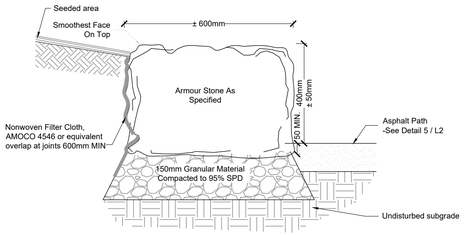
2 COLOURED, SANDBLASTED CONCRETE BANDING
1:15



NOTES:
1. ALL DIMENSIONS ARE IN MM
2. ALL STEEL COMPONENTS ARE MAGLIN POWDER COATED AS PER MANUFACTURERS SPECIFICATIONS.
3. BIKE RACK COLOUR TO BE BLACK POWDER COAT.
4. THE BIKE RACK IS DELIVERED PRE-ASSEMBLED. HOLES (8MM) ARE PROVIDED IN EACH FOOT FOR SECURING TO BASE. CONTRACTOR TO PROVIDE HARDWARE FOR INSTALLATION.
5. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT OF CONCRETE PAD

MAGLIN
MBR500 surface mount

3 BIKE RACK - MAGLIN MBR500
1:20

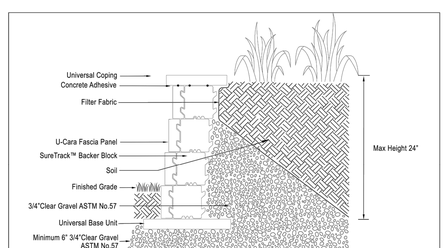


Armourstone notes:

1. All stones shall be of a uniform thickness and rectangular in shape. Stones blasted from quarries with irregular shapes or sharp edges will not be accepted.

   A minor tolerance will be acceptable to adjust with adjacent grades and rock elevations to achieve the desired purpose.
2. The Contractor shall contact the consultant for approval of stone at the extraction source or distribution facility
3. The Consultant reserves the authority to reject any material delivered to the site that is deemed unsuitable.
4. Granular base material and layout to be approved by Consultant prior to stone installation.

6 ARMOUR STONE WALL AT ASPHALT PATH
Scale 1:10



RESIDENTIAL/COMMERCIAL
WALL DETAIL
CREATED: January 17, 2018
REVISED:
FILE NAME:

NOTES:
This cross section is intended for preliminary design purposes only. Confirm site conditions and consult with a qualified design professional or installer prior to installation.

CROSS SECTION
U-Cara Planter Wall

UNILOCK DESIGNED TO CONNECT.

8 DECORATIVE RETAINING WALL - FOR REFERENCE ONLY
NTS

GENERAL NOTES:

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DETAILS

401-417 Martha St.
Burlington, Ontario

NOT FOR CONSTRUCTION

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
BRIAN H. ROTH
OALA
22 MAY 2020
MEMBER

DATE	ISSUE	BY
Apr. 17, 2018	Issued for Coordination	CBI
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Hamilton, Ontario L8P 4A9
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www.gspgroup.ca

Date: October 11, 2018
Drawn By: CBI
Scale: As Shown.
Project No.: 17190

L2