Ralston Building Site

Hollis, Salter, and Lower Water Streets

Excavation & Building Construction

Prepared by Geoff MacLean, P.Eng.

Job No. 37572

CONSTRUCTION MANAGEMENT PLAN

1	MAR 2023	REVISED ENCROACHMENT
0	FEB 2023	ISSUED FOR REVIEW
REVISION #	DATE	DESCRIPTION

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Revisions Summary

Revision 1 – Secitons; 1.1, 2.1, 4.1, 5, 5.1, 6, 7.3, 8.1, 8.3 & 8.4, Appendies A, E, F, G, P, Q & R

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Prepared by

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In consultation with the Developer, contractor,

traffic control company and HRM.

Section 1: Introduction

1.1: Project Description and Objectives

The developer is planning to construct an apartment building located on the corner of Lower Water, Salter, Hollis Streets in Halifax. In preparation for this development, the existing commercial building (The Ralston Building) that housed civic 1557 Hollis Street and 1548 Lower Water Street was previously demolished. The new development will have three building towers that will house 462 residential units within the 20 storey, 11 storey, and 6 storey building towers; each with commercial space. The common podium will have 4 levels of underground parking accessed from Hollis Street and Lower Water Street. This CMP has been prepared to address excavation, services and building construction.

Where the podium foundation is planned to be set at the HRM Right of Way (ROW) and where site excavation will need to accommodate 4 levels of underground parking fronting Hollis Street and 2 levels fronting Lower Water Street; deep excavations of +12m fronting the HRM ROW are anticipated. Given these depths and proximity to the ROW, for public safety from excavation limits and construction activities the project compound is planned to include the sidewalk on Salter Street and sidewalk and a portion of the street lane fronting the project on the remaining streets with truck laybys for material deliveries and storage laydown area. This encroachment will close the public sidewalk redirecting pedestrians to the opposite side of these streets. A temporary on street pedestrian route fronting the project on Hollis Street will lead pedestrians to a new temporary crosswalk passing by the existing Sky Tower sidewalk closure. The crosswalk on Lower Water Street adjacent to the project will be relocated south of the Salter Street intersection to align with the crosswalk on Hollis Steet. The encroachment will reduce Salter Street to one-way traffic between Hollis and Lower Water eastbound and close metered on street parking directly in front of the project along Hollis and Lower Water Streets.

Only during service work do we anticipate short term temporary lane closures on Lower Water Street. It is anticipated that the crane assembly will reside within the Lower Water Street encroachment or on private property. While crane disassemble will require a temporary road closure of Hollis Street.

The project borders The Maple, a residential/commercial property along its northern property line; commercial properties opposite Hollis that houses Metro Park (Parking), The Cabin Café and an existing or planned to be Sky Tower construction site; opposite Lower Water Street is the Waterfront Warehouse, and a residential/commercial property opposite Salter Street. All neighbouring properties will remain undisturbed throughout the project.

This CMP document is intended to be an evolving document to help guide the project team to mitigate impacts to the adjacent community before they arise and to address unforeseen issues. SDMM, together with the developer, contractor, and traffic control company, have prepared this Construction Management Plan (CMP) following HRM's CMP (2020) guidelines and administrative order (2018-005-ADM) in an effort to reduce potential negative impacts on the surrounding community, due to construction activities for this project.

The most up-to-date version of this document will be kept on-site at all times during construction. Should ownership or contracting services change throughout the course of this project, HRM will be notified immediately, and new parties will be required to comply with the approved CMP in writing.

1.2: Project Contact Information

The project team for the proposed development consists of:

Role	Name	Contact	Address	Phone
Developer	Universal Contracts Limited	Pam Priest	1190 Barrington Street, P.O. Box 384, Halifax, NS B3J 2P8	(902) 425-8877 24 Hour Emergency Contact
Site Contractor	Atlantic Road Construction and Paving	Greg MacDonald	6 Belmont Avenue, P.O. Box 89 Eastern Passage, NS B3G 1M7	(902) 830-6411
Traffic Control Company	Frontline Traffic Services	Phil Pruneau	6 Belmont Avenue, P.O. Box 89 Eastern Passage, NS B3G 1M7	(902) 818-5548
Rodent Control Company	Rentokil Pest Control		51 Duke Street, Bedford, NS B4A2Z2	(902) 835-2304

Section 2: Project Schedule and Logistics

The following is a brief summary of anticipated major project milestones broken down by phase:

2.1: Schedule

Project Phase	Start Date		End Date	Time Period
Rodent Control Program	Apr 1, 2023	-	Jun 30, 2023	3 months
Building Demolition	n/a	-	n/a	-
Site Excavation	May 1, 2023	-	Oct 30, 2023	6 months
Substructure (Podium)	Sep 1, 2023	-	Apr 30, 2024	8 Months
Superstructure (Tower B)	Apr 1, 2024	-	Jun 30, 2025	14 months
Superstructure (Tower A)	Oct 2, 2024		Dec 31, 2026	27 months
Superstructure (Tower C)	Aug 1, 2025		Jun 30, 2026	10 months
Service Abandonments	May 6, 2024	-	May 28, 2024	2 weekends
Service installs	Jul 1, 2024	-	Jul 23, 2024	4 weekends
HRM Right of Way Flat Works	Aug 15, 2025	-	Sep 15, 2024	1 months
Site Flat Works	Oct 1, 2024	-	Oct 31, 2024	1 months

2.2: Key Dates

- Install Encroachment — June 1, 2023
  - Sidewalk closure (Hollis, Salter & Lower Water Streets)
  - Street Lane closures (Salter Street)
  - Existing Salter Street crosswalk closures (Hollis & Lower Water Intersection)
  - Parking lane closure (Hollis & Lower Water Streets)
- Finish encroachment — June 30, 2026
- Duration of encroachment — 36 months

The encroachment areas are shown in the appendix for reference.

2.3: Hours of Work

Work will generally take place during normal working hours as outlined in HRM's Noise By-Law and Traffic Control Manual Supplement; these are noted below.

- Monday to Friday: 7:00 a.m. – 9:30 p.m.
- Saturdays: 8:00 a.m. – 7:00 p.m.
- Sundays & Statutory Holidays: 9:00 a.m. – 7:00 p.m.
- Servicing Work: Noted Above

Although work is not expected to be required outside of the times listed above, if, for any reason, work is anticipated to be required outside of these hours, the contractor will apply to HRM for approval 5 business days (minimum) in advance of such work and obtain approval prior to proceeding. It is noted that HRM's Noise By-Law cannot be altered without HRM council approval; work must adhere to the Noise By-Law.

Section 3 – Relevant Regulations & Guidelines

3.1: Occupational Health & Safety Regulations

This CMP shall be utilized in agreement with all applicable Provincial and Federal Occupational Health and Safety Regulations. At a minimum, construction activities must at all times meet the standards of:

a) National Building Code of Canada, as adopted and modified under the Building Code Act and the Nova Scotia Building Code Regulations made under that Act;
b) Nova Scotia Occupational Health and Safety Act, and the Nova Scotia Occupational Safety General Regulations made under that Act;
c) The Transportation Association of Canada (TAC)'s Manual of Uniform Traffic Control Devices for Canada (MUTCDC); and
d) Nova Scotia Temporary Workplace Traffic Control Manual (NSTCM).

3.2: Municipal Regulations & Guidelines

In addition to the Provincial and Federal standards referenced in Section 3.1, this CMP shall be utilized in agreement with and meet, at a minimum, the standards of all relevant municipal by-laws including, but not limited to, the following:

a) HRM Design Guidelines;
b) HRM Standard Details;
c) S-300 Streets;
d) E-200 Encroachments;
e) B-201 Building;
f) N-200 Noise;
g) T-600 Trees;
h) S-900 Controlled Access Streets;
i) T-400 Truck Routes;
j) W-101 Discharge into Public Sewers;
k) B-600 Blasting;
l) HRM TCM Supplement;
m) G-200 Grade Alteration and Stormwater management;
n) Admin Order 2018-005-ADM regarding encroachments; and
o) Admin Order 2020-010-OP regarding stormwater management standards for development activities.

Section 4: Vehicle Management

Prior to any construction activity, all temporary workplace traffic control devices and signage will be in place as per the Nova Scotia Temporary Workplace Traffic Control Manual (latest edition). The traffic control company will install the signage and ensure that they are maintained throughout the project. This project's Traffic Control Plans (TCPs) are listed in the Appendix.

4.1: Vehicular Traffic Control

A series of Traffic Control Plans (TCP) have been prepared by the traffic control company and are provided in the Appendix.

We are proposing street lane encroachments that will narrow street lanes fronting the project on Hollis and Lower Water streets to provide room for two truck laybys. Throughout all phases of construction two-way traffic will be maintained on Salter Street and one-way vehicular traffic will be maintained on the remaining streets with 4.0m travel lanes passing the encroachment. Only during building service work do we anticipate short term temporary lane closures being required. It is anticipated that tower crane assembly will be stationed within encroachment area on Lower Water Street or on private property. Tower crane disassembly is anticipated to require a temporary street closure of Hollis Street to facilitate. Please refer to the appendices for required encroachment plan and traffic control plans.

4.2: Haul Route and Staging Areas

The truck Haul Route Plan has been prepared by the traffic control company and is provided in the appendix.

The selected route is intended to minimize traffic congestion and maximize pedestrian safety. During all construction phases vehicles will enter and exit the site at the gate location(s) which will be clearly marked for function. During construction activities concrete and material deliveries shall be contained within private property and Lower Water Street encroachment. Refer to appendix for concrete delivery schematic.

4.3: Vehicular Traffic Notifications

Should any traffic disruptions be required, notifications will be distributed to properties in the impacted area a minimum of five (5) days in advance of vehicular traffic closures. Refer to sample notification letter in the appendix.

4.4: Emergency Vehicles

In the event of unforeseen emergency situations, the site will remain accessible to emergency vehicles at all times.

4.5: Parking

Parking will be affected by this project. Metered on street parking will be closed in front of the project will be occupied by the Hollis and Lower Water Street encroachments. It is noted that passenger vehicles are not permitted to park within any encroachment areas. To minimize parking requirements in adjacent neighbourhoods, site workers will utilize private property and workers will be encouraged to carpool or rely on public transit.

4.6: Bus Stops

There are no bus stops directly in front of the project, but bus service travels along both Hollis and Lower Water Streets. Bus service will not be affected by this project.

4.7: Hazard Assessment

A vehicular and pedestrian hazard assessment is provided in the appendix. Any additional site hazards identified or encountered after work has commenced will be added to this list. All personnel on-site will be required to review this list and encouraged to identify additional potential hazards and hazard mitigation methods.

Section 5: Pedestrian Management

A Pedestrian Management Plan (PMP) has been prepared by the traffic control company and is provided in the appendix.

Throughout phase 2 construction, we are proposing a on street pedestrian route to a temporary crosswalk fronting the encroachment on Hollis Street and the existing crosswalk fronting the project site on Lower Water Street will be relocated south of the Slater Street intersection. This will align with the sidewalks opposite the street as we plan to close the sidewalk in front of the development on all abutting streets. Pedestrians traffic will be maintained with use of the on street pedestrian route and temporary crosswalk on Hollis, exiting sidewalks opposite these streets and marked crosswalks at Sackville and Hollis Streets, and the noted relocated crosswalk at Salter and Lower Water Street.

5.1: Pedestrian Protection

Pedestrians will be protected by physically distancing them from the project. F-type concrete jersey barriers with chain link fencing mounted above will delineate the project. Chain link fencing will be covered with opaque covering to block view of the site. F-type concrete jersey barriers will be positioned on the street demarking the 1.5m temporary on street pedestrian route separating the pedestrians from vehicle traffic. Refer to the appendix for examples of the barriers and fencing.

5.2: Pedestrian Safety

Pedestrian safety will be maintained by implementing appropriate signage as shown on the PMP. All navigation and safety signage indicating alternative sidewalks and potential hazards will be inspected and maintained regularly.

5.3: Pedestrian Traffic Notifications

Notifications will be distributed to properties in the impacted area a minimum of five (5) days in advance of pedestrian traffic impacts. A sample traffic notification letter can be found in the appendix. HRM must be notified prior to issuing the notification to neighbours.

5.4: Visually Impaired Persons

In keeping with CNIB requirements and as outlined on their 'Clearing Our Path' website; various items will be incorporated into the pedestrian management signage and barriers. Such as, high visibility contrasting colours with appropriate font types (mix of upper and lower-case lettering), font sizes (between 16mm to 51mm) and sign colours (orange background with black lettering or white background with black lettering).

The contractor will use bright orange sawhorse barricades complete with bold-font signage to identify sidewalk termination points. Sawhorse barriers will incorporate lower cross members, painted and marked consistent with the rest of the sawhorse, these added cross members will be placed near the ground to aid visually impaired persons using a cane. Reflective tape will also be placed on the ends of fencing, hoarding, sawhorse barricades, and concrete barriers to help delineate pedestrian routes and disruptions. Signage and tape colours will vary but will comply with the colour/brightness contrast as outlined by the CNIB website; examples are black/white, orange/black or dark red/white combinations.

5.5: Accessibility
High visibility signage will be used to assist pedestrians to easily navigate around all project related blocked sidewalks.

5.6: Hazard Assessment
A vehicular and pedestrian hazard assessment is provided in the appendix. Any additional site hazards identified or encountered after work has commenced will be added to this list. All personnel on-site will be required to review this list and encouraged to identify additional potential hazards and hazard mitigation methods.

5.7: Pedestrian Management Plans Rendering (PMPR) Signage
The need for a rendered map displayed for pedestrians showing the detoured pedestrian route is not anticipated for this project.

5.8: Pedestrian Detour Wayfinding Signage
The need for pedestrian wayfinding signage directing pedestrians to adjacent businesses is not anticipated for this project.

Section 6: Encroachments & Disruptions

During construction, the project will incorporate the sidewalk on Salter Street and sidewalk and portion of the street lane on the remaining streets directly in front of the project. This will redirect pedestrian traffic to the opposite side of the street using the existing crosswalks, on street pedestrian route and temporary sidewalk on Hollis Street, relocated temporary crosswalk intersecting Lower Water Street, and will close metered on street parking directly in front of the project site on Hollis and Lower Water Streets.

These encroachments are to keep the public away from the excavation zone of influence as well as provide additional room for site workers and deliveries. These encroachments are planned to be delineated by a combination of chain link fencing and interlocking F-type concrete barriers complete and chain link fencing with opaque coverings.

Throughout the project, fencing will be positioned to not obstruct vehicle sight lines. In areas adjacent to the site gates open mesh chain link fence on top of the site barriers to not obstruct sight lines.

Should any utility or traffic disruptions be required, the contractor will first apply to HRM for approval, a minimum of five (5) business days in advance of such work and will then notify neighbours of these disruptions in a timely fashion.

6.1: Demolition
The site's existing buildings were previously demolished. This CMP does not speak to demolition.

6.2: Site Excavation
This includes deep excavation and removal of common site material. The development is planned to have 4 levels of underground parking below grade fronting Hollis Street and 2 levels of underground parking below grade fronting Lower Water Street. If bedrock is found, the contractor will need to apply for a blasting permit and adhere to the HRM blasting by-law and conditions of the blasting permit. Alternatively, if a blasting permit can not be obtained the site's bedrock will be broken by a series of rock breakers to reach footing elevation.

6.3: Site Services Connection
This includes installation of new water and sewer laterals to their respective mains as well as decommissioning existing laterals which will be abandoned. The service installs will require modifications to the encroachment with

temporary workplace signage incorporated (refer to the Service Installation Traffic Control Plans (TCP) in the appendix). HRM requires that this service work be limited to weekends only to minimize traffic disruptions. The target dates for this work are provided in the "Key Dates" section above with time of installations adhering to the Noise By-Laws noted above. The intent will be to complete this servicing work and reinstate the street as quickly as possible in order to minimize disruptions to the public.

Before scheduling site services connections, the contractor will notify all neighbouring properties, of the intended timeline for this work. A sample notification letter is included in the appendix.

The contractor intends to reinstate the street cut during the season of work. It is noted that street cuts cannot be left gravel or open. HRM reinstatement specifications must be met, and the travel way must be hard surfaced prior to reopening to the public. Asphalt, concrete curb and sidewalk reinstatement must be completed within 72 hours of disturbance and will be considered temporary if reinstated after October 31st or prior to May 1 in which case permanent reinstatement will be completed by June 15.

6.4: Construction Management Plan Element Inspection and Maintenance

Construction management plan elements will be inspected daily to ensure continued adherence to this CMP. Any deficiencies identified will be reinstated immediately. A CMP's TCP & PMP inspection report summary will be completed for the project, including information on what maintenance activities were conducted. This report must be kept on site at all times and be available to HRM upon request.

6.5: Changes to the Construction Management Plan

All departures from the CMP regardless of the significance must be submitted to the Municipality 10 days in advance for review and approval. Any required changes or modifications to the approved CMP will be submitted to HRM for review and approval prior to implementation.

Section 7: Environmental Factors

7.1: Damage to HRM Infrastructure

Existing HRM infrastructure will be reinstated within the encroachment area and/or be completely replaced. This includes reinstatement of the HRM tree lawn, sidewalk and curb and gutter post construction. It is anticipated that sidewalks across the street will not be impacted by excavation or other construction activities. However, while efforts will be made to avoid damage, it is anticipated that additional portions of existing curbs, gutters, and sidewalks may become damaged during the construction process which would require repairs or replacement. Pending HRM's review prior to and after construction and subject to damage due to construction activities, the developer acknowledges that items may require to be fully replaced rather than repaired. The developer also acknowledges that any costs incurred to repair or replace this public infrastructure are the responsibility of the owner. For reinstatement timeline requirements, it is noted that asphalt, concrete curb and sidewalk reinstatement must be completed within 72 hours of disturbance and will be considered temporary if reinstated after October 31st or prior to May 1 in which case permanent reinstatement will be completed by June 15 of the following construction season.

7.2: Protection of Trees

There are ten (10) HRM street trees within the Right-of-Way (ROW) of Lower Water Street. It is noted that HRM street trees shall not be touched prior to approval and/or compensation agreements between the developer and HRM Urban Forestry are in place. Adjacent street trees are to be protected during construction in accordance with the HRM Tree Bylaw (T-600). Refer to HRM tree protection detail in the appendix.

Given their location within the planned site driveway and encroachment these ten (10) HRM street trees directly fronting the project on Lower Water Street will need to be removed and compensation agreement reached.

7.3: Line Painting and Temporary Crosswalks

Temporary crosswalks are proposed for this project. Refer to the line painting schematic in the appendix.

7.4: Street and Right-of-Way Cleaning

The portion of public street adjacent to the project will be cleaned daily of any debris from trucks and silt, dirt, or rock that migrates beyond the encroachments. A sweeper truck will be utilized as required. Rock pads will be installed and maintained at all site entrances behind the curb line to knock dirt free from truck tires with aim to reduce off tracking of site soils.

Where the developer plans to utilize the ROW for their street encroachments the developer is responsible to clear snow from the street side of these encroachment barriers and gates.

7.5: Protection from Inclement Weather

To protect the public from construction debris during inclement weather, the project site will be enclosed by fencing complete with dust control covering, the site will be regularly reviewed and cleaned, with loose items secured when not in use.

7.6: Storm Water Management

During construction, nearby catch basins may be fitted with filter fabric to prevent debris from entering the storm system. Stormwater collected inside the project site will be directed to temporary stormwater settling ponds situated within the building footprint to allow clean water to be pumped into the existing public sewer systems in accordance with HW regulations and HRM By-law W-101 complete with appropriate fees to Halifax Water (HW). Sediment ponds may be shifted and positioned as desired by the site contractor during mass excavation however will generally be placed in localized low points within the building excavation.

7.7: Noise, Dust and Emission Control

The contractor will at all times adhere to the HRM Noise Bylaw (N-200). No work will take place on the project site outside those hours identified in section 2 of this report.

Dust mitigation for this project will be achieved using rock pads for trucks exiting the site. A water truck and sweeper truck will also be utilized to help prevent dust from becoming airborne and, when required, calcium may need to be used to mitigate dust migration. Additionally, mesh on the inside of the fencing will help to contain any airborne dust inside the site.

Breaking of rock may occur and rock faces cleared to form a wall. Mesh will be used on the inside of all construction fencing to mitigate dust control.

All construction vehicles will be required to use the loading area for parking and idling to keep exhaust emissions within the construction zone. Vehicles will be staged so that idling will not occur for more than 3 minutes at a time.

As indicated above, all work shall be completed in accordance with the HRM Noise By-Law.

7.8: Rodent Control

Rodent movement increases during construction activities. The owner has engaged a rodent control company, to utilize the established Rodent Control Plan (RCP) to help mitigate rodent movement prior to and during site

excavation and building construction. The RCP applies to all project phases with the goal of preventing movement of rodents off-site. The RCP will consist of a baiting and monitoring program. Bait stations (traps) will be placed as outlined in the NPMA Pest Management Standards for Food Processing & Handling Facilities.

The RCP was engaged two weeks prior to the commencement of site excavation to help to lower the number of active rodents in the project area. Bait stations positioned along existing buildings and fence lines prior to excavation. Bait stations positioned along the edges of the project and secured in place using wooden stakes (for open sodded and dirt locations), weighted patio stones (behind walls and on paved areas), and zip-ties (fixed to fences) as per typical industry standards.

Refer to the appendix for a copy of the Rodent Control Plan.

Section 8: Site Protection & Hoarding

8.1: Barriers & Fences

Throughout construction, the encroachment will be delineated using interlocking F-type concrete jersey barriers complete with chain link fencing with a total height (concrete barrier and fencing structure) being 1.8m or 6ft as per the noted administrative order. This fencing will be open chain link fence or covered with an opaque dust control mesh of high quality which will extend a minimum 3m from the public right-of-way. This screening is described in the appendix and will block passersby or tourists view of the construction site. Throughout the project, fencing will be situated to not obstruct vehicle sight lines.

Interlocking F-type concrete jersey barriers will define the edge of the temporary on street pedestrian route. This 1.5m wide access route positioned on the street will allow safe passage in front of the site's encroachment leading to the temporary crosswalk on Hollis Street.

Along the private sidelines where vehicular traffic and non-vehicular traffic is present, the hoarding will be delineated by a combination of concrete waste blocks with chain link fencing mounted on top and rigid fencing being 1.8m or 6ft as per the noted administrative order and weighted modular 1.5m (5ft) high fencing or existing fencing where it is at least 1.5m tall. All fencing will have opaque dust control mesh and must be anchored down to prevent unintentional movement or overturning due to snow or wind loads.

The F-type barriers and fencing that define the encroachment will adhere to the Encroachment Plan which is to scale includes dimensions and can be found in the appendix. These areas can be measured for the administering of applicable fees. Encroachment areas and fees will be based on the areas within the public right-of-way enclosed by the barriers and fencing.

Installation of F-Type concrete barriers, concrete waste blocks, fencing and covering will take place during regular working hours as noted above. This work will be scheduled by the contractor after the HRM's pre-construction meeting has been held. HRM will coordinate this pre-construction meeting; the landowner, contractor and traffic control company will attend this site meeting. During the process of erecting and tearing down the traffic barriers, fencing and opaque covering defining the encroachment, traffic control elements will be implemented as per the Traffic Control Plan(s) in the appendix. All work and any traffic interruptions will be coordinated by the contractor who will notify HRM a minimum of 5 business days before work is scheduled to begin.

It is noted that surplus fencing must be stored and installed from private property when relocated for deliveries and be routinely re-established to keep the site secure. Surplus fencing cannot be stored within HRM's right-of-way.

8.2: Snow removal

The developer will be responsible to remove snow and ice as required to ensure that emergency access is maintain to the project site, this includes fire hydrants. The contractor will not dump snow or ice onto adjacent property and will truck snow off site as required to prevent the unsafe build-up of snow piles.

The contractor will clear snow from outside the jersey barriers to keep the edge of the vehicle travel lane clear of snow and ice build up on Hollis, Salter and Lower Water Streets.

8.3: Gate Access and Egress

The site will be accessible through gates. These gates are the only locations that will receive equipment/materials during construction, gates will remain closed and will be locked at all times after work hours. In cases of emergencies, on-site workers will exit the project site through these gates. These gates will remain unlocked at all times when workers are on site in case of emergency allowing unrestricted emergency response units access to the site.

Construction access gates are planned to be stationed at the existing site access during the initial excavation stages. However, as the project progresses an access gate will be stationed at each end of the truck laybys on Lower Water Street and Hollis Street to facilitate deliveries. Gates are to swing/slide into site, remain closed when not in use and locked after hours. The encroachment is planned to have four gates.

The existing fire hydrant in front of the project on Salter Street near Lower Water Street will sit within the planned encroachment area and will be turned off at the main and marked out of service by Halifax Water prior to excavation in this area. Adjacent existing hydrants and fire department connections are not anticipated to be affected by construction. As all other existing fire hydrants located adjacent to the site will remain protected from construction activities. These fire hydrants, along with the existing fire department connections will be accessible to firefighters throughout all phases of the project.

8.4: Hoarding Aesthetics

The site hoarding will resemble that shown in the appendix; encroachment fee reductions are anticipated for this project.

8.5: Sight Lines

Rigid fencing and signage will be installed as per the CMP drawings such that vehicle sight lines are maintained around corners, particularly at driveway access points and existing intersections.

8.6: Project Information and Contacts

To encourage communication between the project team and the public, contact information will be provided on Project Information Boards; these will be posted prominently around the project site on the fencing; refer to the appendix for a copy of the Project Information Board and the Encroachment Plan for the planned locations. Refer to the signage specification within the appendix describing the required size, materials, mounting hardware, etc. of these signs.

Section 9: Lifting, Hoisting, and Crane Operations

9.1: Crane Use Overview

This project will incorporate multiple tower cranes, these cranes will be stationed within the project site and will be operated under the direct supervision of a licensed crane operator employed by the formwork contractor. The approximate location of the site's tower cranes are shown in the appendix.

It is anticipated that the crane assembly will reside within the Lower Water Street encroachment or on private property. While crane disassemble will require a temporary road closure of Hollis Street.

The crane swing will extend over neighbouring properties. The developer will notify adjacent property owners prior to extending the crane over their properties. Refer to the appendix for crane information.

Depending on the stage of construction, concrete trucks will be stationed within the encroachment area or private property during concrete operations. Refer to the concrete delivery schematic within the appendix.

If lifting operations are required over the public realm, this area will be closed to access. In all cases of lifting, extreme care will be used to ensure public and worker safety.

9.2: Transport Canada and Nav Canada Regulations

There are two registered aerodromes in the Halifax region; Halifax International Airport and Canadian Forces Base Shearwater Airfield. According to Transport Canada regulations, the project site is outside of the lands to which regulations for these two aerodromes apply and Nav Canada clearance is not required for this site.

9.3: Aerodromes

There are several heliport approaches in the Halifax region; both Emergency Hospitals (QEII and IWK) as well as Point Pleasant Park. Given the location of the project site relative to these various approaches we understand Transport Canada notice does not apply and Nav Canada clearance is not required for this site.

Section 10: On-Site Safety and Security

10.1: Site Safety and Security Overview

The contractor will adhere to all Occupational Health & Safety requirements throughout the completion of this project. At a minimum, the following safety protocols will be utilized to further enhance site safety and security:

a) All workers will be required to have proof of up-to-date safety training;
a) Personal protective equipment (PPE) will be required for all personnel on site;
b) Adequate signage will be placed outside the hoarding, which will warn of hazards that may exist;
c) Gates will be locked and the perimeter fencing secured to provide security against public access during off work hours and will be monitored during operation;
d) Hoarding will clearly state "No Trespassing – Construction Personnel Only" & PPE requirements will be clearly identified (e.g., "Hard Hats and Safety Footwear Must Be Worn Beyond This Point");
e) Regular safety inspections will be conducted to ensure suitability of hoarding and other safety devices;
f) Emergency contact information to be prominently posted as per the Project Information Board.

10.2: Material Handling: Loading, Unloading, Delivery and Storage

The contractor will adhere to the procedures stipulated in the Haul Route Plan for delivery of materials. Delivery vehicles will use the designated gates for entry and exit. Timing of deliveries will be coordinated to have the least possible negative impact on regular traffic. The staging and delivery area will be coordinated by the delivery companies and site personnel, concrete and material delivery trucks will be housed within encroachment area or private property accessed from Hollis and Lower Water Streets.

10.3: Emergency Access & Egress

The site will be accessible through gates to facilitate construction vehicle access. In cases of emergencies, on-site workers will exit the project site through these gates. These gates will remain closed but unlocked at all times when workers are on site in case of emergency allowing unrestricted emergency response units access to the site. Gates will be locked and secured afterhours to provide security against public access during off work hour. Emergency contact information will be posted on project information boards surrounding the site, refer to the CMP plan for details.

Gates are to remain closed at all times unless being used for deliveries to maintain a controlled access site preventing access by the general public to the construction site.

10.4: Security Site Lighting

Security site lighting is not anticipated for this project.

10.5: Smoking Areas

On site smoking areas will not be provided as this will be a smoke-free site.

10.6: Fire Suppression Systems

The existing fire hydrant in front of the project on Salter Street near Lower Water Street will sit within the planned encroachment area and will be turned off at the main and marked out of service by Halifax Water prior to excavation in this area.

The existing fire hydrants on both Hollis and Lower Water stationed behind the curb opposite the project will remain outside the project area and will be physically distanced from construction activities. Additionally, existing fire department connections (FDC) adjacent to the site will remain outside the project area and distanced from construction activities. Fire hydrants, along with any existing FDCs will be accessible to firefighters throughout all phases of the project.

There are no proposed fire department connections at this stage of the project. These are not available for fire department use until after the water supply lines have been installed, tested and commissioned by the water commission, similar with the fire suppression system. This system will not be active until after the building is near complete and the encroachment fencing has been removed.

Section 11: Pre-Construction Consultation & Meeting

11.1: Pre-CMP Community Consultation

Due to the current pandemic, the developer will forego the community consultation meeting. A construction notification letter will be delivered to the properties neighbouring the construction site as well as HRM staff, notifying them of the expected work with contact information for questions and feedback. As part of this notification the surrounding community and businesses will be offered to sign up for a monthly construction project notification from

the development. It is understood, HRM requires a confirmation letter from the applicant confirming delivery of notification letters to affected residents. A map indicating these properties has been included in the appendix.

11.2: Project Information and Contacts

To encourage communication between the project team and the public, contact information will be provided on Project Information Boards; these will be posted prominently around the project site on the fencing; refer to the appendix for a copy of the Project Information Board and the CMP Plan for the planned locations. Information on signage size and materials is outlined in the appendix.

11.3: Preconstruction Meeting

Prior to construction the developer, contractor and traffic control company will attend a pre-construction meeting with HRM staff to review the CMP document on site. HRM's engineering technician will confirm the date and time of this meeting; and may wise to waive the requirement.

11.4: Construction Notification

Approximately five (5) business days prior to the encroachment, an additional notification will be circulated to the neighbouring properties, notifying them that work is starting on site.

Section 12: Summary

This construction management plan was prepared with the goal to minimize negative impacts to the community, pedestrians, and traffic throughout the scope of this project. This plan will be used as a minimum standard and any further safety protection required or methods to provide a more positive environment will be used throughout construction work as necessary.

Should you have any questions or comments related to this document, please contact SDMM. For all construction-related inquiries, please contact the developer, contractor, or traffic control service provider.

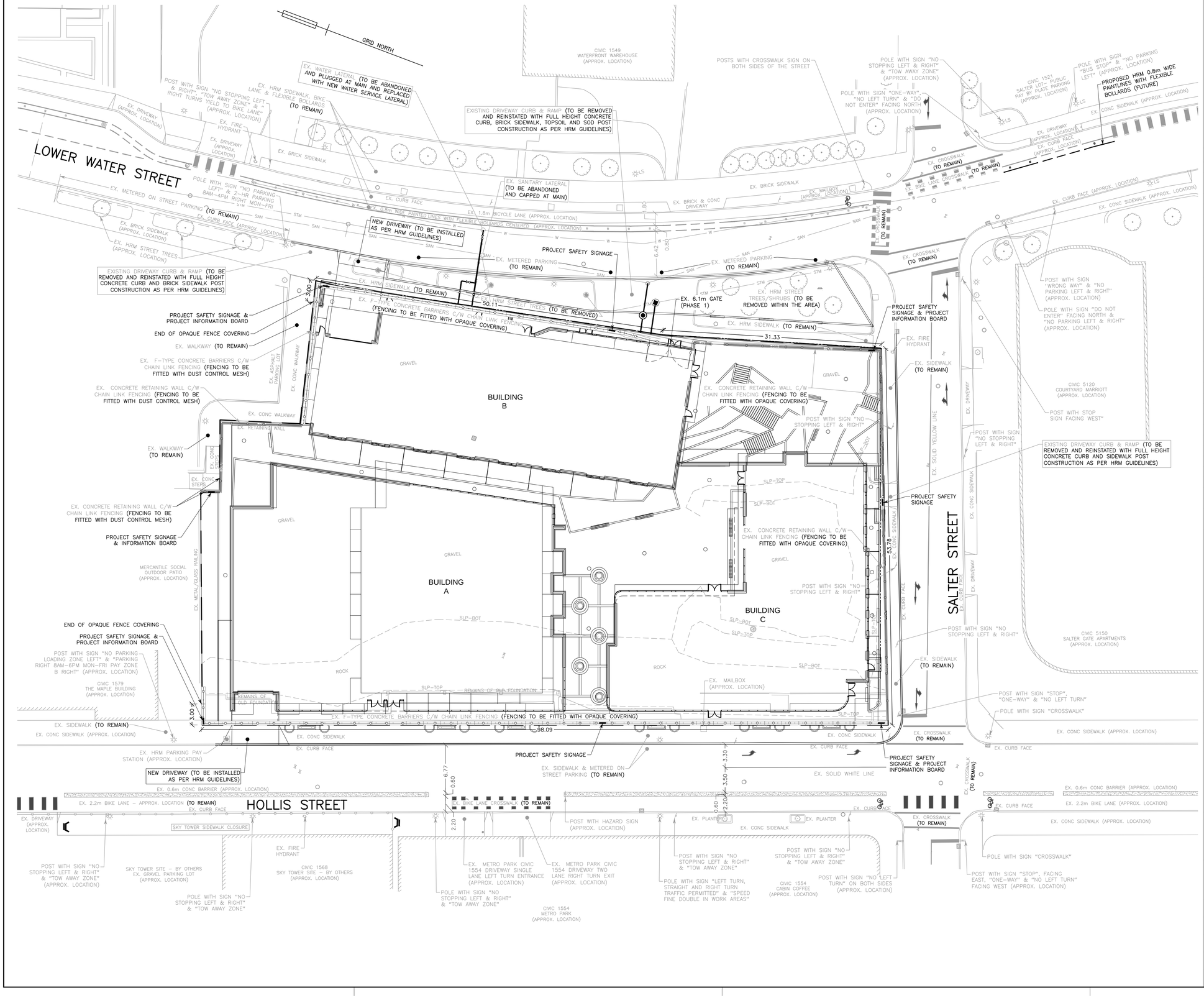
Regards,

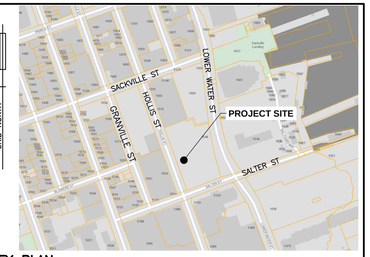
Servant, Dunbrack, McKenzie & MacDonald Ltd.

Geoff MacLean, P.Eng.
Project Engineer
\\sdmm-server\company\SDMM\37000-37999\37550\37572\CMP\Rev1\1557 Hollis St - CMP (Rev1) - 37572.docx

APPENDIX

Appendix A – Encroachment Plan





KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
	FIRE HYDRANT	
	CONCRETE THRUST BLOCK	
	SIAMESE CONNECTION	
	CATCH BASIN/PIT	
	CULVERT	
/ RD	ROCK LINING/DAM	/ RD
/ RW	ROCK WALL/RETAINING WALL	/ RW
	POWER POLE & ANCHOR/LIGHT STANDARD	
	TREE	
	STREET SIGN/PARKING METER	
× 131.82	ELEVATION/GRADE	125.00 × / ± 125.00
	TEST PIT	
/ S	DRAINAGE/SWALE FLOW DIRECTION	/ S
W	WATER MAIN/SERVICE	W
SAN	SANITARY MANHOLE & PIPE	SAN
STM	STORM MANHOLE & PIPE	STM
SAN/STM	COMBINED PIPE	SAN/STM
GAS	GAS LINE	GAS
FL	100YR. FLOOD LIMIT	FL
	GUARD RAIL	
C	UNDERGROUND CONDUIT	C
	OVERHEAD WIRES	
	PROPERTY LINE/BOUNDARY	
	FENCE	
	BUILDING	
	TOP OF SLOPE	
	TOE OF SLOPE	
	TREELINE	
	LIMITS OF DISTURBANCE	
	TACTILE PEDESTRIAN PLATES	
	PROJECT SAFETY SIGNAGE	
	ORANGE SAWHORSE BARRICADE	

NOTES

1. THIS PLAN IS IN METRIC.
2. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

No.	YY/MM/DD	Revision Description	Appr'd
1	23/03/16	PER HRM: SKY TOWER SIDEWALK ENCROACHMENT ADDED	
0	23/02/14	ISSUED FOR REVIEW	

REGISTERED PROFESSIONAL ENGINEER – PROVINCE OF NOVA SCOTIA – DATE – G.K. MacLean – 8978

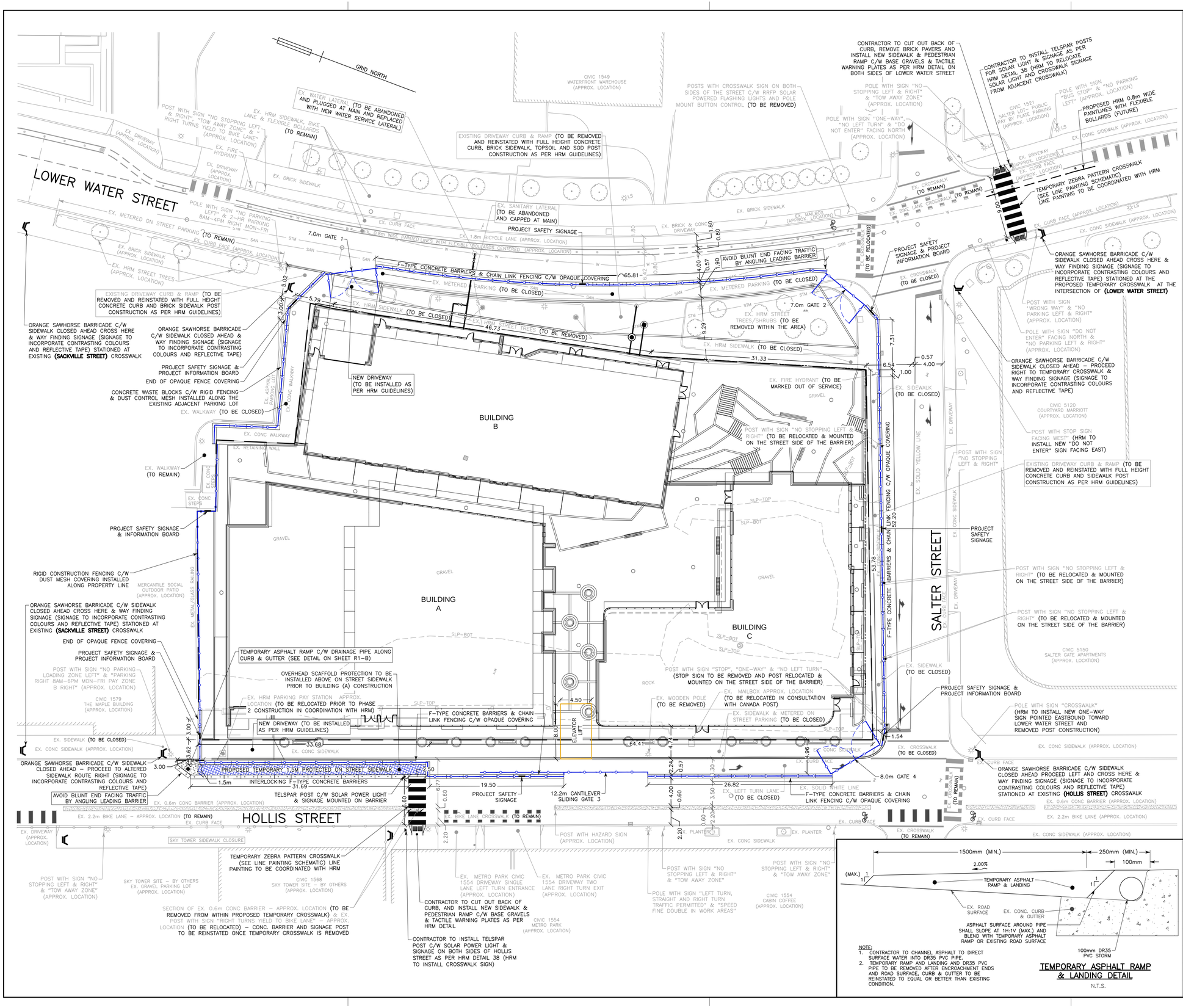
SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS
36 OLAND CRESCENT, BAYERS LAKE BUSINESS PARK, HALIFAX, NS B3S 1C6
PHONE: (902) 455–1537 FAX: (902) 455–8479 WEB: www.sdmm.ca

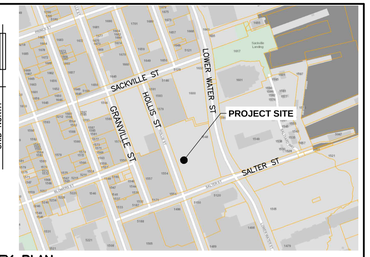
PROPOSED DEVELOPMENT
1557 HOLLIS STREET
HALIFAX, NOVA SCOTIA

PHASE 1 – ENCROACHMENT PLAN

Date: FEBRUARY 14, 2023	Drawn: D. ANDERSON	Project No.: FILE NO. 1–1–147 (37572)
Scale: 1:250	Engineer: G. MACLEAN	Plan No.:
Reference: ––	Approved: G. MACLEAN	Drawing Name: R1–A
Surveyed: BY OTHERS	Sheet:	

0m 5 10 15 20 25m





KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
	FIRE HYDRANT	
	CONCRETE THRUST BLOCK	
	SIAMESE CONNECTION	
	CATCH BASIN/PIT	
	CULVERT	
RD	ROCK LINING/DAM	RD
RW	ROCK WALL/RETAINING WALL	RW
	POWER POLE & ANCHOR/LIGHT STANDARD	
	TREE	
	STREET SIGN/PARKING METER	
× 131.82	ELEVATION/GRADE	125.00 × / 125.00
	TEST PIT	
S	DRAINAGE/SWALE FLOW DIRECTION	S
W	WATER MAIN/SERVICE	W
SAN	SANITARY MANHOLE & PIPE	SAN
STM	STORM MANHOLE & PIPE	STM
SAN/STM	COMBINED PIPE	SAN/STM
GAS	GAS LINE	GAS
FL	100YR. FLOOD LIMIT	FL
	GUARD RAIL	
C	UNDERGROUND CONDUIT	C
	OVERHEAD WIRES	
	PROPERTY LINE/BOUNDARY	
	FENCE	
	BUILDING	
	TOP OF SLOPE	
	TOE OF SLOPE	
	TREELINE	
	LIMITS OF DISTURBANCE	
	TACTILE PEDESTRIAN PLATES	
	PROJECT SAFETY SIGNAGE	
	ORANGE SAWHORSE BARRICADE	

NOTES

1. THIS PLAN IS IN METRIC.
2. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

No.	YY/MM/DD	Revision Description	Appr'd
1	23/03/16	REVISED ENCROACHMENT & ADDED CROSSWALK	
0	23/02/14	ISSUED FOR REVIEW	

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE — G.K. MacLean — 8978

SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS
36 OLAND CRESCENT
BAYERS LAKE BUSINESS PARK
HALIFAX, NS B3S 1C6
PHONE: (902) 455–1537
FAX: (902) 455–8479
WEB: www.sdmm.ca

PROPOSED DEVELOPMENT
1557 HOLLIS STREET
HALIFAX, NOVA SCOTIA

PHASE 2 – ENCROACHMENT PLAN

Date: FEBRUARY 14, 2023	Drawn: D. ANDERSON	Project No.: FILE NO. 1–1–147 (37572)
Scale: 1:250	Engineer: G. MACLEAN	Plan No.:
Reference: ––	Approved: G. MACLEAN	Drawing Name: R1–B
Surveyed: BY OTHERS	Sheet:	

0m 5 10 15 20 25m

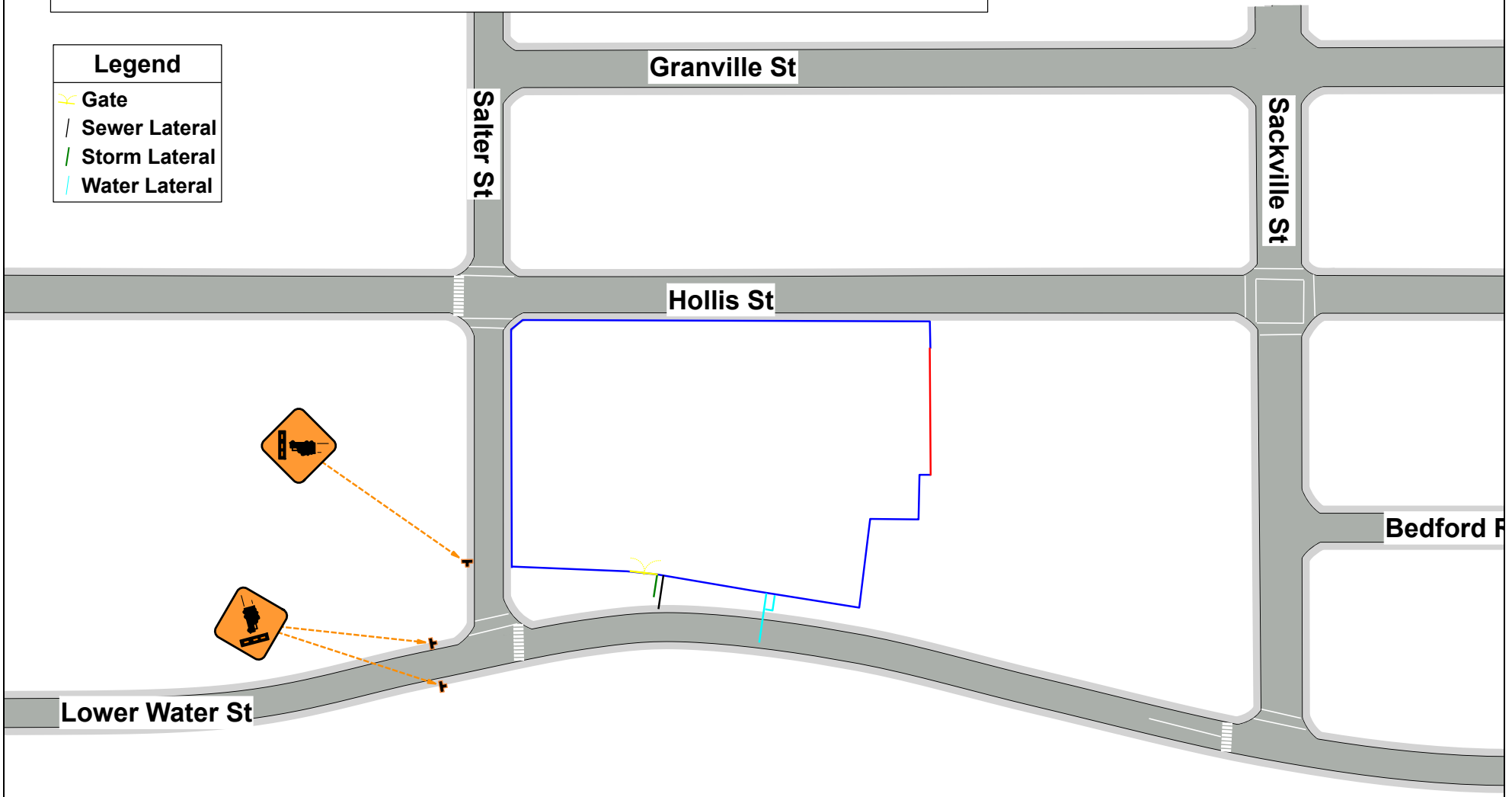
Appendix B – Traffic Control Plans TCP

Phase 1 Encroachment Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Phase 1 Encroachment Plan
No Street or Shoulder Encroachment



Phase 2 Encroachment Plan

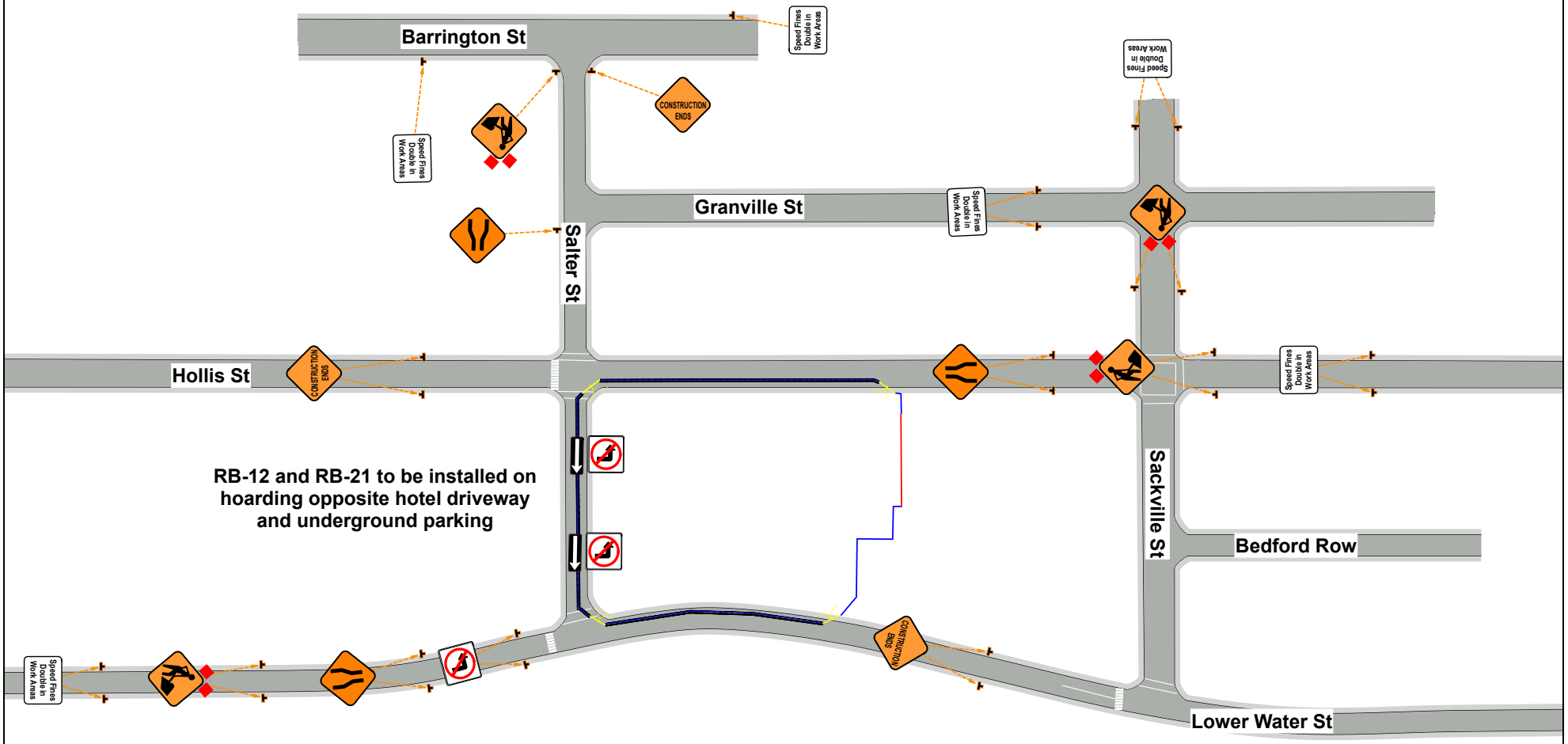
Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Phase 2 Encroachment Plan
Application Guide C22
See Pedestrian Management Plan 2 for sidewalk closure details

Legend

- Existing Wall
- F-Type Barrier with Rigid Fencing and Opaque Hoarding
- Gate
- Rigid Fencing

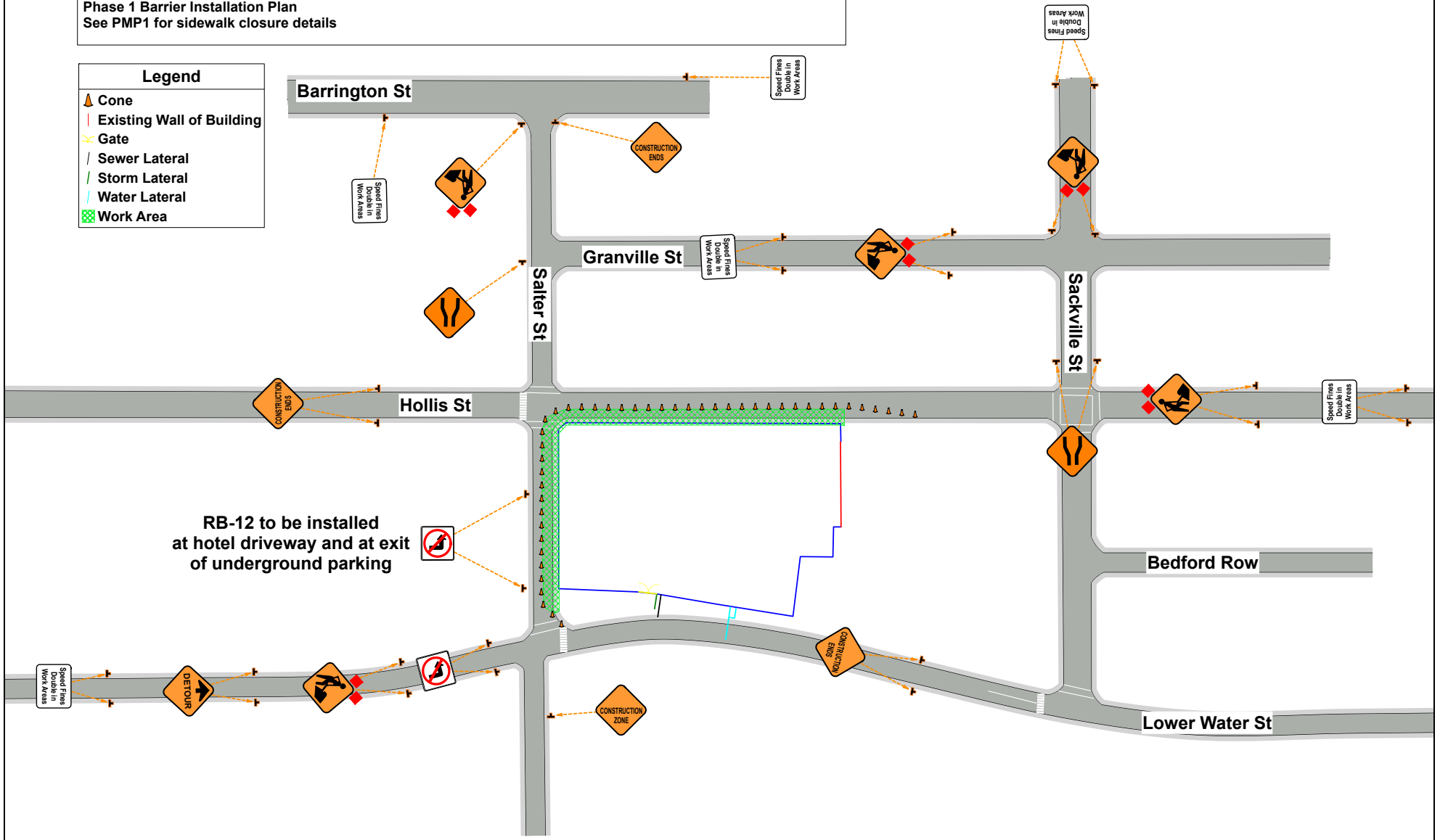


Phase 1 Barrier and Fencing Installation Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Application Guides C119, C77 and C22
Phase 1 Barrier Installation Plan
See PMP1 for sidewalk closure details



Phase 2 Barrier and Fencing Installation and Removal Plan

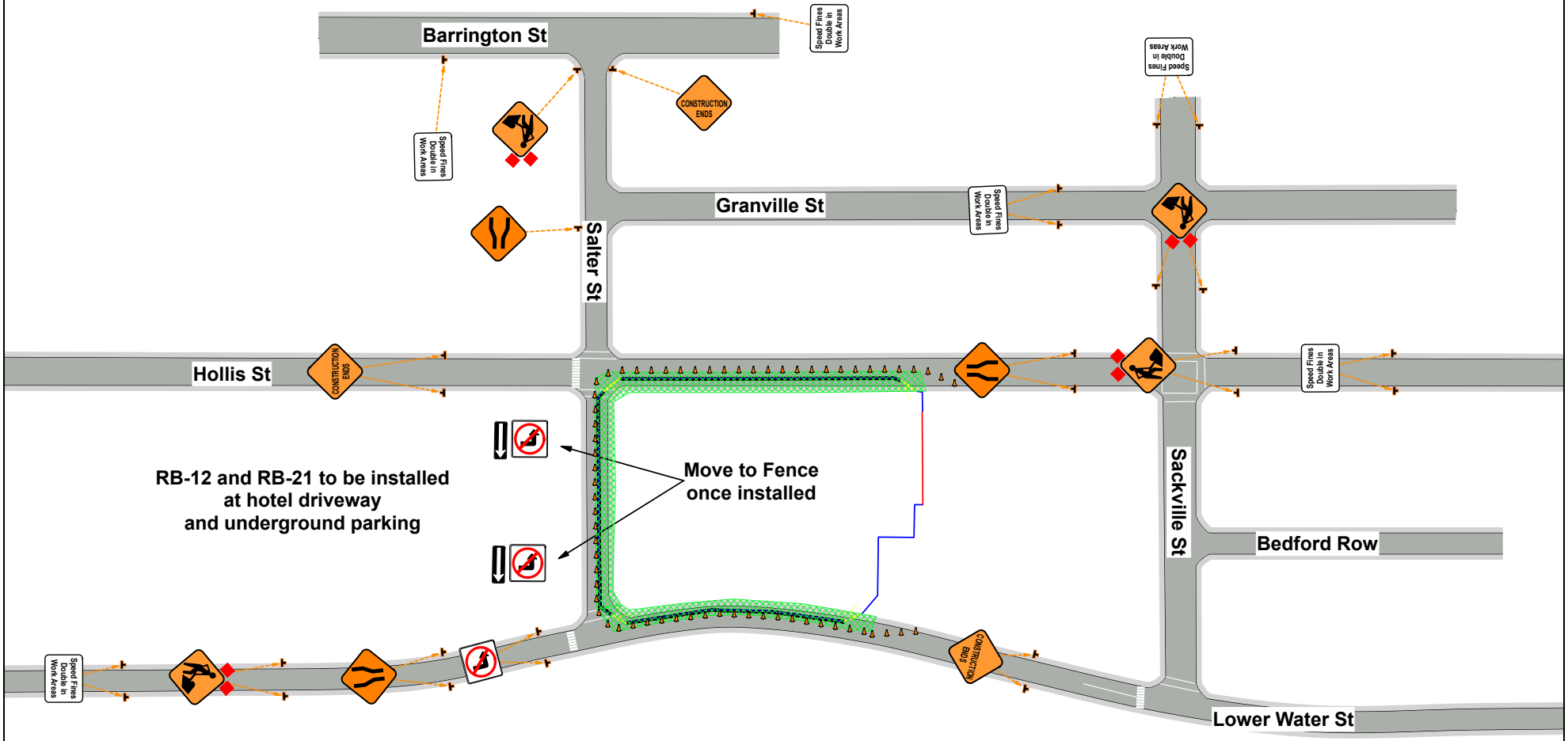
Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Application Guides C119, C77 and C22
Phase 2 Barrier and Fencing Installation and Removal Plan
See PMP2 for sidewalk closure details

Legend

- Cone
- F-Type Barrier with Rigid Fencing and Opaque Hoarding
- Gate
- Work Area

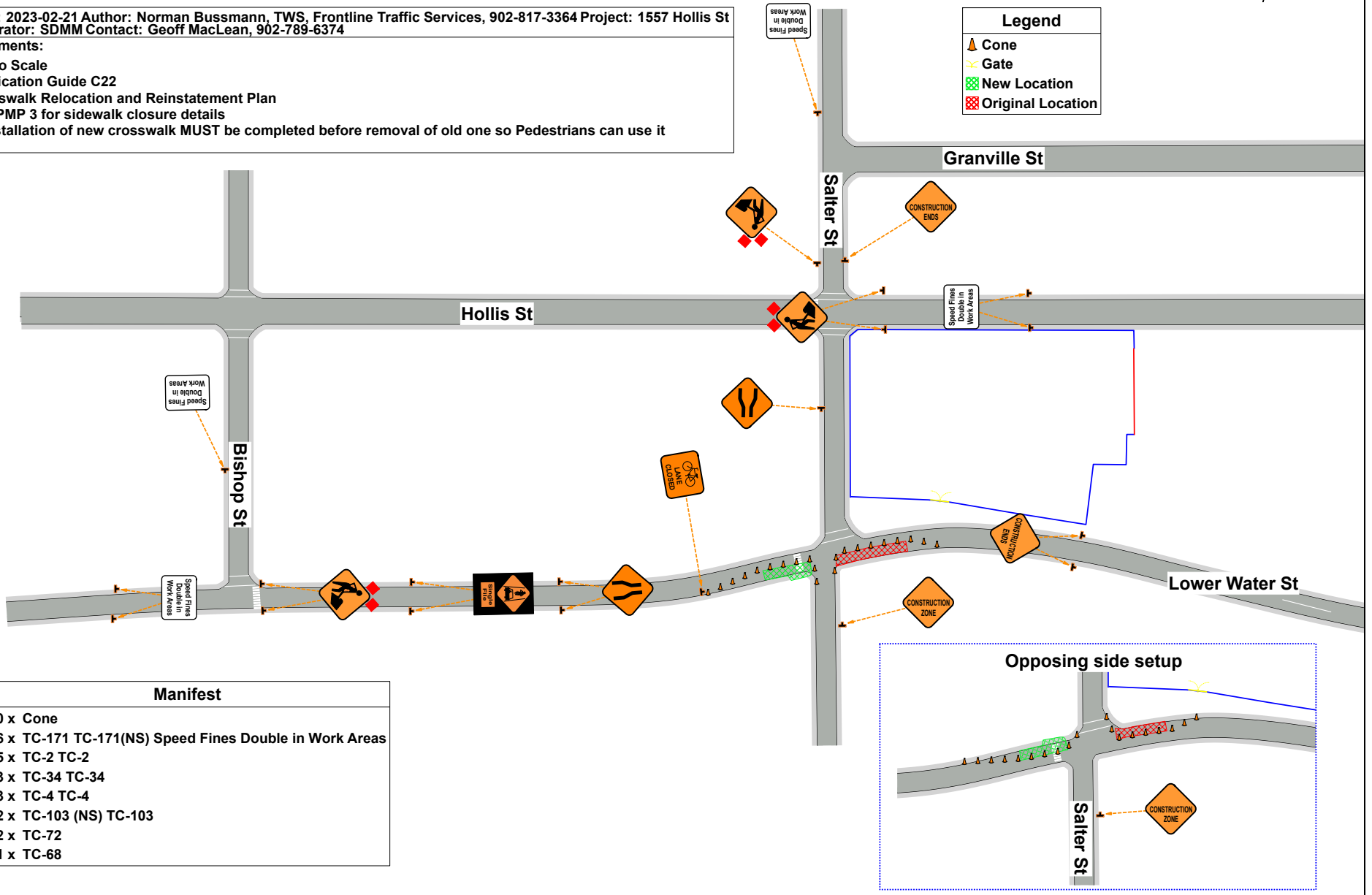


Crosswalk Relocation and Reinstatement Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Application Guide C22
Crosswalk Relocation and Reinstatement Plan
See PMP 3 for sidewalk closure details
** Installation of new crosswalk MUST be completed before removal of old one so Pedestrians can use it



Manifest
40 x Cone
6 x TC-171 TC-171(NS) Speed Fines Double in Work Areas
5 x TC-2 TC-2
3 x TC-34 TC-34
3 x TC-4 TC-4
2 x TC-103 (NS) TC-103
2 x TC-72
1 x TC-68

Storm and Sewer Laterals Installation Plan

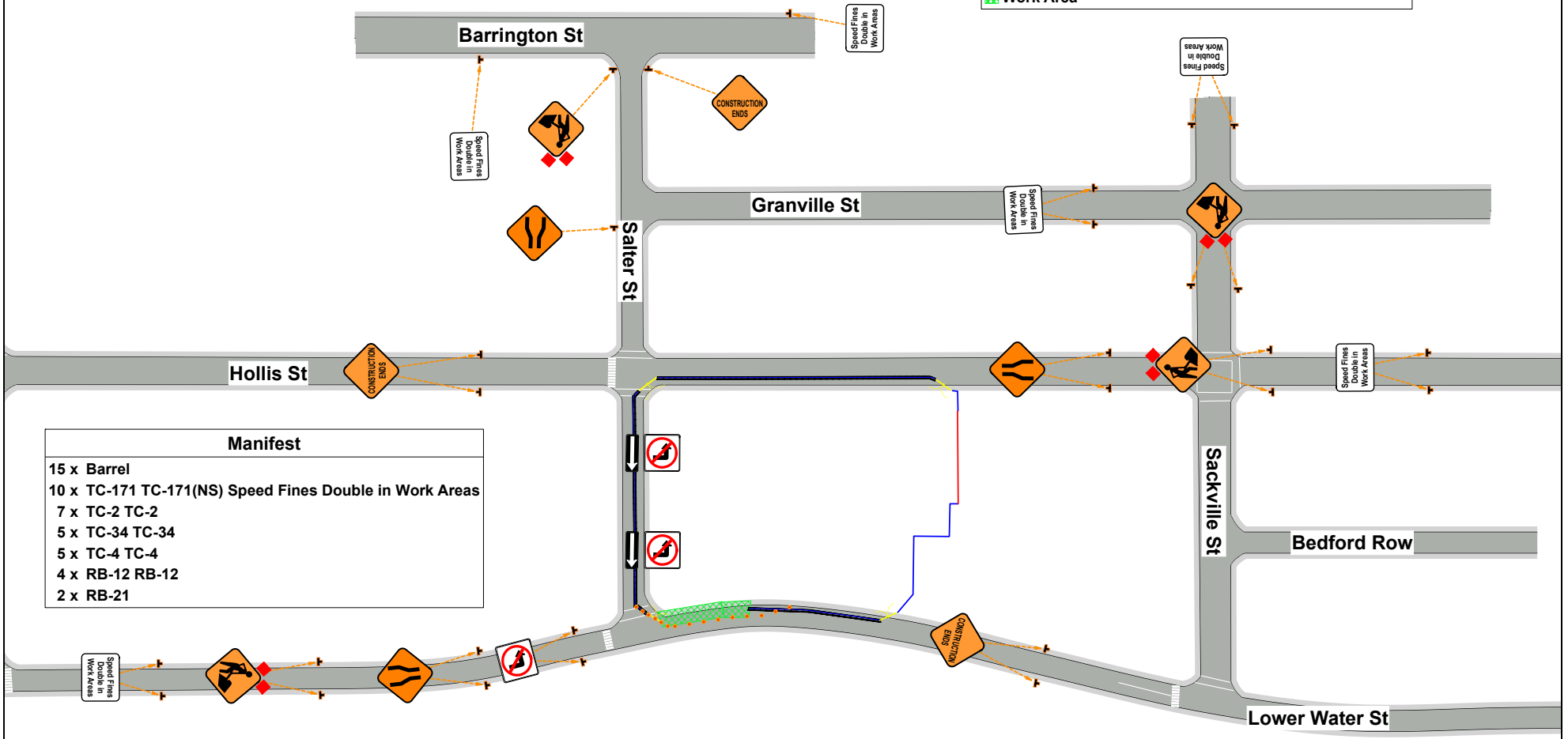
Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Storm and Sanitary Service Laterals Installation Plan
No additional signage required. Work can be done within the existing encroachment
See Pedestrian Management Plan 2 for sidewalk closure details

Legend

- Barrel
- Existing Wall
- F-Type Barrier with Rigid Fencing and Opaque Hoarding
- Gate
- Rigid Fencing
- Work Area



Manifest

15 x	Barrel
10 x	TC-171 TC-171(NS) Speed Fines Double in Work Areas
7 x	TC-2 TC-2
5 x	TC-34 TC-34
5 x	TC-4 TC-4
4 x	RB-12 RB-12
2 x	RB-21

Water Lateral Installation Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

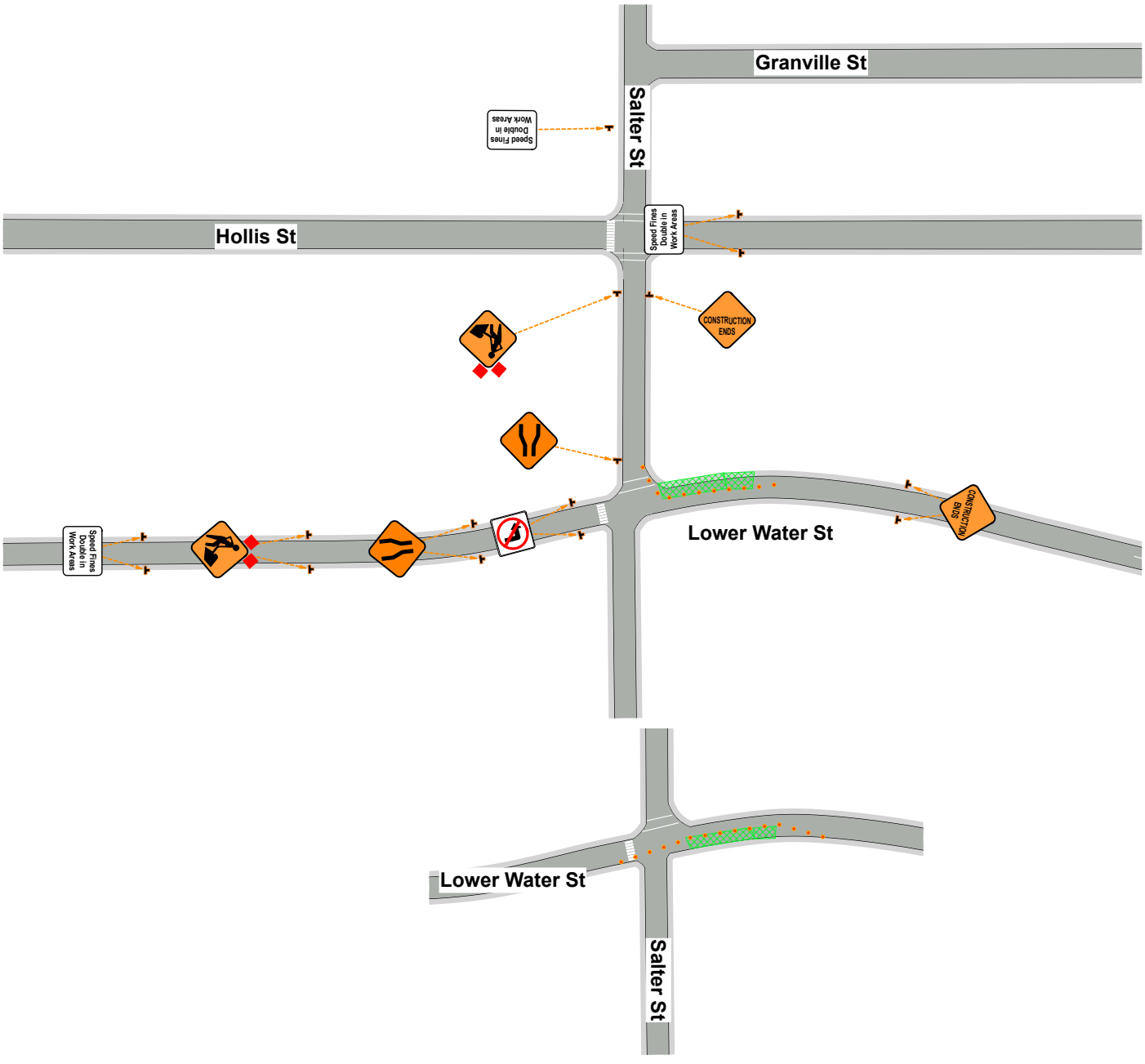
Comments:

Not to Scale
Water Lateral Installation Plan
Application Guide C22
No additional signage required. Work can be done within the existing encroachment
See Pedestrian Management Plan 3 for sidewalk closure details

Manifest
26 x Barrel
5 x TC-171 TC-171(NS) Speed Fines Double in Work Areas
3 x TC-2 TC-2
3 x TC-34 TC-34
3 x TC-4 TC-4
2 x RB-12 RB-12

Legend

- Barrel
- Existing Wall
- Gate
- Rigid Fencing
- Work Area



Hollis St Closure Plan

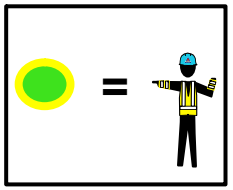
Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: The Governor
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

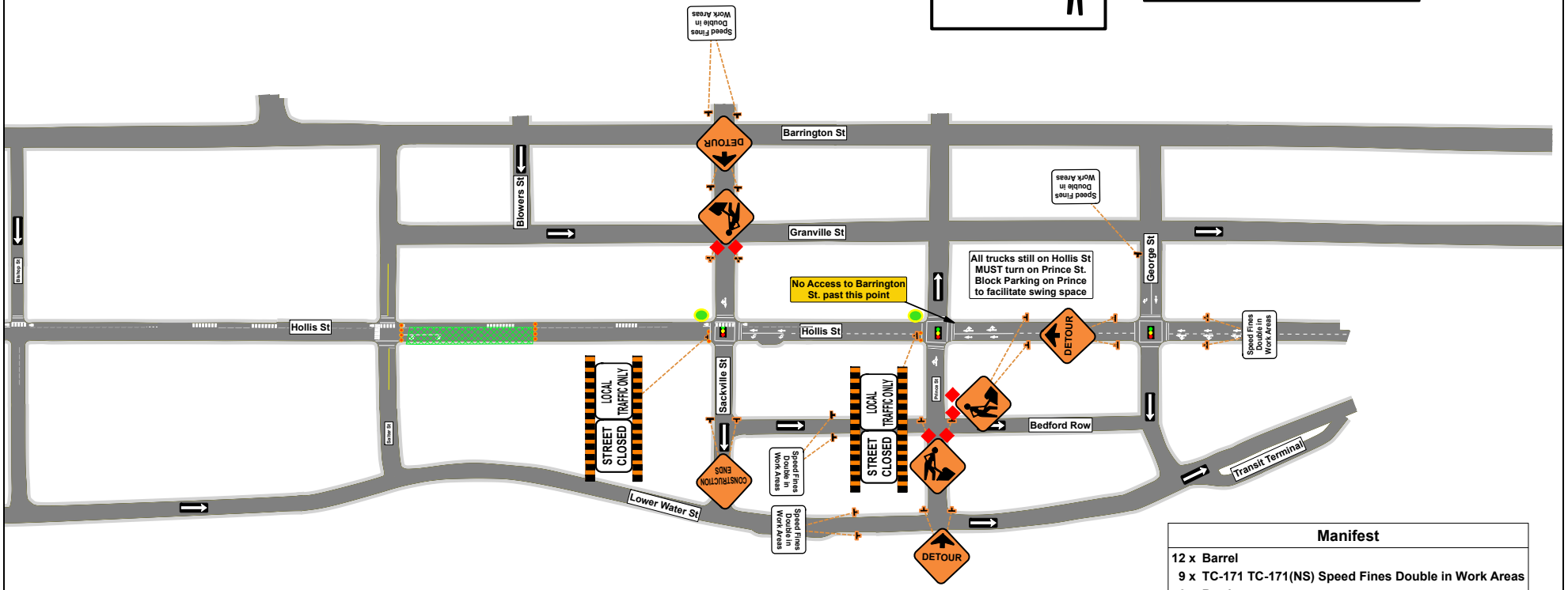
Not to Scale
Application Guide C114
Long Duration Closure of Hollis St for Crane dismantling
See Pedestrian Management Plan for sidewalk closure details
See VMB Plan for Message Board Placement

Legend

- Barrel
- Barrier
- Work Area



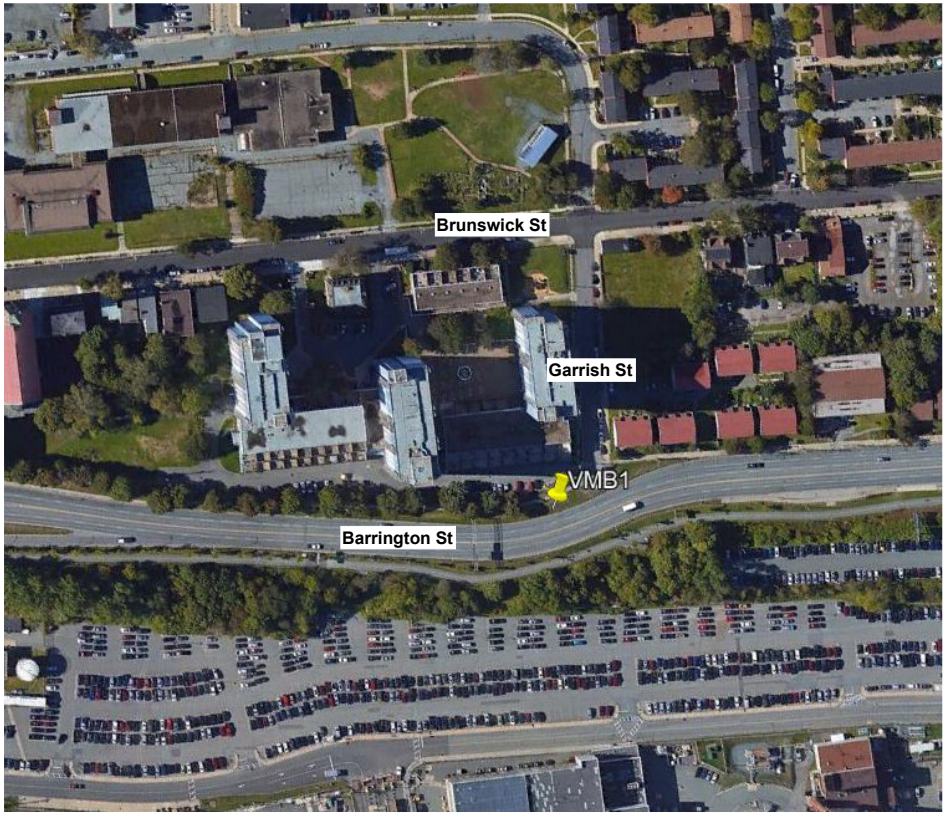
V	Speed Zone, km/h	50	60-70	80-90
A	Sign Spacing (m)	50	100	150
L	Transition Taper (m)	30	60	120
L/2	Termination Taper (m)	15	30	60
D	Delineator Spacing (m)	5	5	10
B	Buffer Area	Note 2	Note 2	30m



Manifest

12 x Barrel
9 x TC-171 TC-171(NS) Speed Fines Double in Work Areas
6 x Barrier
6 x TC-10 TC-10
6 x TC-2 TC-2
2 x TC-4 TC-4
2 x TC-64D TC-64D

Hollis St Closure VMB Location



Example

Hollis St Closed at Salter St	Fri.Mar6 6pm to Mon Mar9 5am	Trucks use Barrington St

Appendix C – Haul Route Plan

Phase 1 Haul Route Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

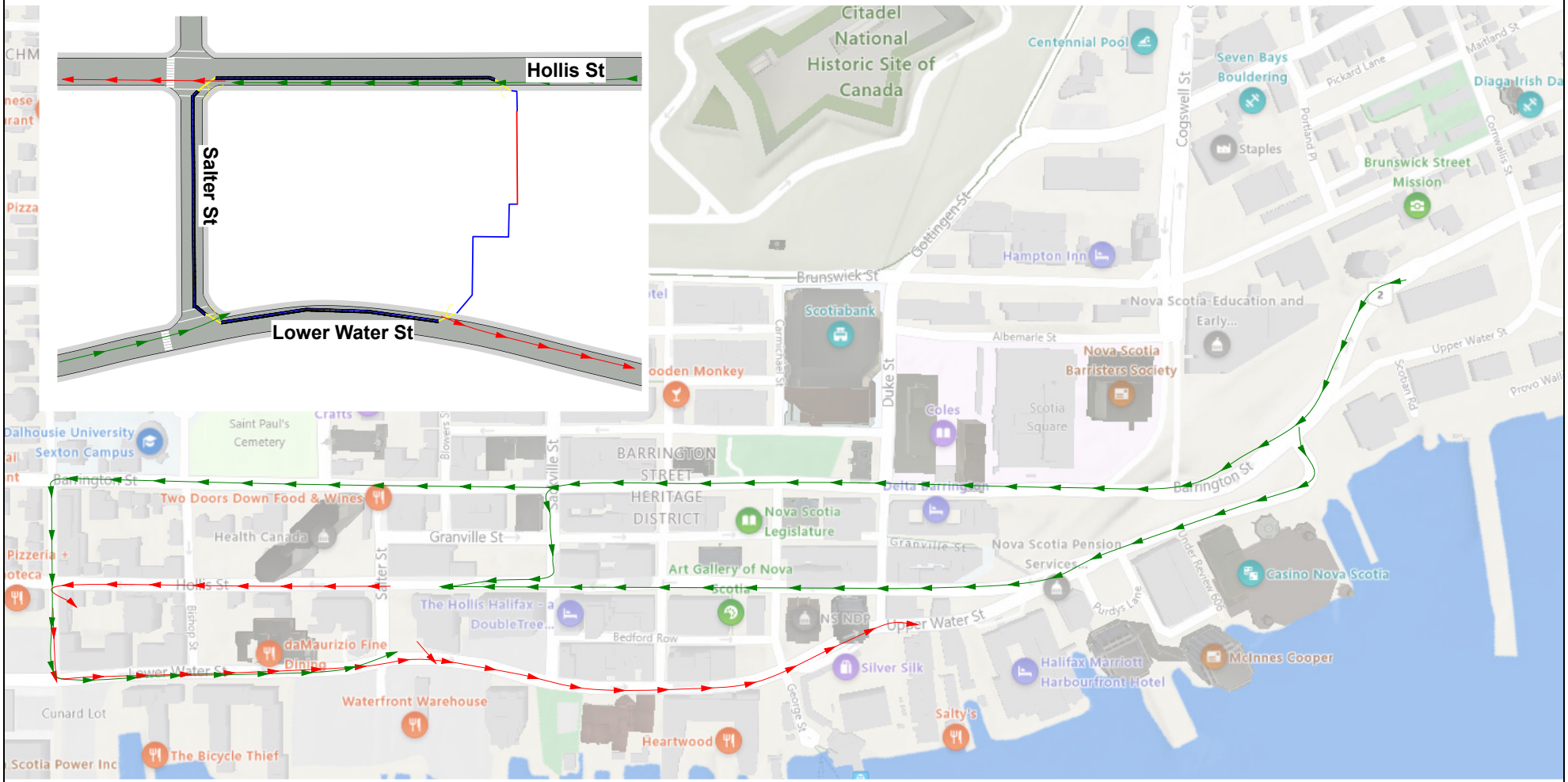
Not to Scale
Phase 1 Haul Route Plan
Inbound via Barrington St to Salter St to Lower Water St
Or, via Barrington St to Upper Water St to Hollis St to Salter St to Lower Water St
Outbound Via Lower Water St to Upper Water St to Barrington St

Phase 2 Haul Route Plan

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Phase 2 Haul Route Plan
Inbound via Barrington St to Morris St to Lower Water St to Site
Inbound via Barrington St to Upper Water St to Hollis St to Site
Outbound via Hollis St to Morris St to Lower Water St to Upper Water St to Barrington St
Outbound via Lower Water St to Upper Water St to Barrington St



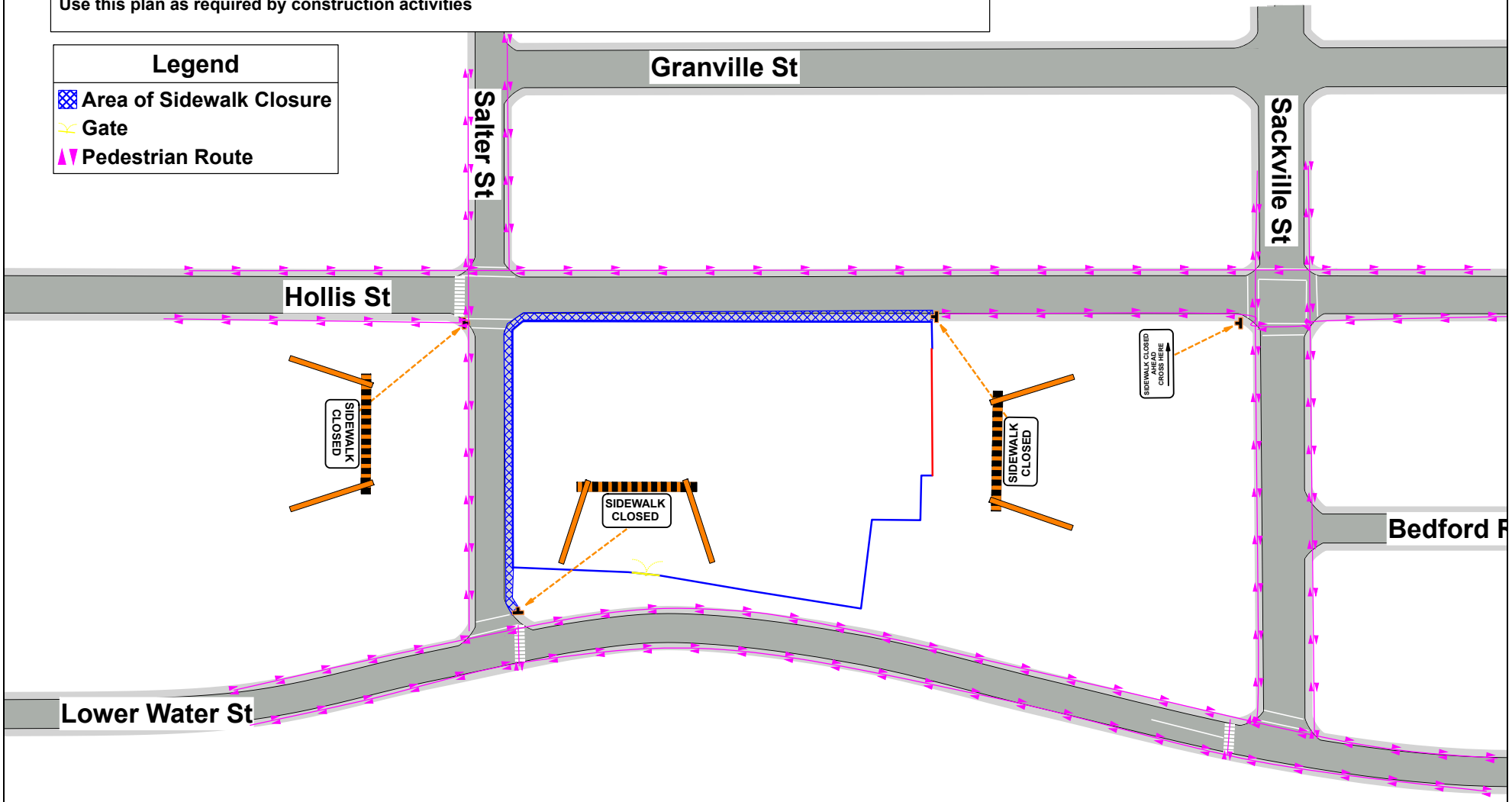
Appendix D – Pedestrian Management Plan (PMP)

Pedestrian Management Plan 1

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Pedestrian Management Plan 1
For closure of East sidewalk on Hollis St and North Sidewalk on Salter St
Use this plan as required by construction activities

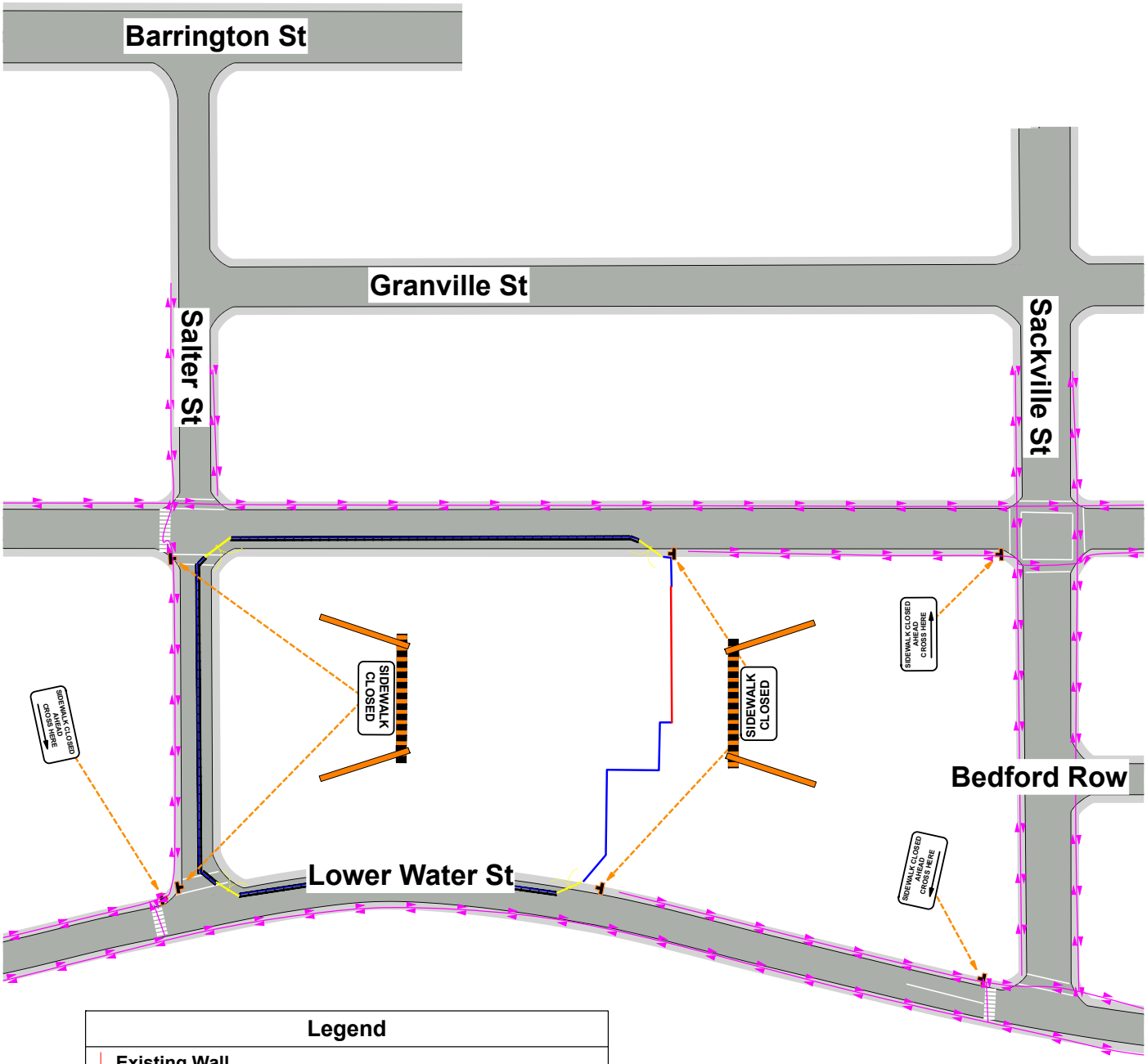


Pedestrian Management Plan 2

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

Comments:

Not to Scale
Pedestrian Management Plan 2
For long duration closure of sidewalks on Hollis St (East side), Salter St (North side), and Lower Water St (West Side)



Legend
Existing Wall
F-Type Barrier with Rigid Fencing and Opaque Hoarding
Gate
Pedestrian Route
Rigid Fencing

Pedestrian Management Plan 3

Date: 2023-02-21 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 1557 Hollis St
Contrator: SDMM Contact: Geoff MacLean, 902-789-6374

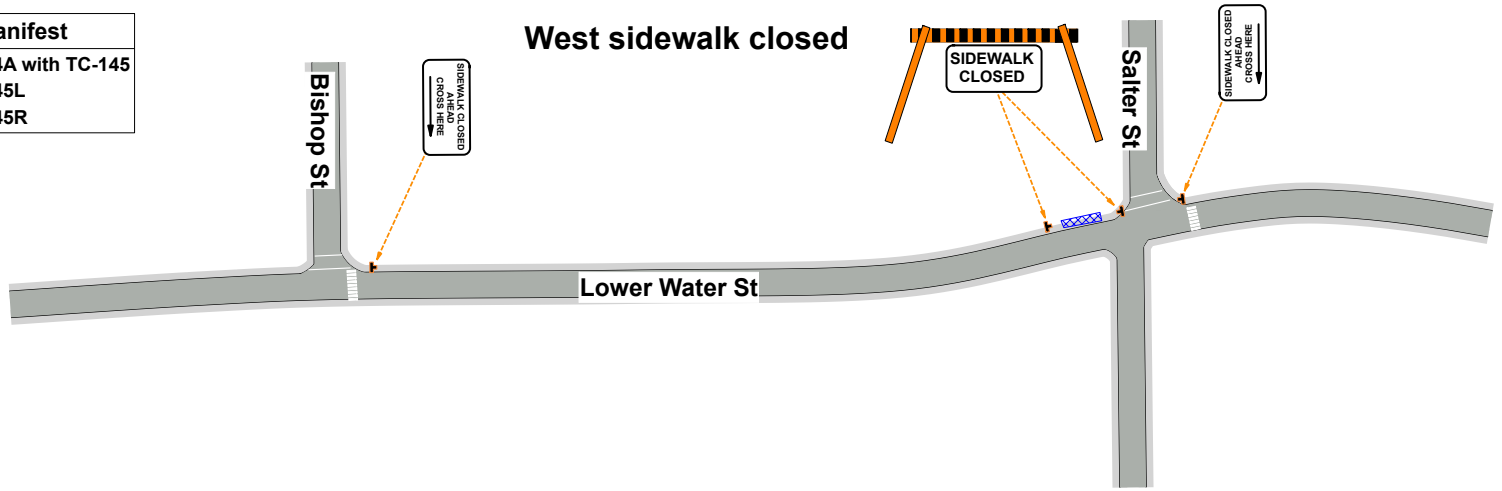
Comments:

Not to Scale
Pedestrian Management Plan 3
For closure of Lower Water St sidewalk to facilitate the installation and removal of relocated crosswalk

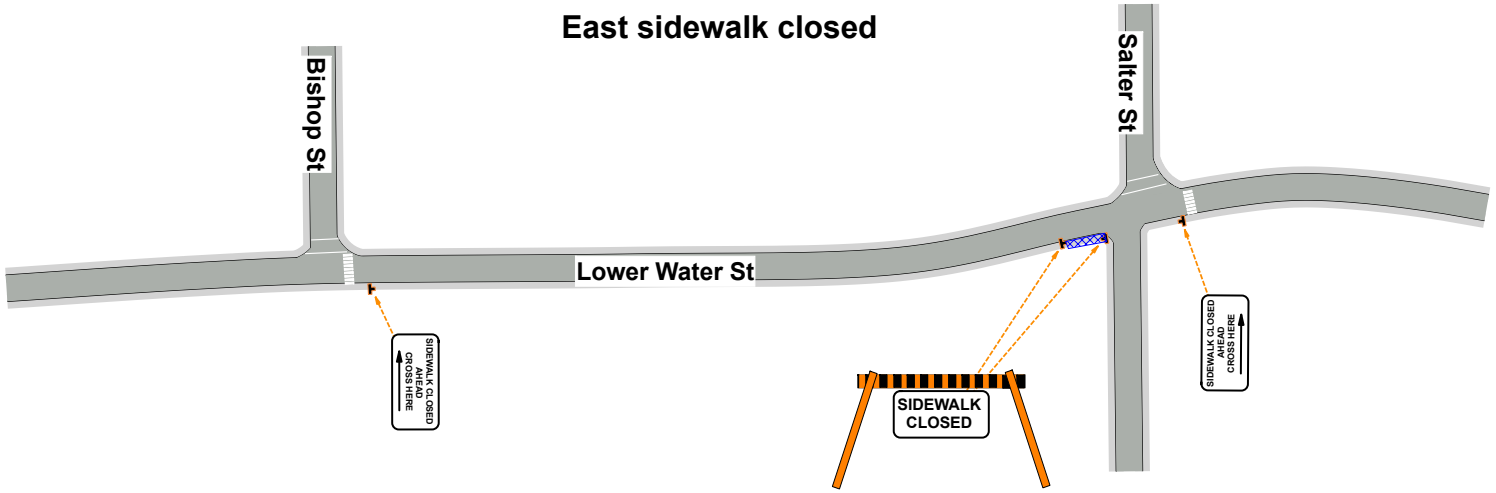
Legend
Area of Sidewalk Closure

Manifest
2 x TC-64A with TC-145
1 x TC-145L
1 x TC-145R

West sidewalk closed



East sidewalk closed



Appendix E – Barrier, Waste Blocks, Fence & Gates Information

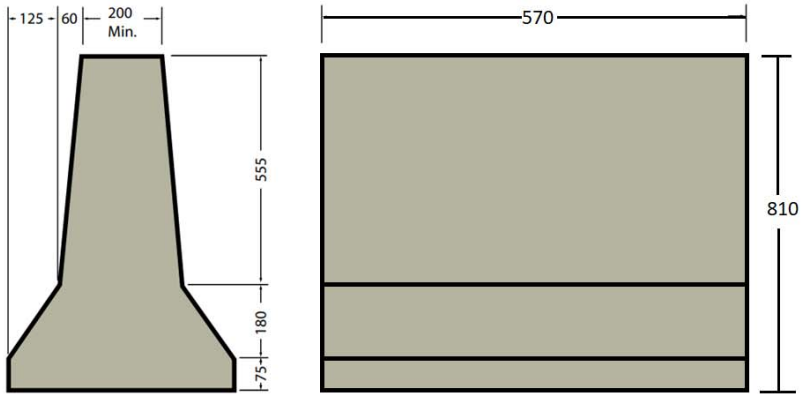
Sample Barrier & Fence Details

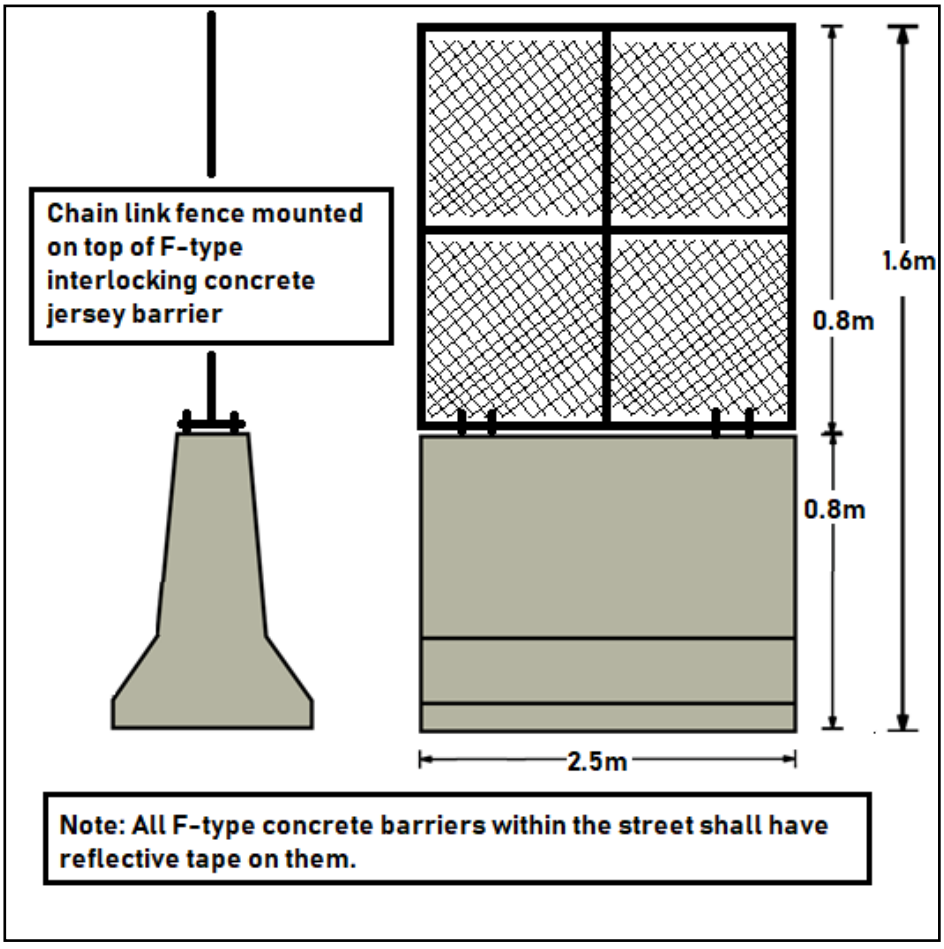
F-shape Barrier

Approved Barrier Designs

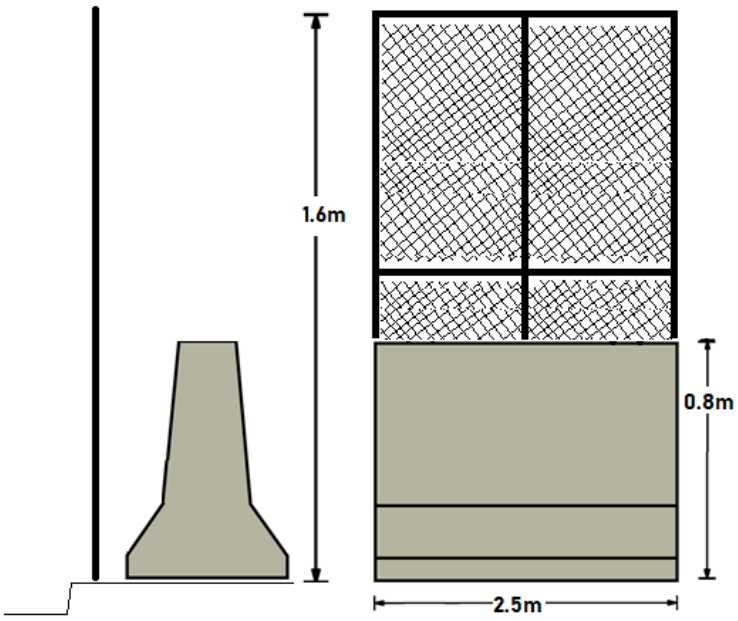
The only pre-approved portable anti-intrusion barrier in Nova Scotia is the Portland Cement Concrete F-shape Barrier. F-shape Barriers with designs approved before 2011.01.01 must be constructed and installed copying a design certified as meeting Test Level 3 of the NCHRP Report 350 (NCHRP 350), or if the design was approved after 2011.01.01, Test Level 3 standards of the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH).

Dimensions are in mm

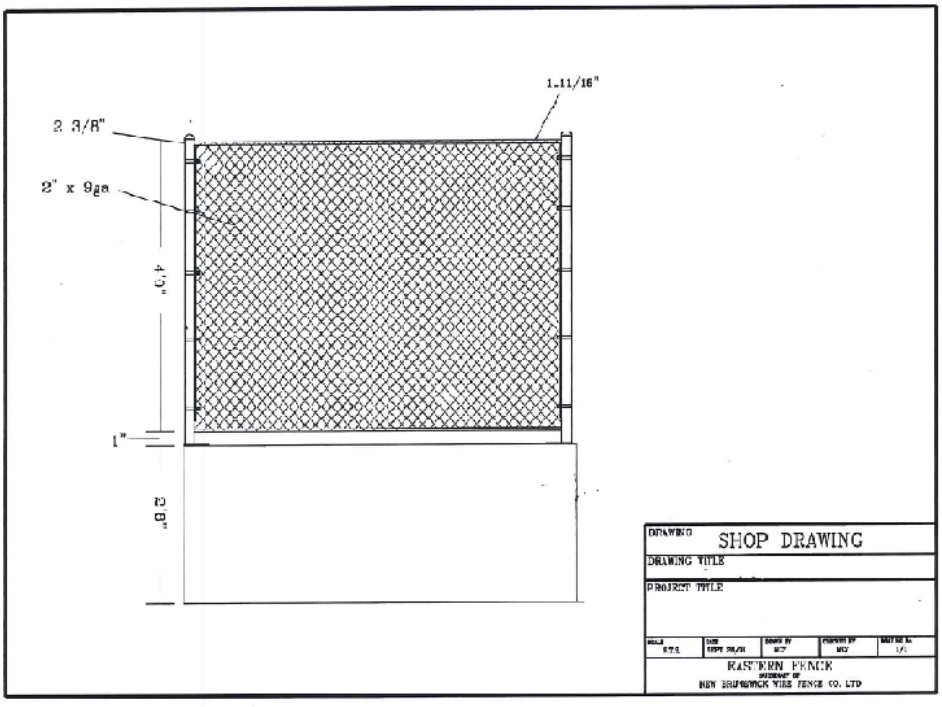


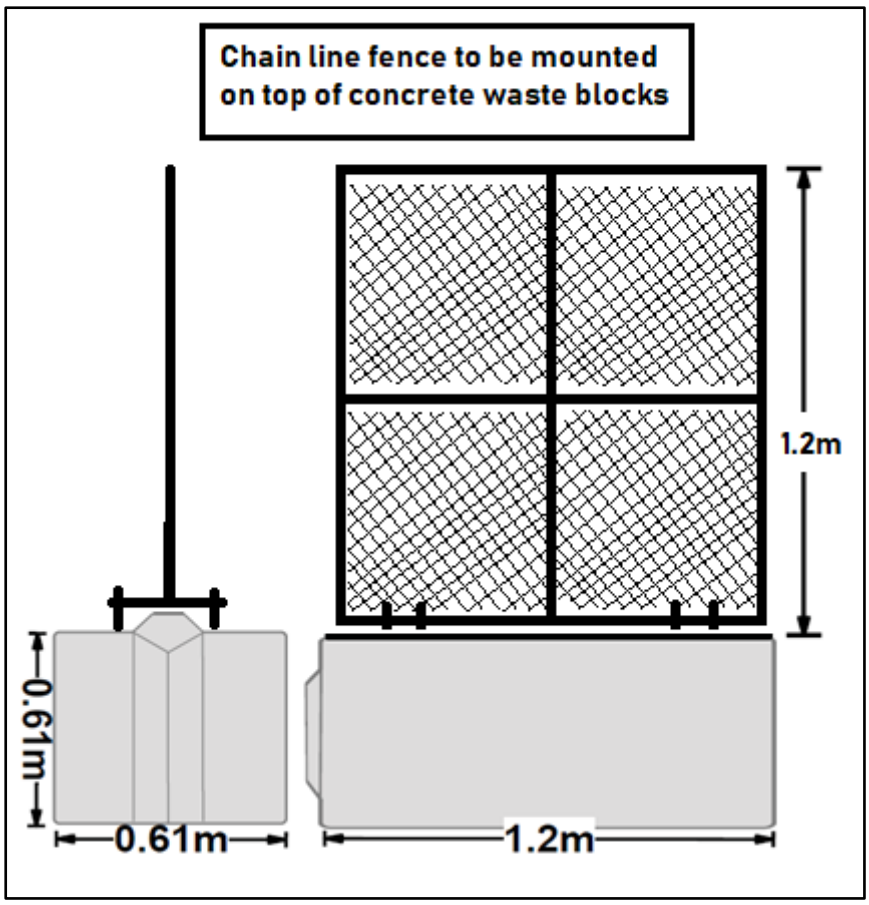


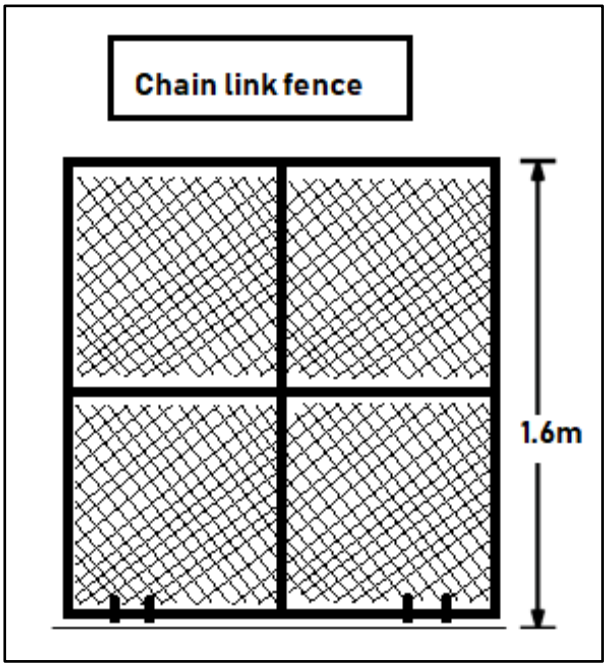
Fence mounted to curb with interlocking F-type concrete jersey barriers set beside

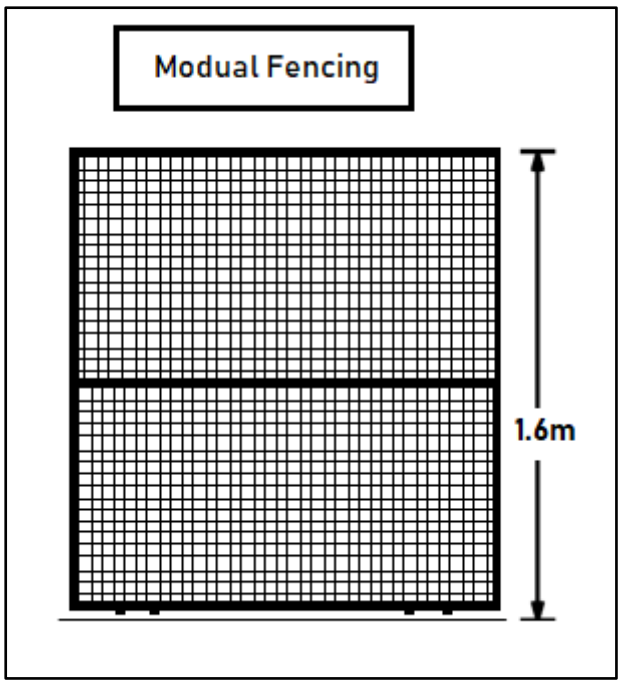


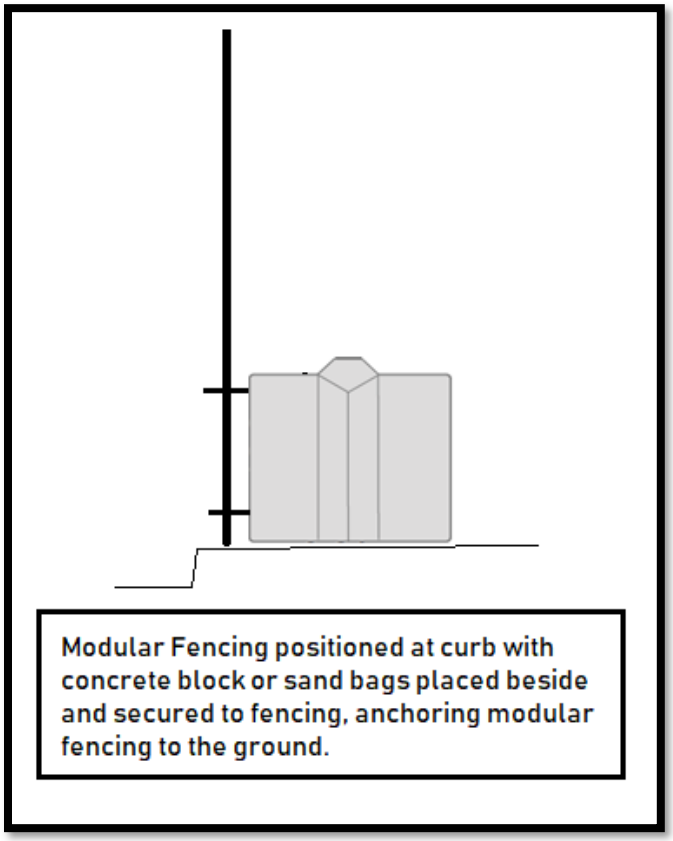
Note: All F-type concrete barriers within the street shall have reflective tape on them.




Chain line fence to be mounted on top of concrete waste blocks
1.2m
0.61m
0.61m
1.2m

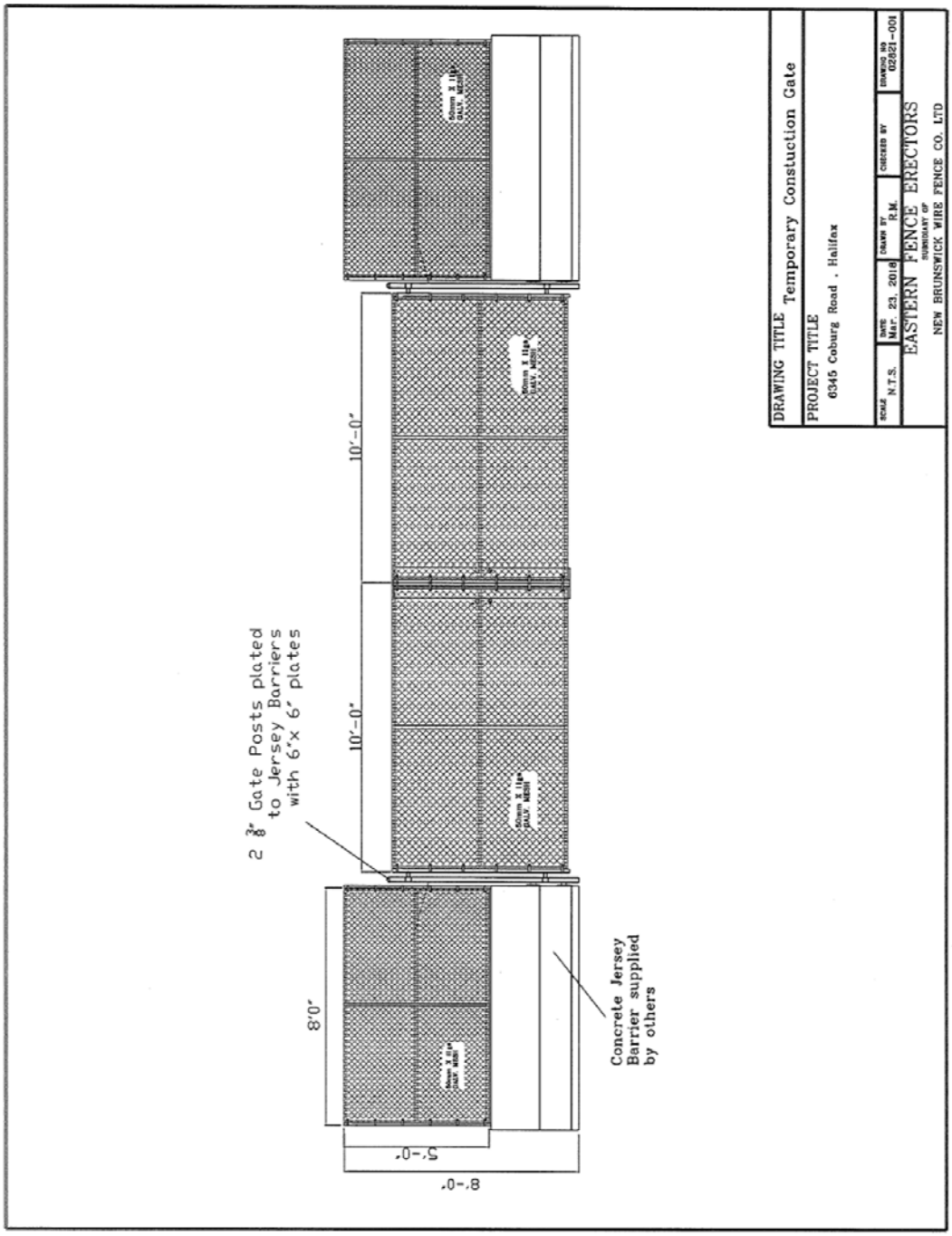

Chain link fence
1.6m





Modular Fencing positioned at curb with concrete block or sand bags placed beside and secured to fencing, anchoring modular fencing to the ground.

Sample Gate Detail



Appendix F – Hoarding Information

Opaque construction hoarding material shall covering and be adequately secured to the rigid fencing that outlines the encroachment area. This covering shall be continuous such that it prevents passersby or tourist from seeing through the fencing and gates to the active construction site.

UltraMesh® Eclipse® if a 7.96 oz. which is a polyester, black-backed mesh that is used where complete opacity is required.

UltraMesh Eclipse is UV printable for project renderings and is typically used for building and fence graphic wraps. The product is available in widths of 126” and 196”.

Product example is shown below with the technical data sheet on the following page.

Printed Banner Option

Sample Dust Control Mesh

Tarp Option

ULTRAFLEX SYSTEMS INCORPORATED

Technical Data Sheet

UltraMesh® Eclipse ®

UltraMesh Eclipse is a 7.96 oz. polyester, black-backed mesh. The material is ideal for applications where complete opacity is required. UltraMesh Eclipse is UV printable and may be used for building wraps and fence graphics. Available in widths of 126 and 196 .

Material Details

CHARACTERISTICS	TEST METHOD	METRIC	ENGLISH
Base Fabric	100% PES	1000D×1000D	
Construction		12×12	
Total Weight	DIN53352 BS3424 Method5A	270 +/- 20 gsm/m²	7.96 oz/yd²
Width		Up to 500cm	
Tensile Strength	DIN53352 BS3424	Warp 1250 n/5cm Weft 1100 n/5cm	142.75 x 130.19 lb/in
Tear Strength	DIN53356 BS3424	Warp 235 N Weft 225 N	52.8 x 50.5 lbf
Air Permeability	GB/T 2410-2008	2649 mm/s	
Light Transmission	GB/T 5453-1997	37%	
Temperature Resistance	DIN53357 BS3425 Method 10	-20°C 70°C	

Applications

	Back-lit	Banner	Billboard	Block-out	Building Wrap	Fence Graphics	Truckside
Applications		■		■	■	■	

Ink Printability

Solvent	Eco Solvent	UV	Latex	Screen Printing	Dye Transfer	Dye Direct
		■				

Available Sizes

Metric (m)	English (inches)
3.20, 5.00	126 , 196

The information on physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. A legally binding guarantee of specific properties is not to be inferred from our specifications. They are given without guaranty and do not constitute a warranty. A weight variance of +1/-2 is acceptable. The purchaser should independently determine, prior to use, the suitability of this material for his/her specific purpose. (Data represents averages and is not intended for use as a specification.)

ULTRAFLEX SYSTEMS INCORPORATED
www.ultraflexXX.com
updated: 12/2016

Ultraflex Systems Inc.
Headquarters
203 Kelsey Lane, Suite E
Tampa, FL 33619
P: (973)627-8608
Email: sales@Ultraflexx.com

Ultraflex Systems Inc.
1578 Sussex Turnpike, Bldg. 4
Randolph, NJ 07869
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Email: sales@ultraflexx.com

Ultraflex Europe
Unit 1 Hardwick Road Industrial Park
Great Gransden Bedfordshire
England SG19 3BJ
Phone: (44)1767-677-100
Email: sales@ultraflexxeurope.com

Ultraflex México
Azafrán No. 112, Col.Granjas México
Del. Iztacalco, C.P. 08400, México D.F.
Tel: (55)31823632,3182 3608
01 800 822 52 31
Email: sales.mx@ultraflexx.com

Ultraflex Guadalajara
Av. Patria No. 2804
Loma Bonita Sur.
Zapopan, Jalisco CP45066
Mexico
Tel: (55)3312-049-857

Appendix G – Project Information Board

PROPOSED MULTI-UNIT BUILDINGS
Ralston Redevelopment

20 Storey – Multi-Level Residential Building

462 Residential Units including 5 Townhouse Units

Commercial Space Fronting Hollis and Lower Water Streets

Rooftop Terraces

Mixture of Studio-2 Bedroom Units

4 Levels Underground within a Common Podium

January 2023 – June 2026

Developer:
Universal Contracts Limited
1190 Barrington Street, P.O. Box 384, Halifax, NS B3J 2P8

24 Hour Contact:
Pam Priest – (902) 425-8877

Contractor:
Atlantic Road Construction and Paving
6 Belmont Avenue, P.O. Box 89
Eastern Passage, NS, B3G 1M7

Contact:
Greg MacDonald - (902) 830-6411

Traffic Control:
Frontline Traffic Services
6 Belmont Avenue, P.O. Box 89,
Eastern Passage, NS, B3G 1M7

Contact:
Phil Pruneau - (902) 818-5548

Rodent Control Company:
Rentokil Pest Control
51 Duke Street, Bedford, Bedford, NS

Contact:
Main Office – 902- 835-2304

Appendix H – Project Safety Signage

Sample Safety Signage


RESTRICTED
AREA
CONSTRUCTION
WORK IN
PROGRESS

Appendix I – Project Signage Specifications

Signage Specifications: Project Signage shall;

- Be constructed of weatherproof material (corrugated plastic)
- Have high visibility contrasting colours (dark letters on white background)
- Incorporate appropriate font types (mix of upper and lower-case lettering)
- Incorporate appropriate font sizes (16mm – 51mm) such that the signage is readable from a distance (16-20m)
- Size of signage will be poster size (600mm x 900mm) or larger; to allow community members to see and read the information from a distance
- Signage may incorporate plastic grommets positioned every 300mm around the perimeter of the signage to ensure a secure signage installation
- Signage will be installed/anchored to project fencing using plastic zip-ties
- Signage will be positioned along the project site as per the encroachment plan
- Signage shall not impede traffic of pedestrian sight lines
- **Signage shall be placed on site 10days prior to the start of the noted construction activity to ensure the passing public has had adequate time to review, adjust their travel patterns, usage of streets and or cab be considered 'informed'.**

Samples

Appendix J – Sample Traffic Notification Letter

Proposed Multi-Unit Residential Building

DRAFT NOTIFICATION LETTER

TO WHOM IT MAY CONCERN
Date

NOTIFICATION OF TRAFFIC DISRUPTION: STREET NAME, HALIFAX, NOVA SCOTIA

This is to inform you that the to facilitate operations in association with the Multi-Unit Residential building construction work, traffic disruptions will occur on or about **DATE** with an anticipated duration of approximately **TIME**. The street will be **reduced(?)** to one lane of vehicular traffic during this time.

Should you have any questions or concerns please feel free to contact the below:

CONTACT INFORMATION

General Contractor:

Atlantic Road Construction and Paving
6 Belmont Avenue, P.O. Box 89
Eastern Passage, NS
B3G 1M7
Phone: (902) 830-6411

Should any questions arise, please feel free to contact the undersigned.

Yours Truly,

Greg MacDonald

Atlantic Road Construction and Paving

Appendix K – Vehicular and Pedestrian Hazard Assessment

Project Date: Location:

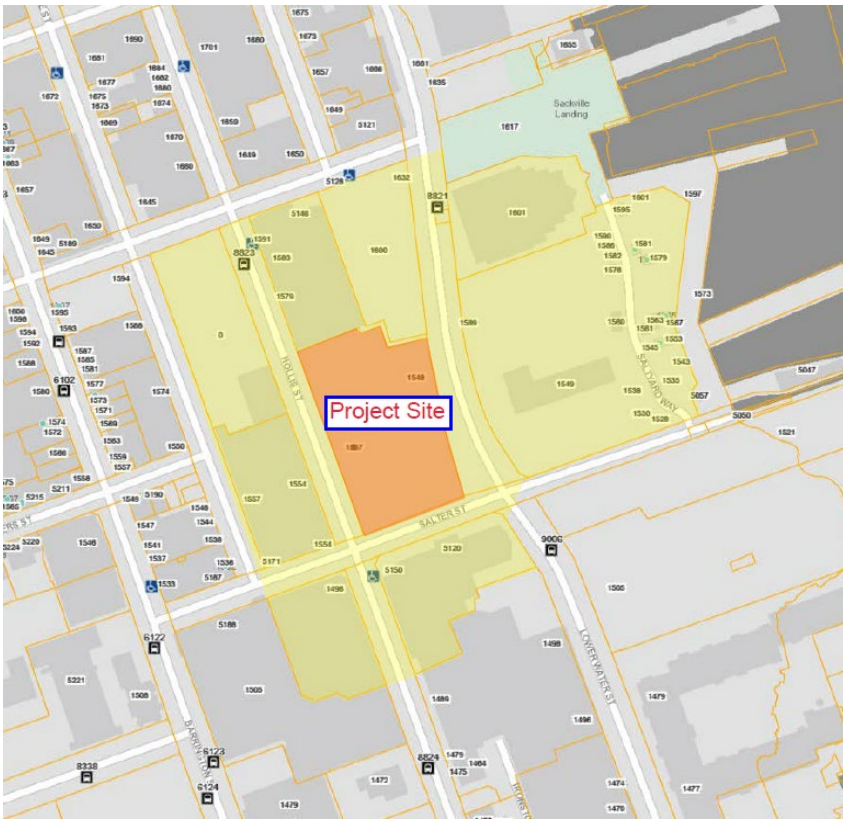
VEHICULAR & PEDESTRIAN HAZARD ASSESSMENT

No.	Hazard:	Project Phase:	Vehicular Impacts:	Mitigation Methods:	Pedestrian Impacts:	Mitigation Methods:
1	Excavation	Excavation	Vehicles may enter project site and fall down excavation.	Place concrete barriers along travel ways. Concrete barriers and existing curbs to prevent vehicle entry.	Pedestrians may enter project site and fall down excavation.	Place concrete barriers/rigid fencing around entire project site.
			Vehicle weight may surcharge excavation, causing excavation wall failure.	Close sidewalks & driveways adjacent to project site, moving vehicles farther away from excavation.		
2	Rock Blasting	Excavation	Blasted rock projectiles may strike vehicles.	Close sidewalks & driveways adjacent to site, moving vehicles farther away from blasted rock.	Blasted rock projectiles may strike pedestrians.	Install solid plywood hoarding along rigid fence adjacent to blasting zone.
3	Construction Waste	All Phases	Vehicles may be struck by construction waste.	The contractor shall keep the project site and surrounding areas clean and free of construction debris.	Pedestrians may be struck by construction waste.	The contractor shall keep the project site and surrounding areas clean and free of construction debris.
4	Vehicular & Pedestrian Activities	All Phases	Drivers and pedestrians may become confused or impatient with construction activities. Pedestrians may walk in unmarked crosswalks or in vehicular travel areas. Drivers may fail to obey traffic signage.	Vehicular and pedestrian signage will be posted prominently around the project site to facilitate pedestrian movement. Notification will be sent prior to all traffic interruptions.	Drivers and pedestrians may become confused or impatient with construction activities. Pedestrians may walk in unmarked crosswalks or in vehicular travel areas. Drivers may fail to obey traffic signage.	Vehicular and pedestrian signage will be posted prominently around the project site to facilitate pedestrian movement. Notification will be sent prior to all traffic interruptions.
5	Heavy Machinery Operation	All Phases	Heavy machinery or vehicles may break down or overturn, damaging other vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site.Concrete barriers will be installed to separate construction vehicles from public traffic.	Heavy machinery or vehicles may break down or overturn, injuring pedestrians.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery. Rigid fences will be installed to separate construction vehicles from pedestrians.
			Heavy machinery or vehicles may overturn due to uneven terrain, damaging other vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site and ensure travel routes are kept flat.	Heavy machinery or vehicles may overturn due to uneven terrain, injuring pedestrians. Pedestrians may walk on uneven terrain causing them to twist their ankles or fall.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery and ensure travel routes are kept flat.
6	Construction Signage	All Phases	Construction signage may strike vehicular traffic.	Construction signage will be securely fixed to existing poles, temporary concrete sign bases, or rigid fences.	Pedestrians may walk into construction signage, including traffic signage, wayfinding signs, etc. may.	Signage will be angled in line with pedestrian routes and/or be placed at heights such that they do not pose a risk to pedestrians.
					Construction signage may strike pedestrians.	Construction signage will be securely fixed to existing poles, temporary concrete sign bases, or rigid fences.
7	Dangerous Materials	All Phases	Flammable, explosive, & hot materials may damage vehicles if not properly maintained & stored.	The contractor will use and store dangerous materials properly as per manufacturers' specifications.	Flammable, explosive, & hot materials may injure pedestrians if not properly maintained & stored.	The contractor will use and store dangerous materials properly as per manufacturers' specifications.
8	Hoisting Operations	Superstructure	Precast concrete panels and other items hoisted may fall from heights and damage vehicles.	Proper hoisting and lifting techniques will be used to ensure that materials do not fall from heights. F-Type concrete barriers will be installed such that loads are never suspended above the public realm.	Precast concrete panels and other items hoisted may fall from heights and injure pedestrians.	Proper hoisting and lifting techniques will be used to ensure that materials do not fall from heights. Pedestrians will be moved to opposite sides of street from the project site or onto temporary sidewalks such that loads are never suspended above the public realm.
9	Reinstatement of Public Infrastructure & Service Installation	Superstructure	Heavy equipment and hot concrete used during public infrastructure reinstatement and service installation may cause damage to vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site. Concrete barriers will be installed to separate construction vehicles from public traffic during public infrastructure reinstatement and service installation.	Heavy equipment and hot concrete used during public infrastructure reinstatement may injure pedestrians.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery.
10	Fallen debris	Superstructure	Debris may fall from upper stories of the new building causing damage to vehicles.	F-Type concrete barriers will be installed such that a safe distance is maintained between the building envelope and vehicular traffic.	Debris may fall from upper stories of the new building injuring pedestrians.	Construction of upper building levels will be set back from the property line/rigid fencing, this separating pedestrians from potential fallen debris.

Appendix L – Community Consultation Records

COMMUNITY CONSULTATION MAP OVERVIEW

Project – Ralston Redevelopment



Notification Letter

Date: *******

Universal Contracts Limited – Building Construction Information Meeting

Dear Neighbour,

As you may be aware, we are planning an apartment building construction project located on Hollis Street, Halifax.

If you are interested in receiving more information about our construction plans, practices, schedule and to go over any questions you may have regarding construction of our new project please contact us to discuss. We would be happy to meet with you to discuss.

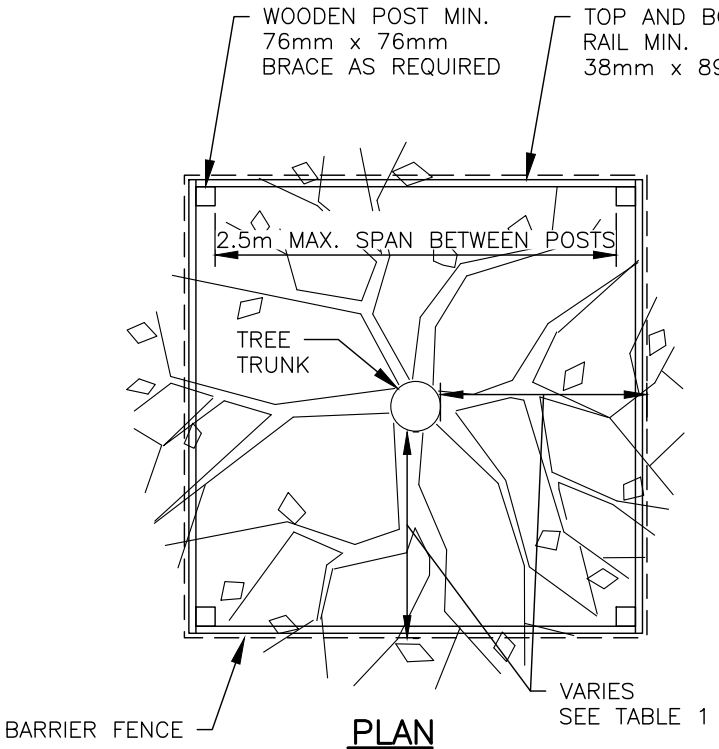
Thank you.

Pam Priest

Cell: 902-425-8877

Email: pam@universalgroup.ca

Appendix M – HRM Tree Detail

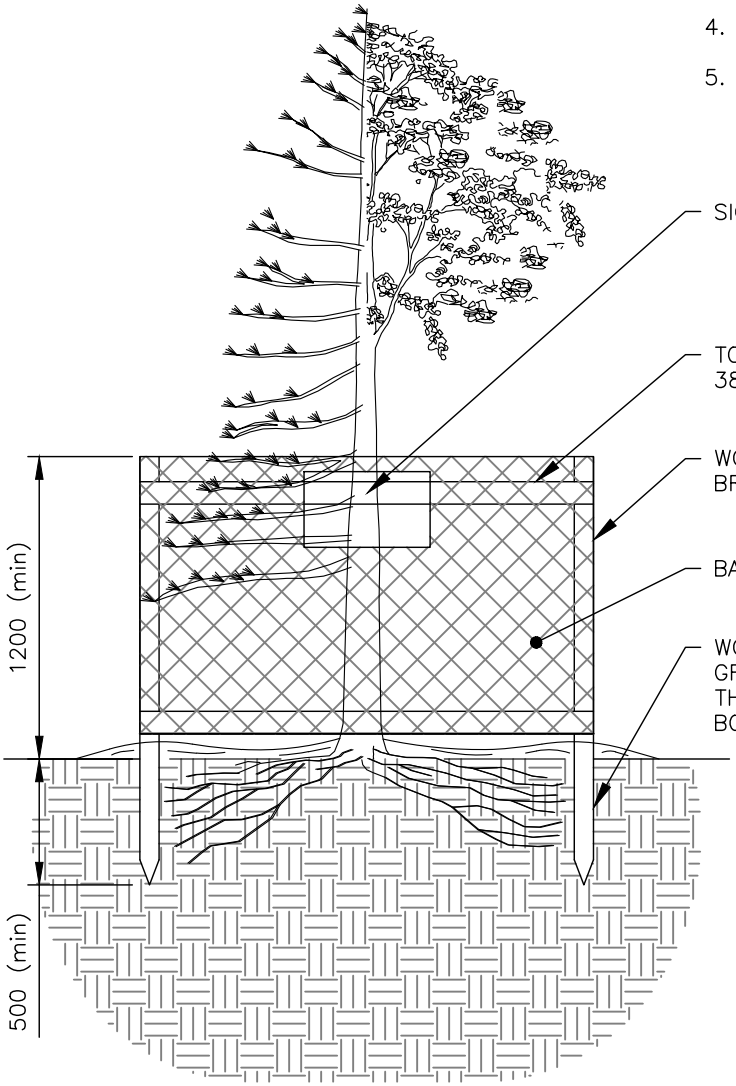


PLAN

TABLE 1

TREE PROTECTION ZONE CALCULATION TABLE	
TRUNK DIAMETER (DBH)	MINIMUM PROTECTION DISTANCE REQUIRED (MEASURE FROM THE OUTSIDE EDGE OF TREE TRUNK)
10 CM & UNDER	1.2 METERS
11 – 30 CM	2.0 METERS
31 – 40 CM	3.4 METERS
41 – 50 CM	4.6 METERS
51 – 60 CM	6.0 METERS
61 – 70 CM	7.0 METERS
71 – 80 CM	8.0 METERS
>80 CM	9.0 METERS

NOTES:
1. WOOD POST: (MIN. 76mm WIDTH) INSTALLED TO A DEPTH OF 500mm. TOP AND BOTTOM RAIL: (MIN. 38 x 89mm CONSTRUCTION, MAX. SPAN 2.5m), CROSS BRACING AS REQUIRED.
2. NO GROUND DISTURBANCE WITHIN 1.2 METER OF THE TREE TRUNK (I.E. POST INSTALLATION)
3. POSTS SET BACK FROM SIDEWALK AND CURB: MIN 300mm
4. FENCE MATERIAL: MINIMUM ORANGE BARRIER FENCE OR METAL CHAIN LINK FENCE
5. ATTACH A SIGN ON TWO SIDES OF THE TREE "PROTECTION ZONE DO NOT REMOVE FENCE DURING CONSTRUCTION"



PROFILE

HALIFAX

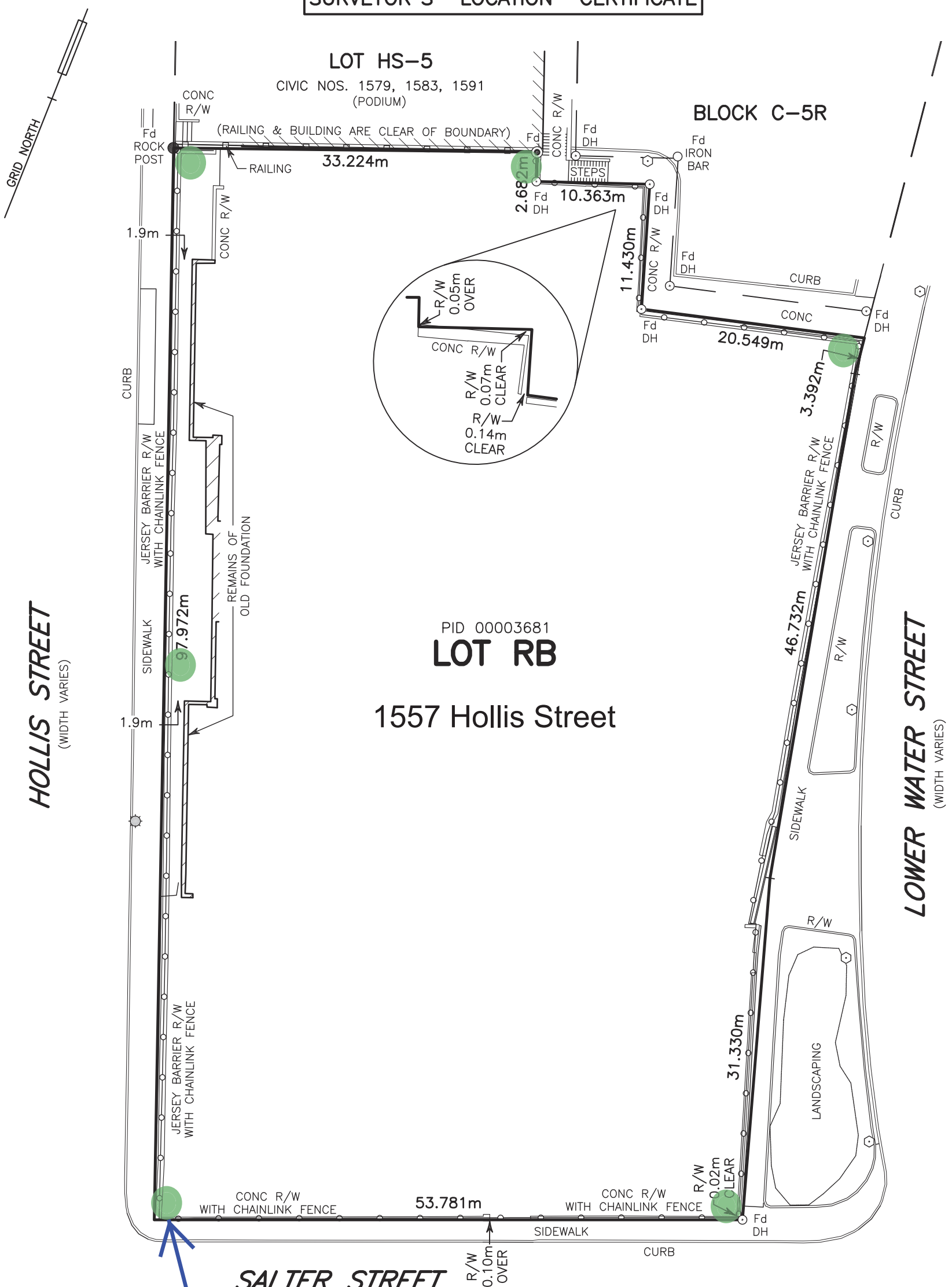
STANDARD DETAIL

TREE PROTECTION ZONE & BARRIER

DATE: 2021	REFERENCE	APPROVED
SCALE: NTS		FIG No.: HRM 140

Appendix N – Rodent Control Plan

SURVEYOR'S LOCATION CERTIFICATE



Bait Stations
(Pre & Post Excavation)

Bait Station Legend

Pre & Post - Excavation

-

Rodent Control Plan

-

Prepared for
Rentokil Atlantic

-

902-835-2304

-

51 Duke Street, Bedford, NS

LEGEND

- ◉ . . Survey Marker
- ⊙ DH . . Drill Hole
- ⬡ . . Light Standard
- CONC . . Concrete
- Fd . . Found
- R/W . . Retaining Wall
- PID . . Parcel Identification Number
- HCLRO . . Halifax County Land Registration Office

Protecta® EVO® AMBUSH™

PATENT PENDING

THE MOST ADVANCED LOW-PROFILE BAIT STATION

PRODUCT FEATURES:

- Single locking mechanism for quick servicing
- Removable tray for easy cleaning
- Locking bait rods won't fall out during cleaning
- Dog & child tamper-resistant
- Can hold:
  4 - 1 oz. bait BLOX on 4 vertical rods
  - or -
  T-Rex™ rat trap or Mini-Rex™ mouse trap
- Compatible with Sidekick® Load-N-Lock™ system

PRODUCT	CODE	DIMENSIONS (in)	CASE QTY
Protecta Evo Ambush	EA2000	8 1/2 x 10 1/4 x 4 1/4	6 Stations

Bell LABORATORIES, INC More Than Meets The Eye

Madison, Wisconsin 53704 USA | Ph: (608) 241-0202 | Fax: (608) 241-9631

www.belllabs.com

ALL-WEATHER
BLOX™

Bell LABORATORIES, INC.

CONTRAC®

ALL-WEATHER BLOX™

NET WT:
18 lbs (8.2 kg)

KILLS RATS, MICE & MEADOW VOLES*

Kills Warfarin Resistant Norway Rats

KEEP OUT OF REACH OF CHILDREN

CAUTION

See back panels for First Aid and additional precautionary statements.

ACTIVE INGREDIENT:	
Bromadiolone (CAS #28772-56-7):	0.005%
OTHER INGREDIENTS†:	99.995%
†Contains Denatonium Benzoate TOTAL	100.000%

***Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat.**

FIRST AID

HAVE LABEL WITH YOU WHEN OBTAINING TREATMENT ADVICE

IF SWALLOWED:

- Call a poison control center, doctor, or 1-877-854-2494, or 1-800-858-7378** immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes.
- Call a poison control center or doctor for treatment advice.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15–20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center, doctor, or 1-877-854-2494 immediately for treatment advice.

** Also call this number for information on health concerns and pesticide incidents.

NOTE TO PHYSICIAN

If swallowed or absorbed through the skin, this material may reduce the clotting ability of the blood and cause bleeding. If ingested, administer Vitamin K_1 intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

TREATMENT FOR PET POISONING

If animal eats bait, call veterinarian at once.

NOTE TO VETERINARIAN

Anticoagulant Bromadiolone: For animals ingesting bait and/or showing poisoning signs (bleeding or elevated prothrombin times), give Vitamin K_1. If needed, check prothrombin times every 3 days until values return to normal (up to 30 days). In severe cases, blood transfusions may be needed.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL: Read this entire label and follow all use directions and use precautions. Use only for sites, pests, and application methods described on this label.

IMPORTANT: Do not expose children, pets, or nontarget animals to rodenticides. To help to prevent exposure:

1. Store unused product out of reach of children and pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamper-resistant bait stations. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hoofed livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Bait stations are mandatory for outdoor, above-ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

USE RESTRICTIONS: This product may only be used to control the following rodent pests in and around man-made structures: House mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), Roof rat (*Rattus rattus*), Cotton mouse (*Peromyscus gossypinus*), Cotton rat* (*Sigmodon hispidus*), Deer mouse (*Peromyscus maniculatus*), Eastern harvest mouse* (*Reithrodontomys humuli*), Golden mouse* (*Ochrotomys nuttalli*), Polynesian rat* (*Rattus exulans*), Meadow vole* (*Microtus pennsylvanicus*), White-footed mouse (*Peromyscus leucopus*), White-throated woodrat* (*Neotoma albigula*), Southern plains woodrat* (*Neotoma micropus*), and Mexican woodrat* (*Neotoma mexicana*). This product must be used in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations. Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port or terminal buildings and related structures around and associated with these sites. Fence and perimeter baiting, beyond 100 feet from a structure as defined above, is prohibited. This product must not be applied directly to food or feed crops.

587CB-9

CONTRAC®

ALL-WEATHER BLOX™

KILLS RATS, MICE, AND MEADOW VOLES*

Kills Warfarin Resistant Norway Rats

Norway rats, roof rats, and house mice may consume a lethal dose in one night's feeding with first dead rodents appearing four or five days after feeding begins.

ACTIVE INGREDIENT:	
Bromadiolone (CAS #28772-56-7):	0.005%
OTHER INGREDIENTS†:	99.995%
†Contains Denatonium Benzoate TOTAL	100.000%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panels for First Aid and additional precautionary statements.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store only in original container in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals.

Pesticide Disposal: Wastes resulting from the use of this product may be placed in trash or delivered to an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. **[Plastic:]** Offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration. In most states, burning is not allowed.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

NET WEIGHT: 18 lbs (8.2 kg)

EPA REG. NO. 12455-79

EPA EST. NO. 12455-WI-1

Manufactured by:

Bell LABORATORIES, INC.
3699 Kinsman Blvd.
Madison, WI 53704 U.S.A.
www.belllabs.com

MADE IN USA

DIRECTIONS FOR USE (Continued from other panel)

Burrow baiting with Contrac All-Weather Blox is prohibited.

Do not place near or inside ventilation duct openings. Do not contaminate water, food, feedstuffs, food or feed handling equipment, or milk or meat handling equipment or surfaces that come into direct contact with food. When used in USDA inspected facilities, this product must be applied in tamper-resistant bait stations. Do not broadcast bait. Do not use this product in sewers.

Do not sell this product in individual containers holding less than 16 pounds of bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats, mice, or meadow voles* will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, in corners and concealed places, between floors and walls, or in locations where rats, mice, or meadow voles*, or their signs have been seen. Protect bait from rain and snow. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:

RATS: Place 3 to 16 bait blocks (at intervals of 15 to 30 feet) per placement in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until signs of rat activity cease.

MICE AND MEADOW VOLES*: Place 1 block per placement. Space placements at 8- to 12-foot intervals in infested areas. Two blocks may be needed at points of very high activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until signs of mouse or meadow vole* activity cease.

FOLLOW-UP: Replace contaminated or spoiled bait immediately. Wearing gloves, collect and dispose of all dead, exposed animals and leftover bait. To prevent reinfestation, limit sources of rodent food, water, and harborage as much as possible. If reinfestation does occur, repeat treatment. Where a continuous source of infestation is present, establish permanent bait stations and replenish as needed.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through the skin. Keep away from children, domestic animals and pets. Do not get in eyes, on skin or on clothing.

All handlers (including applicators) must wear: shoes plus socks, and waterproof gloves. Any person who retrieves carcasses or unused bait following application of this product must wear gloves.

User Safety Requirements

Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish, birds and other wildlife. Dogs and predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply this product directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate.

***Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat.**

Product Code: CB4051

090415/09-15

DETEX®BLOX with LUMITRACK

SAFETY DATA SHEET	ACCORDING TO REGULATION: OSHA Hazard Communication Standard 29 CFR 1910.1200	DATE OF ISSUE: January 2016	PREPARED BY: CAR

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: DETEX® BLOX with LUMITRACK
EPA Registration Number: NA
Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Activity Monitoring - Ready to use
Uses advised against: Use only for the purpose described above

MANUFACTURER/SUPPLIER:
Bell Laboratories, Inc.
3699 Kinsman Blvd.
Madison, WI 53704, USA
Email: sds@belllabs.com
Phone: 608-241-0202
Medical or Vet Emergency: 877-854-2494 or 952-852-4636
Spill or Transportation Emergency: 800-424-9300 (CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Classification according to Regulation OSHA 1910.1200(d): Not classified
Signal Word: None
See Section 15 for information on FIFRA applicable safety, health, and environmental classifications.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	% By weight
Inert and Non-Hazardous Ingredients (Unlisted components are non-hazardous)	Proprietary	100.00%

SECTION 4. FIRST AID MEASURES

Description of first aid measures
Ingestion: Non-Toxic
Inhalation: Not applicable**.**
Eye contact: Non-Toxic
Skin contact: Non-Toxic
Most important symptoms and effects, both acute and delayed
Non-Toxic
Advice to physician: Non-Toxic
Advice to Veterinarian: Non-Toxic

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media
Suitable Extinguishing Media: water, foam or inert gas.
Unsuitable Extinguishing Media: None known.
Special hazards arising from the mixture: High temperature decomposition or burning in air can result in the formation of toxic gases, which may include carbon monoxide.
Advice for firefighters: Wear protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: None. Non-Toxic
Environmental precautions: None. Non-Toxic
Methods and materials for containment and cleaning up
For Containment: None. Non-Toxic
For Cleaning Up: None. Non-Toxic
Reference to other sections: Refer to Sections 7, 8 & 13 for further details of personal precautions, personal protective equipment and disposal considerations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: Do not use near heat sources, open flame, or hot surfaces. Non-Toxic.
Conditions for safe storage, including any incompatibilities: None. Non-Toxic

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Established Limits

Component	OSHA	ACGIH	Other Limits
None	Not Established	Not Established	Not Established

Appropriate Engineering Controls: None. Non-Toxic
Occupational exposure limits: None. Non-Toxic
Personal Protective Equipment:
Respiratory protection: Not required
Eye protection: Not required
Skin protection: None. Non-Toxic
Hygiene recommendations: None. Non-Toxic

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance/Color:	Tan wax block
Odor:	Sweet grain-like
Odor Threshold:	Not applicable, odor not associated with a hazardous material.
pH:	Not applicable, is not dispersible with water.
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Not applicable, does not contain components classified as flammable.
Evaporation rate:	Not applicable, is a solid.
Flammability:	Not applicable, is a solid.
Upper/lower flammability or explosive limits:	Not applicable, does not contain components classified as flammable or explosive.
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable, is a solid
Relative Density:	1.13 g/mL @ 20°C
Solubility (water):	Not water soluble
Solubility (solvents):	Not applicable
Partition coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable, does not contain components classified as flammable.
Decomposition temperature:	Not applicable
Viscosity:	Not applicable, is not a liquid.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not Applicable
Chemical stability: Not Applicable
Possibility of hazardous reactions: Refer to Hazardous decomposition products
Conditions to avoid: Avoid extreme temperatures (below 0°C or above 40°C).
Incompatible materials: Not Applicable
Hazardous decomposition products: Not Applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute Toxicity
LD50, oral (ingestion): Not Toxic
LD50, dermal (skin contact): Not Toxic
LC50, inhalation: Not Toxic
Skin corrosion/irritation: Not Toxic
Serious eye damage/Irritation: Not Toxic.
Respiratory or skin sensitization: Not Toxic
Germ cell mutagenicity: Not Toxic
Carcinogenicity: Not Toxic

Components	NTP	IARC	OSHA
None	NA	NA	NA

Reproductive Toxicity: Not Toxic
Aspiration Hazard: Not Toxic
Target Organ Effects: Not Toxic

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Effects: Not Toxic
Persistence and degradability: Not Toxic
Bioaccumulative potential: Not Toxic
Mobility in Soil: Not Toxic.
Other adverse effects: None.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal: Wastes resulting from the use of this product may be placed in trash, on-site, or at an approved waste disposal facility. Dispose of all wastes in accordance with all Federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

UN number: Not regulated
UN proper shipping name: Not regulated
Transport hazard class(es): Not regulated
Packing group : Not regulated
Environmental Hazards
DOT Road/Rail: Not considered hazardous for transportation via road/rail.
DOT Maritime: Not considered hazardous for transportation by vessel.
DOT Air: Not considered hazardous for transportation by air.
Freight Classification: LTL Class 60
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable
Special precautions for user: None

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture: Not applicable
Signal Word: None
Precautionary Statements: None
Potential Health Effects:
Eye Contact: May cause irritation
Skin Contact: Non-irritating to the skin
Ingestion: Not harmful if swallowed

TSCA: All components are listed on the TSCA Inventory or are not subject to TSCA requirements
CERCLA/SARA 313: Not Toxic
CERCLA/SARA 302: Not Toxic

SECTION 16. OTHER INFORMATION

For additional information, please contact the manufacturer noted in Section 1.

NFPA	Health: 0 (Not Toxic)	Flammability: 1 (slight)	Reactivity: 0 (stable)	Specific Hazard: None
HMIS	Health: 0 (Not Toxic)	Flammability: 1 (slight)	Reactivity: 0 (minimal)	Protective Equipment: None

Disclaimer: The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. Bell Laboratories, Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your consideration and investigation. The user is responsible to ensure that they have all current data, including the approved product label, relevant to their particular use.

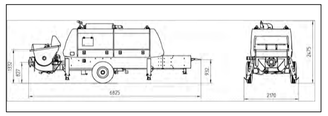
Appendix O – CMP's TCP & PMP Inspection Records

Project: ________________ Location: ____________ Phase: ___________ Date: ___________ Inspector: ___________

CONSTRUCTION MANAGEMENT PLAN - INSPECTION CHECKLIST

CMP Element	Set-up per PMP?			Condition?		Action Required	Action Completed	Comments
	Yes	No	N/A	Good	Bad			

Appendix P – Concrete Delivery Schematic



BSA 2109 HD

KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
	FIRE HYDRANT	
	CONCRETE THRUST BLOCK	
	SIAMESE CONNECTION	
	CATCH BASIN/PIT	
	CULVERT	
RD	ROCK LINING/DAM	RD
RW	ROCK WALL/RETAINING WALL	RW
	POWER POLE & ANCHOR/LIGHT STANDARD	
	TREE	
	STREET SIGN/PARKING METER	
× 131.82	ELEVATION/GRADE	125.00 × / 125.00
	TEST PIT	
S	DRAINAGE/SWALE FLOW DIRECTION	S
W	WATER MAIN/SERVICE	W
● SAN	SANITARY MANHOLE & PIPE	● SAN
○ STM	STORM MANHOLE & PIPE	○ STM
SAN/STM	COMBINED PIPE	SAN/STM
GAS	GAS LINE	GAS
FL	100YR. FLOOD LIMIT	FL
	GUARD RAIL	
C	UNDERGROUND CONDUIT	C
	OVERHEAD WIRES	
	PROPERTY LINE/BOUNDARY	
	FENCE	
▨	BUILDING	▭
	TOP OF SLOPE	
	TOE OF SLOPE	
	TREELINE	
	LIMITS OF DISTURBANCE	
	TACTILE PEDESTRIAN PLATES	
	PROJECT SAFETY SIGNAGE	▬
	ORANGE SAWHORSE BARRICADE	

NOTES

1. THIS PLAN IS IN METRIC.
2. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

No.	YY/MM/DD	Revision Description	Appr'd
1	23/03/16	REVISED ENCROACHMENT & ADDED CROSSWALK	
0	23/02/14	ISSUED FOR REVIEW	

REGISTERED PROFESSIONAL ENGINEER
DATE Original Signed
G.K. MacLean
8978

SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS
36 OLAND CRESCENT
BAYERS LAKE BUSINESS PARK
HALIFAX, NS B3S 1C6
PHONE: (902) 455–1537
FAX: (902) 455–8479
WEB: www.sdmm.ca

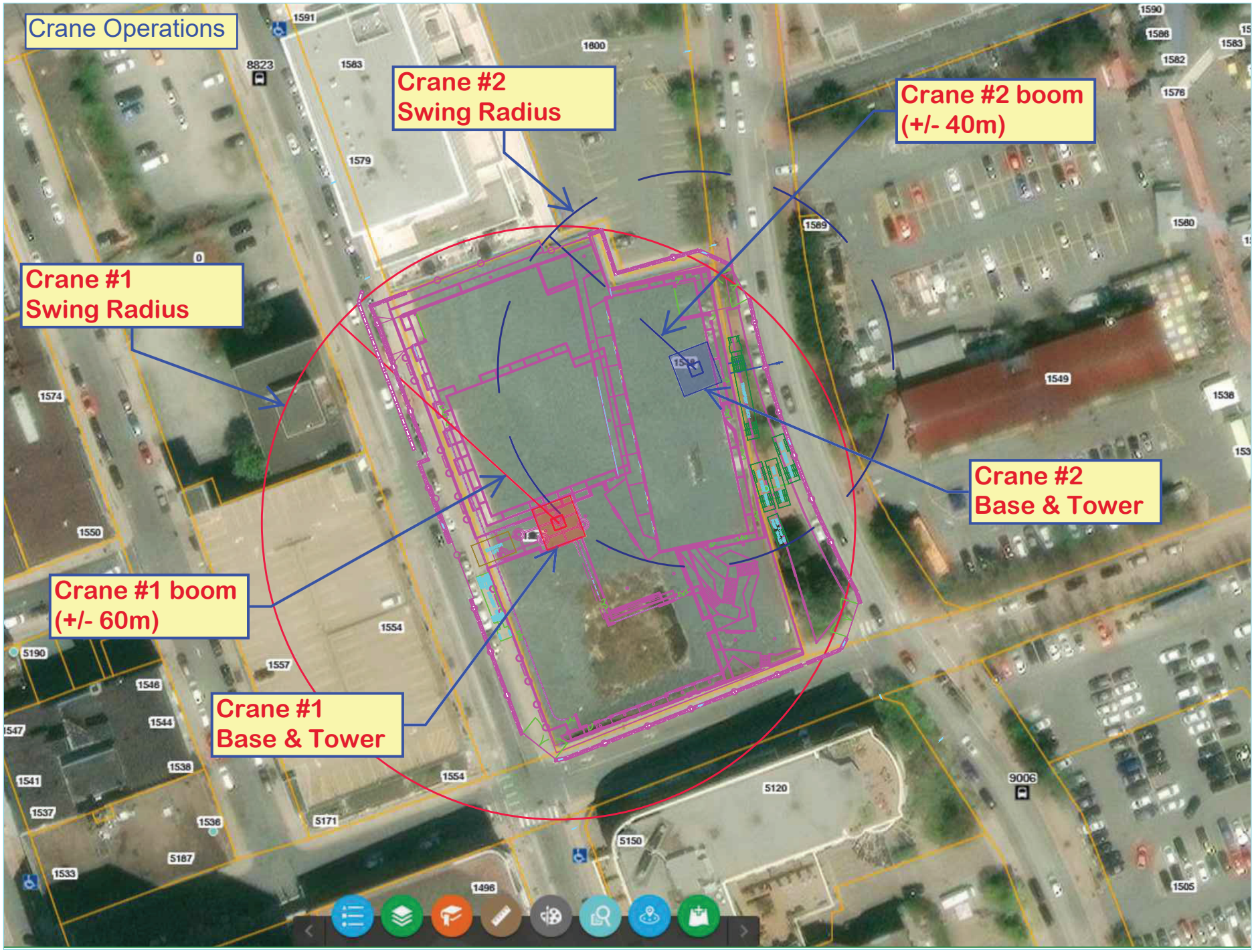
PROPOSED DEVELOPMENT
1557 HOLLIS STREET
HALIFAX, NOVA SCOTIA

CONCRETE DELIVERY SCHEMATIC

Date FEBRUARY 14, 2023	Drawn D. ANDERSON	Project No. FILE NO. 1–1–147 (37572)
Scale 1:250	Engineer G. MACLEAN	Plan No.
Reference ––	Approved G. MACLEAN	Drawing Name R2
Surveyed BY OTHERS	Sheet	

0m 5 10 15 20 25m

Appendix Q – Crane Information


Crane Operations
Crane #2
Swing Radius
Crane #2 boom
(+/- 40m)
Crane #1
Swing Radius
Crane #2
Base & Tower
Crane #1 boom
(+/- 60m)
Crane #1
Base & Tower

TOP OF TOWER
CRANE #1 (70.2)
AFTER FINAL JACKING

35,000

TOP OF TOWER
CRANE #1 (35.2)
ORIGINAL SET-UP

TOP OF TOWER 4.0
CRANE #2 (25.2)

50,500

40,500

TOP OF RAFT
SLAB - 14.8m

CRANE #1

CRANE #2

P4 - 14.388

4250

17150

3.2

3.2

3.2

3.2

3.2

3.31

ROOF T/SLAB 68000
LEVEL 21 T/SLAB 62500
LEVEL 20 T/SLAB 58500
LEVEL 19 T/SLAB 55500
LEVEL 18 T/SLAB 52500
LEVEL 17 T/SLAB 49500
LEVEL 16 T/SLAB 46500
LEVEL 15 T/SLAB 43500
LEVEL 14 T/SLAB 40500
LEVEL 13 T/SLAB 37500
LEVEL 12 T/SLAB 34500
LEVEL 11 T/SLAB 31500
LEVEL 12B (PENTHOUSE) T/SLAB 29912 — 12B
LEVEL 10 T/SLAB 28500
LEVEL 11B T/SLAB 25912 — 11B
LEVEL 9 T/SLAB 25500
LEVEL 10B T/SLAB 22712 — 10B
LEVEL 8 T/SLAB 22500
LEVEL 9B T/SLAB 19512 — 9B
LEVEL 7 T/SLAB 19500
LEVEL 6 T/SLAB 16500
LEVEL 8B T/SLAB 16312 — 8B
LEVEL 5 T/SLAB 13500
LEVEL 7B T/SLAB 13112 — 7B
LEVEL 4 T/SLAB 10500
LEVEL 6B T/SLAB 9912 — 6B
LEVEL 3 T/SLAB 7500
LEVEL 5B T/SLAB 6712 — 5B
LEVEL 2 T/SLAB 4500
LEVEL 4B T/SLAB 3512 — 4B
LEVEL 3B T/SLAB 312
LEVEL 1 T/SLAB 0
AVERAGE GRADE -3500
LEVEL 2B T/SLAB -2888
PARKING P1 T/SLAB -4388
PARKING P2 (LEVEL 1B) T/SLAB -7388
ELEV 0000 SURVEY 0
PARKING P3 T/SLAB -11388

3 2 1

BLDG STREET WALL HEIGHT

iris

20-20 FORMING.
RALSTON BDG.
ELEVATIONS
JAN. 31/2023.

89/2

Key Plan:

BUILDING 'A'

No.	Description
1	ISSUED FOR D

Seal:

FOR INFO

Drawn: JE, IM

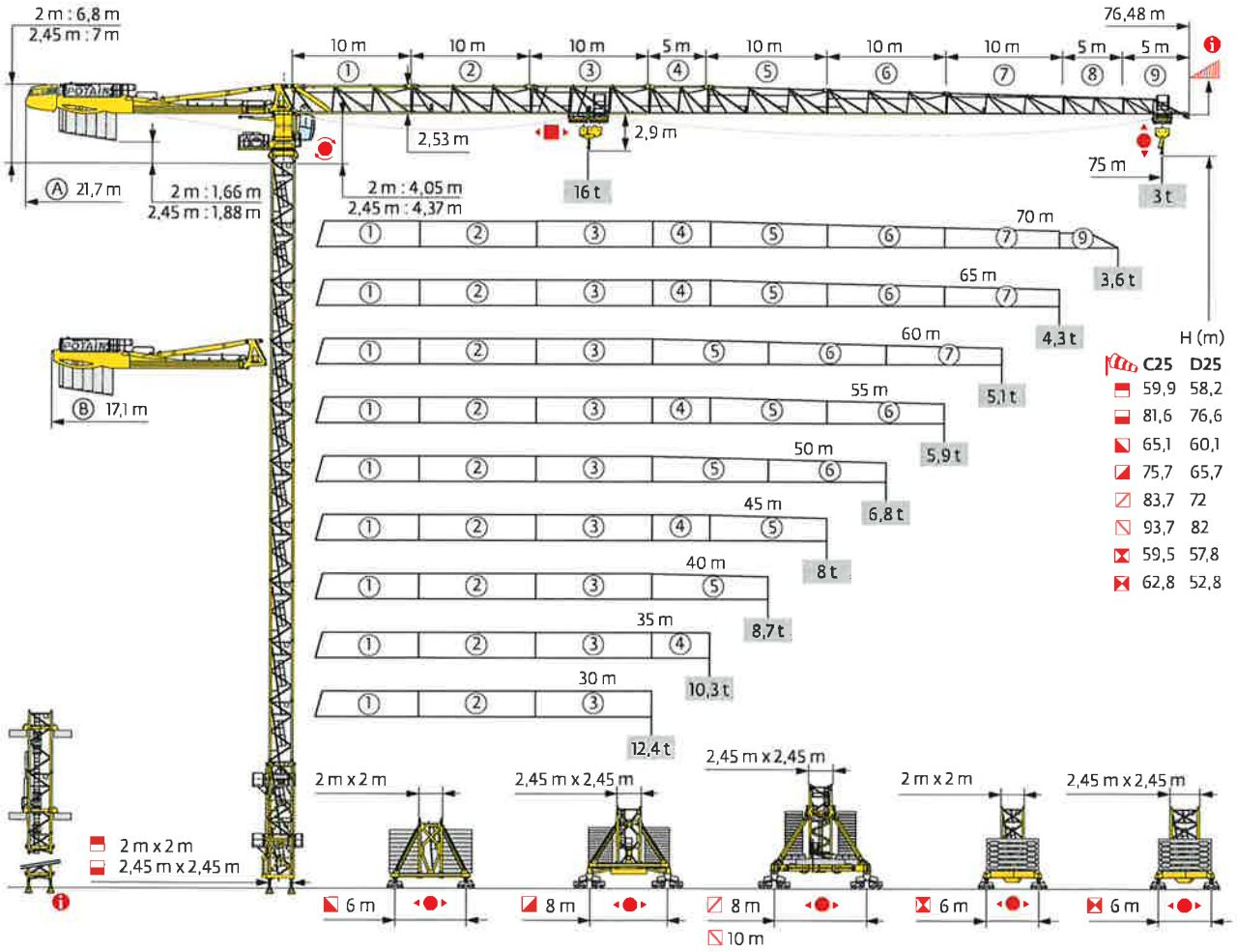
Checked:

Approved:

Project:

RA
REDEV

Potain MDT 368 A L16



SmartCom | Power Control | CraneSTAR Fleet - Diag | Top Site | Top Tracing II

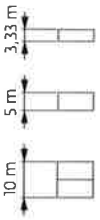
CE EN 14439 C25-D25

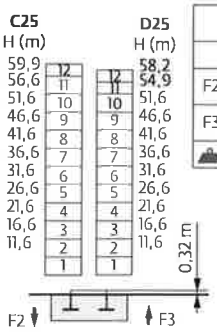
Mât - Réactions / Mast - Reaktionskräfte / Mast - Reactions / Mástil - Reacciones / Torre - Reazioni
Tramo - Reacções / Реакция опор мачты

V 60A	H1 = H	H2 = H - 0,4 m	H3 = H - 0,8 m
V 63A	H1 = H	H2 = H - 0,5 m	H3 = H - 0,9 m
Y 800B	H1 = H	H2 = H - 0,8 m	H3 = H - 1,2 m
YM 850 - JM 850	H1 = H	-	H3 = H - 1,4 m
ZX 6830	H1 = H	-	H3 = H - 0,3 m

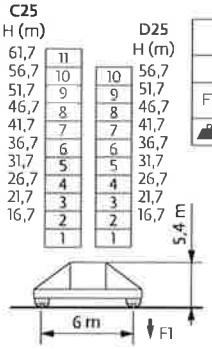
2 m

30 m → 75 m

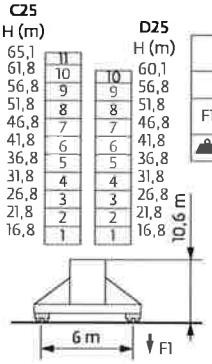




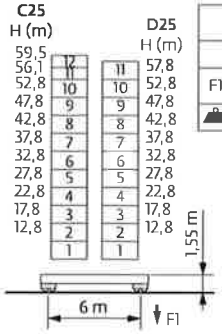
P 62B	C25	D25
F2	• 193 t ■ 253 t	• 188 t ■ 318 t
F3	• 124 t ■ 193 t	• 121 t ■ 259 t
	94 t	93 t



V 60A	C25	D25
F1	• 119 t ■ 133 t	• 120 t ■ 154 t
	105 t	101 t



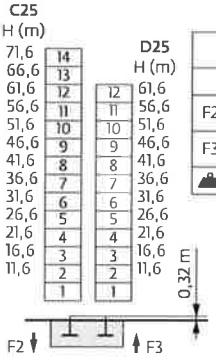
V 63A	C25	D25
F1	• 130 t ■ 157 t	• 133 t ■ 179 t
	109 t	104 t



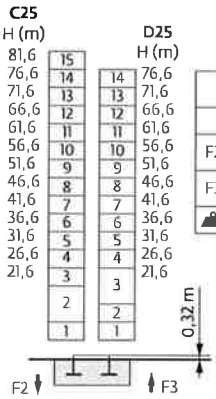
ZX 6830	C25	D25
F1	• 116 t ■ 122 t	• 122 t ■ 159 t
	108 t	106 t

2,45 m

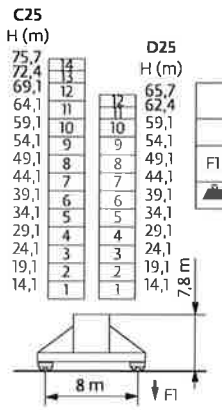
30 m → 75 m



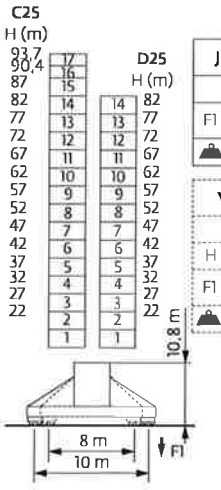
P 800B	C25	D25
F2	• 195 t ■ 341 t	• 170 t ■ 334 t
F3	• 124 t ■ 278 t	• 102 t ■ 274 t
	100 t	93 t



P 850A	C25	D25
F2	• 230 t ■ 455 t	• 216 t ■ 527 t
F3	• 153 t ■ 386 t	• 139 t ■ 459 t
	112 t	111 t

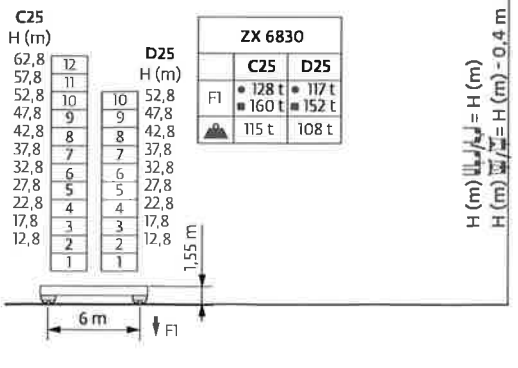


Y 800B	C25	D25
F1	• 146 t ■ 193 t	• 140 t ■ 195 t
	153 t	147 t



JM 850 (10 m)	C25	D25
F1	• 164 t ■ 247 t	• 152 t ■ 245 t
	175 t	164 t

YM 850 (8 m)	C25	D25
H	83,7 m	72 m
F1	• 165 t ■ 242 t	• 152 t ■ 237 t
	162 t	149 t

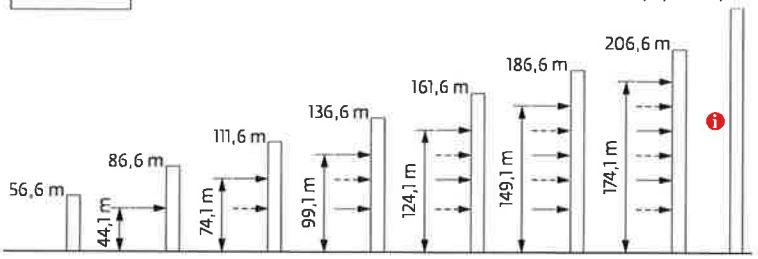


ZX 6830	C25	D25
F1	• 128 t ■ 160 t	• 117 t ■ 152 t
	115 t	108 t

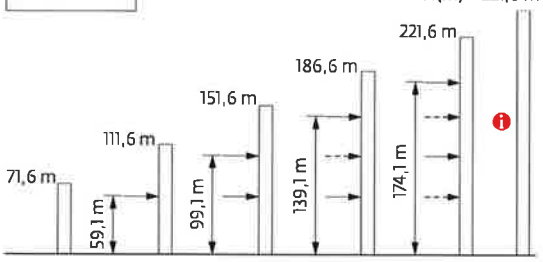
Ancrages / Verankerungen / Anchorages / Anclajes / Ancoraggi
Ancoragem / Анкера

D25

P 62B - C25

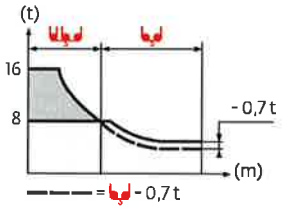


P 800B - C25

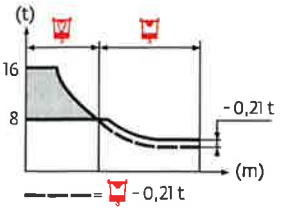


Courbes de charges / Lastkurven / Load curves / Curvas de cargas / Curve di carico
Curvas de carga / Кривые нагрузок

75 m	3,3	▶	17,7	20	22	25	27	30	31,5	34,1	35	37	40	42	45	47	50	52	55	57	60	62	65	67	70	72	75	m
			16	13,9	12,4	10,6	9,7	8,5	8	8	7,8	7,3	6,6	6,3	5,8	5,5	5,1	4,8	4,5	4,3	4	3,9	3,6	3,5	3,3	3,2	3	t
70 m	3,3	▶	18,9	20	22	25	27	30	32	33,6	36,4	37	40	42	45	47	50	52	55	57	60	62	65	67	70	m		
			16	15	13,4	11,5	10,5	9,2	8,5	8	8	7,8	7,2	6,8	6,2	5,9	5,5	5,2	4,9	4,7	4,4	4,2	4	3,8	3,6	t		
65 m	3,3	▶	20	22	25	27	30	32	35	35,8	38,6	40	42	45	47	50	52	55	57	60	62	65	m					
			16	14,3	12,3	11,3	9,9	9,2	8,2	8	8	7,7	7,3	6,7	6,4	5,9	5,6	5,3	5,1	4,7	4,6	4,3	t					
60 m	3,3	▶	21,1	22	25	27	30	32	35	37	37,9	40,8	42	45	47	50	52	55	57	60	m							
			16	15,2	13,1	12	10,6	9,8	8,8	8,2	8	8	7,7	7,2	6,8	6,3	6	5,7	5,4	5,1	t							
55 m	3,3	▶	21,8	22	25	27	30	32	35	37	39,3	42,3	45	47	50	52	55	m										
			16	15,9	13,7	12,5	11,1	10,2	9,2	8,6	8	8	7,4	7,1	6,6	6,3	5,9	t										
50 m	3,3	▶	22,4	25	27	30	32	35	37	40	40,3	43,4	45	47	50	m												
			16	14,1	12,9	11,4	10,6	9,5	8,9	8,1	8	8	7,7	7,3	6,8	t												
45 m	3,3	▶	23,2	25	27	30	32	35	37	40	41,8	45	m															
			16	14,7	13,4	11,9	11	9,9	9,3	8,4	8	8	t															
40 m	3,3	▶	23,6	25	27	30	32	35	37	40	m																	
			16	15	13,7	12,1	11,2	10,1	9,4	8,6	t																	
35 m	3,3	▶	23,8	25	27	30	32	35	m																			
			16	15,1	13,8	12,2	11,3	10,2	t																			
30 m	3,3	▶	23,9	25	27	30	m																					
			16	15,2	13,9	12,3	t																					



75 m	2,5	▶	18	20	22	25	27	30	32	32,1	32,8	35	37	40	42	45	47	50	52	55	57	60	62	65	67	70	72	75	m
			16	14,1	12,6	10,9	9,9	8,7	8	8	8	7,4	6,9	6,3	5,9	5,4	5,1	4,7	4,4	4,1	3,9	3,6	3,5	3,2	3,1	2,9	2,75	2,6	t
70 m	2,5	▶	19	20	22	25	27	30	32	34,1	34,9	35	37	40	42	45	47	50	52	55	57	60	62	65	67	70	m		
			16	15,1	13,5	11,7	10,6	9,4	8,7	8	8	8	7,4	6,8	6,4	5,8	5,5	5,1	4,8	4,5	4,3	4	3,8	3,6	3,4	3,2	t		
65 m	2,5	▶	20,1	22	25	27	30	32	35	36,1	36,9	37	40	42	45	47	50	52	55	57	60	62	65	m					
			16	14,4	12,4	11,3	10	9,3	8,3	8	8	8	7,3	6,8	6,3	6	5,5	5,2	4,9	4,7	4,3	4,2	3,9	t					
60 m	2,5	▶	21,1	22	25	27	30	32	35	37	38,2	39	40	42	45	47	50	52	55	57	60	m							
			16	15,2	13,2	12	10,7	9,9	8,9	8,3	8	8	7,8	7,3	6,7	6,4	5,9	5,6	5,3	5	4,7	t							
55 m	2,5	▶	21,8	22	25	27	30	32	35	37	39,6	40,4	42	45	47	50	52	55	m										
			16	15,9	13,7	12,6	11,1	10,3	9,3	8,7	8	8	7,6	7	6,7	6,2	5,9	5,5	t										
50 m	2,5	▶	22,4	25	27	30	32	35	37	40	40,6	41,5	42	45	47	50	m												
			16	14,1	12,9	11,5	10,6	9,6	9	8,2	8	8	7,9	7,3	6,9	6,4	t												
45 m	2,5	▶	23,3	25	27	30	32	35	37	40	42	42,2	43,1	45	m														
			16	14,7	13,5	12	11,1	10	9,4	8,5	8	8	7,6	t															
40 m	2,5	▶	23,7	25	27	30	32	35	37	40	m																		
			16	15	13,8	12,2	11,3	10,2	9,5	8,7	t																		
35 m	2,5	▶	23,9	25	27	30	32	35	m																				
			16	15,2	13,9	12,3	11,4	10,3	t																				
30 m	2,5	▶	24	25	27	30	m																						
			16	15,3	14	12,4	t																						



Lest de base / Grundballast / Base ballast / Lastre de base / Zavorra di base
Lastro da base / Базовый Балласт

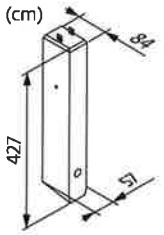
2 m	V 60A	H (m)	61,7	56,7	51,7	46,7	41,7	36,7	31,7	26,7	21,7	16,7						
	C25	(t)	108	96	84	84	84	84	84	84	84	84						
	D25	(t)	-	132	96	84	84	84	84	84	84	84						
	V 63A	H (m)	65,1	61,8	60,1	56,8	51,8	46,8	41,8	36,8	31,8	26,8	21,8	16,8				
	C25	(t)	132	108	108	96	84	84	84	84	84	84	84	84				
	D25	(t)	-	-	168	132	96	84	84	84	84	84	84	84				
	ZX 6830	H (m)	59,5	57,8	56,1	52,8	47,8	42,8	37,8	32,8	27,8	22,8	17,8	12,8				
	C25	(t)	101	91	91	81	81	81	81	81	81	81	81	81				
	D25	(t)	-	131	121	91	81	81	81	81	81	81	81	81				
2,45 m	Y 800B	H (m)	75,7	72,4	69,1	65,7	64,1	62,4	59,1	54,1	49,1	44,1	39,1	34,1	29,1	24,1	19,1	14,1
	C25	(t)	168	132	108	84	72	60	36	24	24	24	24	24	24	24	24	24
	D25	(t)	-	-	-	180	156	144	108	72	36	24	24	24	24	24	24	24
	YM 850	H (m)	83,7	80,4	77	72	67	62	57	52	47	42	37	32	27	22		
	C25	(t)	204	168	144	108	72	48	48	48	48	48	48	48	48	48		
	D25	(t)	-	-	-	204	156	120	72	48	48	48	48	48	48	48		
	JM 850	H (m)	93,7	90,4	87	82	77	72	67	62	57	52	47	42	37	32	27	22
	C25	(t)	204	180	144	108	72	48	48	48	48	48	48	48	48	48	48	48
	D25	(t)	-	-	-	204	156	120	96	60	48	48	48	48	48	48	48	48
	ZX 6830	H (m)	62,8	57,8	52,8	47,8	42,8	37,8	32,8	27,8	22,8	17,8	12,8					
	C25	(t)	121	81	81	81	81	81	81	81	81	81	81					
	D25	(t)	-	-	121	81	81	81	81	81	81	81	81					

Lest de contre-flèche / Gegenauslegerballast / Counter-jib ballast / Lastre de contra-flecha / Zavorra di controbraccio
Lastro da contra lança / Противовес стрелы

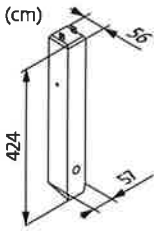
	4600 kg	1530 kg	(kg)
75 m	5	2	26060
70 m	5	2	26060
65 m	5	2	26060
60 m	5	1	24530
55 m	5	1	24530
50 m	5	2	26060
45 m	5	2	26060
40 m	5	0	23000
35 m	4	2	21460
30 m	4	1	19930

	3070 kg	1530 kg	(kg)
75 m	8	1	26090
70 m	8	1	26090
65 m	8	1	26090
60 m	8	0	24560
55 m	8	0	24560
50 m	8	1	26090
45 m	8	1	26090
40 m	7	1	23020
35 m	7	0	21490
30 m	6	1	19950

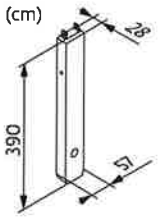
CBS - 4600 kg



CBU - 3070 kg



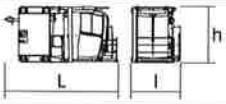
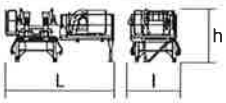
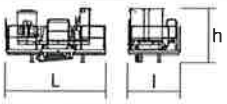
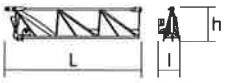
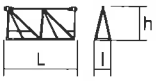
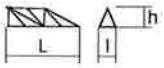
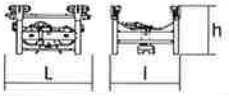
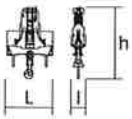
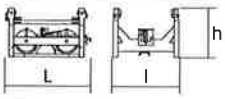
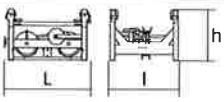
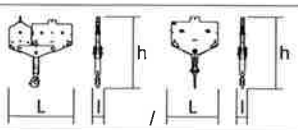
CBY - 1530 kg

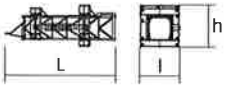
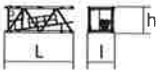
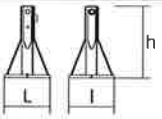
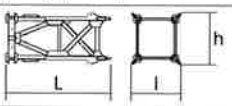
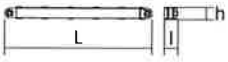
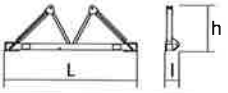
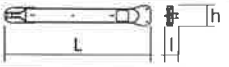
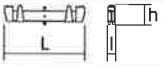
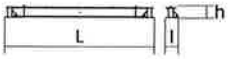
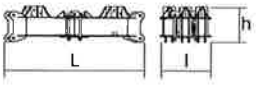
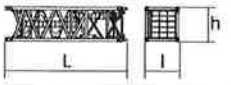
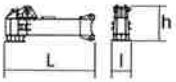
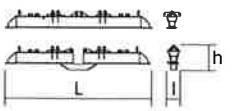


Encombrement et poids / Abmessungen und Gewicht / Dimensions and weight / Dimensiones y peso / Ingombro e peso
dimensões e pesos / габаритные размеры и вес

Partie tournante / Drehender Kranteil / Slewing crane part / Parte giratoria
Parte rotante / Parte rotativa / Поворотная часть : 75 m - - 75 LVF

x 6
x 5

Partie tournante / Drehender Kranteil / Slewing crane part Parte giratoria / Parte rotante / Parte rotativa Поворотная часть			**L (m)**	**l (m)**	**h (m)**	**kg** (+/- 5%)
Contre-flèche / Gegenausleger Counter-jib / Contra-flecha Controbraccio / Contra-lança Контр-стрела		Ⓐ Ⓑ	12 12	1,25 1,25	2,5 2,5	14010 11980
Mât-cabine + cabine / Kabinenmast + Kabine Cab mast + cab / Mástil-cabina + cabina Portaralla superiore + cabina / Tramo-cabina + cabina Секция мачты кабины + кабина		Ultra View	5,03	2,22	2,49	6720
Pivot + 75 LVF (+ câble) / Krankopf + 75 LVF (+ Seil) Towerhead + 75 LVF (+ rope) / Pivote + 75 LVF (+ cabo) Portaralla + 75 LVF (+ fune) / Pivot + 75 LVF (+ cabo) Секция поворотной части + 75 LVF (+ канатом)		2 m 2,45 m 75 LVF	5,26 5,5 2,27	2,48 2,53 2,1	2,5 2,79 1,37	11700 13260 3775
Treuil de levage (+ câble) / Hubwerk (+ Seil) Hoisting winch (+ rope) / Mecanismo de elevación (+ cabo) Argano di sollevamento (+ fune) Guincho de elevação (+ cabo) Подъемная лебёдка (+ канатом)		100 LVF 150 LVF GH	4,27 5,65	2,3 3,08	2,32 2,65	5710 10510
Elément de flèche / Auslegerelement Jib section / Elemento de flecha Elemento di braccio / Elemento de lança Секция стрелы		① 6 DVF	10,75	1,72	2,74	5500
Elément de flèche / Auslegerelement Jib section / Elemento de flecha Elemento di braccio / Elemento de lança Секция стрелы		② ③ ⑤ ⑥ ⑦	10,21 10,31 10,22 10,24 10,19	1,2 1,2 1,2 1,2 1,2	2,5 2,42 2,39 2,1 1,83	3145 2420 1560 1235 950
Elément de flèche / Auslegerelement Jib section / Elemento de flecha Elemento di braccio / Elemento de lança Секция стрелы		④ ⑧	5,27 5,09	1,2 1,2	2,39 1,53	960 310
Elément de flèche / Auslegerelement Jib section / Elemento de flecha Elemento di braccio / Elemento de lança Секция стрелы		⑨	5,09	1,2	1,39	220
Chariot / Laufkatze Trolley / Carrello Carro / Carro-distribuidor Тележка		16 t	2,05	1,51	1,09	482
Moufle / Hubflasche Pulley block / Aparejo Bozzello / Cadernal Полиспаст		16 t	141	0,45	2,22	590
Chariot / Laufkatze Trolley / Carrello Carro / Carro-distribuidor Тележка		16 t	1,77	1,53	1,05	250
Chariot / Laufkatze Trolley / Carrello Carro / Carro-distribuidor Тележка		16 t 8 t	1,77 1,82	1,53 1,53	1,05 1,05	303 303
Moufle / Hubflasche Pulley block / Aparejo Bozzello / Cadernal Полиспаст		16 t 8 t	1,83 1,16	0,28 0,22	1,9 1,6	845 370

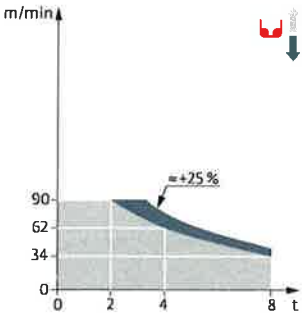
Pylône / Kranturm / Crane tower **Mástil / Torre / Torre** **Башня крана**			**L (m)**	**l (m)**	**h (m)**	**kg** (+/- 5%)
Cage de télescopage / Teleskopwagen Telescopic cage / Jaula de telescopaje Gabbia di telescopaggio / Gaiola de telescopagem для телескопирования крана		⍁2 m ⍁2,45 m	11,5 10,23	4,21 4,62	4,36 5,79	8235 12920
K 639B K 850/KR 849B		⍁2 m ⍁2,45 m	10,23 10,24	2,07 2,54	2,03 2,5	5290 9470
KR 649A K 639A KRMT 849A K 849A K 850/KR 849A KMT 850.10A		⍁2 m ⍁2 m ⍁2,45 m ⍁2,45 m ⍁2,45 m ⍁2,45 m	5,23 5,23 5,23 5,23 5,24 5,32	2,1 2,07 2,55 2,53 2,54 2,54	2,08 2,03 2,53 2,5 2,5 2,51	3250 2805 4090 3400 5575 5450
K 639C KRMT 849C		⍁2 m ⍁2,45 m	3,57 3,57	2,07 2,55	2,03 2,53	1985 3205
Pieds de scellement / Verankerungsfüße Fixing angles / Pie de empotramiento Montante da annegare / Angulos fixadores анкера		P 62B P 800B P 850A	0,65 0,75 0,9	0,65 0,75 0,9	1,27 1,28 1,49	295 465 835
Mât-châssis / Grundmasteinheit Basic mast unit / Tramo-chasis Elemento base / Tramo-chassis Мачта для крепления к шасси		V 60A V 63A Y 800B	5,01 10,02 6,03	2,41 2,41 2,93	2,41 2,41 2,93	4390 7485 8620
Haubans / Mastabstützungen /Struts / Tornapuntas Puntoni / Escoras / Растяжка		V 60A V 63A Y 800B	4,51 4,51 5,51	0,29 0,33 0,5	0,29 0,33 0,45	420 515 1110
Sommier / Unterwagenhälfte Half-bearer / Testero Testata / Estrutura base Траверса		V 60A V 63A	6,7 6,7	0,7 0,7	2,31 2,31	1600 1850
1/2 Longeron / 1/2 Längsträger / 1/2 Side member / 1/2 Larguero 1/2 Longherone / 1/2 Longarina / 1/2 боковина		Y 800B	5,68	1,24	0,73	1520
Longeron / Längsträger /Side member / Larguero Longherone / Longarina / боковина		Y 800B	12	1,24	0,73	3050
Support lest /Ballastträger/ Ballast support / Soporte de lastre Supporto zavorra / Suporte de lastro / Опора балласта		Y 800B	3,75	0,37	0,92	1085
Traverse de châssis / Unterwagentraverse /Chassis beam Traviesa chasis /Traversa carro /Travessa chassis/балка шасси		Y 800B	8,7	0,83	0,74	2240
Croix centrale (position transport) / Zentralkreuz (Transport-position) / Central cross (transport position) / Brazo central (posición transporte) / Croce centrale (posizione di trasporto) Braço central chassis (posição transporte) / крестообразное основание (транспортное положение)		YM 850 JM 850	5,2	1,7	1,5	6700
Mât-châssis / Grundmasteinheit Basic mast unit / Tramo-chasis Elemento base / Tramo-chassis Мачта для крепления к шасси		YM 850 JM 850	8,75	2,5	2,5	14600
Bras de châssis / Unterwagenträger / Chassis girder / Brazo de base en cruz / Traverse del carro / Braço de chassis / опорная балка шасси		YM 850 JM 850	3,8 5,2	0,9 0,9	1,55 1,55	2800 3200
Tirant de châssis / Unterwagenstreben / Chassis ties / Tirante de base en cruz / Tiranti del carro / Tirante de chassis / тяга крепления шасси		YM 850 JM 850	7,2	0,25	0,35	250
Haubans / Mastabstützungen Struts / Tornapuntas Puntoni / Escoras Растяжка		YM 850 JM 850	7,5 8,2	0,75 0,75	1,3 1,3	2100 2300
Bras de croix / Fundamentkreuzträger Cross girder / Brazo en cruz Braccio croce / Braço da cruz Поперечная балка		ZX 6830	9,1 9,1	1,12 0,76	1,1 1,48	5265 5445

Mécanismes / Triebwerke / Mechanisms / Mecanismos / Meccanismi
Mecanismos / Механизмы

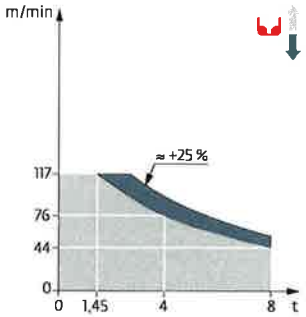
400 V - 50 Hz											ch - PS hp	kW	
	75 LVF 40 Optima	m/min	34	44	62	90	17	22	31	45	75	55	637 m
		t	8	6	4	2	16	12	8	4			
	100 LVF 40 Optima	m/min	44	56	76	117	22	28	38	58,5	100	75	1136 m
		t	8	6	4	1,45	16	12	8	2,9			
	150 LVF 40 GH Optima	m/min	67	84	115	199	248	35	46	66	99	124	150	110	1171 m
		t	8	6	4	1,6	0,7	16	12	8	4,5	2,5			
	6 DVF 6	m/min	0 → 42 (16 t) 0 → 84 (8 t) 0 → 100 (4 t)									5,5	4
	RVF 172 Optima+	tr/min U/min rpm	0 → 0,8									2 x 10	2 x 7,5
V 60A	RT 544 A1 - 2V R ≥ 13 m	m/min	13,5 - 27									4 x 7	4 x 5,2
V 63A	RT 664 A2B - 2V	m/min	16 - 32									6 x 7	6 x 5,2
			ⓘ										
ZX 6830	RT 664 A2B - 2V	m/min	16 - 32									6 x 7	6 x 5,2
Y 800B YM 850 JM 850	ⓘ												

IEC 60204-32	kVA
400 V (+10% -10%) 50 Hz	75 LVF : 84 kVA 100 LVF : 104 kVA 150 LVF GH : 144 → 84 kVA

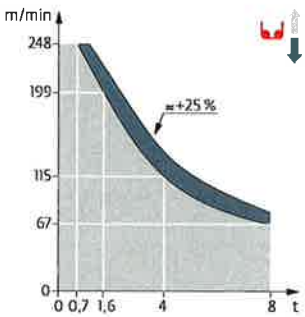
75 LVF 40 Optima



100 LVF 40 Optima



150 LVF 40 GH Optima



	FR	DE	EN	ES	IT	PT	RU
C25 -D25	Profil de vent suivant EN 14439 C25-D25	Windbedingungen gemäss EN 14439 C25-D25	Wind conditions according to EN 14439 C25-D25	Conformidad de los condiciones de viento EN 14439 C25-D25	Condizioni del vento secondo EN 14439 C25-D25	Perfil de vento conforme EN 14439 C25-D25	Ветровой режим в соответствии с EN 14439 C25-D25
	Appel de flèche	Auslegerüberhöhung	Jib elevation	Elevación de la flecha	Inclinazione braccio	Desvio da lança	Подъем стрелы
	Équipements standards	Standardausrüstungen	Standard equipment	Equipamiento de serie	Equipaggiamento standard	Equipamento de série	Стандартное оборудование
	Équipements optionnels	Sonderausrüstungen	Options	Equipamiento opcional	Equipaggiamento in opzione	Equipamento opcional	Дополнительное оборудование (опция)
	Réactions en service	Reaktionskräfte in Betrieb	Reactions in service	Reacciones en servicio	Reazioni in servizio	Reacções em serviço	Реакция при работе
	Réactions hors service	Reaktionskräfte außer Betrieb	Reactions out of service	Reacciones fuera de servicio	Reazioni fuori servizio	Reacções fora de serviço	Реакция в покое
	A vide sans lest avec flèche et hauteur maximum	Gewicht ohne Last, ohne Ballast, mit Ausleger und max. Höhe	Weight without load, without ballast, with jib and max. height	Peso en vacío sin lastre, con flecha y altura máxima	Peso a vuoto, senza zavorra, con braccio e altezza massimi.	Peso em vazio sem lastro com lança e altura máxima.	Вес пустого, без балласта, со стрелой, максимальной высоты.
	Poids total du lest	Ballast-Gesamtgewicht	Total ballast weight	Peso total del lastre	Peso totale della zavorra	Peso total do lastro	Общий вес балласта
	Camion 13,4 m	Lkw 13,4 m	Lorry 13,4 m	Camión 13,4 m	Camion 13,4 m	Camião 13,4 m	Грузовой автомобиль 13,4 м
	Conteneur High Cube 40', et/ou Flat Rack 20'	Container High Cube 40', und/oder Flat Rack 20'	Container High Cube 40', and/or Flat Rack 20'	Contenedor High Cube 40', y/o Flat Rack 20'	Container High Cube 40, e/o Flat Rack 20'	Contentor High Cube 40', e/ou Flat Rack 20'	40-футовый контейнер повышенной вместимости High Cube, и/или 20-футовая открытая платформа Flat Rack
	Cadre d'ancrage serré	Fester Verankerungs-rahmen	Tightened anchorage frame	Marco de anclaje de apriete	Quadro di ancoraggio stretto	Quadro de amarração apertado	Прикрепленная анкерная рама
	Cadre d'ancrage desserré	Loser Verankerungs-rahmen	Loosened anchorage frame	Marco de anclaje de desapriete	Quadro di ancoraggio allentato	Quadro de amarração solto	Отсоединенная анкерная рама
	Levage	Heben	Hoisting	Elevación	Sollevamento	Elevação	Подъем
	Distribution	Katzfahren	Trolleying	Distribución	Ditribuzione	Distribuição	Перемещение по стреле
	Orientation	Schwenken	Slewing	Orientación	Rotazione	Rotação	Поворот
	Translation	Kranfahren	Travelling	Traslación	Traslazione	Translação	Перемещение крана
kVA	Puissance requise	Erforderliche Leistung	Required power	Potencia Necesaria	Potenza richiesta	Potência Necessária	Потребляемая мощность
	Fonction Power Control : vitesses levage adaptées à la puissance disponible	Funktion Power Control : Der verfügbaren Leistung angepasste Hubgeschwin-digkeiten	Power Control function: Hoisting speeds adapted to the available power	Función Power control : Velocidades de elevación adaptadas a la potencia disponible	Funzione Power Control : Velocità di sollevamento adattate alla potenza elettrica disponibile	Função Power control : Velocidades de elevação adaptadas à potência disponível	Функция Power control: скорости подъема в зависимости отмощности источника электроснабжения
	Nous consulter	Auf Anfrage	Consult us	Consultarnos	Consultateci	Consultar-nos	Проконсультируйтесь у нас
	Document commercial non contractuel. Pour toute information technique se référer à la notice correspondante.	Unverbindliches Vertriebsdokument. Für technische Informationen, siehe die entsprechenden Anweisungen.	This commercial document is not legally binding. For any technical information, please refer to the corresponding instructions.	Documento commercial no contractual. Para cualquier información tecnica, ver la noticia correspondiente.	Documento commerciale non vincolante, per tutte le informazioni tecniche fare rifferimento al catalogo istrusioni.	Documento comercial não contratual. Para qualquer informação técnica complementar consultar as respectivas instruções.	Этот коммерческий документ не является юридически обязательным. Для получения технической информации, см. соответствующие инструкции.

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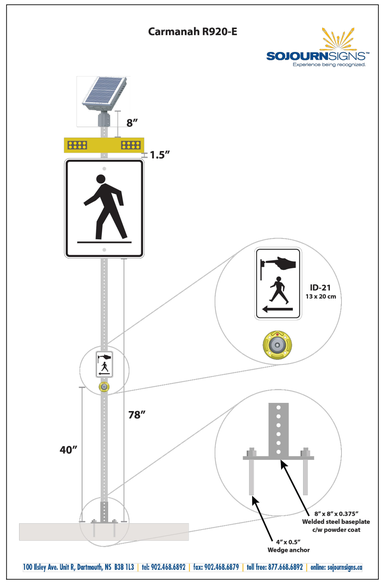
Réf. MDT 368 A LI6 2013 09 - 1

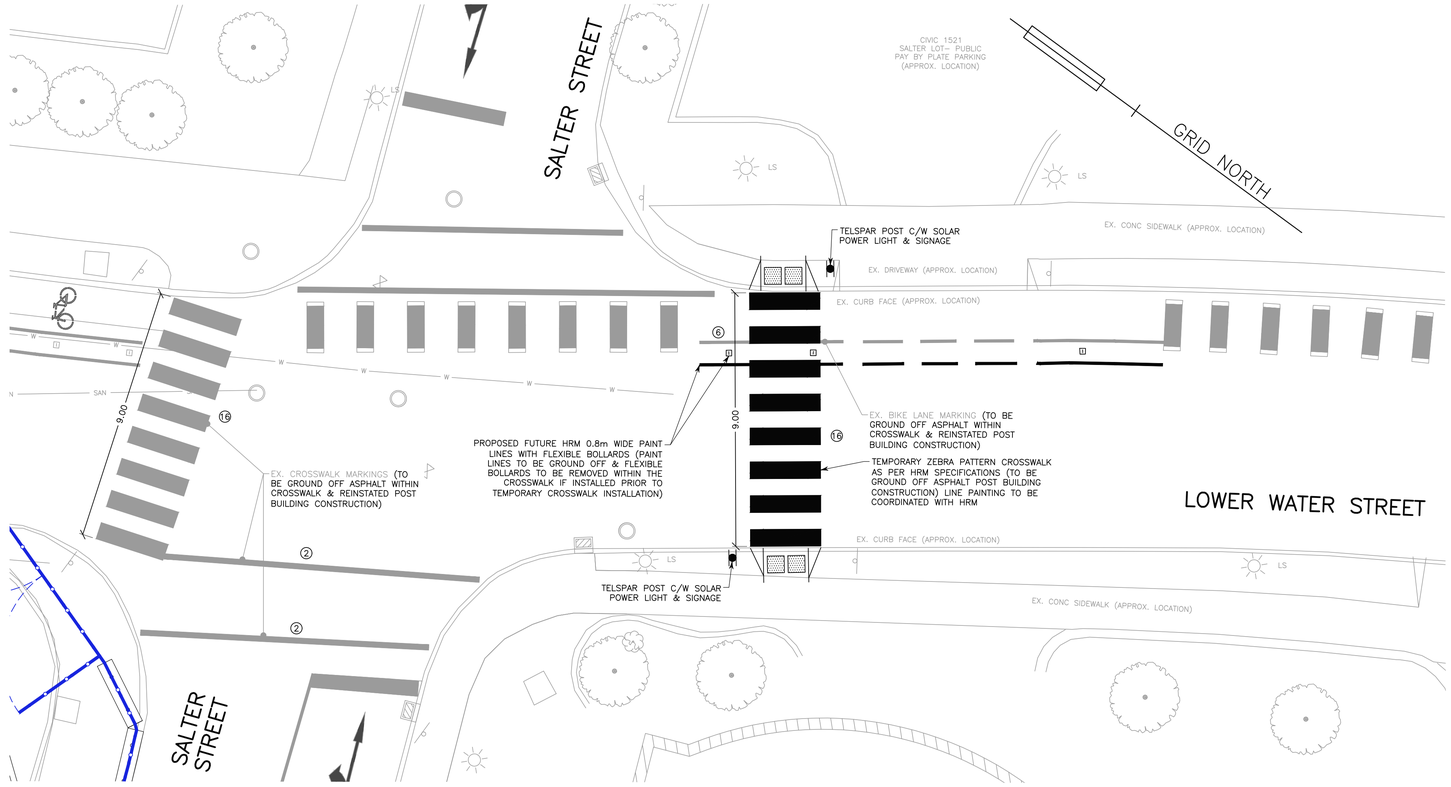
Appendix R – Line Painting Schematic

PAVEMENT MARKINGS				
IDENTIFICATION	TYPE	WIDTH	COLOUR	QUANTITY
①	STOP BAR	450 mm	WHITE	N/A
②	CROSSWALK LINE	200 mm x 2	WHITE	21.50m
③	SINGLE CENTRELINE	100 mm NOT TO BE PAINTED THROUGH INTERSECTIONS	YELLOW	N/A
④	DOUBLE CENTRELINE	100 mm x 2 NOT TO BE PAINTED THROUGH INTERSECTIONS	YELLOW	N/A
⑤	SOLID ℄ WITH BROKEN 3x6 LINE	100 mm	YELLOW	N/A
⑥	LANE & BIKE LINES	100 mm	WHITE	4.50m
⑦	BROKEN LINE 3x3	100 mm	WHITE	N/A
⑧	BROKEN LINE 3x6	100 mm	WHITE	N/A
⑨	BIKE LANE DASHED LINE 1.5x1.5	100 mm	WHITE	N/A
⑩	HATCH	100 mm LANE LINES WITH 600 mm HATCH LINES, 6.0 m SPACING	YELLOW	N/A
⑪	HATCH	100 mm LANE LINES WITH 600 mm HATCH LINES, 6.0 m SPACING	WHITE	N/A
⑫	ARROW	3/4 TAC SIZE	WHITE	N/A
⑬	RESERVED LANE SYMBOL	3/4 TAC SIZE	WHITE	N/A
⑭	BIKE SYMBOL		WHITE	N/A
⑮	SHARED USE LANE SYMBOL		WHITE	N/A
⑯	ZERBA CROSSWALK	600 mm	WHITE	24.60m



DEVELOPER AND CONTRACTOR TO NOTE REQUIRED WORK FLOW FOR NEW CROSSWALK INSTALLATION WITH HRM.

1. URBAN SIGN POST TO BE INSTALLED BY CONTRACTOR IN CONSULTATION WITH HRM ENGINEERING STAFF.
2. HRM SIGN SHOP TO INSTALL AND BAG NEW CROSSWALK SIGNAGE; HRM ENGINEERING TO COORDINATE.
3. CONTRACTOR TO GRIND OFF EXISTING YELLOW CENTERLINE, INSTALL NEW ZEBRA PAINT LINES AND REMOVE BAGS FROM CROSSWALK SIGNAGE IN CONSULTATION WITH HRM ENGINEERING STAFF.
4. CONTRACTOR TO INSTALL RRFP ON BOTH URBAN SIGN POSTS IN CONSULTATION WITH HRM ENGINEERING STAFF.



KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
	FIRE HYDRANT	
	CONCRETE THRUST BLOCK	
	SIAMESE CONNECTION	
	CATCH BASIN/PIT	
	CULVERT	
RD	ROCK LINING/DAM	RD
RW	ROCK WALL/RETAINING WALL	RW
	POWER POLE & ANCHOR/LIGHT STANDARD	
	TREE	
	STREET SIGN/PARKING METER	
× 131.82	ELEVATION/GRADE	125.00 × 125.00
	TEST PIT	
S	DRAINAGE/SWALE FLOW DIRECTION	S
W	WATER MAIN/SERVICE	W
SAN	SANITARY MANHOLE & PIPE	SAN
STM	STORM MANHOLE & PIPE	STM
SAN/STM	COMBINED PIPE	SAN/STM
GAS	GAS LINE	GAS
FL	100YR. FLOOD LIMIT	FL
	GUARD RAIL	
C	UNDERGROUND CONDUIT	C
	OVERHEAD WIRES	
	PROPERTY LINE/BOUNDARY	
	FENCE	
	BUILDING	
	TOP OF SLOPE	
	TOE OF SLOPE	
	TREELINE	
	LIMITS OF DISTURBANCE	
	TACTILE PEDESTRIAN PLATES	
	PROJECT SAFETY SIGNAGE	
	ORANGE SAWHORSE BARRICADE	

NOTES

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2. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED BY

TRAFFIC AUTHORITY DATE

FOR THE APPROVAL OF A CROSSWALK ONLY. ALL OTHER ASPECTS OF THIS TEMPORARY TRAFFIC CONTROL PLAN MUST FOLLOW THE TEMPORARY CONTROL MANUAL, LATEST EDITION.

No.	YY/MM/DD	Revision Description	Appr'd
1	23/03/16	REVISED ENCROACHMENT	
0	23/02/14	ISSUED FOR REVIEW	

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
DATE
G.K. MacLean
8978

SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
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WEB: www.sdmm.ca

PROPOSED DEVELOPMENT
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HALIFAX, NOVA SCOTIA

LINE PAINTING SCHEMATIC

Date: FEBRUARY 14, 2023	Drawn: D. ANDERSON	Project No.: FILE NO. 1-1-147 (37572)
Scale: 1:100	Engineer: G. MACLEAN	Plan No.
Reference: --	Approved: G. MACLEAN	Drawing Name: R3
Surveyed: BY OTHERS	Sheet	

0m 1 2 4 6 8 10m

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IDENTIFICATION	TYPE	WIDTH	COLOUR	QUANTITY
1	STOP BAR	450 mm	WHITE	N/A
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14	BIKE SYMBOL		WHITE	N/A
15	SHARED USE LANE SYMBOL		WHITE	N/A
16	ZERBA CROSSWALK	600 mm	WHITE	24.60m

Carmanah R920-E

SOJOURNSIGNS™
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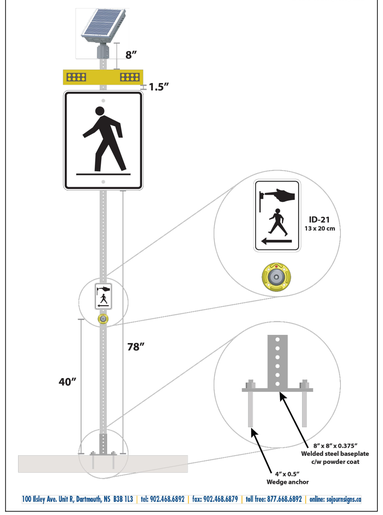

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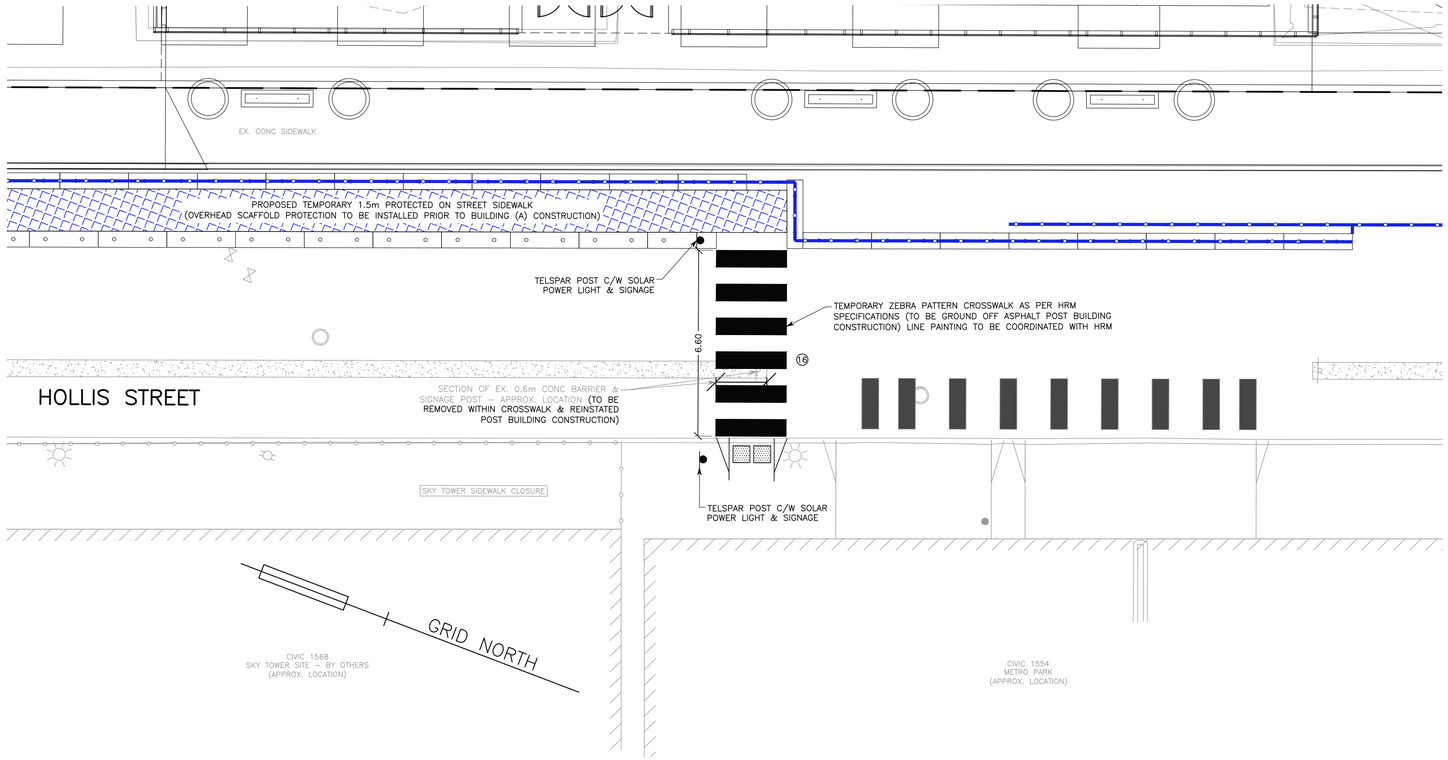

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Scale: 1:100	Engineer: G. MACLEAN	Plan No.:
Reference: --	Approved: G. MACLEAN	Drawing Name: R4
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0m 1 2 4 6 8 10m