Chadwick & Pleasant Apartments

247 Pleasant Street

Building Construction

Prepared by Geoff MacLean, P.Eng.

Job No. 35789

CONSTRUCTION MANAGEMENT PLAN

REVISION #	DATE	DESCRIPTION
3	NOV 10 2023	SETBACK TO HYDRANT ADDED
2	NOV 3 2023	REVISED AS PER HRM COMMENTS
1	JUL 2022	REVISED BUILDING LOCATION
0	AUG 2021	ISSUED FOR REVIEW

SDMM

36 Oland Crescent
Bayers Lake Business Park
Halifax, Nova Scotia B3S 1C6
www.sdmm.ca

t: 902 455-1537
f: 902-455-8479
c: 902-789-6374
e: gmaclean@sdmm.ca

Revisions Summary

Revision 1 – Sections; 2.1 & 2.2, Appendices A, G, M, P & Q

Revision 2 – Sections; 1.2, 2.1, 2.2, 2.3, 7.6, 7.7, 8.1, Appendices E, G, J, L & N

Revision 3 – Sections; 10.6, Appendicies A & P

Table of Contents

Prepared by

G.K. MacLean, P. Eng.

In consultation with the developer, contractor, traffic control company and HRM.

Section 1: Introduction

1.1: Project Description and Objectives

The landowner is proposing to redevelop their existing residential properties at the corner of Chadwick and Pleasant Streets, Dartmouth, NS. The planned building at civic 247 Pleasant Street will have a staggered design that steps with the terrain; that includes an 8-storey residential building with a common landscaped roof top amenity area. The building will house a mixture of 1, 2, and 3-bedroom residential suites fronting on Chadwick and Pleasant. The project will utilize the existing site driveway fronting the former civic 5 Chadwick to access three levels of parking along Chadwick and the one level fronting Pleasant Street. Three of the existing buildings on Chadwick have been previously demolished with the remaining building located at civic 247 Pleasant Street still to be demolished in preparation for this new development. This CMP has been prepared to address demolition, excavation, services and building construction of both building sites.

Where deep excavations (+10ft) are planned for the project and the building is in close proximity (+/-5ft) to the street line on both Chadwick and Pleasant Street, for public safety from excavation limits and construction activities we are proposing encroachments on both Pleasant and Chadwick Streets. These include temporarily relocating the pedestrian access route on Pleasant Street, hoarding off the current sidewalk and providing a 1.8m wide temporary asphalt route around the Pleasant Street encroachment. Additionally, we are planning to close the sidewalk in front of the project on Chadwick while hoarding off a section for a truck layby and material laydown area. These encroachments will maintain pedestrian traffic on Pleasant Street and maintain two-way vehicular traffic on both streets. Vehicle traffic is anticipated to be affected during service work and tower crane assembly and disassembly where temporary traffic control will be utilized. During excavation stages, the landowner's adjacent commercial property (Dartmouth South Professional Centre) parking lot will be utilized for material and concrete deliveries.

The development borders a commercial property to the north that houses the Dartmouth South Professional Centre and residential properties also along it north and east property lines and residential properties to the south across Chadwick and to the west across Pleasant is the HRM owned North Woodside Community Centre Park. All neighbouring properties will remain undisturbed throughout construction and all neighbours will be notified and updated on construction ahead of time.

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
Owner	Joseph Sadek		810 Maplewood Lane, Halifax, NS B3H 4K3	(902) 225-3525
Project Manager	Jean Alphonce		6178 Lady Hammond Road, Halifax, NS B3K 2R6	(902) 830-2808 24 Hour Emergency Contact
Site Contractor	J. Pelley Excavation	Justin Pelley	2129 Old Sambro Road, Halifax, NS B3V 1C2	(902) 229-6297
Traffic Control Company	Safety First-SFC		116 Thorne Avenue, Dartmouth, NS B3B 1Z2	(902) 464-0889
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	Oct 1, 2022	-	Feb 28, 2023	5 months
Demolition	Oct 17, 2022	-	Oct 31, 3022	2 weeks
Site Excavation	Nov 2, 2023	-	Feb 28, 2024	4 Months
Substructure	Feb 1, 2024	-	May 30, 2024	4 Months
Superstructure	May 1, 2024	-	Aug 31, 2025	16 Months
Service Abandonments	May 1, 2024	-	Jul 1,2024	2 weekends
Service installs	May 1, 2024	-	Jul 1, 2024	3 weekends
HRM Right of Way Flat Works	Jul 1, 2025	-	Sep 1, 2025	2 months

2.2: Key Dates

- Take-over encroachment — November 2023
- Finish encroachment — September 2025
- Duration of encroachment — 2 years
- Temporary lane closures:
  - Pleasant Street Service abandonment — May 4, 5, 2024 (weekends only)
  - Chadwick Street Service abandonment — May 11, 12, 2024 (weekends only)
  - Pleasant Street Sewer service install — June 1, 2, 2024 (weekends only)
  - Chadwick Street Sewer service install — June 8, 9, 2024 (weekends only)
  - Chadwick Street Water service install — June 15, 16, 2024 (weekends only)
  - Tower crane assembly — April 27, 28, 2024 (weekend)
  - Tower crane disassembly — April 19, 20, 2025 (weekend)

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. Note that construction noise exemptions may be granted where construction noise is planned to take place during prohibited hours of the N-200 By-law. The developer to apply for this separately under the Construction Noise Exemption process.

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 Traffic Control Plan (TCP) has been prepared by the traffic control company and is provided in the Appendix.

Throughout all phases of construction two-way vehicular traffic will be maintained on Chadwick and Pleasant Streets. Only during service work, tower crane assembly and disassembly do we anticipate short term temporary lane closures being required. 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 excavation stages material and concrete deliveries shall be contained within the owner's private property (adjacent commercial parking lot); once building is backfilled the Chadwick encroachment area will also be used. With the steep street grade on Chadwick in front of the project, they plan to utilize the landowner's parking lot larger deliveries and utilize the Chadwick encroachment for smaller deliveries once the foundation has been backfilled. We anticipate deliveries on Chadwick entering the east gate and exiting the west gate, 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

On street parking is not permitted along Chadwick or Pleasant Street in the vicinity of the project site. 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. However, bus service travels along Pleasant Street however should 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 all phases of construction, the project will maintain pedestrian access by rerouting the sidewalk along Pleasant Street fronting the building. The sidewalk on Chadwick will be closed and pedestrians will be encouraged to use the opposite site of the street for access. This is to ensure the limits of excavation, deliveries and construction overhead are kept a safe distance from pedestrians.

5.1: Pedestrian Protection

Pedestrians will be protected by physically distancing them from the project. F-type concrete barriers with rigid fencing mounted above will delineate the project during the construction activities. Rigid fencing will be covered with translucent covering to block view of the site, except near the intersection of Chadwick and Pleasant where clear rigid fencing will be installed to maintain vehicular sightlines at the Chadwick intersection. Refer to the appendix for examples of the barriers.

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. Existing sidewalks, a proposed temporary asphalt route, pedestrian ramps and crosswalks will be maintained along Pleasant Street.

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 routes are not anticipated for this project given that pedestrian traffic will remain along on Pleasant and minimal pedestrian traffic is anticipated on Chadwick.

5.8: Pedestrian Detour Wayfinding Signage

The need for pedestrian wayfinding signage directing pedestrians to adjacent businesses is not anticipated for this project given the location. Pedestrian traffic will remain on Pleasant Street and there no businesses on Chadwick Street.

Section 6: Encroachments & Disruptions

During construction, we are proposing the project encroachment area will incorporate the public sidewalk on Pleasant and a section of the sidewalk on Chadwick. This will move pedestrians to the opposite side of Chadwick and reroute them around the encroachment on Pleasant Street. 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 within the encroachment area.

The encroachment on Chadwick and Pleasant Streets is planned to be delineated by interlocking F-type concrete barriers complete with rigid fencing with translucent coverings except near the intersection on Pleasant and Chadwick where clear ridged fencing on top concrete barriers will be installed to maintain vehicular sightlines exiting Chadwick.

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 existing building at civic 247 Pleasant Street will be demolished prior to site excavation.

6.2: Site Excavation

This includes deep excavation and removal of common site material. The development is planned to have one level of underground parking below grade on Pleasant Street and two levels of parking along Chadwick. It is anticipated that the local soils will need to be sloped from edge of encroachment to founding elevation. Slopes will be secured and stabilized as per the geotechnical consultant's recommendations. If bedrock is found, these excavation slopes could be lessened, and 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 be completely replaced. This will include removal of the temporary pedestrian route and reinstating the sod behind the street curb along Pleasant Street. 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 landowner acknowledges that items may require to be fully replaced rather than repaired. The landowner 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 several HRM street trees within the public right-of-way directly adjacent to the project site in front of the project along Chadwick and Pleasant Streets. We are proposing to remove several HRM street trees in front of the project on Chadwick Street and one HRM street tree on Pleasant 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 and the noted limits on the encroachment plan sound in the appendix.

7.3: Line Painting and Temporary Crosswalks

Temporary line painting such as altered centreline or temporary crosswalk are not anticipated for this project.

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 public sidewalk for their encroachment the developer is responsible to clear snow from the street side of these jersey barriers.

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 silt bags and/or 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) unless approved under HRM exemption process. No work will take place on the project site outside those hours identified in section 2 of this report. , unless HRM grants an exception.

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 building demolition and 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 building demolition 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

The encroachment will be delineated using concrete F-type jersey barriers complete with rigid fencing secured to the jersey barriers, total height of concrete barrier and fencing structure will be 1.8m or 6ft as per the noted administrative order. This fencing will be open or have translucent dust control mesh of high quality which will extend a minimum 3m from the public right-of-way. This screening described will block passersby or tourists view of the construction site. Construction traffic will utilize the proposed gates, gate will not be screened for safety reasons similar to fencing near the intersection, fencing will remain clear near the intersection to maintain required sight lights.

Along the private sidelines where non-vehicular traffic is present, the hoarding will be delineated by weighted modular 1.8m (6ft) high fencing or existing fencing where it is at least 1.8m tall. All fencing will have dust control mesh and must be anchored down to prevent unintentional movement or overturning due to snow or wind loads. It is noted that this fencing shall **not** be anchored to the sidewalk, **nor** shall the legs of the modular fencing extend onto the sidewalk as this creates an unacceptable tripping hazard which must be avoided. Throughout the project, fencing will be situated to not obstruct vehicle sight lines.

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, 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 developer, contractor and traffic control company will attend this site meeting. During the process of erecting and tearing down the traffic barriers, fencing and translucent 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 and temporary asphalt route free and clear of snow and ice build up.

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 each end the encroachment to facilitate deliveries. Gates are to swing into site, remain closed when not in use and locked after hours. Gates are anticipated to be aligned to allow for traffic flow through the encroachment in line with street traffic on Chadwick Street.

Any existing fire hydrants located adjacent to the site will remain protected from construction activities. These fire hydrants, along with the existing department connections (Siamese connections) will be accessible to firefighters throughout all phases of the project. Adjacent existing hydrants and fire department connections are not anticipated to be affected by construction.

8.4: Hoarding Aesthetics

The site hoarding will resemble that shown in the appendix; encroachment fee reductions are not anticipated.

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 a tower crane, the crane 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 tower cranes is shown in the appendix.

It is anticipated that the crane assembly and disassembly will be stationed on Pleasant Street in front of the project within a lane drop, see traffic control plan in the appendix.

The crane swing will extend over neighbouring properties as shown in the Crane Swing Diagrams included in the appendix. The developer will notify these property owners prior to extending the crane over their properties. Refer to the appendix for crane information.

Concrete is anticipated to be hosted to upper levels by the tower crane. Concrete trucks will be stationed within the adjacent commercial property parking lot and encroachment (see 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.

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.

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, trucks will be housed within the adjacent commercial parking lot or Chadwick encroachment area.

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

There is an existing fire hydrant on Chadwick that will remain outside the project encroachment area and will be protected from construction activities. Per HRM Fire Services request, 2.0m clearance between the existing fire hydrant and site site's compound fencing/barriers shall be provided at all times. This fire hydrant, along with any existing fire department connections (Siamese connections) 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.

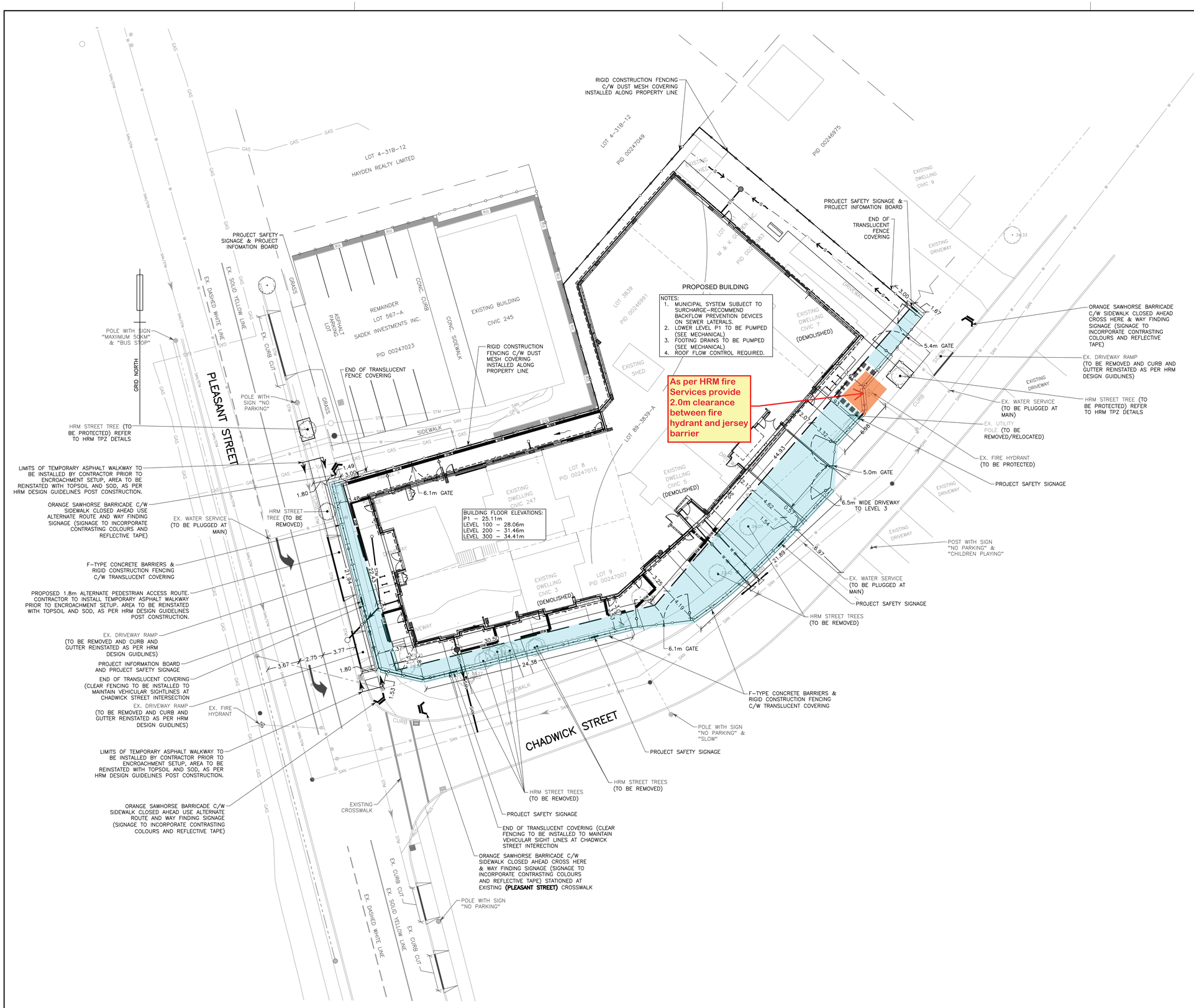
Regards,

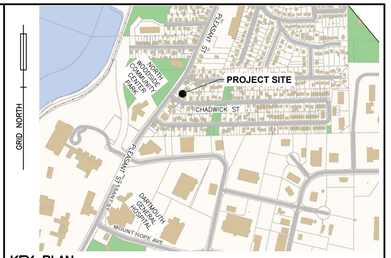
Servant, Dunbrack, McKenzie & MacDonald Ltd.

Geoff MacLean, P.Eng.
Project Engineer
Z:\SDMM\35000-35999\35750\35789\CMP\Rev3\247 Pleasant Street - CMP (Rev3) - 35789.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.

No.	YY/MM/DD	Revision Description	Appr'd
2	23/11/10	REVISED PER HRM COMMENT	
1	22/07/18	REVISED BUILDING LOCATION	
0	21/08/25	ISSUED FOR REVIEW	

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE — G.K. MacLeon — 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.co

PROPOSED MULTI-UNIT BUILDING
247 PLEASANT STREET
DARTMOUTH, NOVA SCOTIA

ENCROACHMENT PLAN

Date: AUGUST 25, 2021	Drawn: D. ANDERSON	Project No.: FILE NO. 1-7-241 (35789)
Scale: 1:200	Engineer: G. MACLEAN	Plan No.
Reference	Approved: G. MACLEAN	Drawing Name: R1
Surveyed	Sheet	

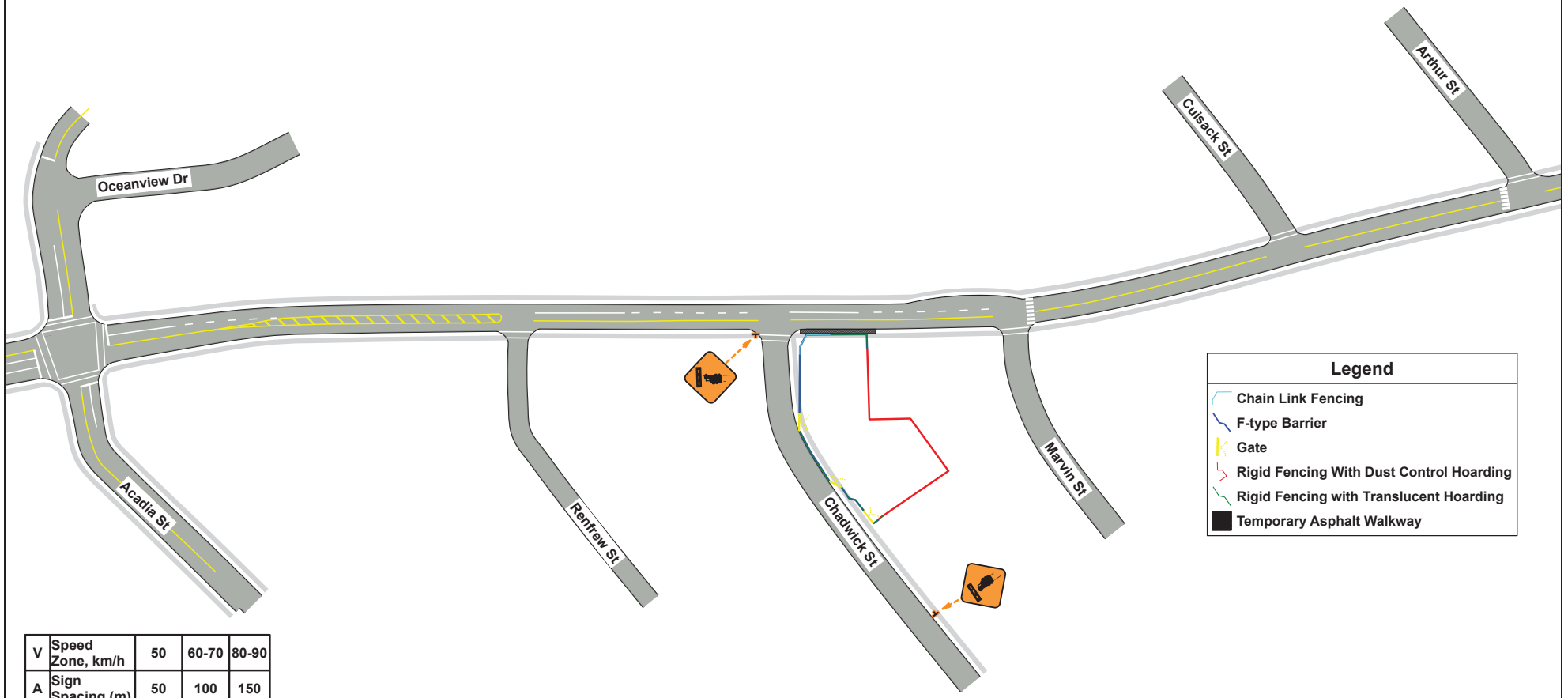
0m 5 10 15 20m

Appendix B – Traffic Control Plans TCP

www.invarion.com

Encroachment Signage Plan

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St Contrator: SDMM Contact: Geoff Maclean, 902 789-6374
Comments: Not to Scale Encroachment Signage Plan See Pedestrian Control Plan for Chadwick St sidewalk closure details



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

Temporary Sidewalk Installation and Removal Plan

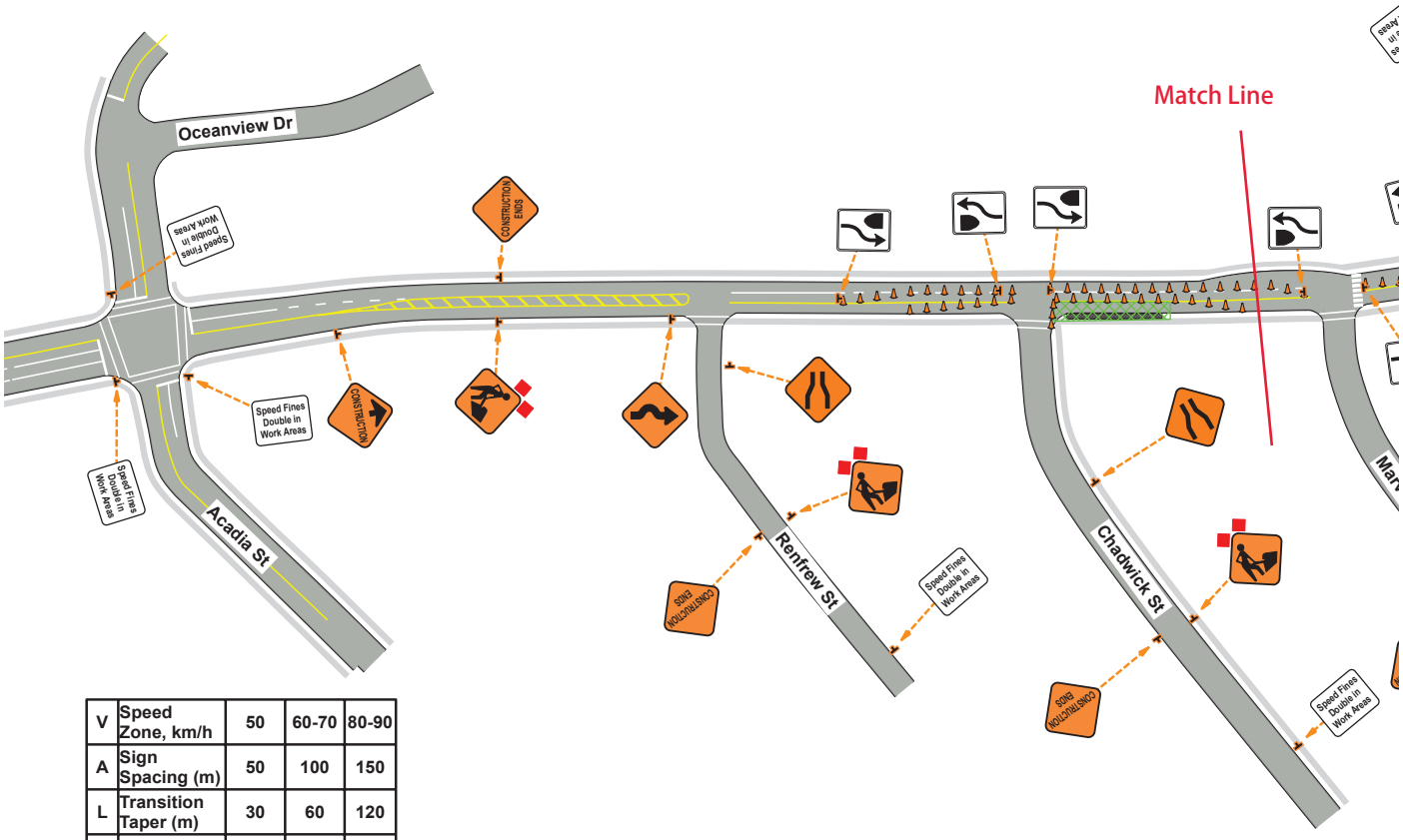
www.invarion.com

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St
Contrator: SDMM Contact: Geoff Maclean, 902 789-6374

Comments:

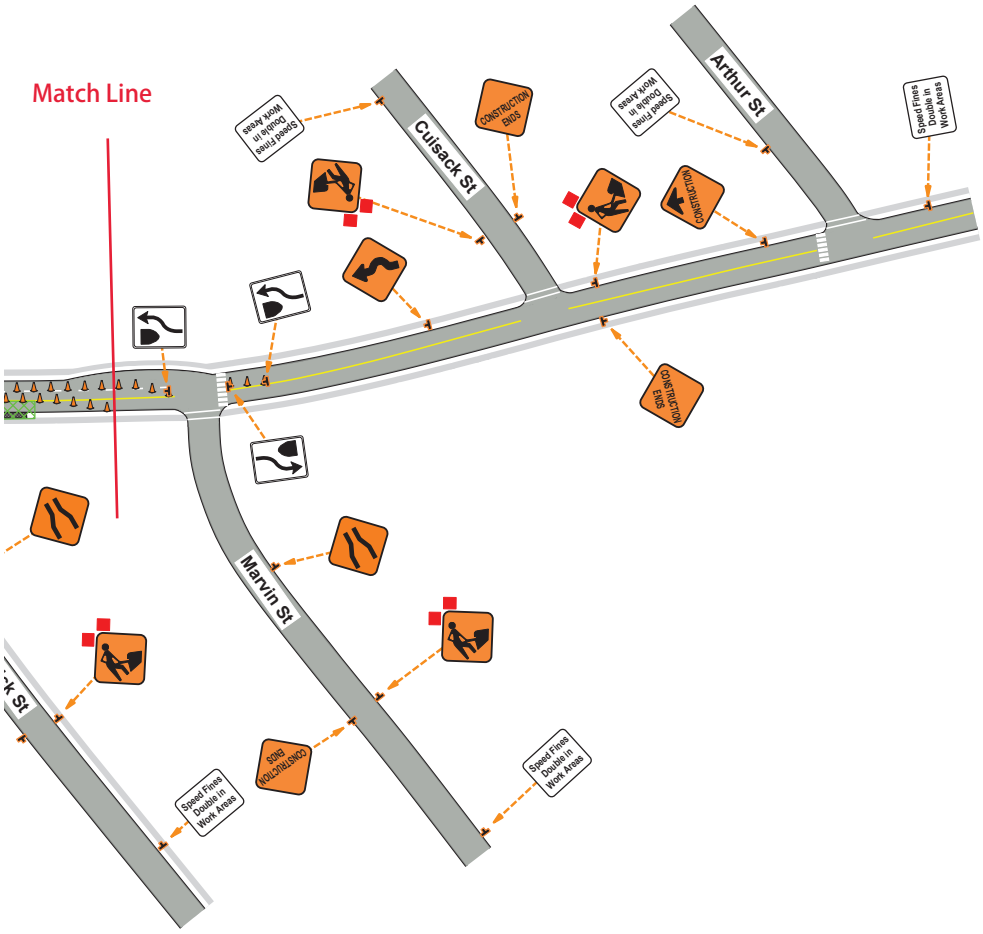
Not to Scale
Encroachment Signage Plan
See Pedestrian Control Plan for Chadwick St sidewalk closure details

Legend
Cone
Temporary Asphalt Walkway
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

Temporary Sidewalk Installation and Removal Plan



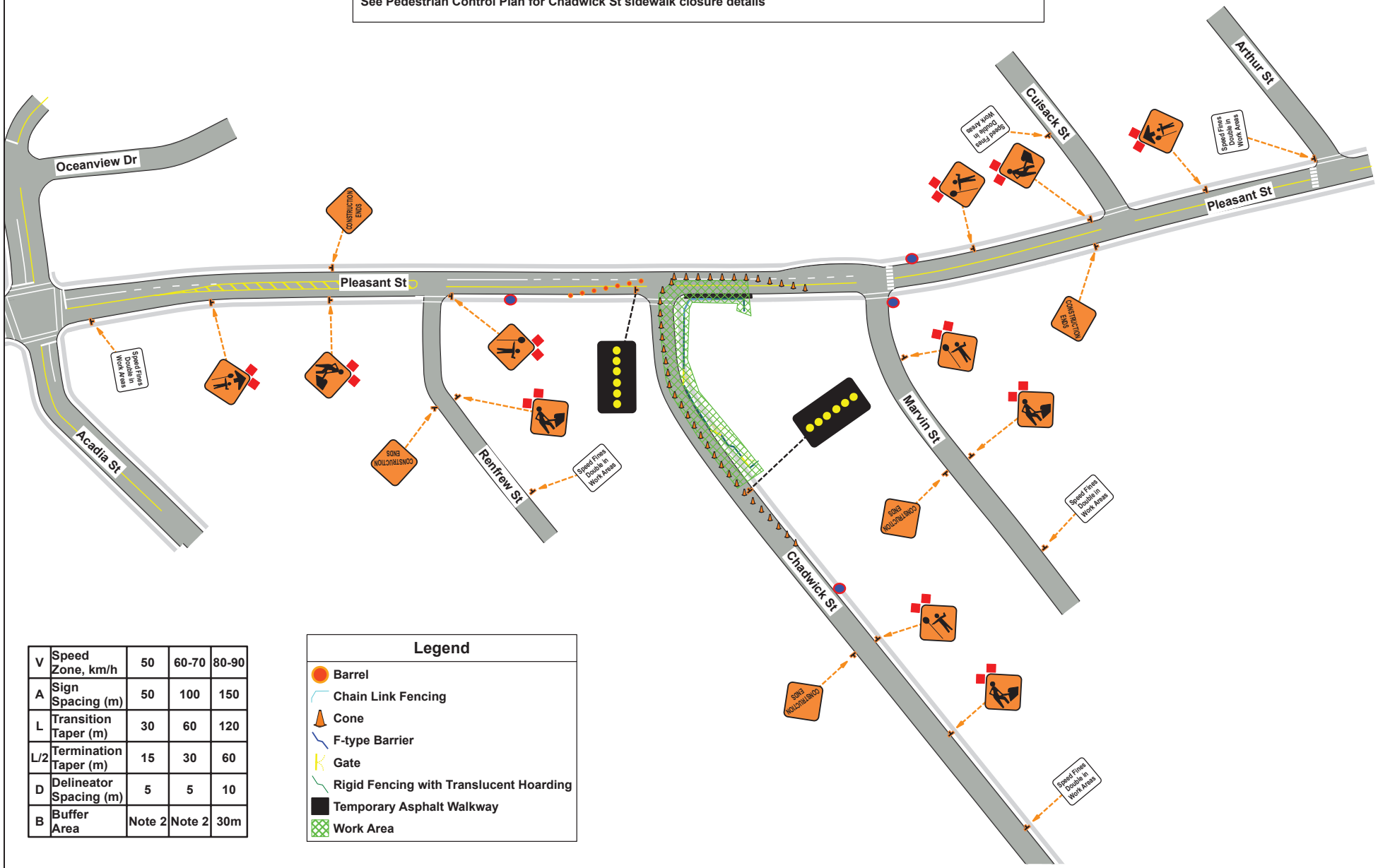
www.invarion.com

Barrier Installation and Removal Plan

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St
Contrator: SDMM Contact: Geoff Maclean, 902 789-6374

Comments:

Not to Scale
Encroachment Signage Plan
See Pedestrian Control Plan for Chadwick St sidewalk closure details



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

Legend

- Barrel
- Chain Link Fencing
- Cone
- F-type Barrier
- Gate
- Rigid Fencing with Translucent Hoarding
- Temporary Asphalt Walkway
- Work Area

www.invarion.com

Storm Lateral Installation Plan

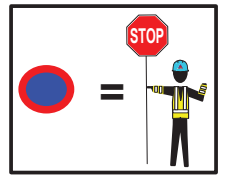
Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St
Contrator: SDMM Contact: Geoff Maclean, 902 789-6374

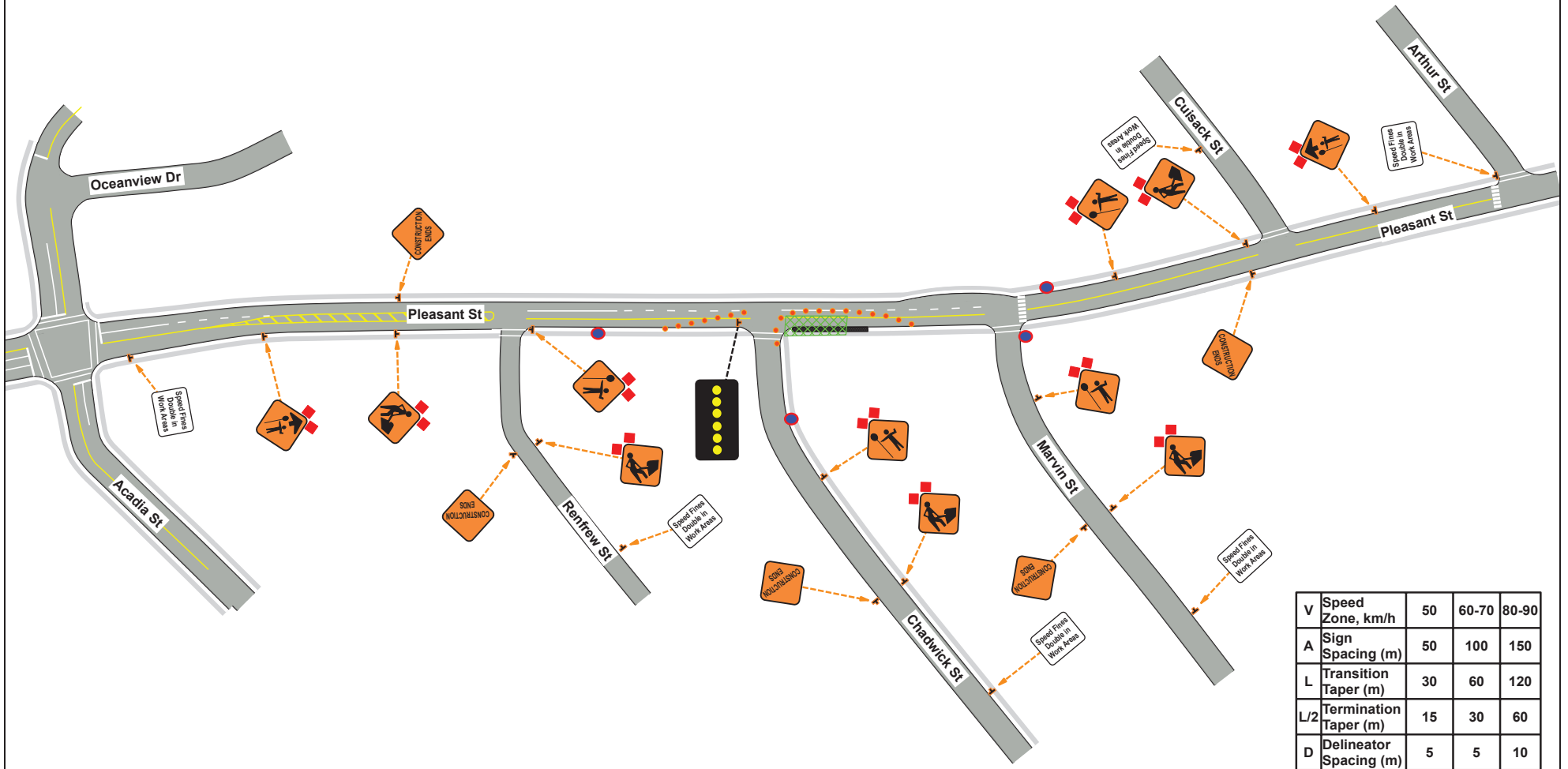
Comments:

Not to Scale
Encroachment Signage Plan
See Pedestrian Control Plan for Chadwick St sidewalk closure details

Legend

- Barrel
- Control Position
- Temporary Asphalt Walkway
- 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

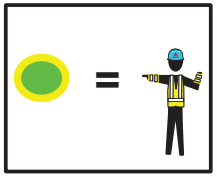
Water and Sanitary Laterals Installation and Capping Plan

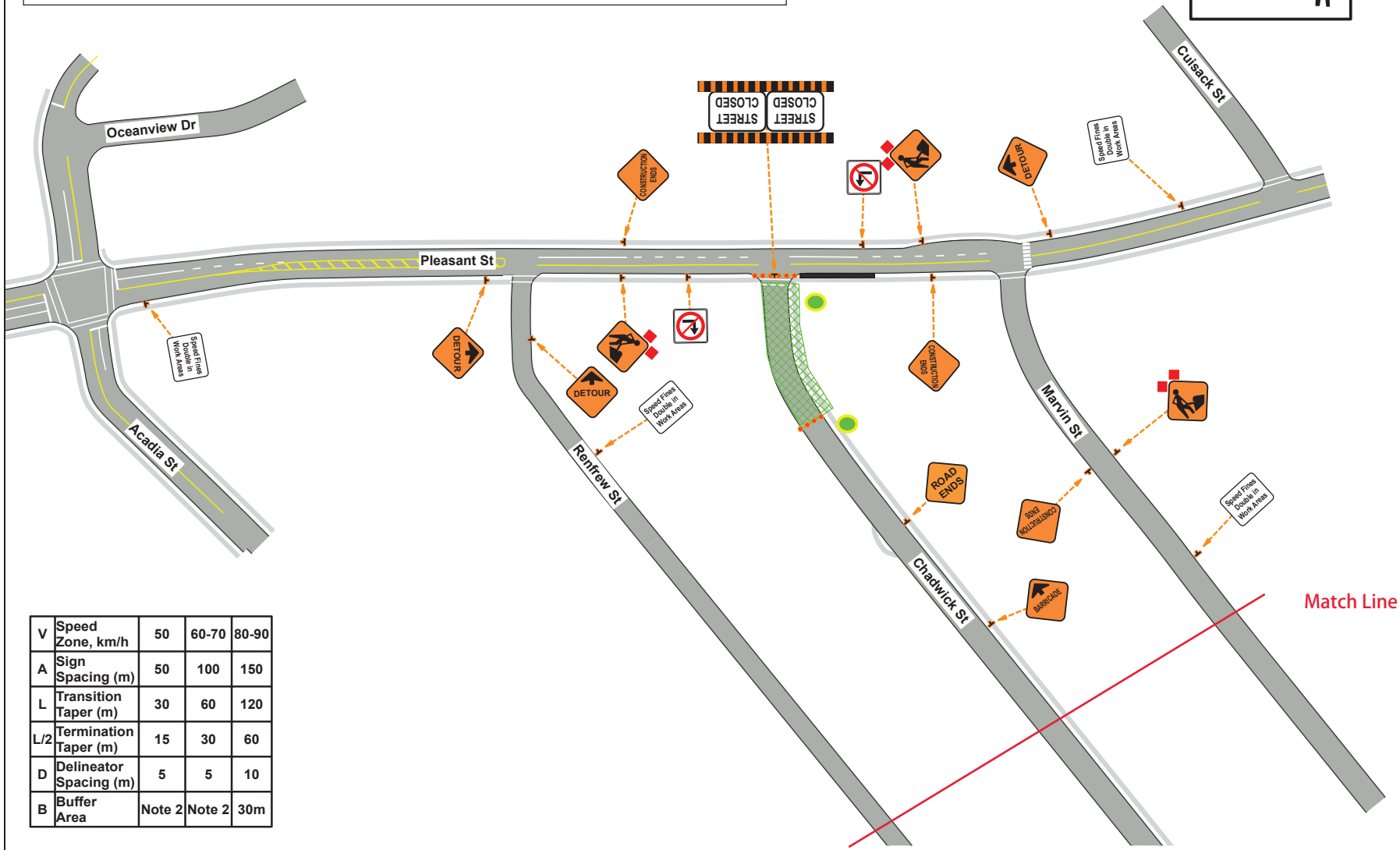
Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St
Contrator: SDMM Contact: Geoff Maclean, 902 789-6374

Comments:
Not to Scale
Encroachment Signage Plan
See Pedestrian Control Plan for Chadwick St sidewalk closure details

Legend

- Barrel
- Temporary Asphalt Walkway
- Work Area

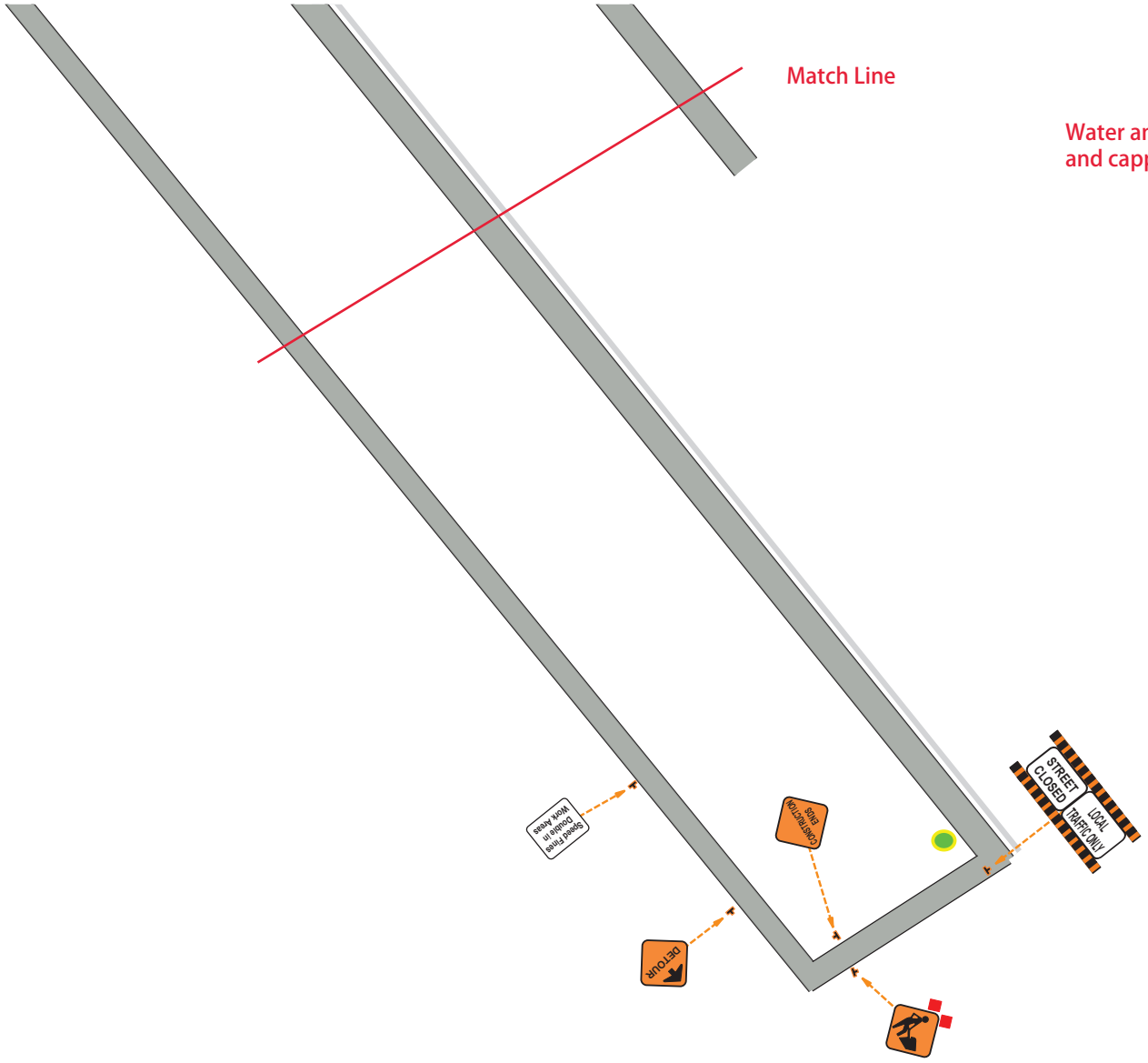




V	Speed Zone, km/h	50	60-70	80-90
A	Sign Spacing (m)	50	100	150
L	Transition Taper (m)	30	60	120
L/2	Termination Taper (m)	15	30	60
D	Delineator Spacing (m)	5	5	10
B	Buffer Area	Note 2	Note 2	30m

Match Line

Water and Sanitary Lateral Installation
and capping plan page 2 of 2

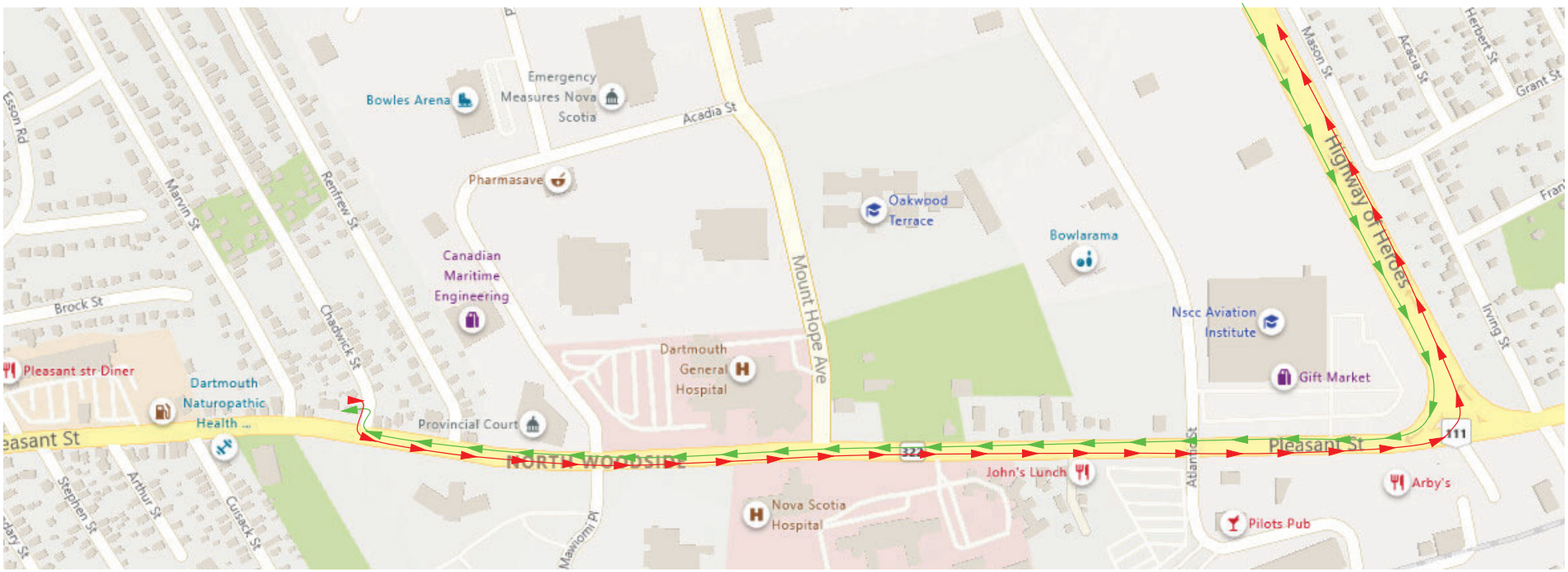


Appendix C – Haul Route Plan

www.invarion.com

Haul Route Plan

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St Contrator: SDMM Contact: Geoff Maclean, 902 789-6374
Comments: **Not to Scale** **Haul Route Plan** **Inbound via Hwy 111 to Pleasant St to Chadwick St.** **Outbound via Chadwick St to Pleasant St to Hwy 111**



Appendix D – Pedestrian Management Plan (PMP)

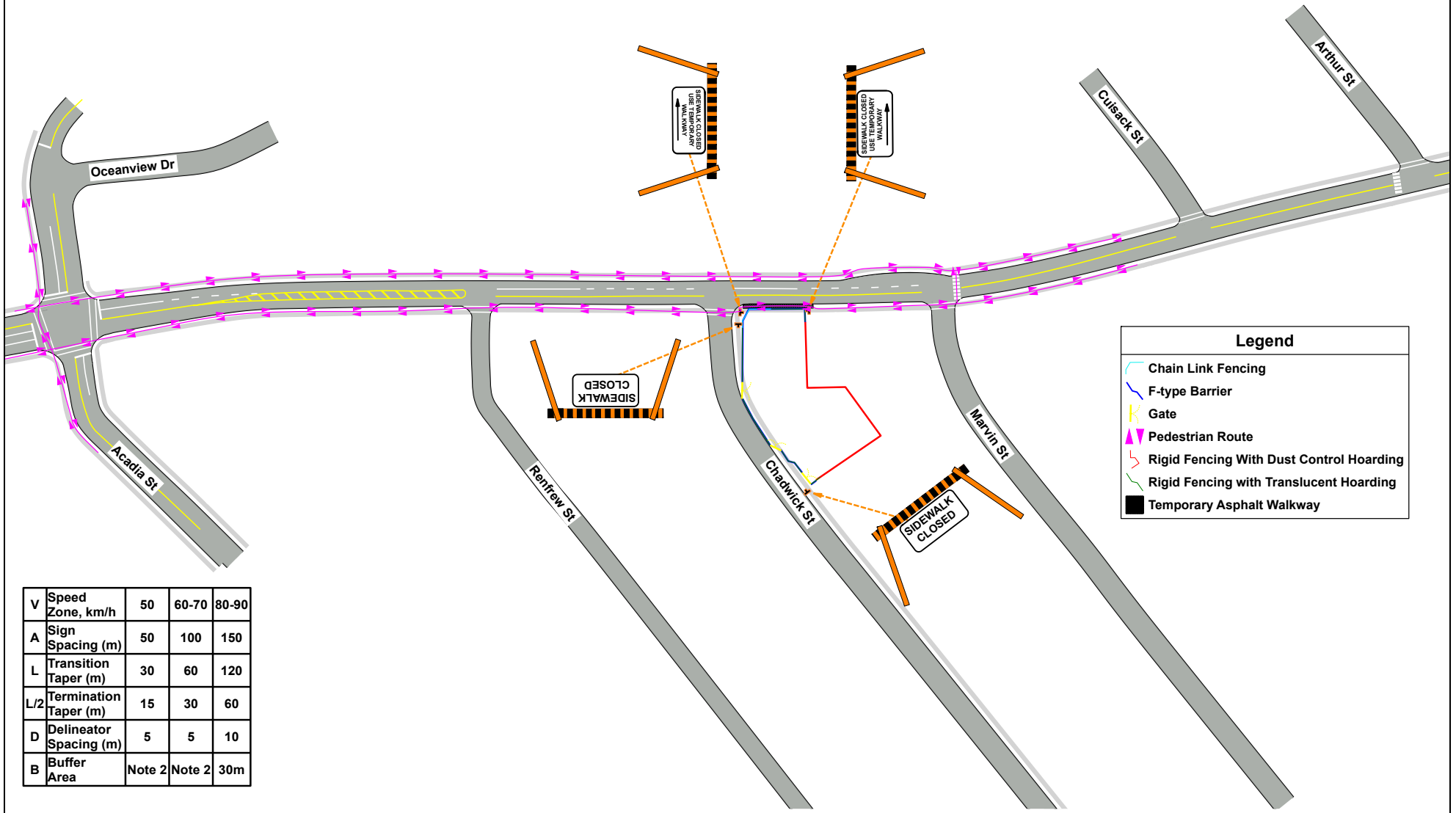
www.invarion.com

Pedestrian Management Plan 1

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St
Contrator: SDMM Contact: Geoff Maclean, 902 789-6374

Comments:

Not to Scale
Encroachment Signage Plan
See Pedestrian Control Plan for Chadwick St sidewalk closure details

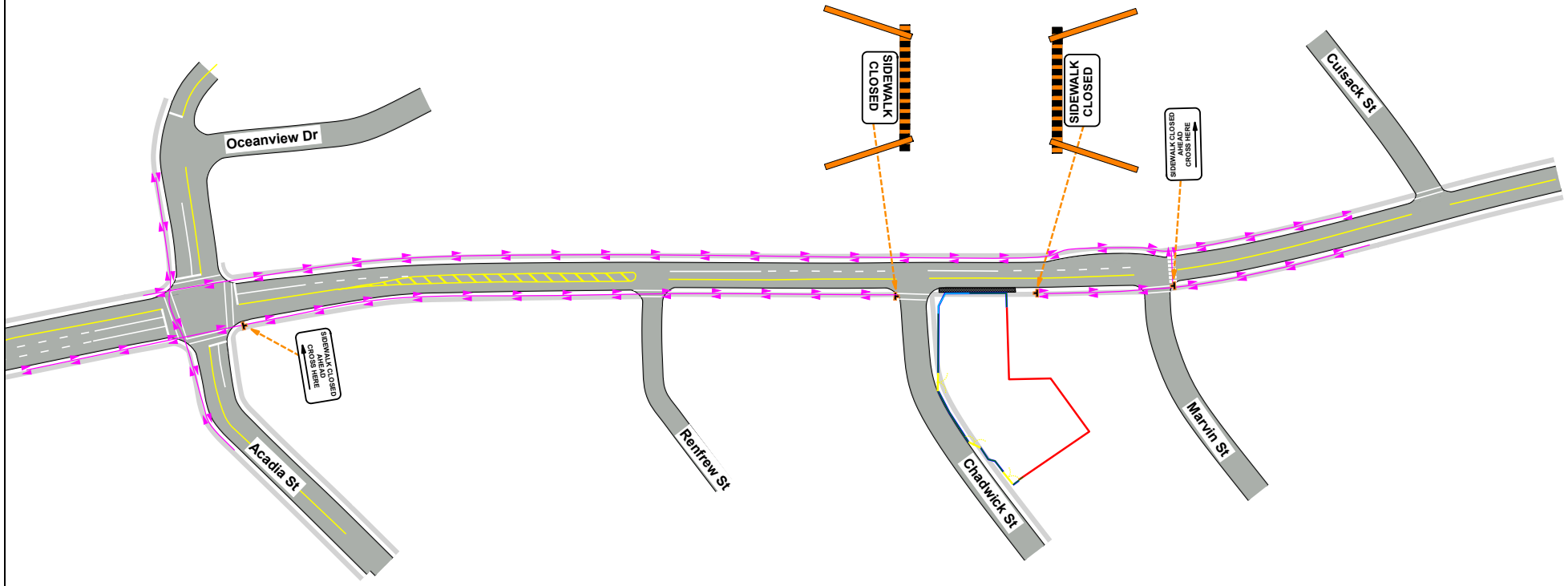


V	Speed Zone, km/h	50	60-70	80-90
A	Sign Spacing (m)	50	100	150
L	Transition Taper (m)	30	60	120
L/2	Termination Taper (m)	15	30	60
D	Delineator Spacing (m)	5	5	10
B	Buffer Area	Note 2	Note 2	30m

www.invarion.com

Pedestrian Management Plan 2

Date: 2021-09-10 Author: Norman Bussmann, TWS, Frontline Traffic Services, 902-817-3364 Project: 247 Pleasant St Contrator: SDMM Contact: Geoff Maclean, 902 789-6374
Comments: Not to Scale Pedestrian Management Plan 2 Short Duration Closure of sidewalk and Temporary Walkway



Legend

- Chain Link Fencing
- F-type Barrier
- Gate
- Pedestrian Route
- Rigid Fencing With Dust Control Hoarding
- Rigid Fencing with Translucent Hoarding
- Temporary Asphalt Walkway

Appendix E – Barrier, Fence & Gates Information

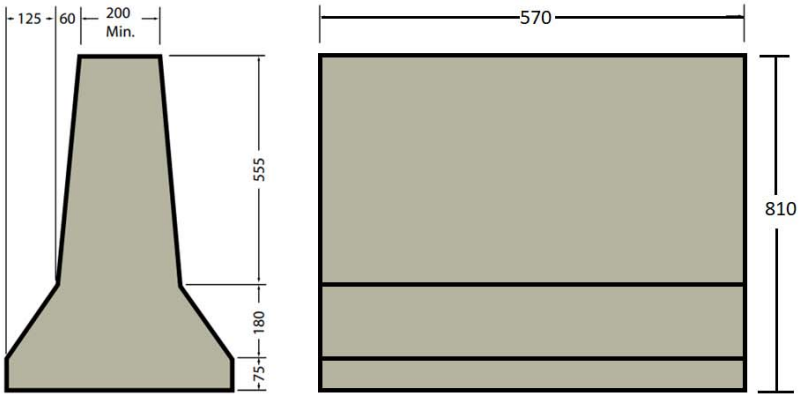
Sample Barrier & Fence Details

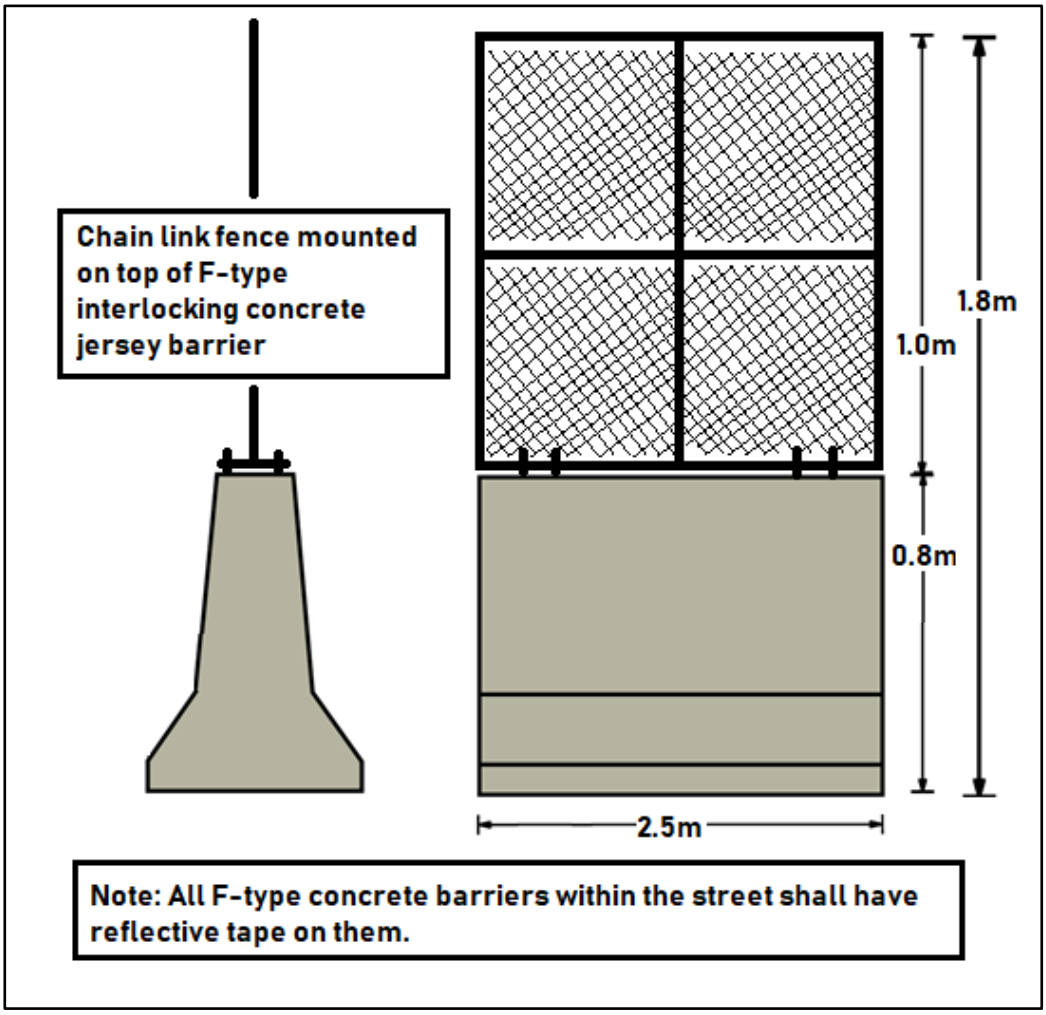
F-shape Barrier

Approved Barrier Designs

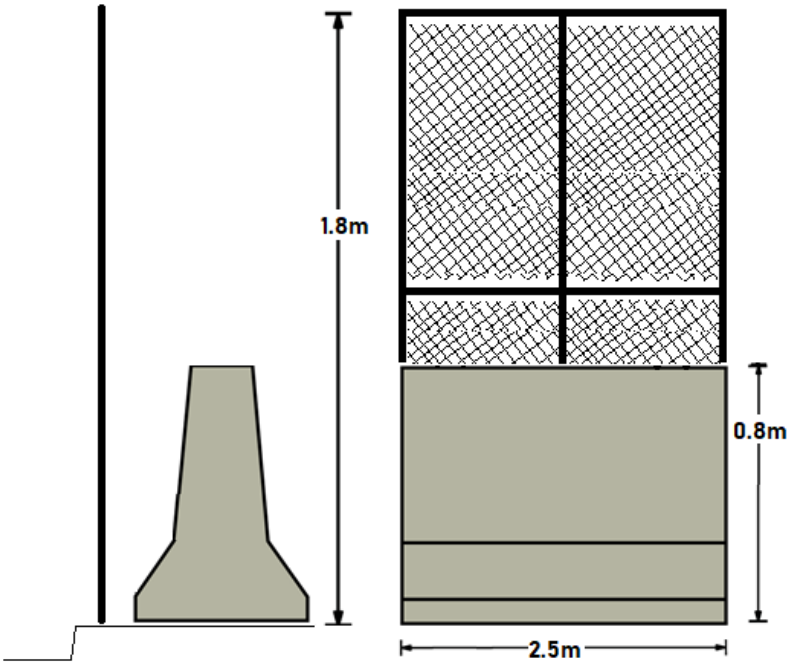
The only pre-approved portable anti-intrusion barrier in Nova Scotia is the Portland Cement Concrete F-shape Barrier. F-shape Barriers with designs approved before 2011.01.01 must be constructed and installed copying a design certified as meeting Test Level 3 of the NCHRP Report 350 (NCHRP 350), or if 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

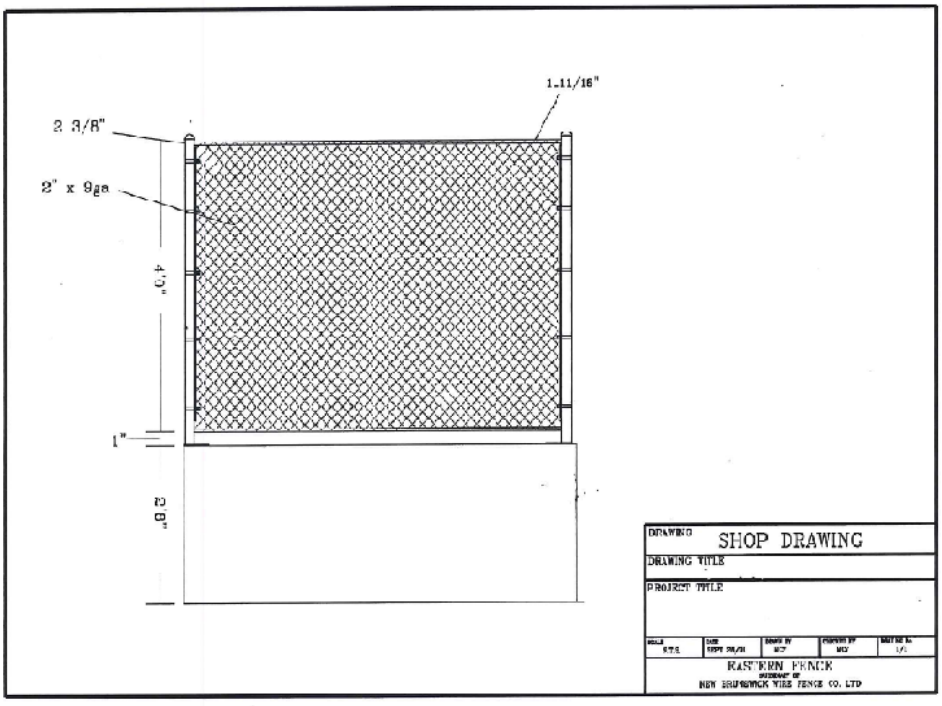


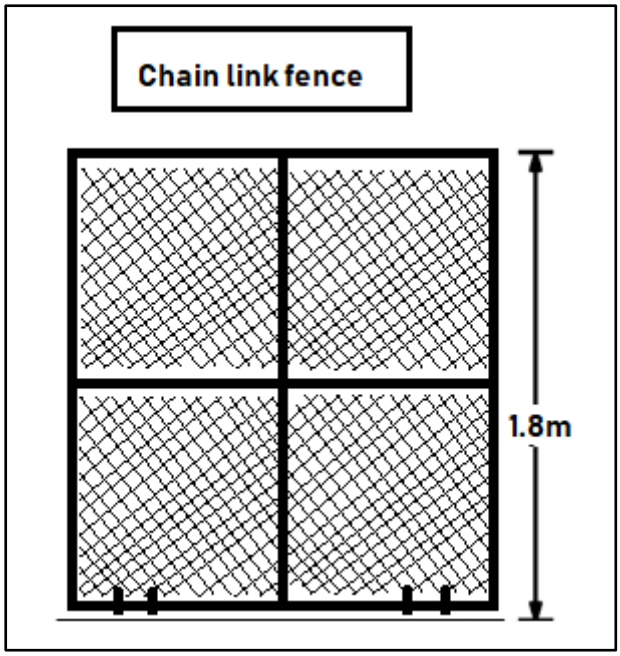


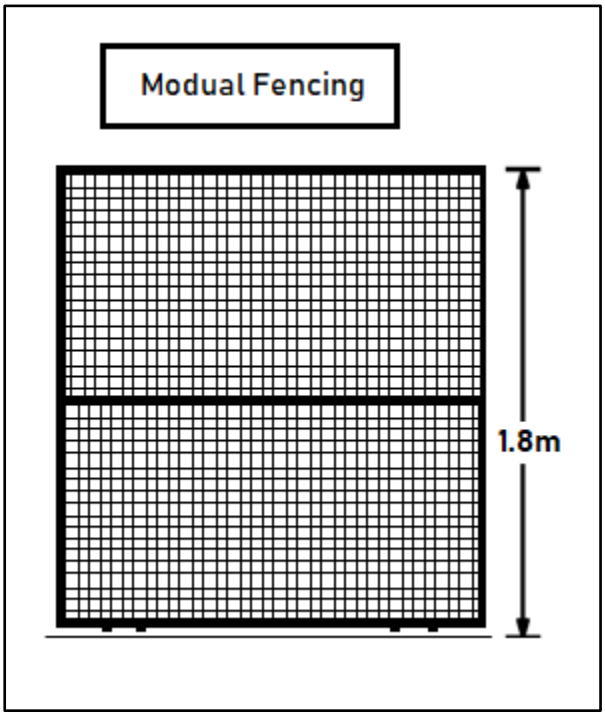
Fence mounted to curb with interlocking F-type concrete jersey barriers set beside



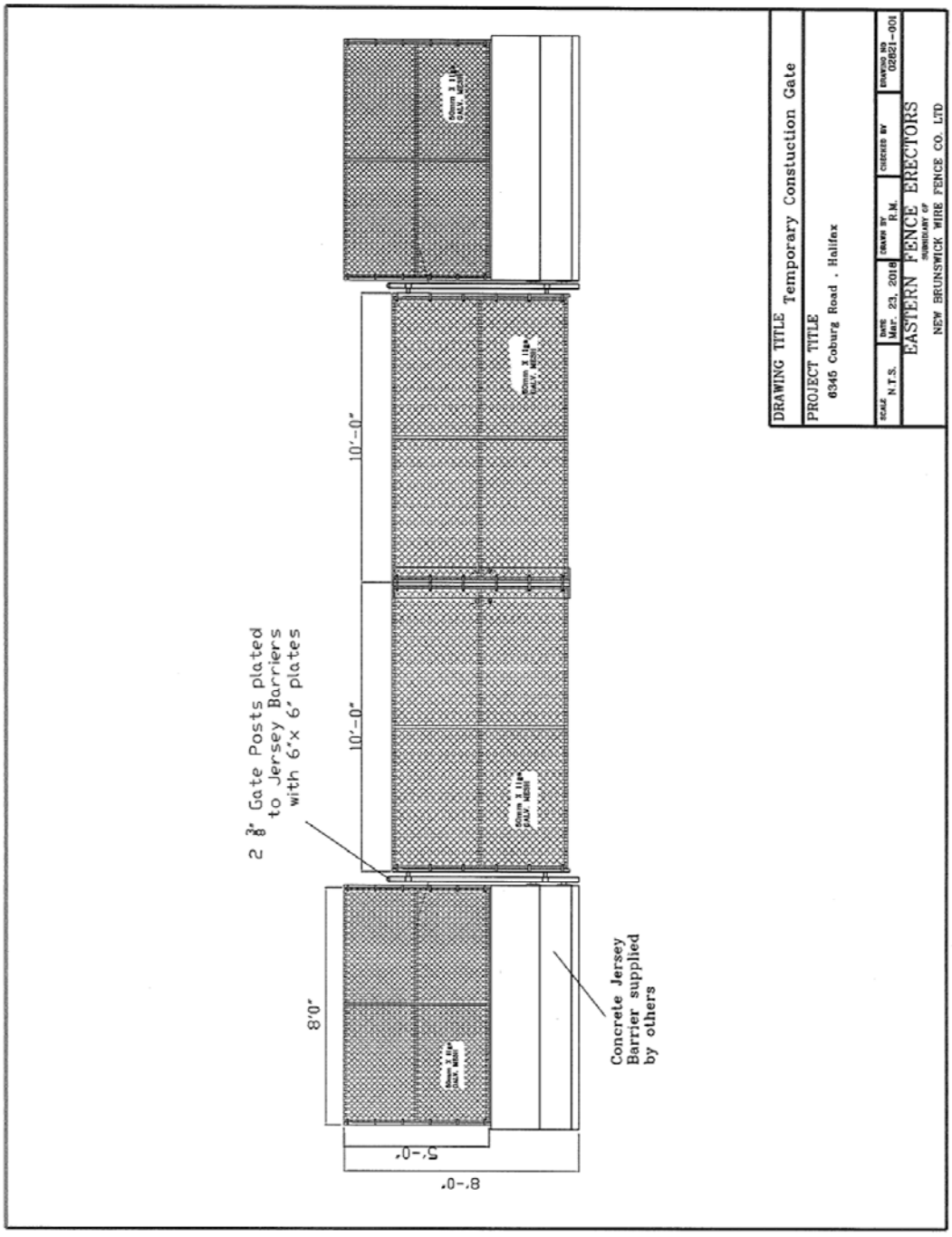
Note: All F-type concrete barriers within the street shall have reflective tape on them.




Chain link fence
1.8m


Modual Fencing
1.8m

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.

Tarp Option

Print Banner 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
P: (973)627-8608
F: (973)627-8506
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 BUILDING
Chadwick & Pleasant Apartments

8 Storey - 67 Residential Units

Level 8 – Rooftop Terrace with Level 6 & 7 Landscaped Amenity Space

1 Level Underground Parking

3 Levels of Upper Floor Parking

Surface and Underground Bicycle parking

January 2024 – December 2025

Owner:
Joseph Sadek
810 Maplewood Lane, Halifax, NS

Project Manager:
Jean Alphonce
6178 Lady Hammond Road,
Halifax, NS, B3K 2R6

24 Hour Emergency Contact:
(902) 830-2808

Contractor:
J. Pelley Excavation Limited
2129 Old Sambro Road,
Halifax, NS, B3V 1C2

Contact:
Justin Pelley - (902) 229-6297

Traffic Control:
Safety First-SFC
116 Thorne Avenue,
Dartmouth, NS, B3B 1Z2

Contact:
(902) 464-0889

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

Contact:
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, DARTMOUTH, 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:

J. Pelley Excavation Limited
2129 Old Sambro Road,
Halifax, NS
B3V 1C2
Phone: (902) 229-6297

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

Yours Truly,

Justin Pelley

J. Pelley Excavation Limited

Appendix K – Vehicular and Pedestrian Hazard Assessment

Project Date: Location:

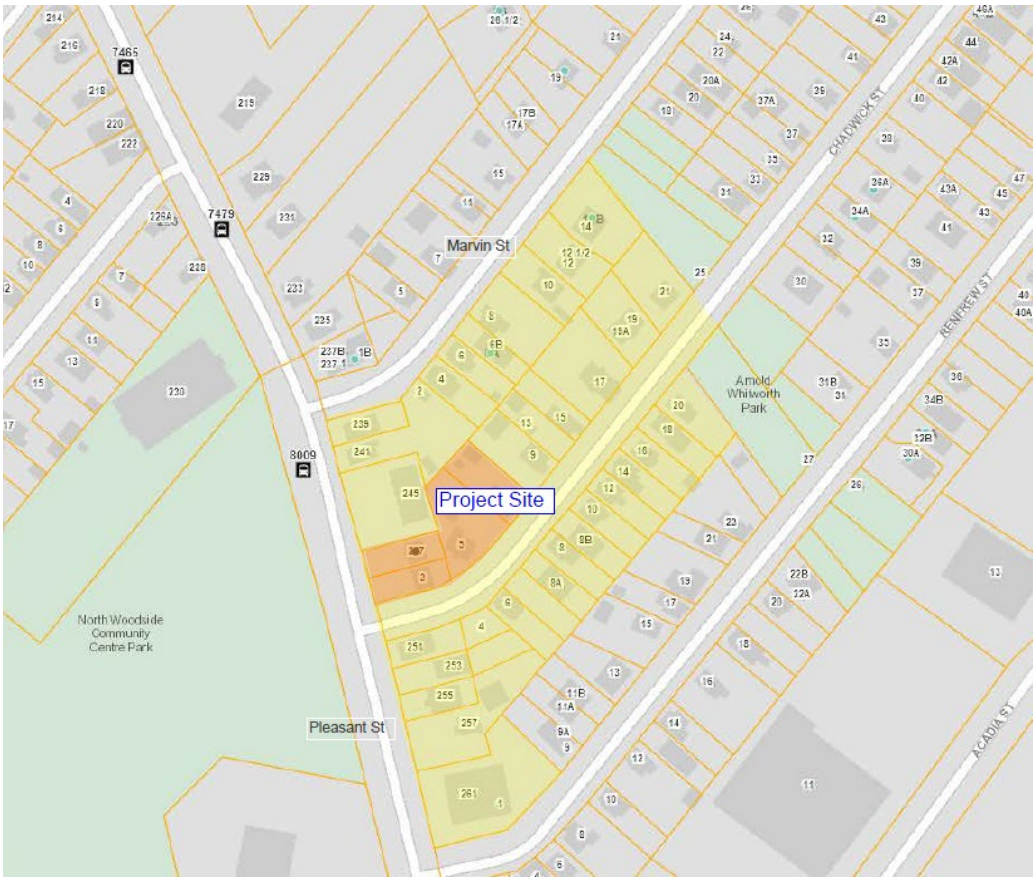
VEHICULAR & PEDESTRIAN HAZARD ASSESSMENT

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 – Chadwick & Pleasant Apartments



Notification Letter

Date: *******

Joseph Sadek – Building Construction Information Meeting

Dear Neighbour,

As you may be aware, we are planning an apartment building construction project located at 247 Pleasant Street, Dartmouth on the corner of Chadwick and Pleasant Streets.

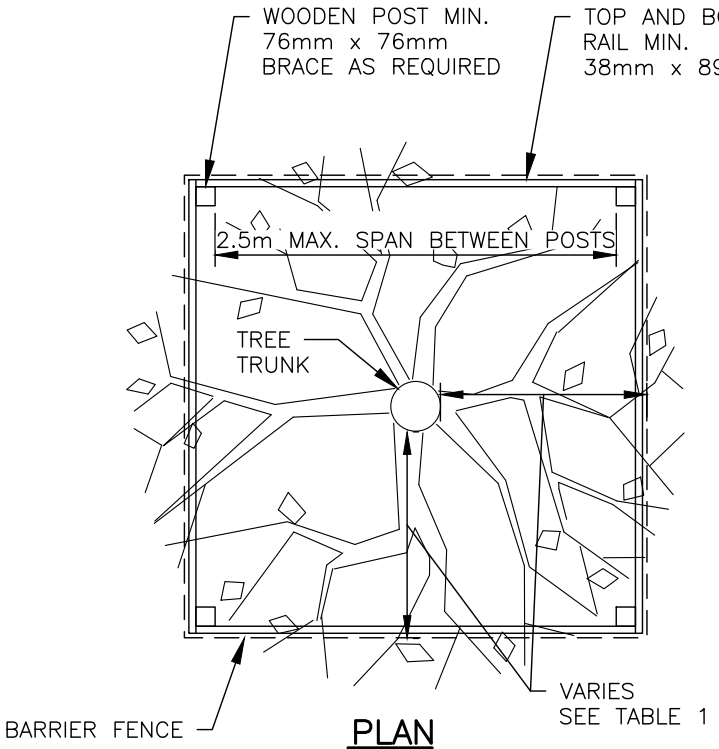
If you are interested in receiving more information about our construction plans, practices, schedule and to go over any questions you may have regarding construction of our new project please contact us to discuss. We would be happy to meet with you to discuss.

Thank you.

Jean Alphonce
Project Manager

Cell: (902) 830-2808

Appendix M – HRM Tree Detail

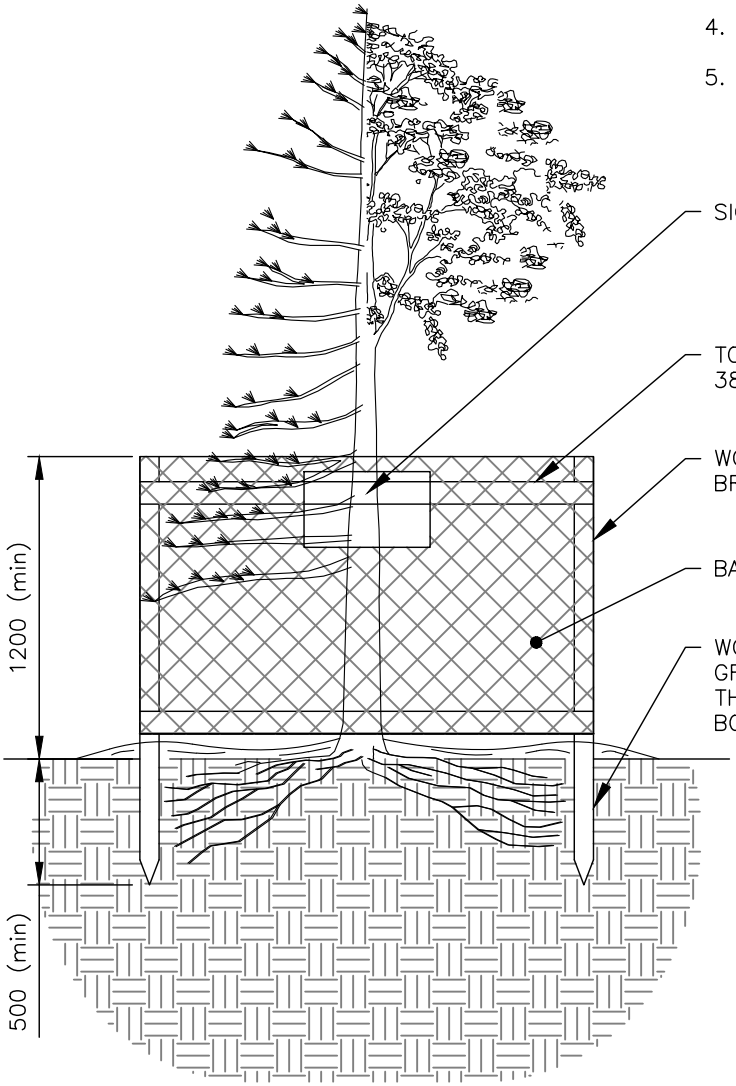


PLAN

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

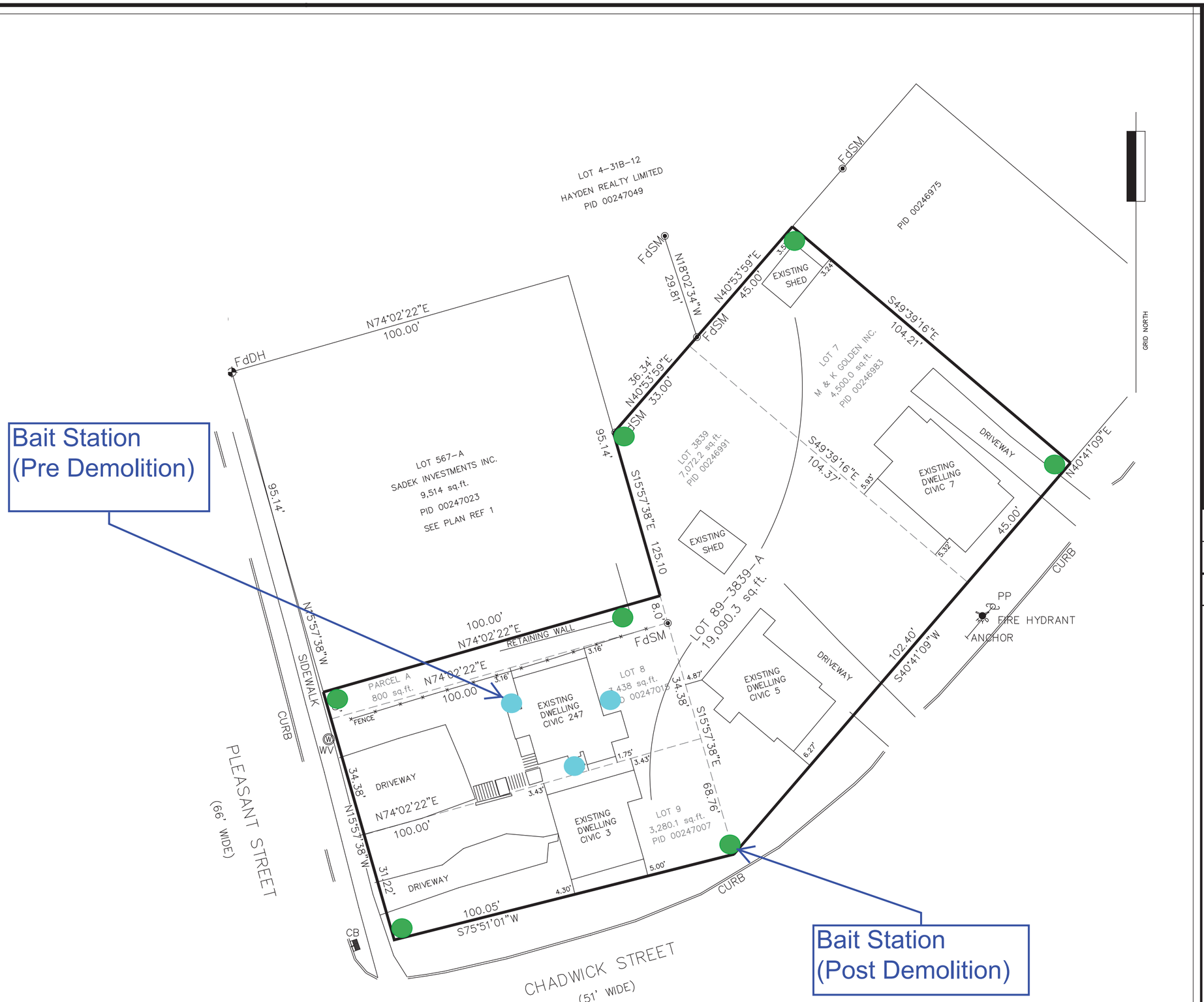
HALIFAX

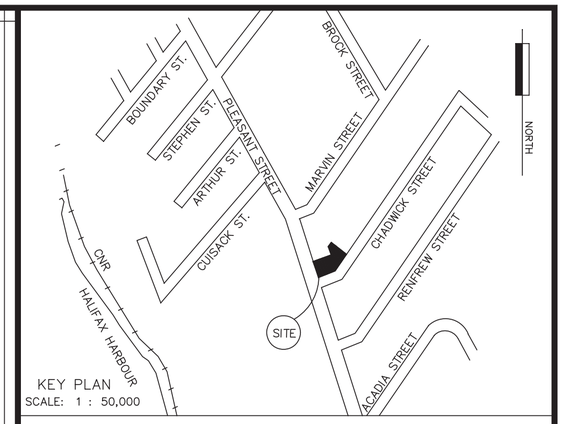
STANDARD DETAIL

TREE PROTECTION ZONE & BARRIER

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

Appendix N – Rodent Control Plan





LEGEND:

LANDS DEALT WITH BY THIS SURVEY	
NOVA SCOTIA CO-ORDINATE MONUMENT	N.S.C.M.
SURVEY MARKER	S.M.
UNMONUMENTED POINT	U.P.
ROCK POST	R.P.
IRON BAR	I.B.
IRON PIPE	I.P.
WOOD POST, WOOD STAKE	W.P. W.S.
FOUND, WITNESS , NOT TO SCALE	Fd., Wit. (N.T.S.)
PLAN, DEED	(P), (D)
CALCULATED FROM FIELD MEASUREMENTS	calc.
TIE LINE, TOTAL	(T/L) (T)
BEGINNING OF CURVE, END OF CURVE	B.C., E.C.
POINT OF COMMON CURVATURE, POINT OF REVERSE CURVATURE	P.C.C., P.R.C.
RADIUS, ARC, CHORD	R, L, C
ORDINARY HIGH WATER MARK	O.W.H.M.
WATER VALVE, CATCH BASIN	WV CB

Bait Station Legend

Pre Demolition

Post Demolition

-

Rodent Control Plan

-

Prepared for
Rentokil Pest Control

-

902-835-2304

-

P.O. Box 997, Halifax, NS

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.**

SPECIMEN LABEL

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.

0 30835 40049 2

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

SPECIMEN LABEL

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.

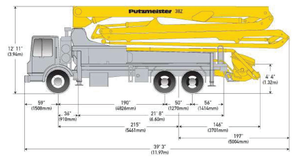
Appendix O – CMP's TCP & PMP Inspection Records

Project: ______________ Location: ____________ Phase: ____________ Date: ____________ Inspector: ____________

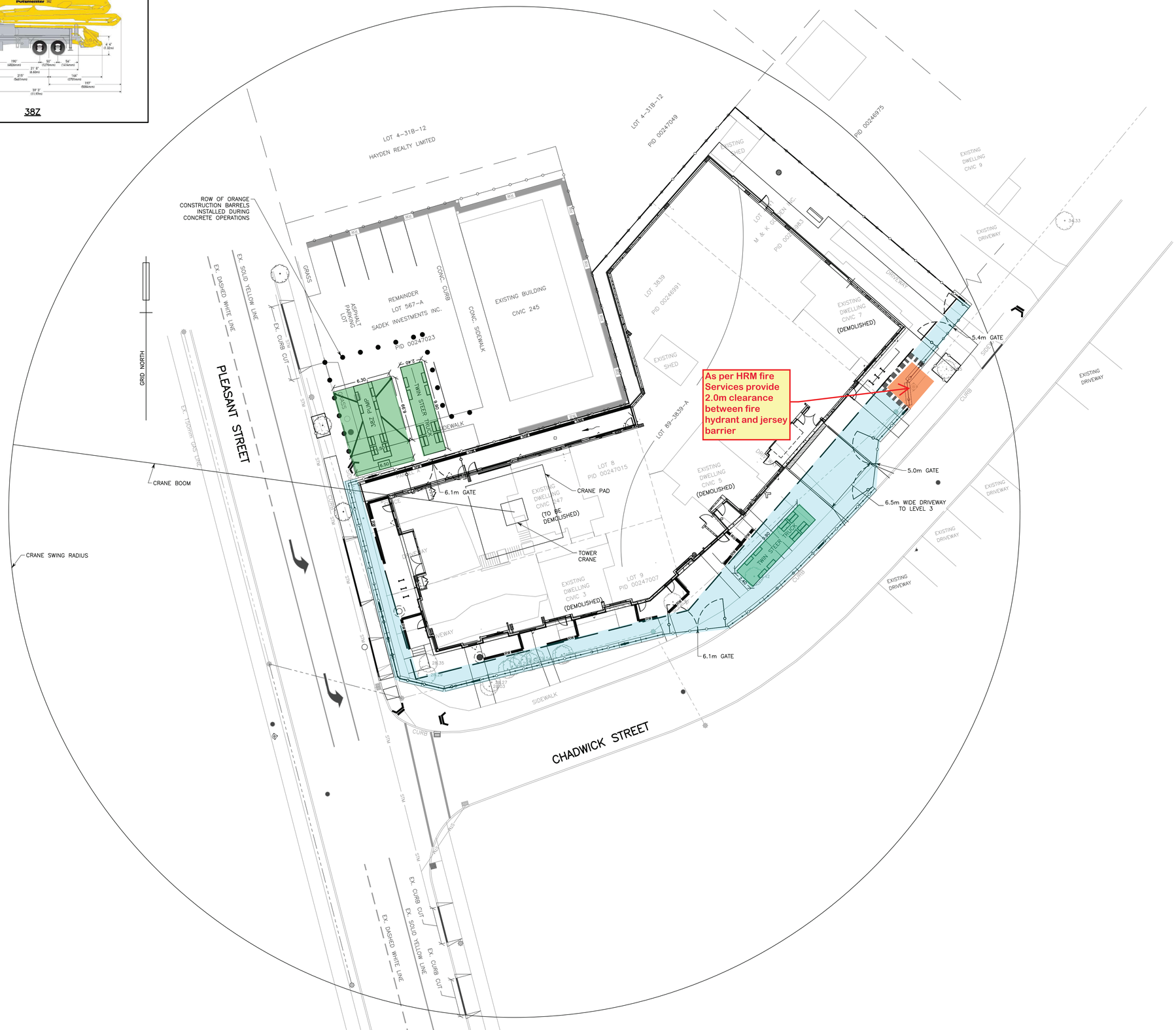
CONSTRUCTION MANAGEMENT PLAN - INSPECTION CHECKLIST

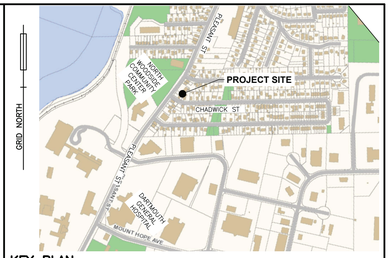
CMP Element	Set-up per PMP?			Condition?		Action Required	Action Completed	Comments
	Yes	No	N/A	Good	Bad			

Appendix P – Concrete Delivery Schematic



38Z





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 / RW	ROCK WALL/RETAINING WALL	RW / 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.

No.	YY/MM/DD	Revision Description	Appr'd
2	23/11/10	REVISED PER HRM COMMENT	
1	22/07/18	REVISED BUILDING LOCATION	
0	21/08/25	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 MULTI-UNIT BUILDING
247 PLEASANT STREET
DARTMOUTH, NOVA SCOTIA

CONCRETE DELIVERY SCHEMATIC

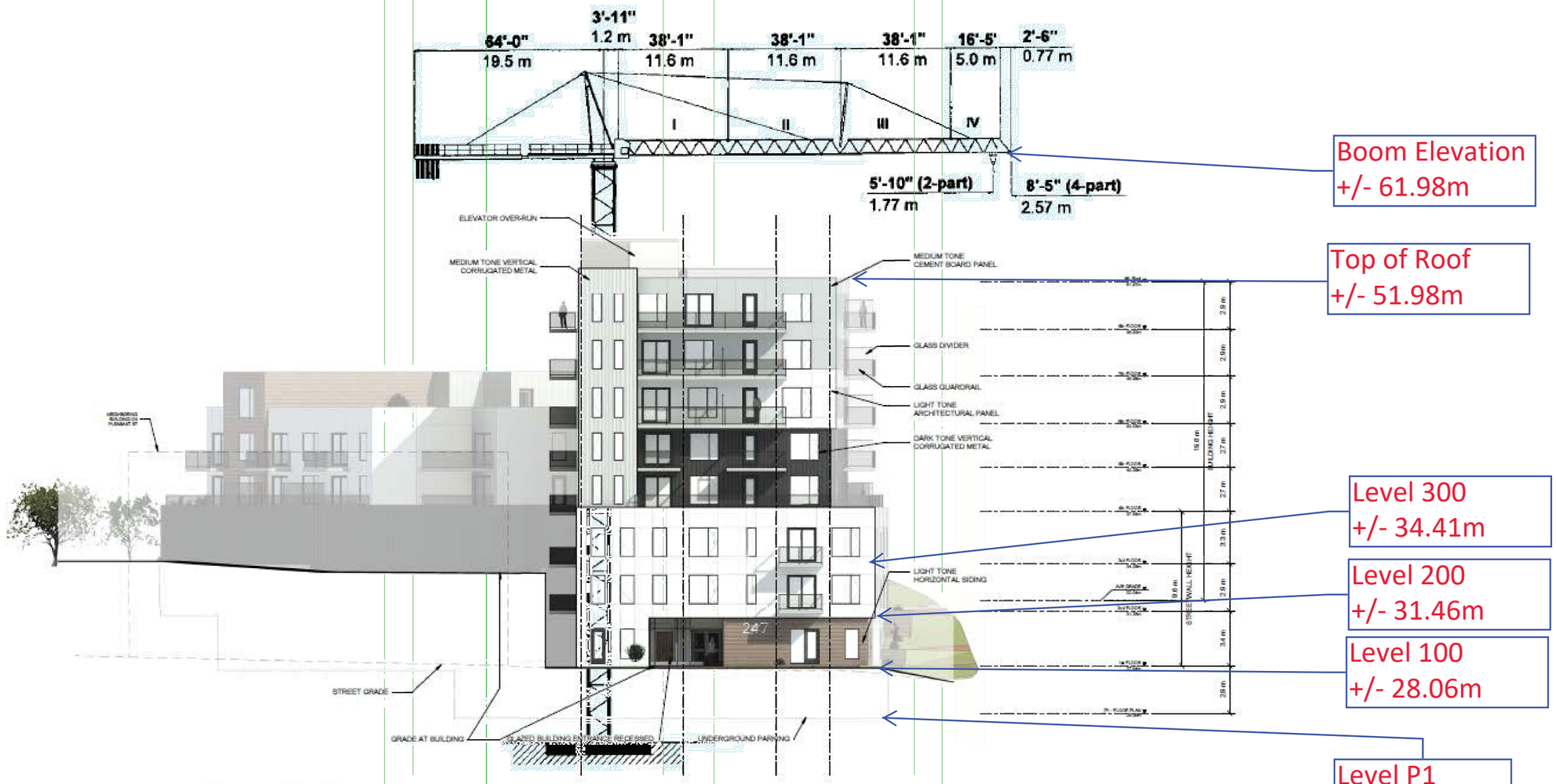
Date: AUGUST 25, 2021	Drawn: D. ANDERSON	Project No.: FILE NO. 1-7-241 (35789)
Scale: 1:200	Engineer: G. MACLEAN	Plan No.:
Reference:	Approved: G. MACLEAN	Drawing Name: R2
Surveyed:	Sheet:	

0m 5 10 15 20m

Appendix Q – Crane Information

City Driving School
Crane Operations
Marvin St
Trans Canada Trail
322
Crane Radius
Dartmouth South Professional Centre
Chadwick St
Crane Boom
Pleasant St
Crane Base & Tower
Chadwick St
Renfrew St
LOT 50

Crane Operations



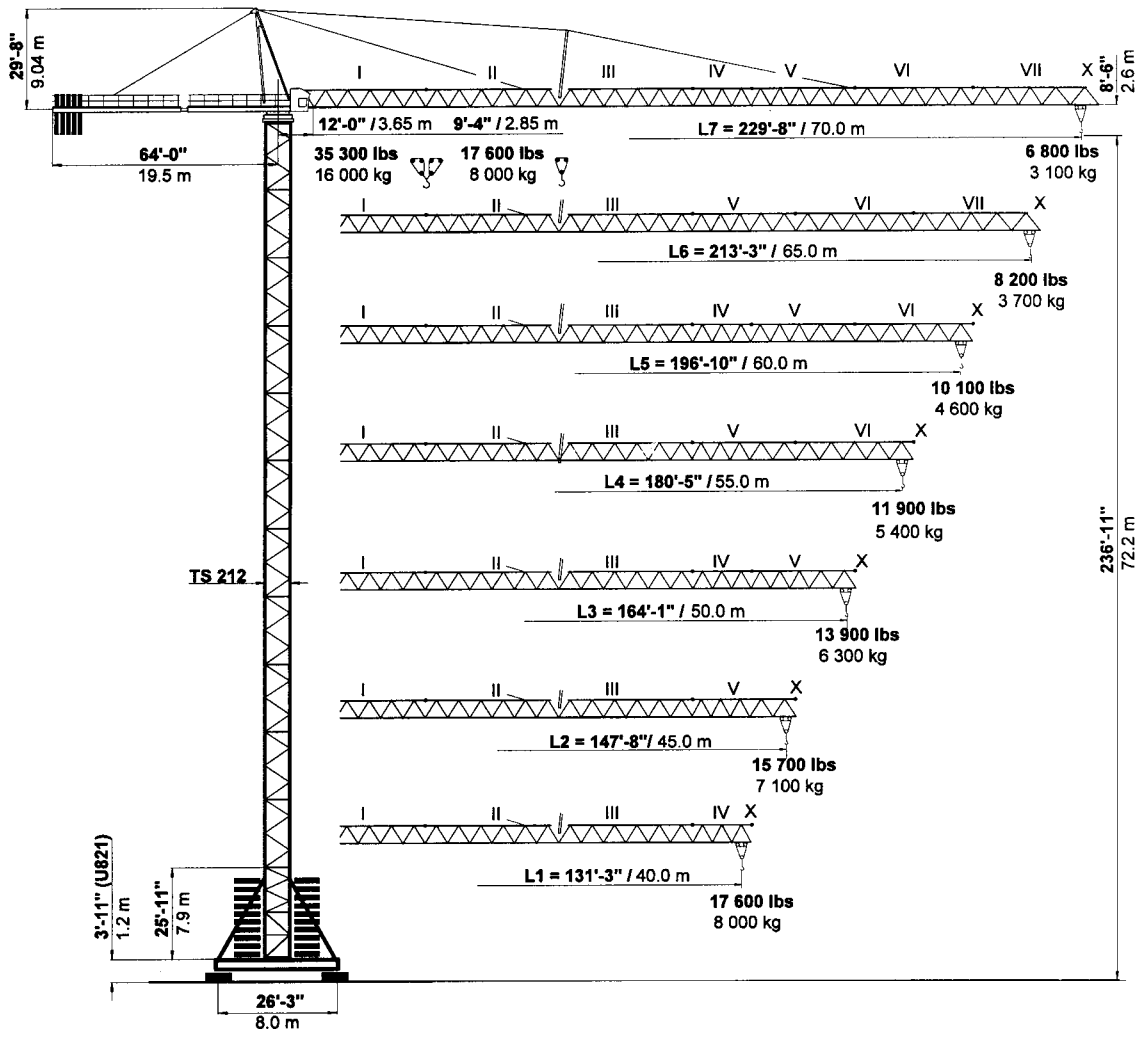
1 A301 WEST ELEVATION - PLEASANT ST
3/32" = 1'-0"

TEREX LIFTING

PEINER SK 315

Hammerhead Tower Crane
17,600-35,300 lbs. (8-16 mt) Lifting Capacity

SPECIFICATIONS

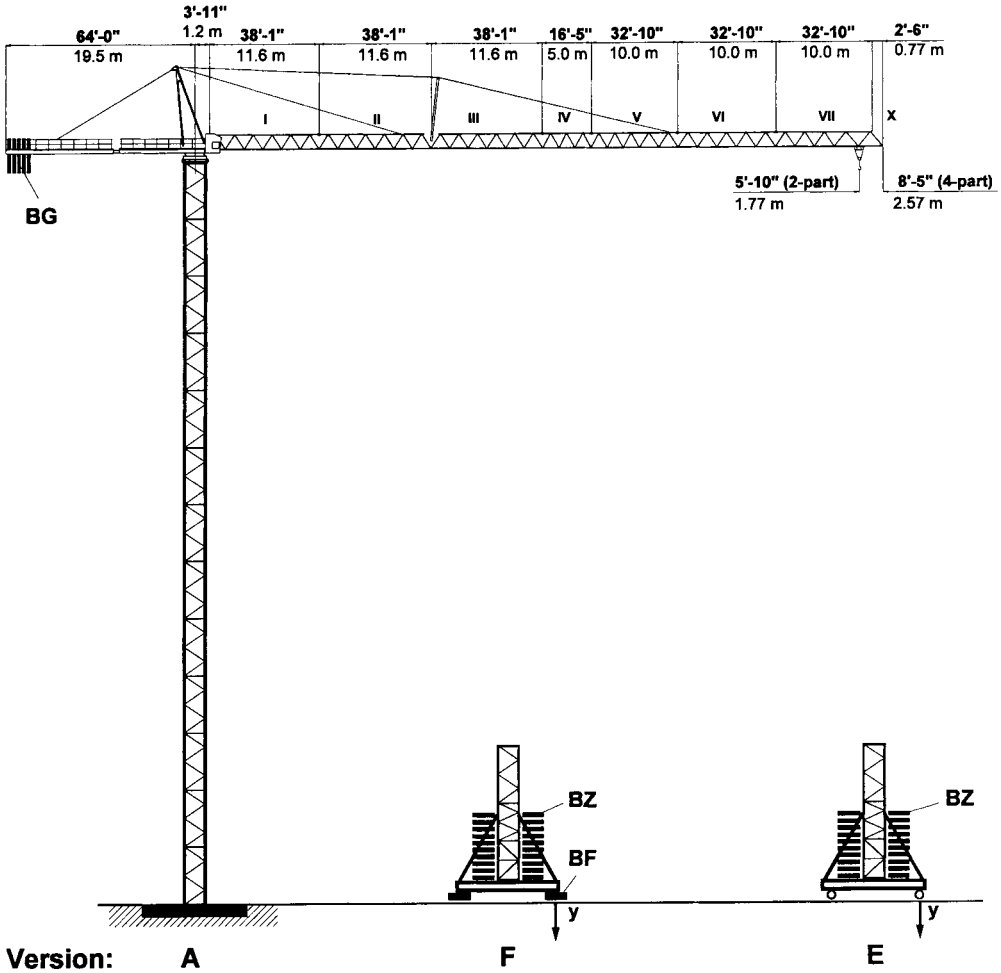


simple, available and cost effective™

Machines shown may have optional equipment.

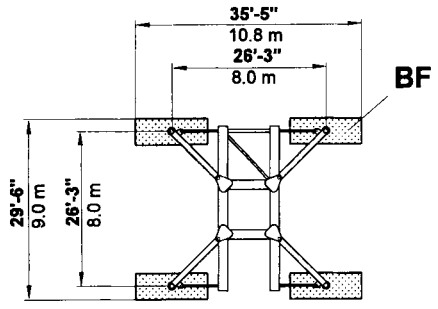
PEINER SK 315

Combinations of tower section, hook heights, forces acting per corner, base ballast

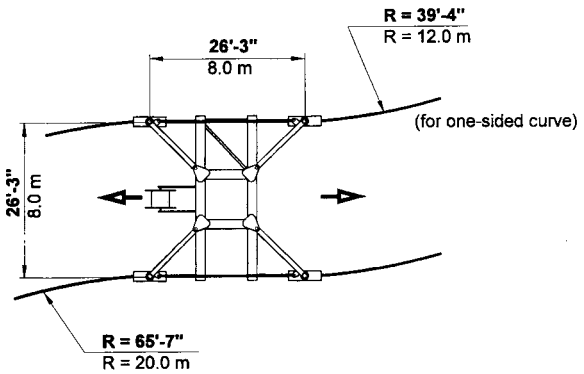


Version: A F E

U 821

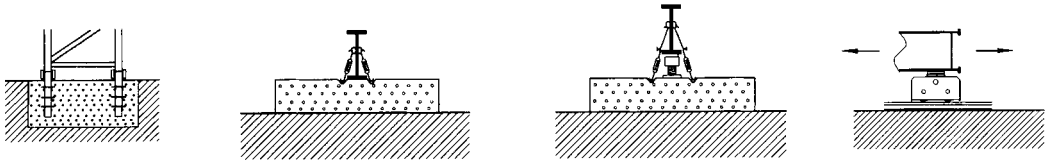


UF 821

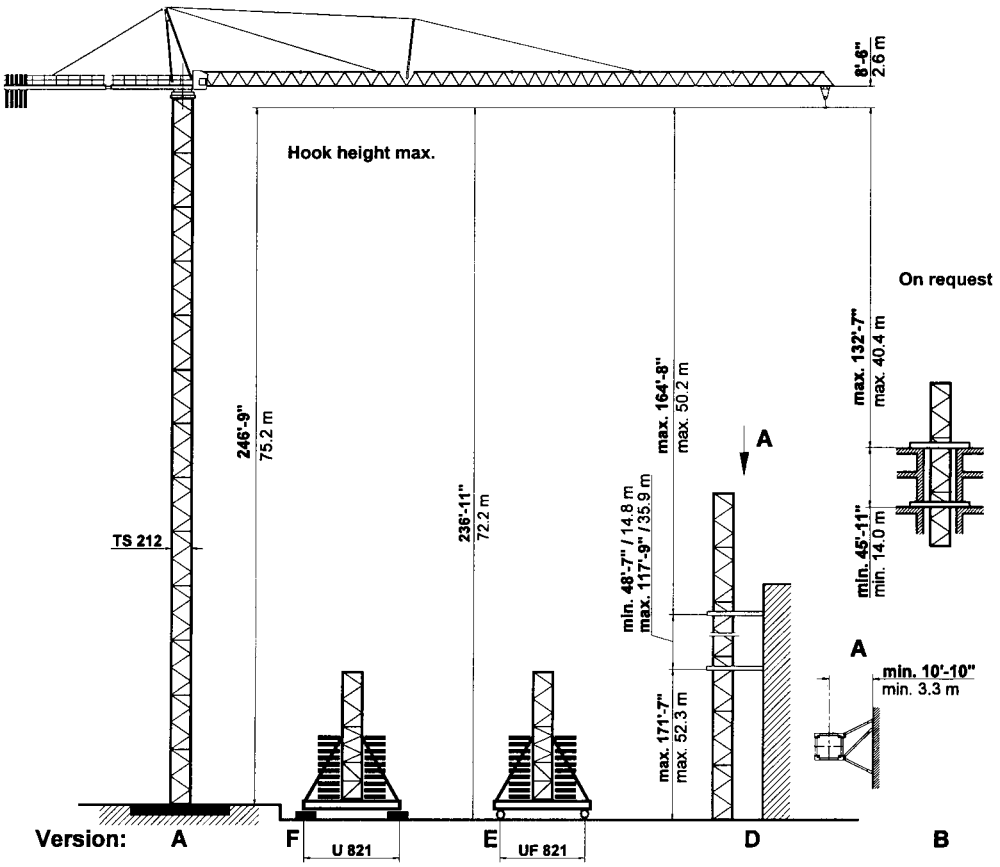


Ground support

Version: A F F / SP E



PEINER SK 315 Tower TS 211



TS 212	Version A			Version F			Version E		
Tower TS 212.1	HH ft m	Tower TSV 212 TS 212.1	HH ft m	BZ + BF kips / t	y in service kips / kN	 out of service kips / kN	BZ kips / t	y in service kips / kN	 out of service kips / kN
13 x TS 212.1	246'-9"* 75.2*								
12 x TS 212.1	227'-4"* 69.3*	1 x TSV 212 11 x TS 212.1	236'-11"* 72.2*	212.0 96	204 909	279 1243	198.0 90	212 942	282 1253
11 x TS 212.1	208'-0"* 63.4*	1 x TSV 212 10 x TS 212.1	217'-6"* 66.3*	168.0 76	186 826	240 1066	154.0 70	192 856	242 1075
10 x TS 212.1	188'-8"* 57.5*	1 x TSV 212 9 x TS 212.1	198'-2" 60.4	146.0 66	173 770	203 901	132.0 60	179 797	204 909
9 x TS 212.1	169'4" 51.6	1 x TSV 212 8 x TS 212.1	178'-10" 54.5	124.0 56	161 715	169 751	88.0 40	161 715	169 754
8 x TS 212.1	149'-11" 45.7	1 x TSV 212 7 x TS 212.1	159'-5" 48.6	101.0 46	149 661	145 645	88.0 40	154 683	170 654
7 x TS 212.1	130'-7" 39.8	1 x TSV 212 6 x TS 212.1	140'-1" 42.7	101.0 46	142 633	128 569	66.0 30	141 629	124 553
6 x TS 212.1	111'-3" 33.9	1 x TSV 212 5 x TS 212.1	120'-9" 36.8	101.0 46	136 607	112 499	66.0 30	135 600	108 482
5 x TS 212.1	91'-10" 28.0	1 x TSV 212 4 x TS 212.1	101'-5" 30.9	101.0 46	131 582	98 435	66.0 30	129 573	94 418
4 x TS 212.1	72'-6" 22.1	1 x TSV 212 3 x TS 212.1	82'-0" 25.0	101.0 46	126 559	85 376	66.0 30	123 548	81 359
3 x TS 212.1	53'-2" 16.2	1 x TSV 212 2 x TS 212.1	62'-8" 19.1	101.0 46	120 536	80 356	66.0 30	118 523	75 335
2 x TS 212.1	33'-9" 10.3	1 x TSV 212 1 x TS 212.1	43'-4" 13.2	101.0 46	116 515	80 356	66.0 30	112 500	75 335
Foundation 25'-7" x 25'-7" x 5'-7" 7.8 x 7.8x 1.7 m				Stationary base U 821			Travelling base UF 821		
Anchor stools 4 x FF 212				BF 4 x 8.82 kips 4 x 4.0 t	BZ block 11.02 kips Block 5.0 t		Bogie Curve F 500		

If TSK 212 section is used the hook height is increased by **6'-7"** (2 m).
* Lower climbing section after erection.

TS 212.1 = 19'-4 ¼" / 5.9 m **TSV 212 = 25'-11"** / 7.9 m **TSK 212 = 6'-7"** / 2.0 m

BIGGE This information is for reference use only. Operators manual should be consulted and adhered to.
Please contact Bigge Crane and Rigging Co. at 888-337-BIGGE or email towers@bigge.com for further information. BIGGE

PEINER SK 315 Radius and Capacity

Jib	Max. capacity max. 17,600 lbs 8.0 t	Radius – ft./m Capacity – lbs./mt 2-Part Line max. 17,600 lbs max. 8.0 t																
ft m		75'-6" 23	82'-0" 25	98'-5" 30	114'-10" 35	131'-3" 40	141'-1" 43	147'-8" 45	157'-6" 48	164'-1" 50	173'-11" 53	180'-5" 55	190'-3" 58	196'-10" 60	206'-8" 63	213'-3" 65	223'-1" 68	229'-8" 70
L7 229'-8" 70.0	9'-4" - 96'-9" 2.85 - 29.5 m	17600 8.0	17600 8.0	17400 7.9	14800 6.7	12800 5.8	11900 5.4	11200 5.1	10600 4.8	10100 4.6	9500 4.3	9000 4.1	8600 3.9	8200 3.7	7700 3.5	7500 3.4	7100 3.2	6800 3.1
L6 213'-3" 65.0	9'-4" - 105'-0" 2.85 - 32.0 m	17600 8.0	17600 8.0	17600 8.0	16100 7.3	13900 6.3	13000 5.9	12300 5.6	11500 5.2	11000 5.0	10400 4.7	9900 4.5	9300 4.2	8800 4.0	8600 3.9	8200 3.7		
L5 196'-10" 60.0	9'-4" -117'-9" 2.85 - 35.9 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	15700 7.1	14600 6.6	13900 6.3	13000 5.9	12300 5.6	11700 5.3	11200 5.1	10600 4.8	10100 4.6				
L4 180'-5" 55.0	9'-4" - 124'-8" 2.85 - 38.0 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16800 7.6	15400 7:0	14800 6.7	13900 6.3	13200 6.0	12300 5.6	11900 5.4						
L3 164'-1" 50.0	9'-4" - 130'-11" 2.85 - 39.9 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16300 7.4	15400 7.0	14600 6.6	13900 6.3								
L2 147'-8" 45.0	9'-4" - 131'-11" 2.85 - 40.2 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16500 7.5	15700 7.1										
L1 131'-3" 40.0	9'-4" - 131'-3" 2.85 - 40.0 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0												
ft m	35,300 lbs 16.0 t	4-Part Line max. 35,300 lbs max. 16.0 t Radius - 2'-7" (- 0.8 m)																
L7 227'-0" 69.2	12'-0" - 48'-7" 3.65 - 14.8 m	21800 9.9	19600 8.9	16100 7.3	13200 6.0	11200 5.1	10400 4.7	9700 4.4	9000 4.1	8600 3.9	7900 3.6	7500 3.4	7100 3.2	6600 3.0	6200 2.8	6000 2.7	5500 2.5	5300 2.4
L6 210'-8" 64.2	12'-0" - 52'-2" 3.65 - 15.9 m	23800 10.8	21600 9.8	17400 7.9	14600 6.6	12600 5.7	11500 5.2	10800 4.9	9900 4.5	9500 4.3	8800 4.0	8400 3.8	7700 3.5	7500 3.4	6800 3.1	6600 3.0		
L5 194'-3" 59.2	12'-0" - 57'-9" 3.65 - 17.6 m	26900 12.2	24500 11.1	19800 9.0	16800 7.6	14300 6.5	13000 5.9	12300 5.6	11500 5.2	10800 4.9	10100 4.6	9700 4.4	9000 4.1	8600 3.9				
L4 177'-10" 54.2	12'-0" - 61'-0" 3.65 - 18.6 m	28700 13.0	26000 11.8	21200 9.6	17900 8.1	15200 6.9	14100 6.4	13200 6.0	12300 5.6	11700 5.3	10800 4.9	10400 4.7						
L3 161'-5" 49.2	12'-0" - 63'-8" 3.65 - 19.4 m	30200 13.7	27300 12.4	22300 10.1	18700 8.5	16100 7.3	14800 6.7	14100 6.4	12800 5.8	12300 5.6								
L2 145'-0" 44.2	12'-0" - 64'-0" 3.65 - 19.5 m	30400 13.8	27600 12.5	22500 10.2	19000 8.6	16300 7.4	15000 6.8	14100 6.4										
L1 128'-7" 39.2	12'-0" - 66'-3" 3.65 - 20.2 m	31700 14.4	28700 13.0	23600 10.7	19800 9.0	17000 7.7												

Speeds

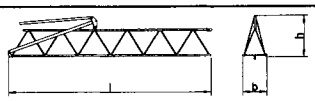
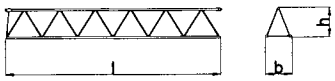
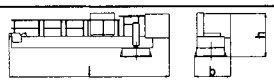
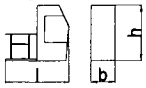
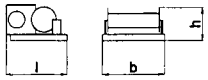
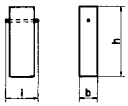
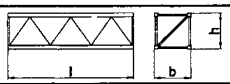
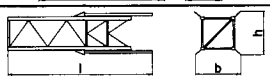
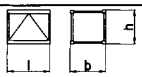
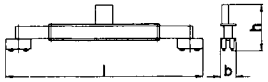
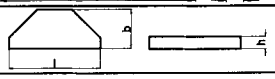
FU 8-160/4		v = 0 → ~290 fpm (88 m / min.)		10.2 HP 7.5 kW
SR 10-190/3		v = 0 → ~96 fpm (30 m / min.)		2 x 16.3 HP 2 x 12.0 kW
K WB 120/4		v = 0 → 0.9 rpm (min $^{-1}$)		2 x 11.4 HP 2 x 8.4 kW
		HK max. = 705' (215 m) 6 - layers		480 V / 60 Hz / 3 ph
Type SR WB 66-80/4F [108 HP] [79 kW]		2-Part Line: 444 fpm 134 m/min / 5 500 lbs 2 500 kg; 276 fpm 84 m/min / 9 300 lbs 4 200 kg; 180 fpm 54 m/min / 13 900 lbs 6 300 kg; 108 fpm 34 m/min / 17 600 lbs 8 000 kg	4-Part Line: 222 fpm 67 m/min / 11 000 lbs 5 000 kg; 138 fpm 42 m/min / 18 600 lbs 8 400 kg; 90 fpm 27 m/min / 27 800 lbs 12 600 kg; 54 fpm 17 m/min / 35 300 lbs 16 000 kg	Total motor output without SR 10-190/3 ~140 HP ~105 kW Connected power 170 kVA

Counterweight

Jib		L 1	L 2	L 3	L 4	L 5	L 6	L 7
Counterweight	BG	30 000 lbs 13 600 kg	32 200 lbs 14 600 kg	36 600 lbs 16 600 kg	39 150 lbs 17 750 kg	43 550 lbs 19 750 kg	41 350 lbs 18 750 kg	45 750 lbs 20 750 kg
	[lbs]	3 x 6 950 1 x 9 150	2 x 6 950 2 x 9 150	4 x 9 150	3 x 6 950 2 x 9 150	1 x 6 950 4 x 9 150	2 x 6 950 3 x 9 150	5 x 9 150
	[t]	3 x 3.15 1 x 4.15	2 x 3.15 2 x 4.15	4 x 4.15	3 x 3.15 2 x 4.15	1 x 3.15 4 x 4.15	2 x 3.15 3 x 4.15	5 x 4.15

PEINER SK 315 Dimensions and transport weights

See operating manual for mounting weights

	Designation			Dimensions (ft / m) l	b	h	Weight lbs / t	Volume ft³ / m³
1	**Jib** Section III			**39.01** 11.94	**4.99** 1.52	**7.09** 2.16	**4 200** 1.92	**1 386** 39.2
2	**Jib** Section I			**39.01** 11.89	**4.99** 1.52	**5.84** 1.78	**3 790** 1.72	**1 137** 32.2
	Section II			**38.65** 11.78	**4.99** 1.52	**6.17** 1.88	**4 320** 1.96	**1 190** 33.7
	Section IV			**19.19** 5.85	**4.99** 1.52	**5.41** 1.65	**1 760** 0.80	**519** 14.7
	Section V			**35.34** 10.77	**4.99** 1.52	**5.45** 1.66	**3 090** 1.40	**961** 27.2
	Section VI			**36.03** 10.98	**4.99** 1.52	**5.48** 1.67	**2 470** 1.12	**985** 27.9
	Section VII			**33.33** 10.16	**4.99** 1.52	**5.32** 1.62	**1 570** 0.71	**853** 25.0
	Jib tip X			**3.12** 0.95	**5.02** 1.53	**1.64** 0.50	**310** 0.14	**25** 0.7
3	**Turntable with slewing ring support and cabin**			**36.35** 11.08	**7.64** 2.33	**7.81** 2.38	**25 350** 11.50	**2 169** 61.4
	Turntable with slewing ring support			**31.99** 9.75	**7.64** 2.33	**7.81** 2.38	**24 030** 10.90	**1 911** 54.1
	Cabin with support and railing			**10.17** 3.10	**4.92** 1.50	**7.25** 2.21	**1 320** 0.60	**364** 10.3
4	**Counter jib with hoist winch**			**38.13** 11.62	**5.91** 1.80	**6.00** 1.83	**14 550** 6.60	**1 353** 38.3
	Hoist winch	**66 WB**		**7.51** 2.29	**5.45** 1.66	**3.28** 1.00	**5 400** 2.45	**134** 8.4
5	**Counterweight**	**BG**		**3.94** 1.20 **3.94** 1.20	**1.64** 0.50 **1.64** 0.50	**9.32** 2.84 **12.11** 3.69	**6 950** 3.15 **9 150** 4.15	**60** 1.4 **78** 1.7
6	**Tower section**	**TS 212.1**		**19.52** 5.95	**7.78** 2.37	**8.01** 2.45	**9 130** 4.14	**1 216** 34.4
		TSV 212 with struts		**31.17** 9.50	**9.84** 3.00	**10.00** 3.05	**20 330** 9.22	**3 067** 86.9
		TSK 212		**6.63** 2.02	**7.87** 2.40	**9.84** 3.00	**6 170** 2.80	**513** 14.5
7	**Travelling base, folded**	**UF 821**		**41.01** 12.5	**9.74** 2.97	**7.05** 2.15	**35 050** 15.90	**2 816** 79.8
8	**Stationary base, folded**	**U 821**		**34.55** 10.53	**9.06** 2.76	**2.79** 0.85	**17 130** 7.77	**873** 24.7
9	**Central ballast block**	**BZ**		**11.48** 3.50	**4.92** 1.50	**2.20** 0.67	**11 020** 5.00	**124** 3.5
10	**Foundation pad**	**BF**		**9.19** 2.80	**3.28** 1.00	**1.87** 0.57	**8 820** 4.00	**57** 1.6
11	**Accessories**						**4 800** 2.17	

For more information, product demonstration, or details on lease and rental plans, please contact your local Terex Towers Distributor.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty applicable to the particular product and sale. We make no other warranty, expressed or implied.

Bigge Crane and Rigging Co.
10700 Bigge Avenue
San Leandro, CA 94577
Phone: (888) 337-BIGGE or (510) 638-8100
Fax: (510) 639-4053
Email: towers@bigge.com
Web site: www.biggetowercrane.com

TEREX TOWERS
202 Raleigh Street
Wilmington, NC 28412 USA
(910) 395-8500 • FAX: (910) 395-8547
E-mail: wilmington@terexlifting.com
www.terexlift.com

TT-106-1 ©Terex Cranes, Inc. 1999 Litho in U.S.A. 5K499J60