Construction & Mobility Management Plan

1396 Guelph line, Burlington

Prepared by Infinity Development.

March 10, 2022

Period of Construction and Construction Phasing

The period of construction is estimated to be 24 months from the start of construction to occupancy

The construction work is proposed to be conducted in one phase and will comprise of the new construction of the two level of underground garage, 11-storeys above grade and all site works and landscaping.

Hours of Construction/Noise Control

All exterior, structural, and major construction activities and construction of interior elements and finishes, including delivery of materials, will be conducted between 7:00 am and 7:00 pm from Monday to Friday, and between 9:00 am and 5:00 pm on Saturday. No construction activities will take place on any statutory public holiday including Christmas Day, Boxing Day, New Years Day, Victoria Day, Canada Day, Labour Day, and Thanksgiving Day. When statutory holidays fall on a Sunday, the following day will be designated as the holiday.

All construction work will be conducted in accordance with City of Burlington by-laws with respect to noise.

Dust Control

The following dust control program, as submitted with the demolition permit application, will be put into place:

1. All soft and hard surfaces and any demolition face on the site will be wetted daily, or more frequently if required, with the addition of calcium chloride or other recognized material as a dust suppressant, if required.

2. The road pavement and sidewalks along the entire frontages of the property and extending for twenty-five meters (25m) beyond the property line, will be cleaned as required.

3. Truck loading points will be designated to avoid trucks tracking demolition debris off site. Such loading points will be maintained on a stone base to minimize tracking of debris onto the sidewalks and streets. If the loading point becomes contaminated, it will be cleaned and/or replaced.

4. All trucks leaving the site will be cleaned of all demolition debris and dust. If necessary, trucks will be washed including washing of tires and sweeping or washing of truck exteriors and tailgates.

5. All trucks leaving the site which have been loaded with demolition debris which may generate dust will be tarped.

6. An air monitoring program, if necessary, as determined through consultation with the Medical Officer of Health, will be put into place.

7. A dust control measures supervisory program by a qualified environmental consultant, if necessary, as determined through consultation with the medical officer of Health, will be put into place.

All construction work will be conducted in accordance with normal City of Burlington requirements with respect to air-borne pollution.

Construction Vibration Assessment and Monitoring Plan

An assessment of the potential impacts of vibrations generated during demolition and construction of the proposed residential development will be undertaken in accordance with and as defined in City of Burlington by-laws.

The Vibration Study shall be prepared by a Professional Engineer outlining the following:

- The anticipated vibration generated by the proposed construction on adjacent lands;
- The anticipated vibration generated by the proposed construction on itself; and
- Details of the measures proposed to mitigate or reduce the anticipated negative vibration impacts.

The study will include a) examination of the planned construction activities; b) consideration of the site and its surroundings to identify potentially impacted structures, c) on the basis of the projected construction activities, geotechnical information and other relevant information, establish a Zone of Influence beyond which unacceptable vibration is not anticipated; e) discuss the implication of the Zone of Influence, and describe any measures required under the by-law to address buildings or other structures located within the Zone.

If the Zone of Influence will extend beyond the legal boundaries of the site, the study will develop and describe an appropriate Vibration Monitoring Plan, as required by the By-Law. Preconstruction Surveys and Pre-construction consultation, as required under the by-law, will be prepared, and undertaken. Communication protocols will also be implemented with the owners of adjacent affected properties.

An overview of Vibration studies is also provided in the Geotechnical Report

Hoarding and Pedestrian Traffic

Construction of a fencing enclosure comprised of plywood hoarding and chain link fencing surrounding the perimeter of the project, as shown on the attached Construction Management Plan (“CMP”), shall be installed in a manner and form satisfactory to the Chief Building Official and in accordance with applicable City of Burlington by-laws and Ministry of Labour requirements. The site enclosure will be maintained in a safe condition as required throughout the course of construction with the intention of always preventing entry by unauthorized persons and protecting passersby from construction activities.

Tree protection fencing shall also be installed in accordance with the Arborist report

Pedestrian traffic will be maintained on Guelph Line however, a temporary sidewalk closure may be requested of the City of Burlington from time to time to facilitate construction activities and material deliveries. Overhead protection will be erected along the sidewalk on Guelph Line. Pedestrian movement will be properly signed in accordance with City of Burlington requirements.

All proposed hoarding and fencing on the construction site are shown on the attached CMP.

Sidewalk closures shall not be permitted unless extenuating circumstances (which have been mutually agreed to by the developer and the Director of Transportation) exist.

Prior to starting a minor or major construction or demolition project, a Road Occupancy Permit shall be obtained from Transportation Services for any temporary occupation of a city road allowance or right-of-way, including but not limited to construction staging or equipment/material storage.

Existing Tree Protection and Management

All tree protection measures in accordance with the City of Burlington's Tree Protection Policy and Specification for Construction Near Trees and to the satisfaction of the General Manager of Parks, Forestry and Recreation shall be conducted.

Crane Swing

A level luffing crane will be erected at the site to facilitate the construction of the reinforced concrete frame during the construction of the project. It should be noted that at no time will any live load be swung over the property line onto private property to the west.

Construction Dewatering

It is expected that Construction dewatering will be required; refer to Hydrogeological Geotechnical reports. The Groundwater has been tested and there are no exceedances of storm or sanitary and thus complies with the City of Burlington's Storm Sewer Discharge By-Law No. 086-2002.

Shoring Design

The shoring design can be designed within the limits of the site if necessary. Written permission from the adjacent property owner(s), formal agreement (s), at time of site plan would be required to be submitted, for any encroachments into adjacent lands, including the municipal ROW.

The temporary excavation shoring system depicted here assumes the use of tiebacks located below the adjacent properties. Should the appropriate permissions from adjacent landowners not be obtained, it is feasible to construct the building's foundation and support the temporary soldier piles and/or caisson wall with rakers so that there is no encroachment into adjacent lands.

Construction Vehicle Access and Material Deliveries

Access to and from the site during construction of the project shall be from Guelph Line. Construction accesses and gates will be located at the North end of the property.

The Temporary construction gate and access will be provided in accordance with all City of Burlington by-laws and regulations.

A temporary occupation of the lands may be requested of the City of Burlington Guelph Line frontage to facilitate construction activities and material deliveries.

Traffic along the Guelph Line will be maintained in accordance with this Construction Management Plan.

Provisions for vehicle access and associated gates to the construction site are shown on the attached CMP.

Should there be private encroachments onto adjacent properties, a letter (Agreeing to such an encroachment from the affected party) shall be submitted to the City.

Any encroachments/obstructions shall be progressively removed as the project proceeds including but not limited to moving construction containers/ offices/sanitary facilities into the site once construction is above ground, reinstating/repairing sidewalks, curbs, and asphalt)

Parking for Construction Trades

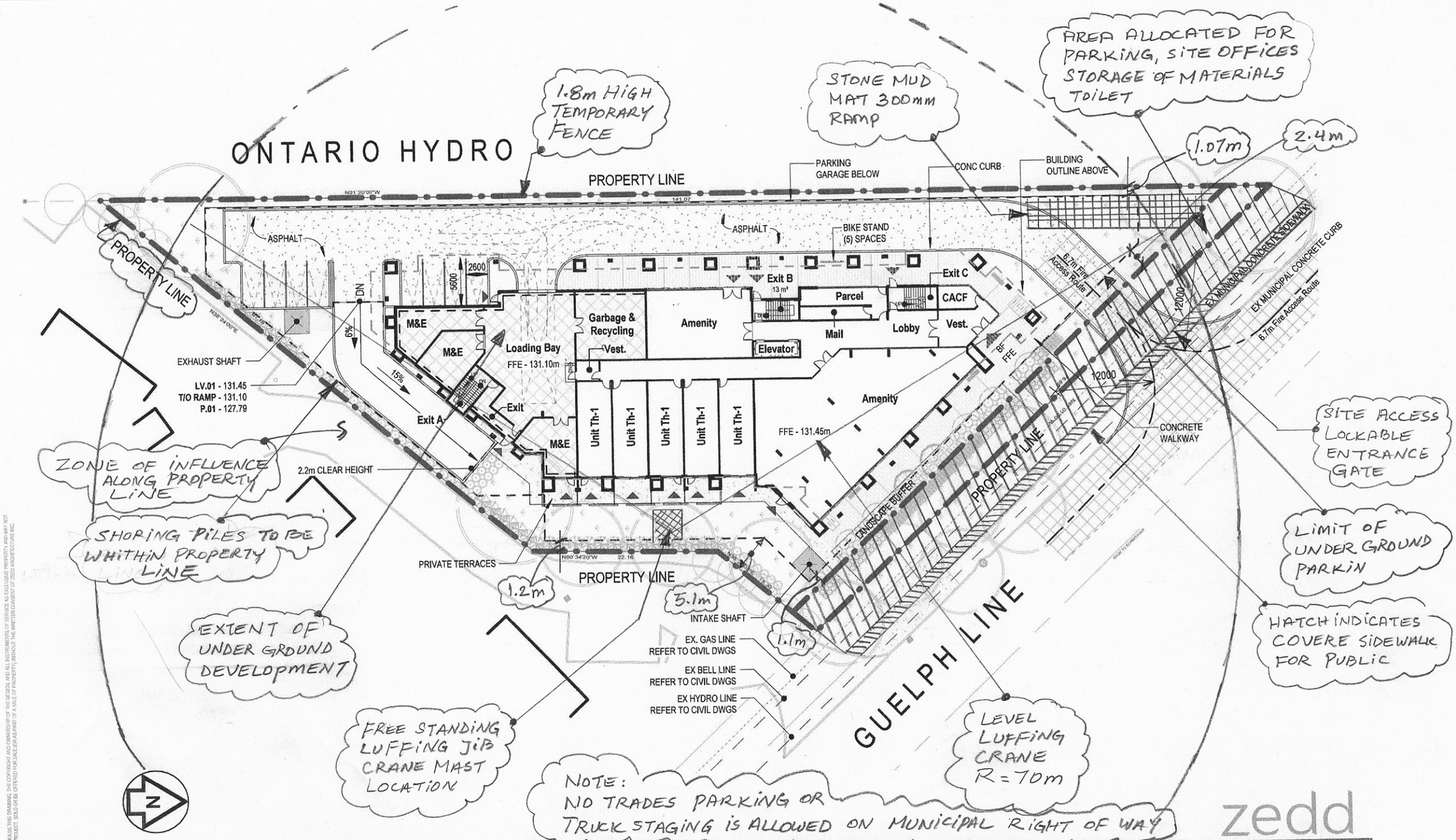
Construction trades personnel will access the site via the following means:

- Private car pooling and car-pooling arranged by their respective employers.
- Local transit.
- Nearby street/private parking.

Contact Information

The following individuals will be available during construction should further information be required, or questions arise:

- Arjun Anand
    - Email: arjun.anand@infintydevelopment.ca
    - Telephone: 647.502.9954
    - Fax: 647.933.8873



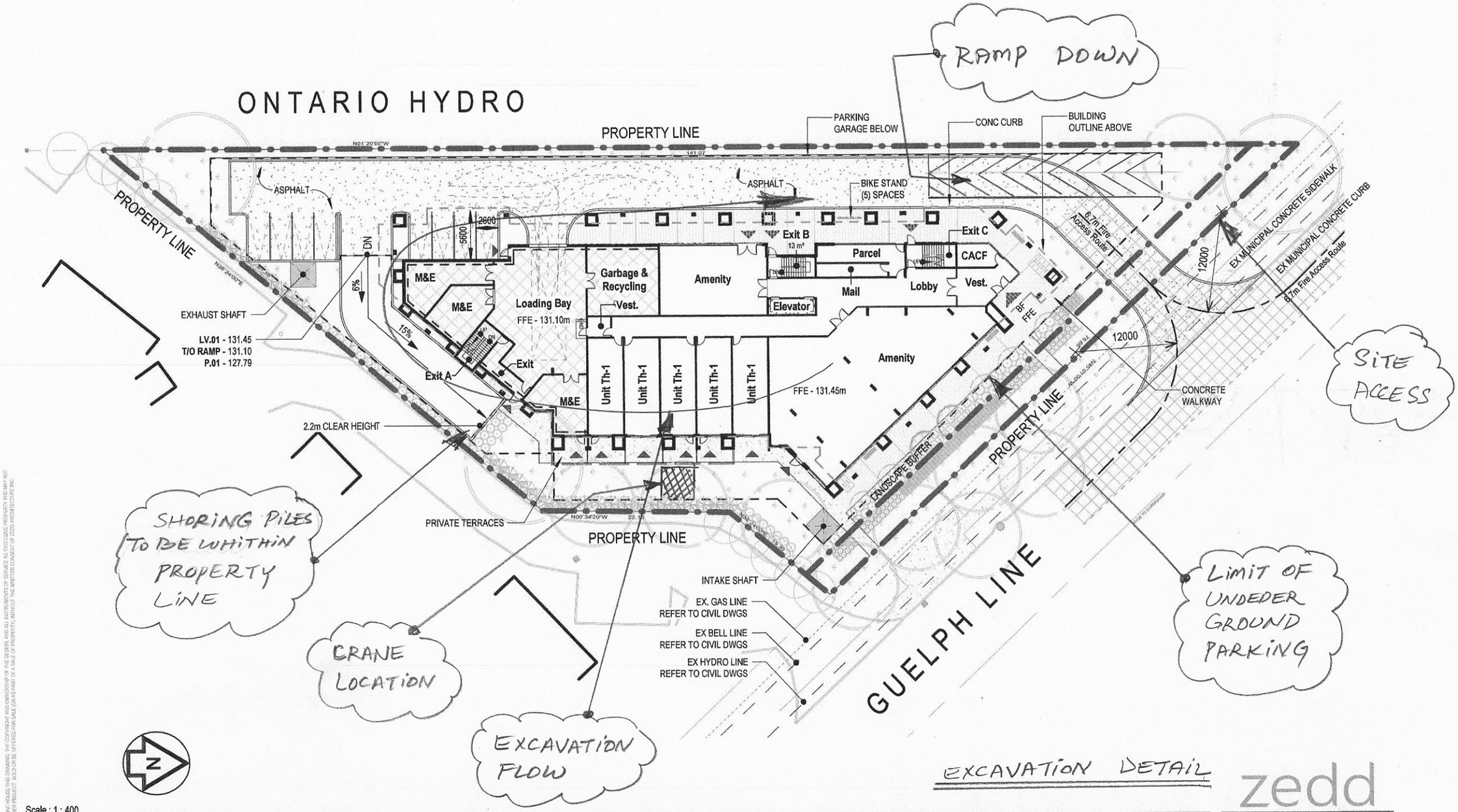
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21-027	Infinity Development Group	1396 Guelph Line Burlington, Ontario	Proposed Site	March 08, 2022	SD1.2

zedd ARCHITECTURE
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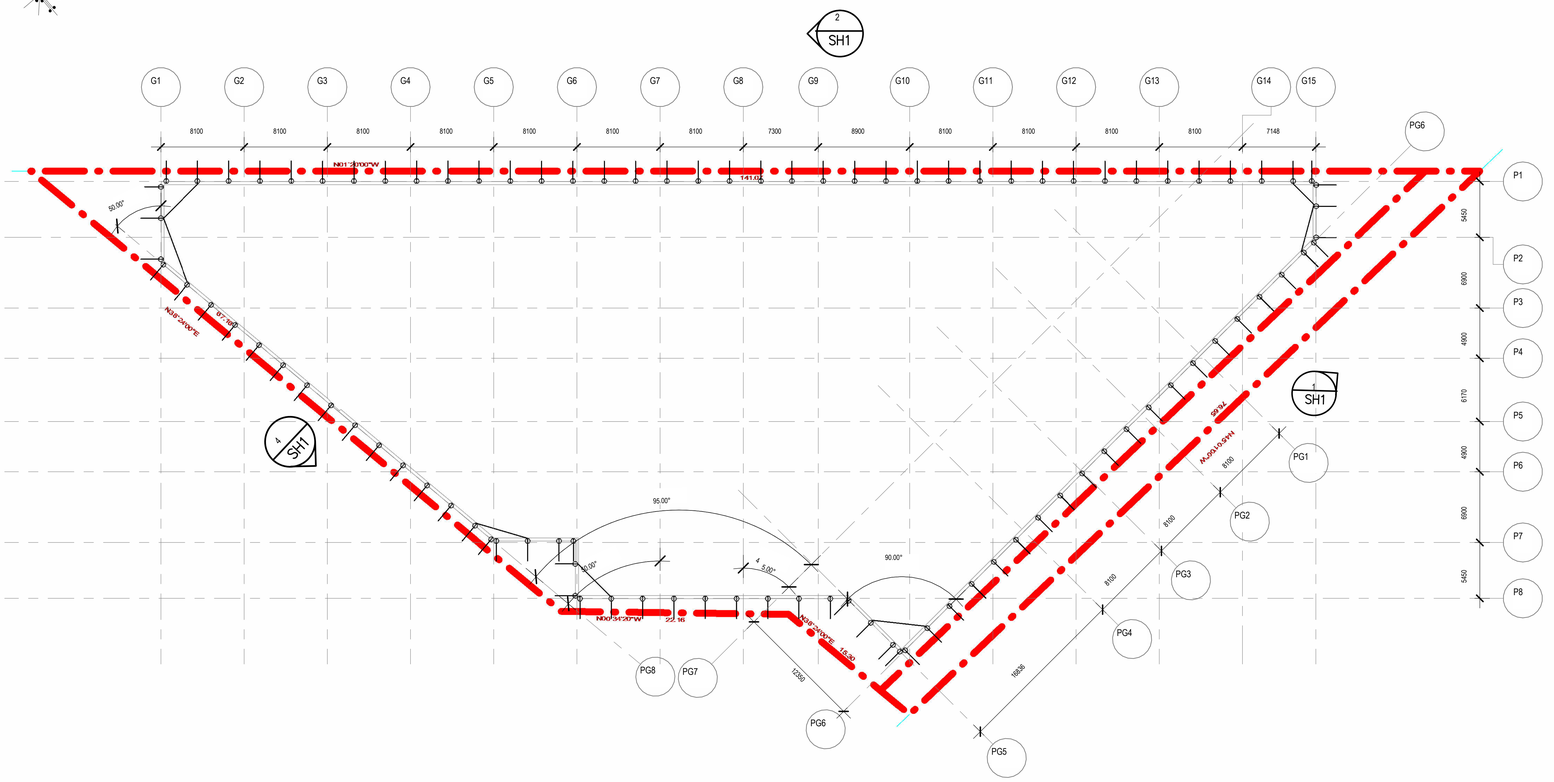


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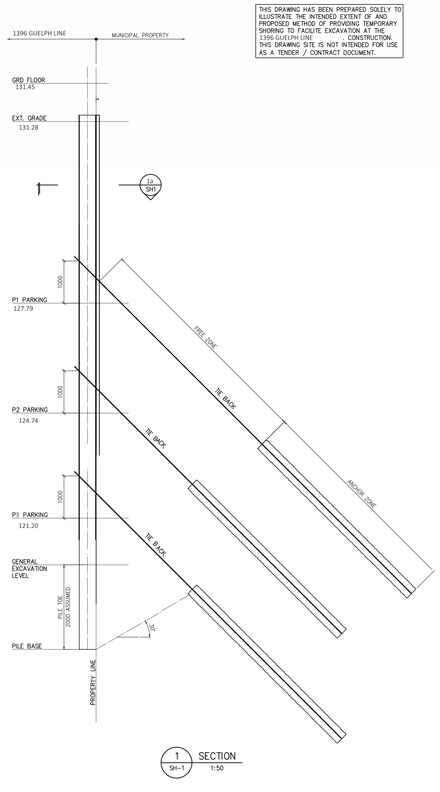
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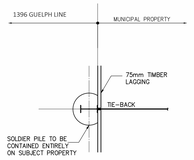
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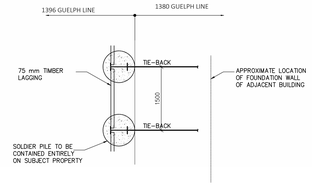
THIS DRAWING HAS BEEN PREPARED SOLELY TO ILLUSTRATE THE INTENDED EXTENT OF AND PROPOSED METHOD OF PROVIDING TEMPORARY SHORING TO FACILITE EXCAVATION AT THE 1396 GUELPH LINE CONSTRUCTION. THIS DRAWING SITE IS NOT INTENDED FOR USE AS A TENDER / CONTRACT DOCUMENT.



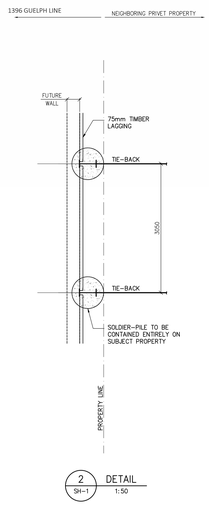
1 SH-1 SECTION 1:50



1a SH-1 SECTION 1:50



4a SH-1 SECTION 1:50



2 SH-1 DETAIL 1:50

GENERAL NOTES

TEMPORARY SHORING NOTES:

1.) GENERAL EXTENT OF EXCAVATION HAS BEEN ASSUMED AND DEPICTED ON THE DRAWINGS AND SECTIONS. SHORING CONTRACTOR SHALL CO-ORDINATE HIS WORK WITH THE EXCAVATION CONTRACTOR.

A. MATERIALS

1. ALL STRUCTURAL STEEL TO BE G40.12 GRADE HAVING A MINIMUM YIELD STRESS fy=350 MPa.
2. CONCRETE STRENGTH SHALL BE 20 MPa FOR SOLDIER PILE TOE ONLY.
3. GROUT STRENGTH FOR TIEBACK ANCHORS TO BE 35 MPa WITH AN EXPANSIVE ADMIXTURE.
4. GROUT STRENGTH FOR LEAN GROUT FILL IN UPPER SECTIONS OF TIEBACKS TO BE 7.0 MPa.
5. WOOD LAGGING SHALL BE DOUGLAS FIR CONSTRUCTION GRADE OR WESTERN HEMLOCK CONSTRUCTION GRADE, MINIMUM 100mm THICKNESS. ALLOWABLE BENDING STRESS TO BE 18 MPa.
6. ALL WELDING TO BE PREFORMED BY C.W.B. REGISTERED WELDERS IN ACCORDANCE WITH C.S.A. SPECIFICATION W59.

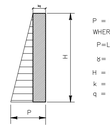
B. SOLDIER PILE INSTALLATION PROCEDURE

1. PRE-AUGER 750mm MIN. DIAMETER HOLES FOR SOLDIER PILES TO BASE OF SOLDIER PILE TOE.
2. INSTALL SOLDIER PILE, CONCRETE TOE AND FILL AROUND PILE LEAN CONCRETE TO GRADE AS SPECIFIED.
3. EXCAVATE AND PLACE LAGGING, MAXIMUM VERTICAL CUT FOR LAGGING TO BE 1200mm PLACE FREE DRAINING MATERIAL BEHIND LAGGING.

C. TIE-BACK PLACEMENT PROCEDURE

1. REMOVE TEMPORARY BERM IN FRONT OF TIE-BACKS A MAXIMUM OF 24 HOURS BEFORE DRILLING TIE-BACKS.
2. DRILL HOLE FOR UPPER TIE-BACK AND INSTALL TIE-BACKS AND ANCHOR ZONE GROUT.
3. FILL TIE-BACK FREE ZONES WITH BENTONITE CONCRETE MIX.
4. WHEN ANCHOR ZONE CONCRETE HAS REACHED 20 MPa STRENGTH, INSTALL LAGGING 450mm BELOW TIE-BACKS.
5. STRESS TIE-BACKS AND CONTINUE EXCAVATION.
6. REPEAT SIMILAR PROCEDURE FOR LOWER TIE-BACKS. (TEMPORARY BERM NOT REQUIRED).
7. TIE-BACKS AND ROCK ANCHORS ARE DESIGNED TO 50% ULTIMATE STRENGTH AND SHALL BE TESTED TO 67% ULTIMATE WITH THIS LOAD HELD FOR 10 MINUTES WITHOUT CREEP.
8. LOCK IN ALL TIE-BACKS AT 1.1 TIMES THE DESIGN LOAD, AFTER ALLOWANCE FOR WEDGE SLIP.

D. SHORING DESIGN CRITERIA



$P = k(\gamma H + q)$

WHERE

P=LATERAL EARTH PRESSURE

γ= 21 KN/m^3

H = HEIGHT OF SOIL ABOVE BASE OF EXCAVATION.

k = 4

q = SURCHARGE = 12KN/m^2

FIGURE

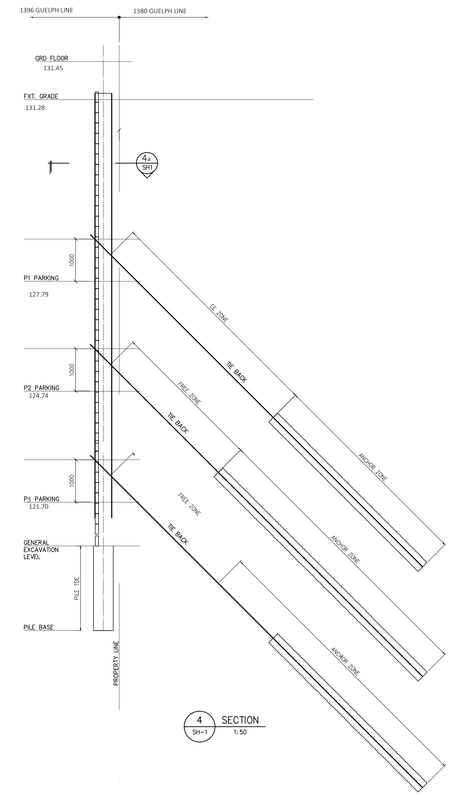
E. GENERAL CONTRACTOR

1. GENERAL CONTRACTOR TO PROVIDE THE FOLLOWNG:
   a) LAYOUT.
   b) MONITORING OF ALL HORIZONTAL MOVEMENTS FOR EACH TIE-BACK LOCATION REPORT TO FISHER ENGINEERING AND QUINN DRESSEL ASSOCIATES IF ANY MOVEMENT OF MORE THAN 6mm OCCURS.

F. DOCUMENTS USED IN PREPARING SHORING CRITERIA DRAWINGS

1. SOIL REPORT FE-P21-11238 PREPARED BY FISHER ENGINEERING DATED MARCH 9, 2022 SEE S101 FOR ADDITIONAL SOIL REPORT REFERENCES.
2. ARCHITECTURAL DRAWINGS PREPARED BY ZEDD ARCHITECTS

"The temporary excavation shoring system depicted here assumes the use of tie-backs located below the adjacent properties. Should the appropriate permissions from adjacent landowners not be obtained, it is feasible to construct the building's foundation and support the temporary soldier piles and/or caisson wall with rakers so that there is no encroachment into adjacent lands. "



4 SH-1 SECTION 1:50

INFINITY DEVELOPMENT GROUP

KEY PLAN

REVISIONS / ISSUED TO

NO.		DATE	BY

ARCHITECT / CONSULTANTS

CONTRACTOR SHALL CHECK ALL DIMENSIONS ON THE WORK AND REPORT ANY DISCREPANCY TO THE CONSULTANT BEFORE PROCEEDING. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL AUTHORIZED IN WRITING BY CONSULTANT.

SEAL / SIGNATURE

ISSUED FOR CONSTRUCTION DATE

DEVELOPER

INFINITY DEVELOPMENT GROUP

DRAWING TITLE

1396 GUELPH LINE, BURLINGTON, ON. SHORING LAYOUT PLAN

.

DESIGNED BY / DRAWN BY: ARJUN ANAND

SCALE: AS NOTED

DRAWING NUMBER: SH-1

PROJECT NUMBER: 22-01