



February 25, 2020

City of White Rock
Hump Retaining Wall Stabilization
Marine Drive, White Rock
Contract No.: WR20 - 007

ADDENDUM NO. 1

This Addendum shall form part of the original Request for Proposal (RFP) documents for the above referenced project. The following supersedes and/or supplements the information contained in the original RFP documents. Proponents shall acknowledge this Addendum by setting out the number in the Submission Form (Appendix B).

Work Commencement Date

Proponents shall be advised that no construction on Marine drive is permitted before 08 September 2020. Commencement of the work shall be no earlier than 08 September 2020 and no later than 14 September 2020. The duration of the work shall remain unchanged.

Submission Deadline

The Submission Deadline is hereby extended to 13 March 2020. The Deadline for Questions and Deadline for Issuing Addenda have been extended to 5 March 2020 and 10 March 2020, respectively.

Appendix A – Supplementary Conditions of the Contract

Replace GC 11.1.1.9 with the following:

“Professional liability insurance in the amount of not less than \$2,000,000 per claim and in the aggregate for any professionals that the Contractor may engage in performing the Work in this Contract.”

Replace GC 11.1.6 with the following:

“All insurance policies shall have the right of subrogation waived as against the Owner, the Consultant, their employees and agents, except for losses and damages arising out of the rendering or the failure to render any professional services.”

Questions and Answers

The following questions and answers are hereby issued in response to the questions of prospective proponents. The questions and answers are in no particular order.

Q1: Please clarify where cost to remove curbs, gutters, sidewalk etc. (mass excavation scope) is to be captured in Option 2 pricing.

A1: Table 1 has been revised to show all pay items separately for Option 1 and Option 2. Proponents shall use the attached revised Table 1 with the proposals.

Q2: While ensuring that all requirements to the proposal and requested content remain the same, would it be acceptable to the City of White Rock if we present the requested content through our own company proposal letterhead?

A2: Proponents are permitted to provide response to the information requested in Schedule A and Schedule B of the Submission Form under their own company letterhead, if preferred. Proponents are required to provide response to all information requested. Please note that the revised Table 1 included in this addendum must be used for the cost estimate.

Q3: Drawing B0.01 Item 3.3.1: The grade of steel pipe shall be of ASTM A106 Grade B. Do you accept to use ASTM A252-3 pipes which are more easily to be found in the market?

A3: Steel piles are required to have a minimum yield strength of 350 MPa. ASTM A252 Grade 3 steel pipes are considered acceptable for use as piles provided they have mill certificates indicating that they meet the required minimum yield strength of 350 MPa. Piles which do not meet the minimum strength requirements will be rejected.

Q4: At the site meeting, it was mentioned that weekly monitoring needs to be completed on the slopes and that all survey work needs to be completed by Target Surveying. These items are not referenced in the RFP documents. Will we be provided with scope of slope monitoring requirements? Will we be provided with a rate sheet or contact information for Target Surveying?

A4: The survey monitoring is referenced in Item 2.7 of Drawing B0.01 – General Notes (1/2). The surveying scope will consist of weekly monitoring of roughly 15 survey points at each construction area. The locations of the survey points will be indicated in the field at the start of construction by a GeoWest representative.

The monitoring point plan and the weekly survey results are to be provided to the Owner and GeoWest for review. Inquiries for pricing shall be sent to the following contact at Target Land Surveying.

Finny Philip | BCLS
Geomatics B.Tech
Target Land Surveying (SurLang) Ltd
Unit #112-10422 168th St., Surrey, B.C., V4N 1R9
Tel: 604-583-6161 | Email: finny@targetlandsurveying.ca
Fax: 866-796-8385 | Website: www.targetlandsurveying.ca

Q5: At the site meeting, it was mentioned that contractors are now being asked to expose the back of the existing bin wall. Will the unit price pay table be updated to account for the additional volumes of excavation and backfill?

A5: The requirement to expose the back of the existing bin wall is referenced in Drawing B1.02 and B2.01. The estimated quantities shown on Table 1 of Schedule D include this work; therefore, no updates will be made.

Q6: The bid bond at 10% of tender price, is this tender price based on Option 1?

A6: The 10% Bid Bond and Work Schedule should be based on the Option 2 work.

Q7: Is there any specification / Bylaws that tells us which routing the traffic and pedestrian needs to flow?

A7: The Occupational Health and Safety Regulation states that traffic control equipment, arrangements and procedures must meet the requirements of the *1999 Traffic Control Manual for Work on Roadways* issued by the Ministry of Transportation. These requirements are to be followed for this project.

Pedestrian traffic is not permitted within the construction areas. The Contractor is responsible for setting up the appropriate sidewalk closure and detour signages to ensure no pedestrians enter the site. Detour signs shall be posted to direct pedestrians to use the White Rock Promenade along the south side of the BNSF tracks.

Q8: Does the proposed construction encroach on BNSF property?

A8: The proposed work does not encroach on BNSF property. No access or work is permitted on BNSF property without prior approval from the Owner and BNSF.

Q9: Have the existing utilities along Marine Drive been inspected for damage? If so, was there any damage observed.

A9: The existing storm and sanitary sewers along the north side of Marine Drive have been inspected by City crews and do not show any signs of damage.

Q10: Please confirm if an emailed amendment will be acceptable.

A10: Emailed amendment of proposals will not be accepted. Amendment of proposals shall conform to Section 1.6.5 of the RFP.

Q11: Appendix C - Work Specifications Item C.1 Project Drawings (Issued for Tender Rev. 1 - January 31, 2020) indicates the drawings are revision "1", however, the drawings as issued are revision "0". Please confirm if there is a more recent revision of drawings.

A11: The Design Drawings issued are up-to-date and incorrectly show Rev 0 on the bottom right corner. The revisions listed on the bottom left corner are correct. It was noted that the Design Drawings submitted with the RFP had some plotting issues making text boxes unclear on Drawing B1.02 and B1.03. The Design Drawings have been re-plotted and will be available to view as a separate attachment from the RFP. No changes to the drawings have been made.

Q12: SSP 14 - Interfering Services indicates " The contractor shall also, at his own expense, temporarily relocate any services which may conflict with the installation of the work." . Please provide approximate locations of existing utilities the Owner feels may interfere with the installation of the work beyond those indicated on drawing B2.01.

A12: There is reference to "an electrical conduit that runs along the sidewalk located on the south side of Marine Drive" in the Geotechnical Assessment Report prepared by Levelton Consultants Ltd. in 2011. This conduit is not shown on information provided by BC One Call; however, there could potentially be services for lighting flowerpots. There is also a dog water fountain on the sidewalk area near the intersection of Marine Drive and Dolphin Street. Utility records for this fountain are not available. The Contractor is required to conduct utility locating at the site prior to any work.

Q13: Drawing B1.03 indicates "Pedestrian Traffic to be Re-directed Around Construction Area in Accordance with City Requirements, Typ." . Please provide or direct us to these requirements i.e. Are SLAT's acceptable? Pedestrian route widths and required delineation from traffic/work site?

A13: Single Lane Alternating Traffic (SLAT) will be required for the proposed work and therefore acceptable. All traffic control must be in accordance with the document referenced in Q7 on the previous page.

Q14: Please confirm (if required) where the cost for pavement markings are to be included in the pricing. Also, please indicate the extent of pavement markings required.

A14: All works associated with pavement markings are to be included in Item 32.09. The works shall include any temporary road marking and reinstatement of all existing pavement markings within the project extents using extruded thermoplastic markings. Square One Paving Ltd. shall be retained to provide the thermoplastic markings for all crosswalks.

Permanent markings shall include reinstatement of all line markings, crosswalk markings, speed limit markings, safety markings, and bicycle markings.

Q15: Item 32.09 Permanent Thermoplastic Pavement Markings (Square One Paving Ltd. to be retained) have a quantity of one (1) Lump Sum. As this product can be extremely costly, we request the Owner provide a quantity for bid comparison purposes.

A15: The Owner will not be providing unit quantities for Item 32.09.

Q16: Please confirm if shutdown of traffic in both directions for a maximum period of five (5) minutes is permissible.

A16: Temporary shutdown of traffic in both directions is permitted for periods not exceeding 5 minutes in duration. The Contractor is required to conduct the work in a manner that minimizes disruptions to traffic. Full-road closures exceeding 5 minutes in duration must be approved prior by the City of White Rock.

Q17: Please confirm if a SLAT between Station 0+000 and approximately Station 0+292 is acceptable for the duration of the project. Also, will it be acceptable to close Dolphin Street to local traffic only for the duration of the project.

A17: Single Lane Alternating Traffic (SLAT) is permitted within the project extents for the duration of the project. Restricting the use of Dolphin Street to local access only is acceptable.

Q18: Item E - Financial History of Appendix B - Submission requests financial statements for the last three (3) years, please confirm if a bid will be deemed non-compliant and not be qualified for further consideration if this information is not provided.

A18: Proponents who do not provide details of their financial history as per Section E of Schedule A will still be deemed compliant. However, proponents are urged to provide all information requested in Schedule A as this information will be used by the evaluation team to determine each proponent's strength and ability to perform the work.

Q19: Existing Shotcrete Encapsulated Timber Wall - Referencing drawing B2.02, please confirm if there are existing tiebacks and if the excavation for the pile cap can encroach immediately up to the back side of the wall.

A19: There are no known existing tieback anchors within the project extents that will interfere with the drilling of piles.

Q20: Please confirm where in Table 1 - Pricing for Work sawcutting of existing asphalt is to be included.

A20: Payment for sawcutting of asphalt or concrete shall be included in Mass Excavation and Removal – Item 31.01.

Q21: Please confirm if a 1m reduction in lane width through the SLAT at foundation equipment locations is acceptable.

A21: The minimum width of travel lane on Marine Drive is to be 3 m. The Contractor's traffic consultant shall confirm all lane widths and provide the City of White Rock with a Traffic Control Plan (TMP) for review.

Q22: Please confirm if residential parking on the westbound side of Marine Drive can be relocated for the duration of the project, perhaps stalls at the nearby parking lot can be reserved for these residents.

A22: Yes, westbound parking can be relocated. Please describe how alternate parking arrangements will be provided in "Schedule B: Work Plan and Methodology, Section B" of the proposal submission.

[END OF ADDENDUM]

Attachments: Table 1: Pricing for Work
CS/CB/knh

TABLE 1: PRICING FOR WORK

ITEM NO.	MMCD OR SSP SECTION	SPECIFICATION TITLE	UNIT	EST. QTY	UNIT PRICE	AMOUNT
OPTION 1 – ROADWORKS ONLY WITHIN EXTENTS OF WEST AND EAST AREA						
DIVISION 01 – GENERAL REQUIREMENTS						
	01 53 01	Temporary Facilities				
01.01	1.9.1	Site Hoarding, Storage, Sanitary Facilities	Lump Sum	1	Incidental	\$ -
	01 55 00	Traffic Control, Vehicle Access and Parking				
01.02	1.5.1	Traffic and Pedestrian Control	Lump Sum	1	\$	\$
	01 57 01	Environmental Protection				
01.03	1.6.1	Erosion and Sediment Control	Lump Sum	1	Incidental	\$ -
		Other				
01.05	-	Bonding	Lump Sum	1	\$	\$
01.06	SSP15	Contractor Submissions	Lump Sum	1	\$	\$
Option 1 Division 01 Subtotal:					\$	
DIVISION 03 – CONCRETE						
	03 30 20	Concrete Walks, Curbs and Gutters				
03.01	1.4.3	Concrete Barrier Curb & Gutter (MMCD C4)	Lineal Metre	115	\$	\$
03.02	1.4.5	Concrete Sidewalks and Ramps (100mm Thick) (MMCD C2) (Incl. Granular Base)	Square Metre	184	\$	\$
	03 30 53	Cast-In-Place Concrete				
03.03	1.5.3	Reinforced Concrete Grade Beam (Excl. Excavation and Backfill)	Cubic Metre	60	\$	\$
Option 1 Division 03 Subtotal:					\$	
DIVISION 31 – EARTHWORKS						
	31 24 13	Roadway Excavation, Embankment and Compaction				
31.01	SSP17	Mass Excavation and Removal (includes curbs, gutters, sidewalks, pavers, etc.)	Lump Sum	1	\$	\$
31.02	SSP18	Common Excavation – Dispose Offsite (includes subgrade preparation and compaction)	Cubic Metre	323	\$	\$
Option 1 Division 31 Subtotal:					\$	

TABLE 1: PRICING FOR WORK (continued)

ITEM NO.	MMCD OR SSP SECTION	SPECIFICATION TITLE	UNIT	EST. QTY	UNIT PRICE	AMOUNT
DIVISION 32 – ROADS AND SITE IMPROVEMENTS						
	32 01 16.7	Cold Milling				
32.01	1.5.1	Surface Milling (Average 40mm Thick)	Square Metre	240	\$	\$
32.02	1.5.1	Full Depth Milling – Dispose Offsite	Square Metre	557	\$	\$
	32 11 16.1	Granular Subbase				
32.03	1.4.2	75mm Minus Crushed Granular Subbase	Metric Tonne	411	\$	\$
	32 11 23	Granular Base				
32.04	1.4.2	19mm Minus Crushed Granular Base	Metric Tonne	205	\$	\$
	32 12 13.1	Asphalt Tack Coat				
32.05	1.5.1	Asphalt Tack Coat – Emulsified Asphalt	Square Metre	810	\$	\$
	32 12 16	Hot-Mix Asphalt Concrete Paving				
32.06	1.5.1	Asphalt Pavement - Upper Course #1 (40mm Thick Overlay)	Metric Tonne	23	\$	\$
32.07	1.5.1	Asphalt Pavement - Upper Course #1 (50mm Thick)	Metric Tonne	67	\$	\$
32.08	1.5.1	Asphalt Pavement - Lower Course #1 (50mm Thick)	Metric Tonne	68	\$	\$
	32 17 23	Painted Pavement Markings				
32.09	1.5.3	Permanent Thermoplastic Pavement Markings (Square One Paving Ltd. to be retained)	Lump Sum	1	\$	\$
	32 31 13	Chain Link Fences and Gates				
32.10	1.5.4	Black Handrail (MMCD C14)	Lineal Metre	60	\$	\$
Option 1 Division 32 Subtotal:					\$	
DIVISION A – DEEP FOUNDATIONS						
		STEEL PIPE PILES				
A.01	SSP19	P1 Pile – 15 m Long 8” Schedule 40 Steel Pipe (Includes 47 bags of Microsil grout per pile)	Each	31	\$	\$
A.02	SSP19	P2 Pile – 9 m Long 6” Schedule 80 Steel Pipe (Includes 17 bags of Microsil grout per pile)	Each	42	\$	\$
Option 1 Division A Subtotal:					\$	

TABLE 1: PRICING FOR WORK (continued)

ITEM NO.	MMCD OR SSP SECTION	SPECIFICATION TITLE	UNIT	EST. QTY	UNIT PRICE	AMOUNT
OPTION 2 – ROADWORKS INCLUDING AREAS BETWEEN WEST AND EAST AREA						
DIVISION 01 – GENERAL REQUIREMENTS						
	01 53 01	Temporary Facilities				
01.01	1.9.1	Site Hoarding, Storage, Sanitary Facilities	Lump Sum	1	Incidental	\$ -
	01 55 00	Traffic Control, Vehicle Access and Parking				
01.02	1.5.1	Traffic and Pedestrian Control	Lump Sum	1	\$	\$
	01 57 01	Environmental Protection				
01.03	1.6.1	Erosion and Sediment Control	Lump Sum	1	Incidental	\$ -
		Other				
01.05	-	Bonding	Lump Sum	1	\$	\$
01.06	SSP15	Contractor Submissions	Lump Sum	1	\$	\$
Option 2 Division 01 Subtotal:					\$	
DIVISION 03 – CONCRETE						
	03 30 20	Concrete Walks, Curbs and Gutters				
03.01	1.4.3	Concrete Barrier Curb & Gutter (MMCD C4)	Lineal Metre	115	\$	\$
03.02	1.4.5	Concrete Sidewalks and Ramps (100mm Thick) (MMCD C2) (Incl. Granular Base)	Square Metre	184	\$	\$
	03 30 53	Cast-In-Place Concrete				
03.03	1.5.3	Reinforced Concrete Grade Beam (Excl. Excavation and Backfill)	Cubic Metre	60	\$	\$
Option 2 Division 03 Subtotal:					\$	
DIVISION 31 – EARTHWORKS						
	31 24 13	Roadway Excavation, Embankment and Compaction				
31.01	SSP17	Mass Excavation and Removal (includes curbs, gutters, sidewalks, pavers, etc.)	Lump Sum	1	\$	\$
31.02	SSP18	Common Excavation – Dispose Offsite (Includes subgrade preparation and compaction)	Cubic Metre	463	\$	\$
Option 2 Division 31 Subtotal:					\$	

TABLE 1: PRICING FOR WORK (continued)

ITEM NO.	MMCD OR SSP SECTION	SPECIFICATION TITLE	UNIT	EST. QTY	UNIT PRICE	AMOUNT
DIVISION 32 – ROADS AND SITE IMPROVEMENTS						
	32 01 16.7	Cold Milling				
32.01	1.5.1	Surface Milling (Average 40 mm Thick)	Square Metre	320	\$	\$
32.02	1.5.1	Full Depth Milling – Dispose Offsite	Square Metre	907	\$	\$
	32 11 16.1	Granular Subbase				
32.03	1.4.2	75mm Minus Crushed Granular Subbase	Metric Tonne	647	\$	\$
	32 11 23	Granular Base				
32.04	1.4.2	19 mm Minus Crushed Granular Base	Metric Tonne	320	\$	\$
	31 12 13.1	Asphalt Tack Coat				
32.05	1.5.1	Asphalt Tack Coat – Emulsified Asphalt	Square Metre	1227	\$	\$
	32 12 16	Hot-Mix Asphalt Concrete Paving				
32.06	1.5.1	Asphalt Pavement – Upper Course #1 (40 mm Thick Overlay)	Metric Tonne	37	\$	\$
32.07	1.5.1	Asphalt Pavement – Upper Course #1 (50 mm Thick)	Metric Tonne	109	\$	\$
32.08	1.5.1	Asphalt Pavement – Lower Course #1 (50 mm Thick)	Metric Tonne	111	\$	\$
	32 17 23	Painted Pavement Markings				
32.09	1.5.3	Permanent Thermoplastic Pavement Markings (Square One Paving Ltd. to be retained)	Lump Sum	1	\$	\$
	32 31 13	Chain Link Fences and Gates				
32.10	1.5.4	Black Handrail (MMCD C14)	Lineal Metre	60	\$	\$
Option 2 Division 32 Subtotal					\$	
DIVISION A – DEEP FOUNDATIONS						
		STEEL PIPE PILES				
A.01	SSP19	P1 Pile – 15 m Long 8” Schedule 40 Steel Pipe (Includes 47 bags of Microsil grout per pile)	Each	31	\$	\$
A.02	SSP19	P2 Pile – 9 m Long 6” Schedule 80 Steel Pipe (Includes 17 bags of Microsil grout per pile)	Each	42	\$	\$
Option 2 Division A Subtotal:					\$	

TABLE 1: PRICING FOR WORK (continued)

OPTION 1 SUMMARY		
	Division 01 Subtotal:	\$
	Division 03 Subtotal:	\$
	Division 31 Subtotal:	\$
	Division 32 Subtotal:	\$
	Division A Subtotal:	\$
	TOTAL EXCLUDING GST:	\$
	GST (5%):	\$
	TOTAL TENDER PRICE:	\$
OPTION 2 SUMMARY		
	Division 01 Subtotal:	\$
	Division 03 Subtotal:	\$
	Division 31 Subtotal:	\$
	Division 32 Subtotal:	\$
	Division A Subtotal:	\$
	TOTAL EXCLUDING GST:	\$
	GST (5%):	\$
	TOTAL TENDER PRICE:	\$

END OF SECTION

- 1.1 IN THESE NOTES, THE OWNER OF THE PROJECT IS THE CITY OF WHITE ROCK, TEL. 604-541-2180. ALL WORKS SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF WHITE ROCK'S REQUIREMENTS.
- 1.2 IN THESE NOTES, THE GEOTECHNICAL ENGINEER IS GEOWEST ENGINEERING LTD., TEL. 604-852-9088.
- 1.3 IN THESE NOTES, THE CONTRACTOR IS THE "PRIME CONTRACTOR" UNDER THE WORKERS COMPENSATION ACT. HEALTH AND SAFETY DUTIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 1.4 THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE DESIGN DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.
- 1.5 THE PROPOSED PILE AND GRADE BEAM SYSTEMS ARE INTENDED TO PROVIDE LONG TERM SUPPORT TO THE ROAD SECTIONS SHOWN ON THESE DRAWINGS AGAINST GLOBAL INSTABILITY.
- 1.6 THE DESIGN IS BASED ON SITE OBSERVATIONS, SUBSURFACE INVESTIGATIONS (LEVELTON 2011 AND GEOWEST 2018), AND GEOTECHNICAL ASSESSMENT REPORT CONDUCTED BY GEOWEST (GEOWEST FILE GA17-1167-00, REPORT DATED OCTOBER 18, 2018)
- 1.7 THE CONTRACTOR SHALL PROVIDE ADD/DELETE UNIT PRICES FOR THE WORKS SHOWN ON THESE DRAWINGS.
- 1.8 A COMPLETE SET OF APPROVED CONSTRUCTION DRAWINGS SHALL BE ON-SITE AT ALL TIMES DURING THE CONSTRUCTION OF THE ROAD STABILIZATION WORKS.
- 1.9 THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURATE LAYOUT OF THE GRADE BEAMS AND STEEL PILES. ADDITIONAL COSTS DUE TO INACCURATE LAYOUT OR EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 1.10 THE CONTRACTOR SHALL NOT ENCR OACH ONTO ADJACENT PROPERTIES WITHOUT PRIOR WRITTEN AGREEMENT FROM THE OWNER OF THE PROJECT AND ADJACENT PROPERTY OWNERS.
- 1.11 THE CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL SURROUNDING UNDERGROUND OR OVERHEAD SERVICES WHICH CAN BE DAMAGED BY THE PROPOSED EXCAVATION AND INSTALLATIONS PRIOR TO EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADVANCE NOTIFICATION TO THE GEOTECHNICAL ENGINEER OF ANY UNDERGROUND/OVERHEAD SERVICE THAT CAN BE DAMAGED BY THE PROPOSED CONSTRUCTION.
- 1.12 THE CONTRACTOR SHALL SCHEDULE, COORDINATE AND CONDUCT THE WORK WITH THE OWNER OR THEIR REPRESENTATIVE IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
- 1.13 THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE CONSTRUCTION OF THE ROAD STABILIZATION WORKS AND PROVIDE INSPECTION REPORTS. HOWEVER, THE CONTRACTOR SHALL CONDUCT THEIR OWN INSPECTIONS OF THE CONSTRUCTION ON A DAILY BASIS AND IMMEDIATELY REPORT ANY IRREGULARITIES OR DETERIORATING SOIL AND GROUNDWATER CONDITIONS TO THE GEOTECHNICAL ENGINEER.
- 1.14 THE CONTRACTOR SHALL BUILD AND MAINTAIN PROPERLY SECURED HOARDING AROUND THE SITE FOR THE SAFETY OF SITE PERSONNEL AND THE PUBLIC IN THE SITE VICINITY IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
- 1.15 IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SUITABLE ACCESS AND STAGING FOR THE EXCAVATION, DRILLING, AND INSTALLATION OF STEEL PIPE PILES.
- 1.16 THE GEOTECHNICAL ENGINEER IS TO HAVE ACCESS TO THE SITE WHENEVER REQUIRED AND IS THE SOLE JUDGE OF WHEN THE GEOTECHNICAL ENGINEER'S PRESENCE IS NECESSARY AND WHETHER A TECHNICIAN, STAFF ENGINEER, OR SENIOR ENGINEER IS REQUIRED ON SITE.
- 1.17 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROL THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
- 1.18 THE CONTRACTOR IS RESPONSIBLE FOR PEDESTRIAN AND TRAFFIC CONTROL DURING CONSTRUCTION AND SHALL COORDINATE SUCH ACTIVITIES WITH THE OWNER.

2.0 CONTRACTOR SUBMISSIONS

- 2.1 THE CONTRACTOR SHALL SUBMIT A NOTICE OF PROJECT TO WORKSAFE BC AS REQUIRED BY THE OCCUPATIONAL HEALTH AND SAFETY REGULATION.
- 2.2 THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN AND A GROUT SPILL MANAGEMENT PLAN TO THE OWNER PRIOR TO START OF WORK.
- 2.3 THE CONTRACTOR SHALL SUBMIT A TRAFFIC MANAGEMENT PLAN AND PEDESTRIAN MANAGEMENT PLAN TO THE OWNER AND IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- 2.4 THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONSTRUCTION NOTICES TO RESIDENTS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. RESIDENTS WITHIN A 3-BLOCK RADIUS OF THE SITE ARE REQUIRED TO BE NOTIFIED A MINIMUM 2 WEEKS IN ADVANCE OF ANY CONSTRUCTION WORK.
- 2.5 THE CONTRACTOR SHALL PROVIDE A VECTOR CONTROL PLAN TO THE OWNER. THE PLAN SHALL CONTAIN INFORMATION AND PROCEDURES ON HOW TO MANAGE RODENTS AROUND THE CONSTRUCTION SITE.
- 2.6 THE CONTRACTOR SHALL PROVIDE THE OWNER WITH PRE AND POST CONSTRUCTION VIDEO INSPECTIONS OF THE CONSTRUCTION AREA.
- 2.7 THE CONTRACTOR SHALL RETAIN TARGET LAND SURVEYING LTD. TO ESTABLISH SURVEY POINTS AROUND THE CONSTRUCTION AREA. THE SURVEY MONITORING POINT PLAN SHALL BE PROVIDED TO THE OWNER AND GEOTECHNICAL ENGINEER. WEEKLY SURVEY RESULTS ARE TO BE PROVIDED TO THE OWNER AND GEOTECHNICAL ENGINEER.

3.1	<u>CAST-IN-PLACE CONCRETE (GRADE BEAMS):</u>	
	CEMENT:	TYPE GU
	EXPOSURE CLASS:	C-1
	MINIMUM COMPRESSIVE STRENGTH:	35 MPA @ 28 DAYS
	MAXIMUM AGGREGATE SIZE:	20 MM
	SLUMP:	80 +/- 20 MM
	AIR CONTENT:	5 - 8%
	MAXIMUM W/ CM:	0.50
3.2	<u>CAST-IN-PLACE CONCRETE (SIDEWALKS AND CURBS):</u>	
	CEMENT:	TYPE GU
	EXPOSURE CLASS:	C-2
	MINIMUM COMPRESSIVE STRENGTH:	32 MPA @ 28 DAYS
	MAXIMUM AGGREGATE SIZE:	20 MM
	SLUMP:	80 +/- 20 MM
	AIR CONTENT:	5 - 8%
	MINIMUM CEMENT CONTENT:	35 KG / M ³

ALL CONCRETE SHALL CONFORM TO STANDARDS DOCUMENTED IN THE CANADIAN STANDARDS ASSOCIATION: CSA A23.1-14, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.

3.3.1 STEEL PILES SHALL CONSIST OF ASTM A106 GRADE B STEEL PIPES WITH THE DIMENSIONS SPECIFIED IN THESE DRAWINGS. PILE SPICES SHALL BE FULL PENETRATION BUTT WELDED WITH E480XX ELECTRODES (OR APPROVED EQUIVALENT).

3.3.2 ALL STRUCTURAL STEEL SHALL CONFORM TO CSA CAN3-G40.21 M-350W WITH MIN. FY = 350 MPA. CONTRACTOR TO SUPPLY MILL CERTIFICATES FOR ALL PILES IMPORTED TO SITE.

3.3.3 PILE BACKFILL SHALL CONSIST OF GROUT IN ACCORDANCE WITH SECTION 3.4 OF THESE NOTES.

THE GROUT SHALL CONSIST OF BASALITE CONCRETE PRODUCTS MICROSIL GROUT OR EQUIVALENT APPROVED IN WRITING BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY DRILLING. WATER CEMENT RATIOS TO BE UTILIZED ARE AS FOLLOWS:

<u>CONSISTENCY</u>	<u>W/C</u>	<u>MAX. WATER / 30 KG (66LB) BAG</u>
STEEL PILE	0.33	10.0 L (2.65 US GAL)
24 - HOUR COMPRESSIVE STRENGTH:		15 MPA (MIN)
28 - DAY COMPRESSIVE STRENGTH:		40 MPA (MIN)

3.5.1 DEFORMED REINFORCING BARS SHALL BE 400 MPA DEFORMED NEW BILLET STEEL AND CONFORM TO CSA G30.18-09 (R2014).

3.5.2 A MINIMUM BAR OVERLAP OF 600 MM SHALL BE USED FOR DEFORMED BAR LAP SPLICES.

3.5.3 MINIMUM CONCRETE BAR COVER SHALL BE 75 MM FOR CONCRETE PERMANENTLY EXPOSED TO SOIL.

3.6.1 IMPORTED BACKFILL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO DELIVERY TO THE SITE. UNLESS OTHERWISE SPECIFIED, IT SHALL COMPRISE OF 75 MM MINUS CRUSHED SAND AND GRAVEL WITH MAXIMUM 5% FINES (SOIL PASSING 0.075 MM SIEVE).

3.6.2 GRANULAR BASE SHALL COMPRISE OF 19 MM MINUS CRUSHED SAND AND GRAVEL WITH MAXIMUM 5% FINES CONTENT.

3.6.3 ALL BACKFILL SHALL BE FREE OF CLAY LUMPS OR ORGANIC MATTER.

3.6.4 BACKFILL DEEMED UNSUITABLE BY THE GEOTECHNICAL ENGINEER SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

4.1.1 CAREFUL SEQUENCING OF THE EXCAVATION, DRILLING, INSTALLATION OF PILES, GRADE BEAM CONSTRUCTION, AND BACKFILLING IS NECESSARY FOR SAFE EXECUTION OF THE DESCRIBED WORKS. THE DRAWINGS GIVE GUIDANCE WITH REGARD TO THE GENERAL INSTALLATION. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL CONSTRUCTION SEQUENCE AND TO PROVIDE THAT INFORMATION TO THE GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.

4.1.2 IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SUITABLE ACCESS AND STAGING FOR THE DRILLING AND INSTALLATION OF PILES AND GRADE BEAMS.

ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

[illegible]

4.1.4 THE CONTRACTOR SHALL INFORM THE GEOTECHNICAL ENGINEER IMMEDIATELY OF TENSION CRACKS OR ANY SIGNS OF UNSTABLE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. INSTALLATION OF FACE-SAVING MEASURES MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER TO SUPPORT SUCH AREAS.

4.2 STEEL PILES



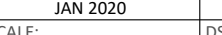


4.2.9 THE COST FOR ANALYSIS, REDESIGN, AND REMEDIATION DUE TO PILES BEING INSTALLED EXCEEDING THE TOLERANCES FOR LOCATION OR PLUMBNESS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

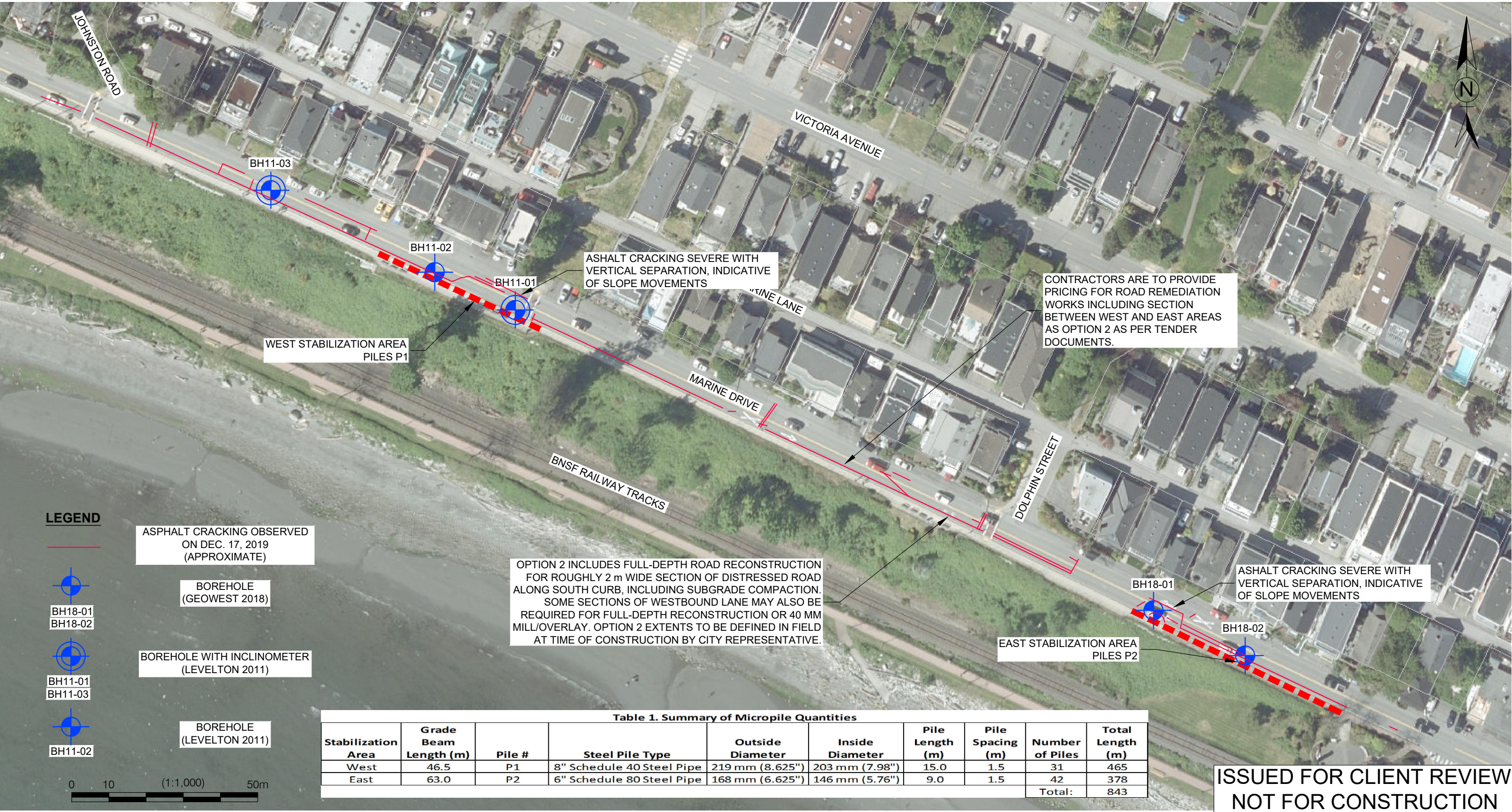
4.3.2 ALL CAST IN PLACE CONCRETE SHALL BE VIBRATED DURING PLACEMENT.

4.4.2 AT THE END OF EACH WORKDAY, THE BACKFILL SURFACE SHALL BE COMPACTED AND GRADED TO MINIMIZE PONDING OF WATER AND SATURATION OF THE BACKFILL.

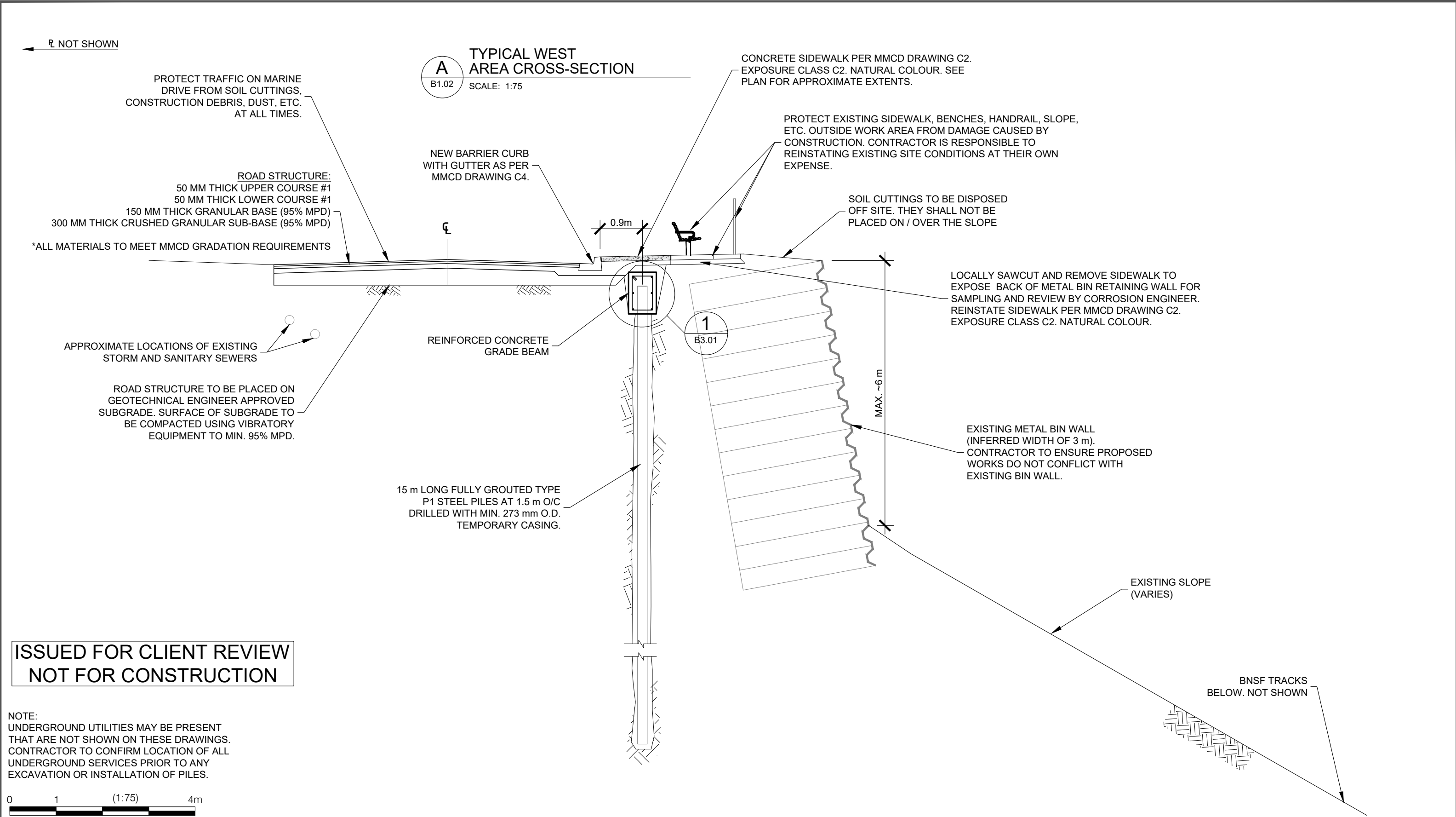
5.5.5 AT LEAST ON COMPACTION TEST FOR EVERY 100 M² OF ROAD BASE

ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

REVISIONS					ADAPTED FROM:		DRAWING TITLE:		CLIENT:		DESIGN BY:		SEAL:		DATE		DWN:					
					-		GENERAL NOTES (2/2)								JAN 2020		BO					
					PROJECT / DWG.NO:										SCALE:		N/A		DSN:		CB	
					DATE:										PROJECT:		HUMP RETAINING WALL STABILIZATION		CHK:		DJ	
					-		ADDRESS:		MARINE DRIVE, WHITE ROCK, BC		200 - 34425 MCCONNELL ROAD ABBOTSFORD, BC V2S 7P1 TEL: 604-852-9088		DRAWING NO: B0.02		REV: 0							
					This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.		CLIENT:		CITY OF WHITE ROCK													
	31 January 2020	Issued for Tender	CS	DJ																		
	24 January 2020	Issued for Client Review	BO	DJ																		
REV	Revision Date	Revision Description	DWN	CHK																		



REVISIONS					ADAPTED FROM:		DRAWING TITLE:		CLIENT:		DESIGN BY:		SEAL:		DATE		DWN:	
					WROMS		OVERALL SITE PLAN		WHITE ROCK		GeoWest		PROFESSIONAL ENGINEER		JAN 2020		BO	
					PROJECT / DWG.NO:				My City by the Sea!		200 - 34425 MCCONNELL ROAD		C. J. BUCHAN		SCALE: 1:1000		DSN: CB	
					N/A				HUMP RETAINING WALL STABILIZATION		ABBOTSFORD, BC V2S 7P1		#22251		GEOWEST FILE: GA17-1167-01		CHK: DJ	
					DATE: JUNE 2018		PROJECT: HUMP RETAINING WALL STABILIZATION		ADDRESS: MARINE DRIVE, WHITE ROCK, BC		200 - 34425 MCCONNELL ROAD		2020-02-18		DRAWING NO: B1.01		REV: 0	
					This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.		CLIENT: CITY OF WHITE ROCK				TEL: 604-852-9088							
REV					Revision Date		Revision Description		DWN		CHK							
					31 January 2020		Issued for Tender		CS		DJ							
					24 January 2020		Issued for Client Review		BO		DJ							



ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

NOTE:
UNDERGROUND UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THESE DRAWINGS. CONTRACTOR TO CONFIRM LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO ANY EXCAVATION OR INSTALLATION OF PILES.

REVISIONS				
△	31 January 2020	Issued for Tender	CS	DJ
△	24 January 2020	Issued for Client Review	BO	DJ
REV	Revision Date	Revision Description	DWN	CHK

ADAPTED FROM:	-
PROJECT / DWG.NO:	-
DATE:	-
This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.	

DRAWING TITLE:	WEST AREA CROSS-SECTION
PROJECT:	HUMP RETAINING WALL STABILIZATION
ADDRESS:	MARINE DRIVE, WHITE ROCK, BC
CLIENT:	CITY OF WHITE ROCK

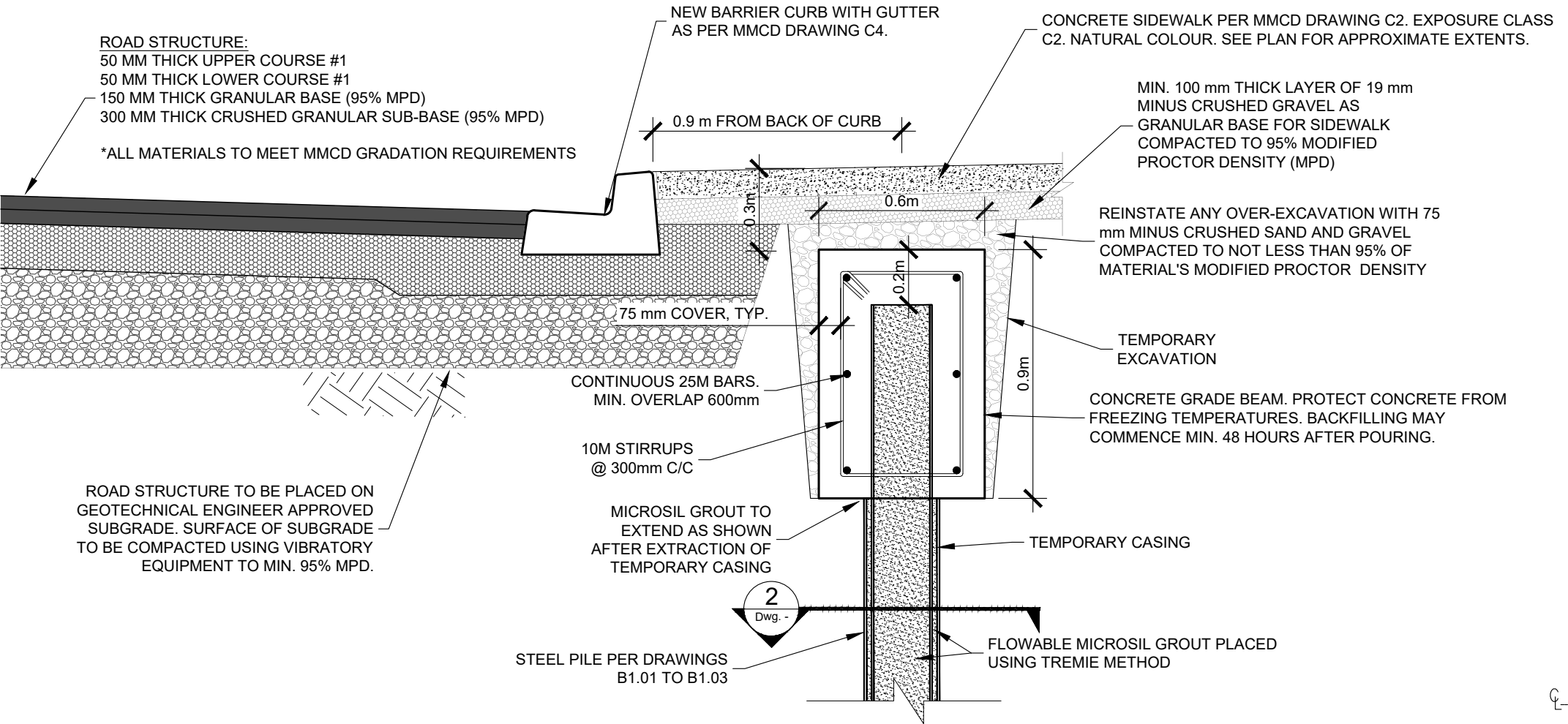
CLIENT:

DESIGN BY:

200 - 34425 MCCONNELL ROAD
ABBOTSFORD, BC V2S 7P1
TEL: 604-852-9088

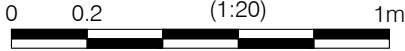
SEAL:

DATE	JAN 2020	DWN:	BO
SCALE:	AS SHOWN	DSN:	CB
GEOWEST FILE:	GA17-1167-01	CHK:	DJ
DRAWING NO:	B2.01	REV:	0

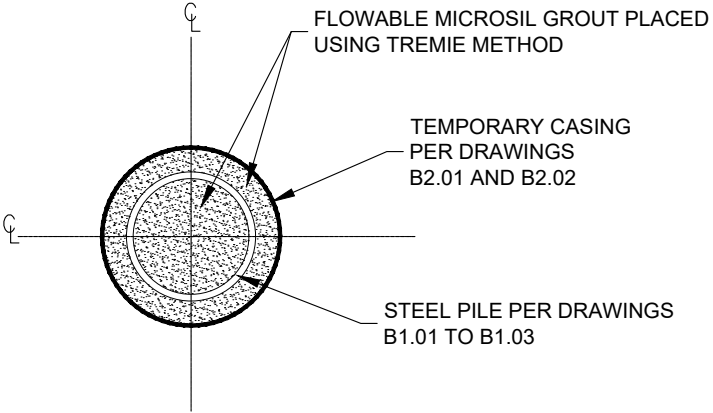


ROAD STRUCTURE TO BE PLACED ON GEOTECHNICAL ENGINEER APPROVED SUBGRADE. SURFACE OF SUBGRADE TO BE COMPACTED USING VIBRATORY EQUIPMENT TO MIN. 95% MPD.

1 TYPICAL GRADE BEAM DETAIL
SCALE: 1:20








2 SECTION
DWG. - SCALE: NTS





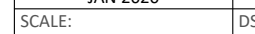


NOTE:
UNDERGROUND UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THESE DRAWINGS. CONTRACTOR TO CONFIRM LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO ANY EXCAVATION OR INSTALLATION OF PILES.

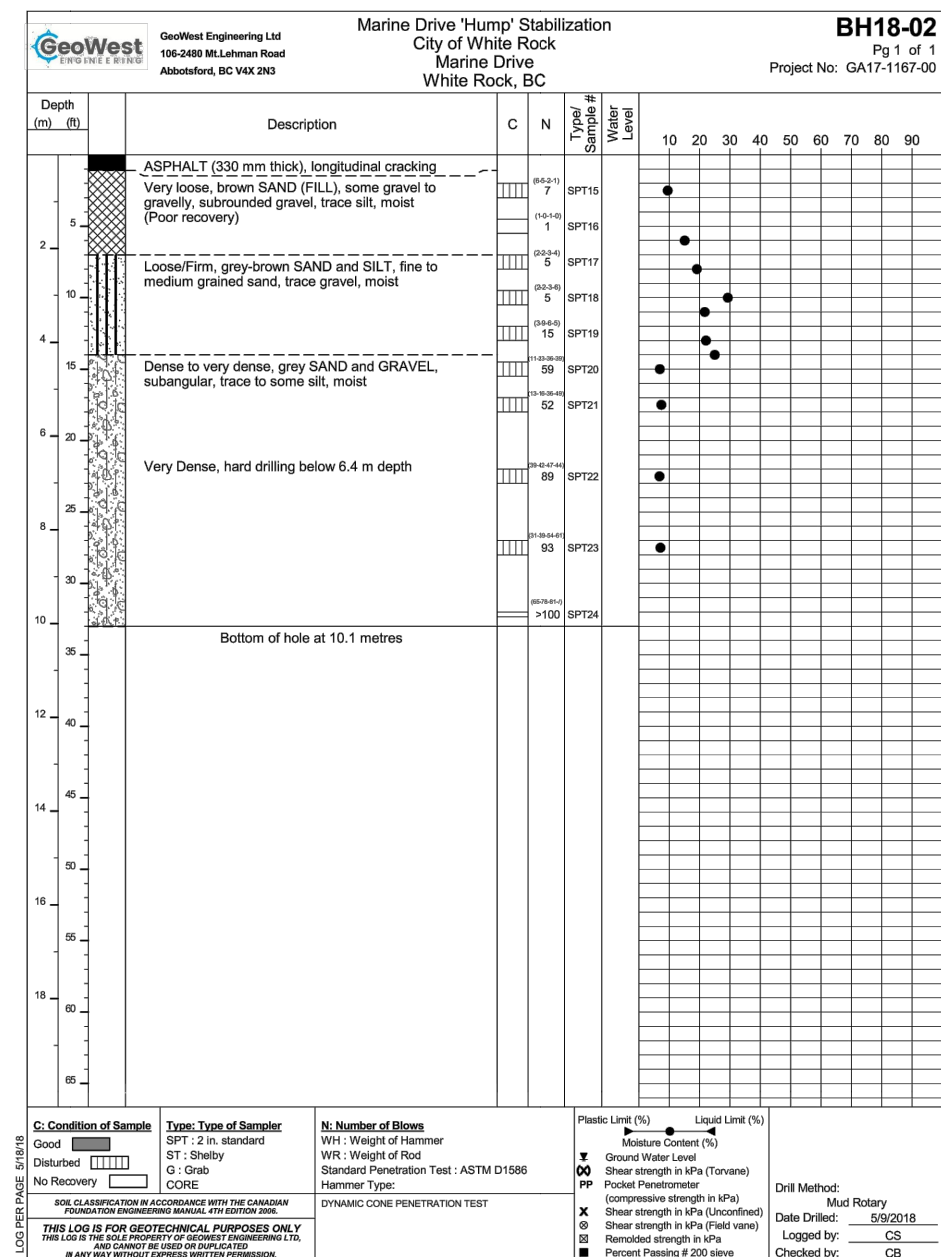
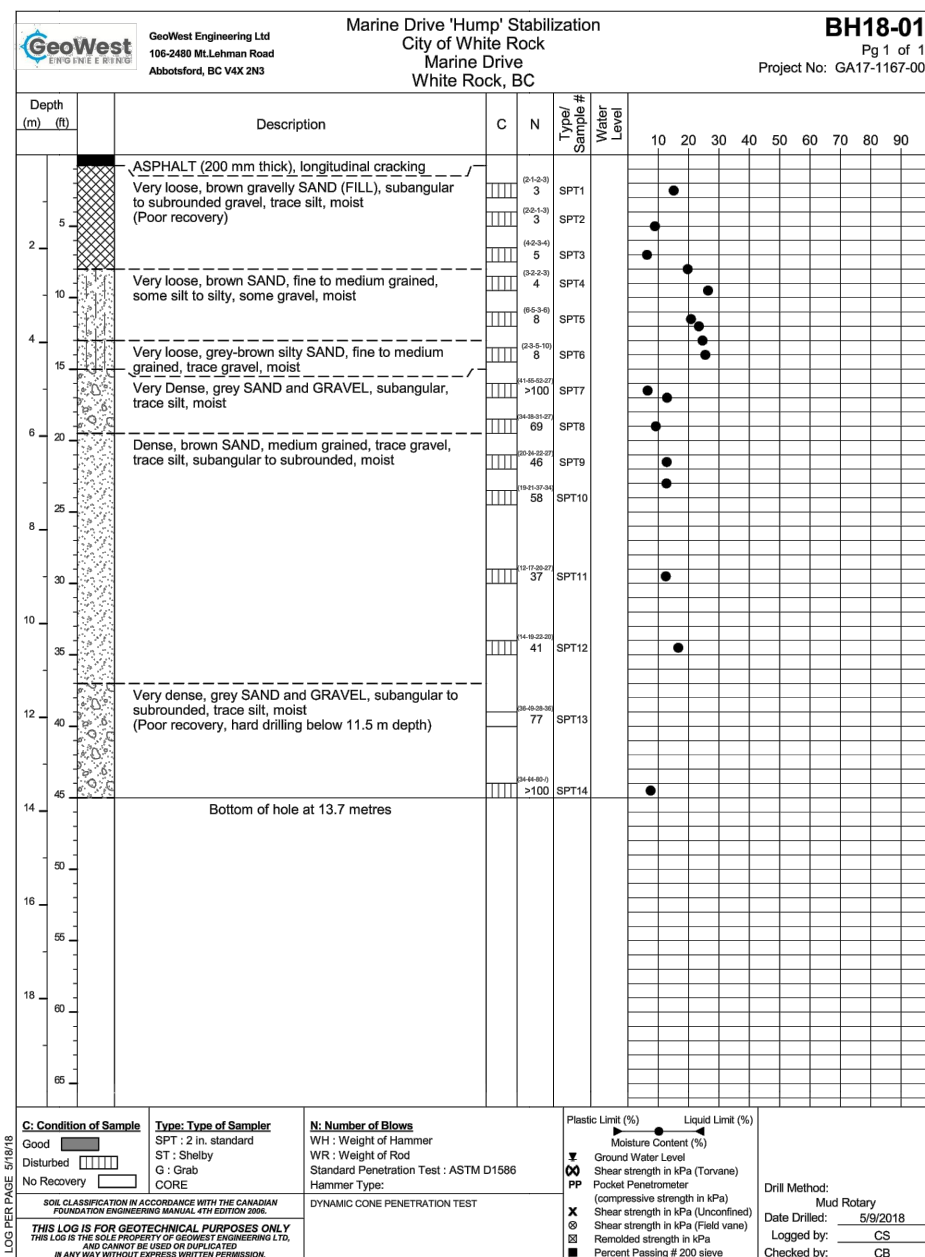
ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

REVISIONS					ADAPTED FROM:		DRAWING TITLE:		CLIENT:	DESIGN BY:	SEAL:	DATE	DWN:	
					-	TYPICAL GRADE BEAM DETAIL		JAN 2020				BO		
					PROJECT / DWG.NO:			AS SHOWN				DSN:		
					-	PROJECT: HUMP RETAINING WALL STABILIZATION		GEOWEST FILE:				CHK:		
					-	ADDRESS: MARINE DRIVE, WHITE ROCK, BC		GA17-1167-01				DJ		
						DATE:		CITY OF WHITE ROCK		DRAWING NO:	REV:			
					This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.		ADDRESS: MARINE DRIVE, WHITE ROCK, BC							
							CITY OF WHITE ROCK					200 - 34425 MCCONNELL ROAD ABBOTSFORD, BC V2S 7P1 TEL: 604-852-9088		
	31 January 2020	Issued for Tender	CS	DJ										
	24 January 2020	Issued for Client Review	BO	DJ										
REV	Revision Date	Revision Description	DWN	CHK								B3.01	0	






[illegible]

ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

REVISIONS					ADAPTED FROM:		DRAWING TITLE:		CLIENT:		DESIGN BY:		SEAL:		DATE		DWN:					
					-		SOIL LOGS (1/2)								JAN 2020		BO					
					PROJECT / DWG.NO:										SCALE:		AS SHOWN		DSN:		CB	
					DATE:										PROJECT:		HUMP RETAINING WALL STABILIZATION		CHK:		DJ	
					-		ADDRESS:		MARINE DRIVE, WHITE ROCK, BC				DRAWING NO:		REV:							
					This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.		CLIENT:		CITY OF WHITE ROCK				B3.02		0							
	31 January 2020	Issued for Tender	CS	DJ																		
	24 January 2020	Issued for Client Review	BO	DJ																		
REV	Revision Date	Revision Description	DWN	CHK																		



ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

REVISIONS					ADAPTED FROM:	DRAWING TITLE:	CLIENT:	DESIGN BY:	SEAL:	DATE	DWN:
					-	SOIL LOGS (2/2)				JAN 2020	BO
				PROJECT / DWG.NO:						SCALE:	DSN:
				-						AS SHOWN	CB
					DATE:	PROJECT:	HUMP RETAINING WALL STABILIZATION			GEOWEST FILE:	CHK:
					-					GA17-1167-01	DJ
	31 January 2020	Issued for Tender	CS	DJ	This drawing is the sole property of GeoWest Engineering Ltd. and cannot be used or duplicated in any way without the expressed written consent of GeoWest.	ADDRESS:	MARINE DRIVE, WHITE ROCK, BC			DRAWING NO:	REV:
	24 January 2020	Issued for Client Review	BO	DJ		CLIENT:	CITY OF WHITE ROCK			B3.03	0
REV	Revision Date	Revision Description	DWN	CHK							