

City of Coquitlam

Request for Proposals
RFP No. 21-003

Construction of Washroom Buildings at Mundy Park – Chilko Entrance

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SUMMARY OF KEY INFORMATION

RFP Reference	RFP No. 21-003 Construction of Washroom Buildings at Mundy Park Chilko Entrance
Overview of the Opportunity	The City requests proposals from experienced qualified firms to provide construction services for the Construction of Washroom Buildings at Mundy Park - Chilko Entrance .
Closing Date and Time	2:00 pm local time Friday, February 12, 2021
Instructions for Proposal Submission	Proposals are to be consolidated into one PDF file and uploaded electronically through Qfile, the City's file transfer service accessed at qfile.coquitlam.ca/bid <ol style="list-style-type: none"> In the "Subject Field" enter: RFP Number and Name Add files in .pdf format and Send (Ensure your web browser remains open until you receive 2 emails from Qfile to confirm receipt.) Phone 604-927-3037 should assistance be required.
Obtaining RFP Documents	RFP Documents are available for download from the City of Coquitlam's website: www.coquitlam.ca/140/Bid-Opportunities Printing of RFP documents is the sole responsibility of the Proponents.
Instructions to Proponents	The guidelines for participation that will apply to this RFP are posted on the City's website: Instructions to Proponents
Questions	Questions are to be submitted in writing quoting the RFP number and name up to 3 business days before the closing date sent to email: bid@coquitlam.ca
Addenda	Proponents are required to check the City's website for any updated information and addenda issued, before the Closing Date at the following website: www.coquitlam.ca/140/Bid-Opportunities
Withdrawal of Submission	Proposals may be withdrawn by written notice only, made by an authorized representative of the Proponent sent to email: bid@coquitlam.ca prior to the Closing Date and Time.
Terms and Conditions of Contract	The City's Standard Terms and Conditions - Purchase of Goods and Services , the City's General Conditions, and the City of Coquitlam's Supplementary General Conditions to the CCDC2-2008 will apply to the Contract awarded as a result of this RFP.

DEFINITIONS

“Contract” means the City Purchase Order (PO) that will be issued to formalize the acceptance of a Proposal by the City with the successful Proponent. Acceptance by the City will incorporate by reference, the RFP documents including Specifications, Terms and Conditions, Drawings, any subsequent information, addenda, negotiation and acceptance by the City. **Where it is not stated in the City’s General Conditions, the CCDC 2-2008 Stipulated Price Contract between Owner and Contractor, as amended by City of Coquitlam’s Supplementary General Conditions to the CCDC2-2008 will apply. CCDC2 -2008 Contract documents will be executed.**

“City” means City of Coquitlam.

“City Project Manager” means the City staff members appointed by the City who will act on its behalf with respect to duties and authorities as outlined in this RFP.

“Consultant(s)” mean those firms that the City has selected to provide professional and technical consulting services in relation to this RFP.

“Contractor” means the person(s) firm(s) or corporation(s) appointed by the City to carry out all duties, obligations, Work and Services first contemplated in the Request for Proposal and all associated documentation, which may also include mutually agreed revisions subsequent to submission of a Proposal. Both “Contractor” and “Proponent” are complementary in terms of duties, obligations and responsibilities contemplated at the Request for Proposals stage, through evaluation process, execution and performance of the Services and Works.

“Price” means the amount that will be paid by the City to the Contractor for delivery and acceptance of goods and Services.

“Proponent” means responder to this Request for Proposals.

“Proposal” means the submission by the Proponent.

“RFP” “Request for Proposals” shall mean and include the complete set of documents, specifications, drawings and addenda incorporated herein, and included in this Request for Proposals.

“Services” “Work” “Works” means and includes the provision of all services, duties and expectations as further described in this RFP, including, unless the context otherwise requires, the whole of the work, tools, materials, labour, equipment, travel, and all that is required to be done, furnished and performed by the Contractor.

“Supply” “Provide” shall mean supply and pay for and provide and pay for.

“Shall” “Must” “Will” “Mandatory” means a requirement that must be met.

1 INSTRUCTIONS TO PROPONENTS**1.1 Project Description**

The City of Coquitlam (“City”) requests Proposals from qualified, experienced companies to provide the Site Servicing Works associated with Construction of **Washroom Buildings at Mundy Park Chilko Entrance** located adjacent to Mundy Park east parking lot at Coquitlam, BC.

For further details, refer to:

- [Appendix A – Specifications](#)
- [Appendix B – Drawings](#)
- [Appendix C – Supplementary General Conditions](#)
- [Appendix D – Geotechnical Report & Geotechnical Memorandum](#)
- [Appendix E – Arborist Report](#)
- [Appendix F – Survey Drawings](#)
- [Appendix G – Leko Drawings](#)

1.2 Non-mandatory Site Visit

A non-mandatory site visit is scheduled for:

NON - MANDATORY SITE MEETING	
PROCESS	Proponents see RSVP instructions below. Based on registration numbers, the City may have multiple site meetings times to ensure proper social distancing and to ensure the safety of all in attendance. The City will adhere to proper provincial Covid-19 measures and ensure physical distancing and minimal sized gatherings are in place. No questions will be answered during the non-mandatory site visit(s); questions are to be submitted to bid@coquitlam.ca and an addendum will be issued to answer all questions and ensure consistency between meetings.
RSVP	Proponents are to confirm attendance by 5:00pm on Thursday, January 28, 2021 via email to bid@coquitlam.ca
DATE:	Tuesday February 2, 2021 and Wednesday February 3, 2021. Time and number of site meetings will be confirmed after the RSVP deadline in order to adhere to COVID-19 measures.
LOCATION:	Mundy Park east parking lot at Mariner Way across from Chilko Drive - 490 Mariner Way, Coquitlam
TIME:	To be scheduled based on RSVP's received
ATTENDANCE:	Limit of 1(one) representative per prospective Proponent. Maximum number of in-person per site meeting is 6 people.

1.3 Completion Date

Fortis BC Right of Way and BC Hydro Right of Way approvals have been applied for and are being reviewed. General Contractor is to coordinate with FortisBC and BC Hydro prior to construction and ensure that all required permits are obtained prior to construction.

The Work shall be substantially completed tentatively by: **Friday September 3, 2021.**

1.4 COVID-19 Safety Requirements

Contractor is responsible for following all COVID - 19 site safety requirements which are posted by WorkSafeBC and subject to change as the situation evolves:

<https://www.worksafebc.com/en/about-us/covid-19-updates/covid-19-industry-information/construction>

<http://www.bccasn.com/media/Guidance%20to%20Construction%20Sites%20Operating%20During%20COVID19.pdf>

[Appendix D – City of Coquitlam Contractor COVID-19 Info Sheet](#)

Contractors must post their Site Safety Covid-19 Specific requirements in plain view and visible to the public.

1.5 Instructions to Proponents

Proponents are advised that the rules for participation that will apply to this RFP are posted on the City's website: [Instructions to Proponents](#)

By submission of a Proposal, the Proponent agrees and accepts the rules by which the RFP and selection process will be conducted.

- a) Proponents are responsible to inspect the existing site(s) and shall fully understand the difficulties and restrictions for execution of the Work under this Contract.
Interpretations by the Proponent of the meaning of any section of the Contract drawings and specifications herein prior to submitting a price for the Work shall not remove the responsibility of completing the Work as per the directions of the City, including all costs associated with that Work, should the Proponent's interpretation be incorrect.
- b) Prior to submitting a price for the Work, the Proponent must seek clarification from the City for any items within the drawings and specifications that may appear to be unclear or conflicting.
- c) Prior to submitting a Proposal, Proponents should visit, inspect, and familiarize themselves with the site(s) and of everything and of every condition potentially affecting the works to be executed, so that the execution of the Contract by the successful Proponent is founded and based upon the Proponent's own examination, information, and judgment. Failure to visit the site(s) prior to the Proposal Closing Date will in no way relieve the successful Proponent from the necessity of furnishing any material or performing any work that may be required to complete the work in accordance with the conditions and specifications without additional cost to the City.
- d) It shall be the responsibility of the Proponent, by personal inspection of the site(s) of the works, examination of the contract documents, calculations, tests, and by requesting

any required clarifications from the City, to become satisfied with respect to the quantities, quality, and practicability of the work. The Proponent must be aware that any information from the City was and is approximate and speculative only and cannot in any manner be warranted or guaranteed. If the Proponent fails to make a proper investigation and examination of the site(s) and the Work, they shall signify by entering into the Contract that they are willing to assume all risk of the work proving more onerous than was contemplated and/or assumed when the Contract was signed.

A complete set of RFP and Contract documents will include:

- i. [Appendix A – Specifications](#)
 - ii. [Appendix B – Drawings](#)
 - iii. [Appendix C – City of Coquitlam’s Supplementary General Conditions](#)
 - iv. [Appendix D – Geotechnical Report & Geotechnical Memorandum](#)
 - v. [Appendix E – Arborist Report](#)
 - vi. [Appendix F – Survey Drawings](#)
 - vii. [Appendix G – Leko Drawings](#)
- e) Figure dimensions of a drawing shall take precedence over measurements scaled from the drawing and large-scale drawings take precedence over those of a smaller scale. Supplementary drawings and specifications supersede their antecedents. Addenda drawings take precedent over all drawings. Addenda specifications take precedent over all specifications. In case of conflict between figured dimensions on a drawing and the dimensions of a specified product, the dimensions of the specified product will govern. The drawings and specifications complement each other and anything called for by one will be as binding as if called for by both.
- f) All information requested for the Proposal is to be completed by the Proponent on the supplied forms only and shall be based upon the whole of the specifications and Contract documents, without reservation. A Proposal that does not include all of the above sections, completed as specified herein, may be rejected.
- g) The selected Proposal shall supply all materials, equipment, installation, commissioning, and construction necessary for the successful starting and completion of the project in accordance with the drawings and specifications herein. It shall be the responsibility of the Proponent to include in the submitted Proposal amount sufficient amounts to cover the cost of the work and materials required to complete the Work but not specifically noted in the drawings and/or specifications. It is assumed that all taxes, duties and levies have been included in the Proposal amount.
- h) Complete sub-contracting of works will not be approved; however, segments of work involving special skills may be sub-contracted.
- i) All information in this RFP Document, Drawings, Specifications, Site Visit and Investigation, and any resulting Addenda will be incorporated into any Contract between the City and the successful Proponent, and therefore must be considered by the Proponent in preparing their Proposal.
- j) The selected Proposal shall supply all materials and construction necessary for the successful starting and completion of the project in accordance with the drawings and

specifications herein. It shall be the responsibility of the Proponent to include in the submitted Proposal sufficient amounts to cover the cost of all work and materials required to complete the Work noted in the drawings and/or specifications. All taxes, duties and levies are to be included in the Proposal amount.

- k) The Proponent must indicate the names of the Proponent's senior staff for the project, specifically identifying the project superintendent, and the names of the major sub-Contractors and the work they will be performing.

1.6 Alternate Products

Requests for any proposed alternate product to be **submitted and approved seven days prior** to the Closing Date.

1.7 Prices

Prices shall be all-inclusive and stated in (Canadian Funds). Prices shall remain FIRM for the completion of the Services.

Prices shall include the provision of all tools, materials, equipment, labour, transportation, fuel, supervision, management, overhead, materials, traffic control, services, all necessary packing and crating (where applicable), Canadian Customs import and export duties, freight, handling, transportation, insurance, all other associated or related charges, foreign, federal, provincial and municipal taxes, bonding costs, all licences, permits, inspections and all other requirements necessary for the commencement, performance and completion of Services as described.

Taxes are to be shown separately at time of invoicing.

The lowest price of any Proposal will not necessarily be accepted but will be analyzed to determine best overall value.

1.8 Eligibility

For eligibility, and as a condition of award, the successful Proponent would be required to meet or provide the equivalent:

- a) Commercial General Liability (CGL) insurance \$5M coverage provided on the [City's Standard Insurance Form](#)
- b) Be registered and provide WorkSafeBC clearance
- c) [Prime Contractor Designation Form](#) and be responsible for all the Work at the site in accordance with WCB regulations, **including COVID-19 site safety requirements**
- d) Accept the City's standard Terms and Conditions posted on the City's website: [Standard Terms and Conditions - Purchase of Goods and Services](#)
- e) Enter into a Contract with the City using the CCDC 2-2008 document supplemented by the City's Supplemental General Conditions to CCDC 2-2008.
- f) A City of Coquitlam or Tri Cities Intermunicipal [Business License](#)
- g) **A CONSENT OF SURETY SHOULD BE SUBMITTED WITH THIS PROPOSAL** confirming agreement to Bond and to verify the Proponent will provide, at time of award:
 - i. **A PERFORMANCE BOND IN THE AMOUNT OF 50% OF THE CONTRACT PRICE;**

ii. **A LABOUR & MATERIALS PAYMENT BOND IN THE AMOUNT OF 50% OF THE CONTRACT PRICE.**

These items are not required as part of this Proposal Submission but will be required prior to entering into an agreement with the City for Services.

1.9 Evaluation Criteria

The criteria for evaluation of the Proposals may include, but is not limited to:

Corporate Experience and Resources – 35 points

- Established business and demonstrated performance providing services of similar size, scope and complexity
- Successful completion of relevant projects referenced within the last 5 years
- Staff qualifications and experience
- Key Personnel & Sub-contractors
- References (on-time completion, performance, within budget, etc.)

Technical – 35 points

- Equipment and Resources
- Methodology, set-up and execution of the work
- Risk factors
- Quality Assurance program
- Site Safety
- Compliance to Specifications
- Schedule and Completion Date

Financial – 30 points

- Total Price,
- Price for Optional work
- Labour Rates and Equipment Rates
- Value Added Benefits
- Sustainable Benefits and Social Procurement

And, upon selection of one or more lead Proponent(s):

- References may be contacted to verify successful completion of successful projects including those in the City of Coquitlam
- Interviews may be conducted

The City reserves the right to check references on other projects even if they are not specifically listed. Information obtained from references will be confidential and will not be disclosed to any Proponents.

These criteria will be used to determine best overall value to the City as well as any other criteria that may become evident during the evaluation process.

The City may, at its discretion, request clarification or additional information from a Proponent with respect to any Proposal and the City may make such requests to only

selected Proponents. The City may consider such clarifications or additional information in evaluating a Proposal.

Incomplete Proposals or Proposals submitted on forms other than the Proposal Form may be rejected.

Proponents agree the City may disclose names of Proponents and total prices. However, no unit prices, rates or scores will be provided to any Proponents.

The City reserves the right to reject without further consideration any Proposal which in its opinion does not meet the criteria it considers essential for the Work outlined in this RFP.

1.10 Requested Departures

The Proponent acknowledges that the departures requested in the Proposal Submission Form will not form part of the Contract unless and until the City specifically consents in writing to any of them. The City will evaluate those departures as per Evaluation Criteria.

1.11 Negotiation

The City reserves the right, prior to Contract award, to negotiate changes to the scope of the services or to the Contract documents (including pricing to meet budget) with the highest ranked Proponent and then consecutively, any one or more Proponents, proposing the “best value” without having any duty to advise any other Proponent or to allow them to vary their Proposal as a result of changes to the scope of the Services or to the Contract documents; and the City may enter into a changed or different contract with the Proponent(s) proposing the “best value”, without liability to Proponents who are not awarded the project.

2 GENERAL CONDITIONS

2.1 Terms and Conditions

The City's [Standard Terms and Conditions - Purchase of Goods and Services](#), as published on the City's website, the Conditions listed below, the Request for Proposals Documents, Appendices, along with the accepted Proposal, addenda and any subsequent clarifications, correspondence, the CCDC 2 – 2008 Stipulated Price Contract Between Owner and Contractor, as amended by the City's Supplementary General Conditions to the CCDC 2 – 2008 and City Purchase Order that will be issued to formalize with the successful Proponent through negotiation process with the City based on the Proposal submitted and will incorporate by reference the Request for Proposals, Specifications, Drawings, Appendices, any additional subsequent information, any addenda issued, the Proponent's response and acceptance by the City, the totality of which will constitute the Contract.

In addition, the following terms and conditions will also apply to this Contract:

2.2 Permits Regulations

The Contractor is to obtain permits except the Building Permit, pay all fees therefore and comply with all Provincial, Municipal and other legal regulations and by-laws applicable to the work. If no local regulations, comply with the National Building Codes of Canada, latest revision. Workers Compensation Act and Workplace Hazardous Material Information System ("W.H.M.I.S.") requirements and regulations are to be strictly adhered to. The City will apply and pay for the Building and Plumbing Permits for this Project. The Contractor will apply and pay for the Electrical Permit.

2.3 On-Site Hazards and Utilities Present

- a) The Contractor is to make themselves aware of any and all on-site hazards including but not limited to underground and overhead utilities in or near to the work area and to take every precaution necessary to eliminate any risk that may exist. If an on-site hazard exists that is causing or may cause injury to any person(s), the Respondent is to take immediate action to mitigate risk and damage, and then to notify the City's contact person.
- b) The locations of all such hazards are to be investigated and verified in the field by the Contractor.

2.4 Warranty

The Contractor shall guarantee the work and materials against any defects arising from faulty installation, faulty materials supplied under the Contract, or faulty workmanship, which may appear within two (2) years from the date of acceptance of the work by the City. Faulty or damaged materials shall be replaced, and any defects discovered or failures which occur during the guarantee period, shall be rectified to the satisfaction of the City on-site within two (2) weeks of notification. This shall be at no cost to the City.

2.5 Site Control and Organization

The Contractor shall at all times be responsible for maintaining safety zones around the worksite with safety barricades and signage to protect workers, City Staff and Public.

The Contractor shall at all times keep the site secure, safe, clean and orderly as the Work allows, with the removal of trash and debris daily.

Operations and Coordination of the Services

The Contractor shall agree to coordinate the execution of the Services with the City such that disruption of the work of all involved is minimized.

2.6 Hours of Work

The Contractor shall carry out the work during regular business hours, and in compliance with the City's Noise Bylaw. Permits will be required for work outside of normal working hours. The Contractor shall be responsible for obtaining any such permits.

2.7 Environmental Protection

The Contractor shall be responsible to take all necessary measures to comply with requirements of the Federal and Provincial Environmental Protection Agencies and Municipal Acts and Bylaws in respect to air, earth and water pollution.

2.8 Services, Utilities and Infrastructure

The Contractor is directed to make special enquiry of the authorities, companies, individuals owning or operating all, conduits, cables, tracks and other structures and services, and to determine their character and locations and verify the accuracy of the information obtained.

The City of Coquitlam does not ensure the accuracy of such information and that any such information shown on Drawings is furnished as the best available, and is to be interpreted as the qualified Contractor deems appropriate. The City disclaims all responsibility for its accuracy or sufficiency.

2.9 Equipment, Materials and Workmanship

The Contractor shall ensure that they are qualified and experienced and have the necessary resources for the successful completion of the work including any amendments as they may occur during the execution of the Work.

All Work shall be performed by skilled, qualified, and experienced trades personnel.

All workmanship and materials will be subject at any time to the inspection and approval of the City.

Equipment must be in good mechanical repair and not require excessive maintenance or create excessive down time that jeopardizes the Contractors ability to provide the services agreed to.

3 SCOPE OF SERVICES

3.1 Scope of Work

The Contractor to provide **Site Services for Construction of Washroom Buildings at Mundy Park Chilko Entrance** adjacent to Mundy Park east parking lot at Coquitlam, BC.

Also Refer to:

- **Appendix A – Specifications**
- **Appendix B – Drawings**
- **Appendix C – City of Coquitlam’s Supplementary General Conditions**
- **Appendix D – Geotechnical Report & Geotechnical Memorandum**
- **Appendix E – Arborist Report**
- **Appendix F – Survey Drawings**
- **Appendix G – Leko Drawings**

Scope of work includes but is not limited to:

1. Supply and installation of a new site services, including the following major items:
 - a) All the required permits, also see note 3
 - b) Earthworks, including cut, fill, removals and import.
 - c) Site preparation including partial demolition of the existing fence and stumps removal.
 - d) Implementation of ESC Plan including maintenance and removal.
 - e) New fence.
 - f) All required civil Infrastructure works and holding tanks.
 - g) A 24 hr leak test for each holding tank as per Fraser Health Authority requirements.
 - h) Supply and installation of a visual alarm indicator for each holding tank.
 - i) Coordination with City officials, Fortis BC and BC Hydro for permits and/or inspections.
 - j) Concrete Works.
 - k) Coordination with Leko Precast Washroom Supplier/Installer.
 - l) Electrical works – connection to adjacent hydro pole including cost associated with supply & installation of a new electrical kiosk with vinyl wrap. The City will provide the image file.
 - m) All interior fit out washroom works including fur out walls.
 - n) All interior plumbing and electrical works.
 - o) Exterior paint. Stencils will be provided by the City.
 - p) New gravel and asphalt pathway.
 - q) All the landscape works as per the drawings including topsoil & seeding.
 - r) Parking lot and pathway modifications including new bollards.
 - s) Concrete slab with broom finish (no troweled edges are permitted).
 - t) New Steel vault covers (color to be black).

- u) Supply and install aggregate binder at Drain Rock areas.
 - v) Supply and installation of a new water fountain as per the specs.
 - w) Building, Plumbing, Electrical, ESC, Fraser Health, Fortis & BC Hydro Permit closing.
2. FortisBC Pipeline and/or Right of Way. Contractor to coordinate and provide FortisBC with the mandatory by law notice required prior to start of the construction or excavation work to facilitate dispatching a FortisBC representative. A copy of the permit must be maintained on the job site at all times.
 3. Building and Site Servicing Plumbing Permit has been already applied for by the City. The successful proponent will be provided with the Permits and marked up permit drawings. Contractor is responsible to coordinate inspections with City officials in accordance with their required notices. A copy of the permit and permit drawings must be maintained on the job site at all times.
 4. Fraser Health permit has been applied for by the City and the consultants and obtained. Contractor to coordinate for inspections, provide required info and close the Fraser Health Authority Permit upon completion of the project.
 5. The contractor will be responsible for applying, paying and providing an Electrical Permit, as well as all coordinating inspection with City officials in accordance with their required notices.
 6. General earthworks, including clearing and grubbing, excavation, stripping and removals, disposal, and import of base needed to complete rough grading and final grading.
 7. Survey, layout, site management and safety, as well as quality control testing and measurement verifications needed to demonstrate the area is constructed to meet the standards and layout of the design drawings and project documents and specifications. The Contractor to submit a detailed Quality Control Plan to the Consultant and City Project Manager.
 8. Concrete testing as per the specifications.
 9. Contractor is responsible for demonstration of correct service tie-ins and connection works, water service connection, electrical service servicing per drawings.
 10. Contractor to install new Romex Rompox “Deko” (D1) Aggregate Binder or approved equal at drain rock areas as shown on the drawings as per Romex Deko Gravel Path Detail and installation instructions as per manufacturer’s written instructions.
 11. Protection and clean tie-in of off-site works, including flush transitions to existing pathways.
 12. Erosion and sediment control works, including adherence to the ESC plan are required. Work required by consultants or the City ESC Inspector for maintenance of the design, including but not limited to the top up of straw, riprap, and maintaining the required storm pond capacity, is considered incidental to the work.
 13. Contractor to provide updates on coordination regarding the City inspection milestones at bi-weekly construction meeting.
 14. Soft landscape works such as hydro seed are included in the general scope per drawings. Installation works of soft landscape, including placement and preparation of growing

medium is to be in accordance with Canadian Landscape Standards and IIABC Standards respectively.

15. Contractor shall be responsible for maintaining the hydro-seeded area until establishment (6 to 8 weeks after installation).
16. The Contractor to provide a project construction schedule prior to the start of construction. The schedule must identify all the necessary start and completion dates of construction, construction activities, submittals process activities, material deliveries, and other milestones required to give a complete review of the project. The Contractor to submit an updated construction schedule with each Progress Claim.
17. Two weeks after award, the Contractor will submit a detailed Submittal Log Schedule for all the required deliverables as identified in the general conditions and technical specifications.
18. Contractor will be responsible for all testing including costs required as per the specifications and drawings. The contractor will be required to submit all test results to the consultant.
19. The washroom buildings will be delivered by Leko Precast who will be responsible for the supply and costs associated with the precast, its delivery to the jobsite and setup.
20. Provisions, Scheduling and Coordination:
 - a) The Contractor shall be responsible for obtaining/paying for all required licenses and permits including a Truck Route Exemption Permit, if required.
 - b) Contractor is responsible for all permits road closures, traffic control and barricades required for installation of the new washrooms.
 - c) Contractor to ensure the roads at entry and exit points are kept safe and clean during construction. Daily cleaning of access roadways including the parking lot; including sweep residual tracked sediment. **Flushing of roadways will not be permitted.**
 - d) Contractor will be responsible to supply & install all temporary services to the site during construction i.e. Water, Electrical, etc. if required. Installation shall be coordinated and approved by the City. All work shall meet the City of Coquitlam standards and requirements.
 - e) Site progress meetings will be scheduled by the Consultant on a bi-weekly basis or as deemed necessary depending on the progress of the work. Meeting minutes will be documented and to be distributed by the Consultant on record not later than three working days from the date of the meeting.
 - f) Contractor to appoint a qualified and experienced Project Manager that will lead and act as the primary point of contact throughout the duration of the project execution until final completion. The Contractor will not substitute a Project Manager without the written consent of the Consultant and City Project Manager.
 - g) Along with the Proposal submission, the Contractor is to submit the related credentials and qualifications of the Project Manager and the site Superintendent that summarize and confirm their professional experience.

- h) Prior to commencing the Work, the Contractor will designate a qualified and experienced Site Superintendent and to notify the Consultant and City Project Manager of the name and telephone number of the Superintendent. The Contractor will keep the Superintendent at the Work site during working hours until the Work has reached completion. The Contractor will not substitute a Superintendent without the written consent of the Consultant and City Project Manager.
- i) The Contractor shall provide a two (2) week “look ahead” construction schedule based upon the current monthly updated schedule as approved at the bi-weekly site progress meetings and that identifies the daily planned activities for that period. If, in the opinion of the Consultant and the City Project Manager, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contractor, without additional cost to the City. In this circumstance, the Consultant and the City may require.
- j) the Contractor to provide a recovery plan, and to submit for approval any supplementary schedule or schedules in Gantt chart form, as the Consultant deems necessary to demonstrate how the approved rate of progress will be regained.
- k) The Contractor is responsible for adhering to the Subcontractors list provided in this proposal. Substituting subcontractors without notifying and obtaining written approval from the City is not allowed.
- l) Contractor will abide by the City of Coquitlam Good Neighbor Policy of minimal disruption for the Alice Lake cul-de-sac residents and parking lot users. Contractor will provide the City of Coquitlam a 2 week look ahead of any disruptions that may need to be communicated to the neighborhood at Alice Lake Place and public using the parking lot, internal City departments, Fortis BC and BC Hydro.
- m) The Contractor will leave the site at completion in as good or better shape than was found when mobilizing. Any damage to parking lots, fences, concrete or surrounding areas or buildings will be repaired by the Contractor at no cost to the City.

APPENDIX A

SPECIFICATIONS



Mundy Park Chilko Washrooms

for the
City of Coquitlam

SPECIFICATIONS

Issued for RFP Jan 14, 2021

Project: 20-26

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09 99 99	Finishes List
Division 10	Specialties
10 99 00	Miscellaneous Specialties
Division 22	Plumbing
	Refer to Mechanical Drawings <i>by AME</i>
Division 23	Heating Ventilation and Air Conditioning
	Refer to Mechanical Drawings <i>by AME</i>
Division 26	Electrical
	Refer to Electrical Drawings <i>by DMD</i>
	Refer also to Electrical General Requirements on Sheet A0.3

Supplementary Civil Specifications by *Van Der Zalm & Associates***Reference Documents:**

Geotechnical Report	Nov 25, 2020 report Thurber Engineering
	Jan 12, 2021 memorandum Thurber Engineering
Survey Drawings	Oct 07 & 21, 2020 drawings Target Land Surveying
Prefabricated Buildings	Nov 27, 2018 invoice for supply & install of prefabricated washroom buildings Leko Precast
	Apr 03, 2020 standard drawings of prefabricated washroom buildings Leko Precast
	June 2016 standard drawings of prefabricated washroom buildings Leko Precast
Arborist Report	Jul 02, 2020 report Diamond Head Consulting

Revised to January 2021

1.1 NOTIFICATION OF AUTHORITIES

- .1 Notify the appropriate authorities of intention to carry out operations in the vicinity of a utility or structure at least one week prior to the commencement of such operation and obtain approval for access to any operations carried out on adjacent public property.

1.2 DOCUMENTS REQUIRED

- .1 The following documents will be kept on site throughout the entire period of the work.
 - .a Contract Drawings.
 - .b Specifications.
 - .c Addenda.
 - .d Reviewed Shop Drawings.
 - .e Change Orders.
 - .f Change Directives
 - .g Field Test Reports.
 - .h BC Building Code, B.C. Plumbing Code, B.C. and Canadian Electrical Codes, together with all supplements, Occupational Environment Regulations.

1.3 LABOUR CONDITIONS

- .1 It is the responsibility of the Contractor and the Subcontractors in formulating the bid to ascertain the labour conditions existing on the site with particular respect to union or non-union labour and to comply with these conditions. The cost of doing so shall be included in the Contract Price.

1.4 COST BREAKDOWN

- .1 Before submitting the first application for payment, submit breakdown of the Contract Price in detail as directed by the Consultant. After approval by the Consultant, the cost breakdown will be used as the basis for progress payment.

1.5 FEES, PERMITS, LICENSES

- .1 The Building Permit will be obtained and paid for by the Owner. The Contractor will obtain all other permits, licenses including a business license and certificates required for performance of the work. Provide the inspection authorities with such plans and information as may be required for issue of acceptance certificates. Furnish inspection certificates to the Consultant in evidence that works installed conform with the requirements of the Authority Having Jurisdiction. Fees and permits (other than Building Permit) will be paid by the Contractor.

1.6 CODES AND STANDARDS

- .1 Execute the work in accordance with the BC Building Code and Supplements, Occupational Environment Regulations, and all other applicable codes and standards.
- .2 Conform to the latest issue of codes and standards specified, as amended and revised on the date of receipt of Bids unless otherwise required to meet applicable Codes and Standards.
- .3 Materials and workmanship must conform to or exceed applicable standards of Canadian Government Specification Board (CGSB), Canadian Standards Association (CSA), American Society for Testing and Materials (ASTM) and other referenced organizations.
- .4 If required by the Consultant, the manufacturer/supplier shall furnish documentation indicating compliance with the requirements of the BC Building Code including, and where required, certification by a Professional Engineer registered in the Province of British Columbia.

1.7 ALTERNATIVE AND EQUIVALENT PRODUCTS

- .1 Only products and methods specified shall be used, or such products and methods approved as equivalent. Alternative products and methods may be used only where approved in writing by the Consultant prior to the submission of the Bid Price. If requested by the Consultant, alternatives may be considered after submission of the Stipulated Bid Price.
- .2 Application for approval of equivalent or alternative products will be received by the Consultant up to seven (7) working days prior to close of Bids, other than as noted above.
- .3 Submit request for approval to the Consultant. List specification section or drawing number and page, brand, model, and manufacturer of specified product and proposed product, with full supporting technical specifications, data, and samples and any other special requirements listed in the section.
- .4 Only requests with full and complete documentation will be considered. Incomplete submissions will be rejected without review of any kind.
- .5 Approval of products does not relieve the Contractor from meeting the requirements of the specifications, and for all maintenance that may be required for incorporation of them into the work.
- .6 If any alternative product is used, whether specified or later approved, the Contractor shall make all changes to the Work necessitated by use of the alternative at no extra cost to the Owner.

1.8 WORKERS' COMPENSATION

- .1 Prior to commencing work and prior to receiving payment for Substantial Performance of the Work, provide evidence of compliance with all requirements of the Workers' Compensation Board, including payments due thereunder.
- .2 At any time during the term of the Contract, when requested by the Consultant, provide such evidence of compliance for any or all Subcontractors.

1.9 PROTECTION OF PUBLIC WORK AND PROPERTY

- .1 Adequately protect all work completed or in progress. Any work damaged or defaced due to failure to provide such protection shall be removed and replaced or repaired, as directed by the Consultant at no increase in the Contract Price.
- .2 The Contractor shall assume responsibility for any damage to existing paving, walks, adjacent building and property, services, etc., caused by construction operations. The Contractor shall repair and make good same, or bear the expense of such repairing.
- .3 The Contractor shall notify the Consultant immediately of any damage to existing amenities or services and shall remove and replace its work at no additional charge to allow repairs or replacement to affected damaged amenities or services. The Contractor shall take proper measures to maintain access to existing electrical pull boxes, valve boxes and allied services concealed underground and on the surface.

1.10 COOPERATION AND COORDINATION

- .1 The Contractor shall take every common and reasonable precaution to avoid damage and minimize interruption to Owner's property, adjacent property and services and programming schedule. All costs associated with making good any damage and/or providing temporary service or protection shall be borne by the Contractor.
- .2 Coordinate the work of Subcontractors with efficient and continuous supervision.
- .3 Cooperate with the authorities having jurisdiction and other Contractors engaged in simultaneous development of adjacent facilities. Coordinate access to the site, the location, removal or adjustment of temporary fences, sheds and utility services.
- .4 Where appropriate the Contractor shall coordinate the work of all trades requiring suspension or fixing devices to be incorporated into the structure. Where required, such suspension or fixing devices are to be built into the structure and/or by of the type specified or detailed herein, the Contractor shall submit to the Consultant details of the device he proposes to use accompanied by such information as the Consultant may require to assess the capability of the proposed device.

1.11 SPECIFICATIONS

- .1 The Contractor shall be responsible for all materials and labour required to complete the work to the full intent of the Drawings and Specifications including changes made by Addenda, Supplemental Instructions, Change Directives or Change Orders. The Specifications are complementary to the Drawings and Details and what is required by any one shall be as binding as if required by all.
- .2 The Definitions and General Conditions of the Contract, Supplementary Conditions, and General Requirements all form an integral part of each individual section of the Specifications and shall be read, interpreted, and coordinated with all other parts.

1.12 TRADEMARKS AND LABELS

- .1 Trademarks and labels, including applied labels shall not be visible in the finished work. Such trademarks or labels shall be removed by grinding if necessary, or painted out where the particular materials is being painted. The exception of this requirement shall be those essential to obtain identification of mechanical and electrical equipment and where required by Code to ensure compliance.

1.13 CONCEALMENT

- .1 Conceal pipes, ducts, and wiring in floor, wall, and ceiling construction of finished areas except where indicated otherwise.

1.14 REQUESTS FOR SITE REVIEW

- .1 Requests for Interim and Final Reviews must be in writing. The Contractor requests for Interim Review will read "fully completed". The Contractor's final request will read "all deficiencies fully completed". Requests for these reviews must be in writing no later than seven (7) days prior to review.

1.15 REVIEW AND TESTING EXTRA COSTS

- .1 When Interim or Final Reviews and tests of installation, assemblies, and equipment by the Consultant, Municipal, Public Utility and/or manufacturer's inspectors indicate deficiencies, all costs incurred by any of these authorities to revisit the project site for further review and tests will be paid by the Contractor.
- .2 Requests for Site Reviews to be in writing to the Consultant or applicable authority.

1.16 DISPOSAL OF WASTES

- .1 Fires, burning or burying of rubbish and waste materials on the site are not permitted.
- .2 Disposal of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers are prohibited.
- .3 Provide a container for waste. Drywall and other hazardous material shall be kept separate. Dispose of all waste materials in a legal manner.

1.17 CLEANING DURING CONSTRUCTION

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .2 Maintain project grounds and public properties free from accumulations of waste materials and rubbish.
- .3 If required, provide street cleaning in the immediate vicinity to remove any construction or demolition waste from the site.

1.18 MAKING GOOD

- .1 The Contractor shall make good all surfaces and installations disturbed in any way by its operations in fulfilling the Contract.

1.19 ADJACENT PROPERTY

- .1 The Contractor shall conduct construction operations with minimum interference to adjacent roadways, sidewalks, and access facilities in general. Keep such areas free from materials, debris, and equipment at all times. Confine operations to areas designated by the Consultant and/or Owner. Maintain fire vehicular access to the Project Site at all times.

1.20 FIRE SAFETY PLAN AND MANUAL

- .1 Provide Information for Fire Safety Plans and Fire Safety Plan Manual in strict accordance with the B.C. Fire Code and other municipal and provincial regulations.

1.21 NOISE

- .1 Every effort must be made to keep noise levels to a minimum.
- .2 Any unnecessary noises such as radios are not permitted.

END OF SECTION 01 00 00
January 2021

1.1 RELATED WORK

- .1 Section 01 70 00 Execution and Close Out Requirements.

1.2 DESCRIPTION OF WORK

- .1 Schedule, form, content.
- .2 Schedule revisions.

1.3 SCHEDULES REQUIRED

- .1 Submit the following schedules:
 - .a Construction schedule.
 - .b Submittal schedule for shop drawings and product data.
 - .c Submittal schedule for timelines of Owner furnished products.
 - .d Material order schedule.
 - .e Product delivery schedule.

1.4 FORMAT

- .1 Prepare schedule in the form of a horizontal bar chart.
- .2 Provide a separate bar for each trade or operation.
- .3 Provide horizontal time scale identifying the first work day of each week.
- .4 Format for listing: the chronological order of the start of each item of work.
- .5 Identification of listing: by specification subjects.

1.5 SUBMISSION

- .1 Submit initial schedule within five (5) days after award of Contract. No payment will be released until schedule has been received and reviewed.
- .2 Submit revised progress schedule if progress of work is delayed more than ten (10) days. Refer to Clause 1.7.5.
- .3 Distribute copies of the reviewed schedule to:
 - .a Job site office.
 - .b Subcontractors.
 - .c Consultant.

.d Owner.

- .4 Instruct recipients to report to the Contractor within five (5) days, any problems anticipated by the timetable shown in the schedule.

1.6 MATERIAL AVAILABILITY

- .1 Immediately upon signing the contract the Contractor and his subtrades shall review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, the Contractor shall notify the Consultant of such, in order that substitutions or other remedial action may be authorized in time to prevent delay in performance of work.
- .2 In the event of failure to notify the Consultant at commencement of work and should it subsequently appear that work may be delayed for such reasons, the Consultant reserves the right to substitute more readily available products of similar character, at no increase in contract price.

1.7 CONSTRUCTION PROGRESS SCHEDULE

- .1 Include the complete sequence of construction activities.
- .2 Include the dates for the commencement and completion of each major element of construction.
- .3 Show projected percentage of completion for each item as of the first day of each month.
- .4 Indicate progress of each activity to date of submission of schedule.
- .5 If progress schedule is revised, show changes occurring since previous submission of schedule:
- .a Major changes in scope.
 - .b Activities modified since previous submission.
 - .c Revised projections of progress and completion.
- .6 Provide a narrative report to define:
- .a Problem areas, anticipated delays, and the impact on the schedule.
 - .b Corrective action recommended and its affect.
 - .c The affect of changes on schedules of other contractors.

END OF SECTION 01 32 00
January 2021

1.1 WORK INCLUDED

- .1 Submit shop drawings, product data and samples required by the Contract Documents directly to the Consultant.
- .2 Designate in the construction schedule, or in a separate coordination schedule, the dates for submission and the dates that reviewed shop drawings, product data and samples will be needed.

1.2 SHOP DRAWINGS

- .1 Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on the Contract Drawings.
- .2 Refer to Divisions 15 and 16 for requirements specific to those Divisions.
- .3 When shop drawings have been received by the Consultant he shall mark with the following information:

REVIEWED ()

REVIEWED AS MODIFIED ()

REVISE AND RESUBMIT ()

NOT REVIEWED ()

Name of Consultant

By: _____

Date: _____

It shall be understood that this review by the Consultant is for the sole purpose of ascertaining conformance with the general design concept.

This review shall not mean that the Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the contractor of his responsibility for meeting all requirements of the Contract Documents. the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, for coordination of the work of all subtrades.

1.3 PRODUCT DATA

- .1 Preparation:
 - .a Clearly mark each copy to identify pertinent products or models.
 - .b Show performance characteristics and capacities.

.c Show dimensions and clearances required.

.d Show wiring or piping diagrams and controls.

.2 Manufacturer's Standard Schematic Drawings and Diagrams:

.a Modify drawings and diagrams to delete information which is not applicable to the work.

.b Supplement additional information to provide information specifically applicable to the work.

1.4 SAMPLES

.1 Office samples shall be of sufficient size and quantity to clearly illustrate:

.a Functional characteristics of the product, with integrally related parts and attachment devices.

.b Full range of colour, texture and pattern.

.2 Field Samples and Mock-ups:

.a Contractor shall erect, at the project site, at a location acceptable to the Consultant/Owner Representative.

.b Size or area - that specified in the respective specification section.

.c Remove mock-ups at conclusion of work or when acceptable to the Consultant/Owner Representative.

1.5 SUBMISSION REQUIREMENTS

.1 Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the work or in the work of any other Contractor.

.2 Number of submittals required:

.a Product Data: Submit the number of copies which the Contractor requires, plus three copies which will be retained by the Consultant and Owner Representative.

.b Samples: Submit the number stated in each specification section.

.c Shop Drawings: Digital shop drawings are acceptable. Include a cover letter and shop drawing review stamp. If original paper copies are required or shop drawings are larger than 11"x17" paper size, submit 6 sets of prints, 3 of which will be retained by the Consultant/Owner Representative or as specified in Structural, Mechanical and Electrical divisions.

.3 Submittals shall contain:

.a The date of submission and the dates of any previous submissions.

- .b The project title and number.
- .c Contract identification.
- .d The names of the Contractor, the Supplier and the Manufacturer.
- .e Identification of the product, with the specification number.
- .f Field dimensions, clearly identified as such.
- .g Relation to adjacent or critical features of the work or materials.
- .h Applicable standards, such as CSA, CGSB or ASTM numbers.
- .i Identification of deviations from Contract Documents.
- .j Identification of revisions on re-submittals.
- .k Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of the Contract Documents.

1.6 RESUBMISSION REQUIREMENTS

- .1 Make any corrections or changes in the submittals required by the Consultant/Owner Representative and resubmit until stamped as reviewed.
- .2 Shop drawings and product data:
 - .a Review initial drawings or data, and resubmit as specified for the initial submittal.
 - .b Indicate any changes which have been made other than those requested by the Consultant.
- .3 Samples: Submit new samples as required for initial submittal as soon as possible after notification of the rejection or disapproval of the original submission and shall be marked "re-submitted sample."

1.7 DISTRIBUTION

- .1 Distribute reproductions of shop drawings and copies of product data which carry the Consultant/Owner Representative stamp to:
 - .a Job site file.
 - .b Record document file. (2 sets)
 - .c Subcontractors.
 - .d Supplier or fabricator.

- .2 Distribute samples which carry the Consultant/Owner Representative stamp of approval as directed by the Consultant/Owner Representative.

1.8 EXTENDED GUARANTEES AND WARRANTIES

- .1 In addition to guarantee requirements of the General Conditions to which all work of this Contract for all the work of this Contract to be Guaranteed for one (1) year after the date of the issue of the Certificate of Substantial Performance by the Consultant, the Contractor shall note that extended guarantee periods are required by the documents for some items as specified in the particular trade section.
- .2 The Contractor shall, in case of work performed by his Subcontractors and when guarantees are required, secure such guarantees from the Sub Contractors and furnish them to the Owner on or before Substantial Performance of the Project.
- .3 All guarantee and Warranties shall be bound into the operations and maintenance manuals.
- .4 Extended warranties shall commence on termination of the standard one (1) year warranty granted in this contract and shall be an extension of these same provisions.

1.9 Project Letters of Assurance

- .1 The Contractor and Subtrades shall provide Letters of Assurance including but not limited to the following items. All other requirements for Letters of Assurance found elsewhere in the Contract Documents are also required.

DIVISION	ITEM
Mechanical	*Refer to Mechanical drawings for Specifications
Electrical	*Refer to Electrical drawings for Specifications *Refer also to Electrical General Requirements on sheet A0.3
Civil	*Refer to Civil drawings for Specifications

- .2 Letters of Assurance shall be signed and sealed by a Professional Engineer registered in the Province of British Columbia in accordance with the BCBC 2018 or VBBL (as jurisdiction requires) or Schedule S-B and S-C Assurance of Professional Design and Commitment for Field Review addressed accurately to the appropriate Architect or Engineer of Record.

END OF SECTION 01 33 00
January 2021

1.1 RELATED WORK

- .1 Section 01 33 00 Submittals (to confirm product quality).
- .2 Divisions 15 and 16: Material and workmanship quality to referenced standards.

1.2 DESCRIPTION OF WORK

- .1 Inspection and testing, administrative and enforcement requirements.

1.3 INDEPENDENT INSPECTION AGENCIES

- .1 The Owner may engage and pay for additional concrete, geotechnical and independent roofing inspection. The Owner may employ and pay for the services of other independent testing laboratories to perform designated testing. In all cases:
 - .a The Contractor shall co-operate with the laboratory to facilitate the execution of its required services.
 - .b Employment of the laboratory shall in no way relieve Contractor's obligations to perform the work of the contract.
- .2 The cost of inspections and tests required by laws, ordinances, rules, guarantees/warranties, regulations, orders or approvals of public authorities relating to the work and for the preservation of public health shall be included, arranged and paid for directly by the Contractor.
- .3 Inspections and testing specified in trade sections as the Contractor's responsibility shall be paid for by the Contractor or Subcontractor as applicable.
- .4 If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defects and irregularities as advised by Owner at no cost to the Owner. Pay costs for retesting and reinspection.

1.4 INSPECTION

- .1 The Owner, Consultant and their appointed representatives shall have access to the work. If parts of the work are in preparation at locations other than the place of the work, access shall be given to such work whenever it is in progress.
- .2 Give timely notice requesting inspection if work is designated for special tests, inspections or approvals by Consultant's instructions, or the law of the place of the work.
- .3 If the Contractor covers or permits to be covered work that has been designated for special tests, inspections or approvals before such is made, uncover such work, have the inspections or tests satisfactorily completed and make good such work.

1.5 PROCEDURES

- .1 Notify the appropriate agency and Consultant in advance of the requirement for tests, in order that attendance arrangements can be made.

- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.6 CONTRACTOR'S RESPONSIBILITIES

- .1 Co-operate with laboratory personnel, provide access to work to manufacturer's operations.
- .2 Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- .3 Provide to the laboratory the preliminary design mix proposed to be used for concrete; and other materials which require control by the testing laboratory.
- .4 Furnish copies of products test reports as required.
- .5 Furnish incidental labour and facilities:
 - .a To provide access to work to be tested.
 - .b To obtain and handle samples at the project site or at the source of the product to be tested.
 - .c To facilitate inspections and tests.
 - .d For storage and curing of test samples.
- .6 Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- .7 When tests of inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred.
- .8 Employ and pay for the services of a separate and approved, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required when initial tests indicate work does not comply with Contract Documents.

1.7 EQUIPMENT/SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical and electrical systems.
- .2 Refer to Division 22 Plumbing, Division 23 Heating Ventilation and Air Conditioning, and Division 26 Electrical for requirements.

END OF SECTION 01 40 00

January 2021

1.1 DESCRIPTION OF THE WORK

- .1 Furnish, install and maintain temporary facilities required for construction of the work, remove upon completion.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- .1 Comply with all related requirements of the Workers' Compensation Board.
- .2 Comply with requirements of all regulatory Authorities Having Jurisdiction including utility requirements.

1.3 FIELD OFFICES AND SHEDS

- .1 Contractor's offices:
 - .a Provide and maintain in clean condition, during entire progress of the work, a suitable office area, adequately lighted.
 - .b Furnish office to allow for proper filing and examination of Contract Documents and regulatory document
 - .c Provide, within office space, a table and chairs to accommodate personnel for site meetings.
 - .d Provide, within office space, adequate first aid facilities as required by regulatory Authority Having Jurisdiction.
- .2 Equipment and tool storage: Provide and maintain, in a clean and orderly condition, adequate lockable storage for tools and equipment.
- .3 Materials storage: Provide and maintain, in a clean and orderly condition, suitable lockable areas for storage and protection of materials which require such protection.
- .4 Construction area, access and parking:
 - .a Confine operations on the site to those areas actually required for the work.
 - .b Confine operations, materials, storage, equipment, parking and deliveries to designated work areas of site as agreed to prior to starting work on site, and as shown on schedule of work. Any encroachment onto public property or other private property must be with permission.
 - .c Parking will be available on site.

1.4 TEMPORARY FACILITIES

- .1 Sanitary facilities: provide sufficient sanitary facilities for workers in accordance with local health authorities. Maintain facilities in clean condition.
- .2 Water supply: Make necessary arrangements for water with the Owner.

.3 Temporary heating:

- .a Provide all temporary heating required during construction period including attendance, maintenance and fuel. Maintain temperatures to be suitable to the work underway in all areas in which construction is in progress, unless indicated otherwise in specifications. At all times protect the work from detrimental effects of extreme temperatures. Properly ventilate all heated areas.
- .b Use approved heating devices only.
- .c Pay for all costs in maintaining and providing temporary heat when using permanent or temporary heating system.
- .d Be responsible for any damages to the work due to failure in providing adequate heat and protection during construction.

.4 Temporary telephone and fax:

- .a Make telephone available for use of all Subcontractors for the purpose of placing and receiving local calls.
- .b Long distance calls by all parties are recoverable from them.

.5 Fueled welding machines and air compressors: Fueled welding machines and air compressors required are the responsibility of the respective users. Locate outside the building.**.6 Hoisting:**

- .a Provide, operate and maintain hoists and portable cranes required for moving of materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .b Hoists and cranes shall be operated by qualified operator.

.7 Fire extinguishers

- .a Maintain sufficient fire extinguishers on site at all times.

1.5 BARRIERS

- .1 Hoarding: Provide and erect hoarding as specified herein and as requested by Authorities Having Jurisdiction to protect the public, workers, and public and private property from injury or damage. Hoarding to be maintained during progress of the work in plumb, properly aligned and painted condition. Hoarding generally to consist of 8'-0" high chain-link or 8'-0" high continuous plywood hoarding, painted light grey. Comply with Workers' Compensation Requirements and the requirement of the BC Building Code.

1.6 SITE ACCESS

- .1 Provide and maintain access, sidewalk crossings, ramps and construction runways as may be required by workers for access to and on site.

- .2 Conform to requirements of governing authorities when required, and when necessary, make arrangements with adjacent property owners.

- .3 Locate these traffic facilities where they are least disruptive to the public.

1.7 NOISE ABATEMENT

- .1 The Contractor shall comply with the requirements of Municipal and/or Provincial bylaws regarding noise abatement and shall take all necessary steps to ensure the generation and transmission of noise and vibration which is found to be objectionable shall be corrected or controlled at no additional cost to the Owner.

1.8 PROTECTION OF WORK AND PROPERTY

- .1 Protection of offsite and public property:

- .a Protect adjacent property from damage during the performance of the work.
 - .b Be responsible for all damage incurred due to improper protection.

- .2 Fire protection:

- .a Provide and maintain adequate temporary fire protection equipment during performance of work, as required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
 - .b Where subjected to low temperatures, extinguishers are to be anti-freeze type and be ULC labeled.
 - .c Remove combustible debris from site daily and deposit in refuse containers.

1.9 CONSTRUCTION SAFETY

- .1 The Contractor shall be responsible for all safety measures in connection with his construction means, methods, techniques, sequences and procedures.
- .2 The Contractor shall provide, maintain and adjust all safety nets, screens, protective covers, guardrails, barricades or safety platforms required for protection of his work and the workmen employed by him. The Contractor shall also provide all necessary guards, signs, etc., as required to fully protect all persons from loss, damage or injury to their person or property and shall be wholly responsible should any loss, damage or injury occur through the neglect, carelessness or incompetence of themselves or their employees.
- .3 The Contractor shall comply with all applicable laws and regulations of Federal, Provincial and Municipal authorities concerning construction safety.
- .4 The Contractor shall comply with the Workers' Compensation Act of British Columbia Accident Prevention Regulations (latest edition) and shall provide all necessary safety requirements as prescribed by the Act for his work.

- .5 Precautions shall be taken to prevent the overloading of any part of the structure, false work, formwork, or scaffolding during the progress of the work, and any damage resulting from such overloading shall be made good at the expense of the Contractor. No load bearing members shall be cut, drilled or sleeved without the written approval of the Consultant. The Contractor shall obtain written approval from the Structural Engineer prior to allowing any fork lifts or other heavy machinery on any suspended slab.
- .6 The Contractor shall allow for the cost of all clothing, supplies and equipment necessary to provide protection to all persons in his employ in accordance with the provisions of the Safety Codes of both the Province of British Columbia and the Workers' Compensation Board. Such items to include protective clothing, safety helmets and the like.
- .7 Scaffolding or temporary stages shall be provided by the Contractor as required for his work and to meet construction safety regulations. Such equipment shall be self-supporting throughout and comply with applicable jurisdictional and code requirements. Scaffolding and temporary stages, when not in use shall be shifted if necessary to permit installation of other work and shall be removed promptly when not required.

END OF SECTION 01 50 00
January 2021

1.1 RELATED WORK

- .1 Section 01 40 00 Quality Requirements (and inspection of Work).

1.2 DESCRIPTION OF WORK

- .1 Reference standard.
- .2 Product quality, availability, storage, handling, protection, transportation.
- .3 Manufacturer's instructions.
- .4 Workmanship, co-ordination, cutting, fastenings.

1.3 REFERENCE STANDARDS

- .1 Within the text of the Specifications, reference may be made to the following standards (current editions):
 - .a ACI - American Concrete Institute
 - .b AWCC - Association of Wall and Ceiling Contractors of B.C.
 - .c AWMAC – Architectural Woodwork Manufacturers Association of Canada.
 - .d ASTM - American Society of Testing and Materials
 - .e BCBC – British Columbia Building Code.
 - .f BCFC - British Columbia Floor Covering Association
 - .g CEC - Canadian Electrical Code (published by CSA)
 - .h CEMA - Canadian Electrical Manufacturer's Association
 - .i CGSB - Canadian General Standards Board
 - .j CISC - Canadian Institute of Steel Construction
 - .k CKCA - Canadian Kitchen Cabinet Association
 - .l CLA - Canadian Lumberman's Association
 - .m CMHC - Canadian Mortgage and Housing Corporation
 - .n CPCA - Canadian Painting Contractor's Association
 - .o CRCA - Canadian Roofing Contractor's Association
 - .p CSA - Canadian Standards Association
 - .q FM - Factory Mutual Engineering Corporation

- .r IGMAC – Insulating Glass Manufacturers’ of Canada.
 - .s MPI - Master Painters Institute.
 - .t NAAMM - National Association of Architectural Metal Manufacturer's
 - .u NBC - National Building Code
 - .v NEMA - National Electrical Manufacturer's Association
 - .w RCABC - Roofing Contractors Association of B.C.
 - .x TTMAC - Terrazzo, Tile and Marble Association of Canada
 - .y ULC - Underwriter's Laboratories of Canada
 - .z VBBL - Vancouver Building By-Law
- .2 Conform to these standards, in whole or in part, as indicated in the Specifications.
- .3 If there is a question as to whether any product or system is in conformance with applicable standards, the Consultant reserves the right to have such products or systems tested to prove or disprove conformance.

1.4 PRODUCTS AND MATERIALS

- .1 Quality:
- .a Products, materials, equipment and articles (referred to as products throughout the Specifications) incorporated in the Work shall be new, not damaged or defective, and of the best quality (compatible with specifications) for the purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
 - .b Defective products, whenever identified prior to the completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
 - .c Should any dispute arise as to the quality or fitness of products, the decision rests strictly with the Consultant based upon the requirements of the Contract Documents
 - .d Unless otherwise indicated in the Specifications, maintain uniformity of manufacture for any particular or like item throughout the building.
 - .e Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions or when located in mechanical or electrical rooms.

.2 Availability:

- .a Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of work.
- .b In the event of failure to notify the Consultant at commencement of work and should it subsequently appear that Work may be delayed for such reason, the Consultant reserves the right to substitute more readily available products of similar character, a no increase in Contract Price.

.3 Storage Handling and Protection:

- .a Handle and store products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .b Store packaged or bundled products in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in the work.
- .c Store products subject to damage from weather in weatherproof enclosure.
- .d Store cementitious products clear of earth or concrete floors and away from walls.
- .e Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .f Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .g Store and mix paints in a heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .h Remove and replace damaged products at own expense and to the approval of the Consultant.

.4 Transportation:

- .a Pay costs of transportation of products required in the performance of work.

1.5 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in the Specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify the Consultant of conflicts between the specifications and manufacturer's instructions, prior to proceeding with the affected work.

- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Consultant to require removal and re-installation at no increase in Contract Price.

1.6 WORKMANSHIP**.1 General:**

- .a Workmanship shall be the best quality, executed by workers experienced and skilled in the respective duties for which they are employed. Immediately notify the Consultant if required Work is such as to make it not possible to produce required results.
- .b Do not employ any unfit person or anyone unskilled in his required duties. The Consultant reserves the right to require the dismissal from the site of workers deemed incompetent, careless, insubordinate or otherwise objectionable.
- .c Decisions as to the quality of fitness of workmanship in cases of dispute rest solely with the Consultant, whose decision is final.

.2 Coordination:

- .a Ensure co-operation of workers in laying out work. Maintain efficient and continuous supervision. Co-ordinate the work of different trades to make the parts of the Work come together properly.
- .b Be responsible for co-ordination and placement of openings, sleeves and accessories

.3 Cutting and Remedial Work:

- .a Perform cutting and remedial work required to make the parts of the Work come together. Co-ordinate the work to ensure this requirement is maintained.
- .b Should work performed outside this contract necessitate cutting and, or remedial work to be performed, the cost of such work will be valued by the Consultant as provided in GC 6.2, valuation and Certification of Changes in the Work.
- .c Perform cutting and remedial work by specialists familiar with the materials affected. Perform in a manner to neither damage nor endanger any portion of Work.
- .d The operation and programming of the existing facilities may not be affected.

.4 Location of Fixtures:

- .a Consider the location of fixtures, outlets, and mechanical and electrical items indicated as schematic if not specifically dimensioned. Confirm locations with Consultant prior to proceeding with the work.
- .b Report any coordination or installation conflicts to the Consultant for clarification prior to proceeding with the work.

.5 Fastenings:

- .a Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .b Prevent electrolytic action between dissimilar metals and materials.
- .c Use noncorrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in the affected specification.
- .d Space anchors within their load limit or shear capacity and ensure they provide positive permanent anchorage. Wood or any other organic material plugs are not acceptable.
- .e Keep exposed fastenings to a minimum, space evenly and install neatly. Exposed fasteners shall match colour and finish of surround surfaces.
- .f Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

.6 Protection of Work In Progress:

- .a Adequately protect work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the Consultant, at no increase in Contract Price.
- .b Prevent overloading of any part of the building. Do not cut, drill or sleeve any load bearing structure member, unless specifically indicated, without written approval of the Consultant.

1.7 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute work at times directed by Authorities Having Jurisdiction, with a minimum of disturbance to adjacent Work, and/or building occupants and pedestrian and vehicular traffic.
- .2 Ensure continuity of operation and coordinate any shutdown giving 48 hours notice with adjacent facility supervisor.

END OF SECTION 01 60 00
January 2021

1.1 RELATED WORK

- .1 Section 01 78 39: Project Record Documents. (Submission of record drawings and operating/maintenance manuals).
- .2 General Conditions of the Contract: fiscal provisions, legal submittals, and other administrative requirements.

1.2 DESCRIPTION OF WORK

- .1 Final cleaning.
- .2 Systems demonstration.
- .3 Document submission.
- .4 Project commissioning.
- .5 Inspection and takeover procedure.

1.3 CLEANING

- .1 Description: execute cleaning, during progress of the work, and at completion of the work, as specified herein.
- .2 Disposal requirements:
 - .a Conduct cleaning and disposal operations to comply with codes, ordinances, regulations and anti-pollution laws.
 - .b Dispose of rubbish, debris and waste materials at periodic intervals away from the site and in a legal manner.
 - .c Materials: use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces. Use as recommended by surface material manufacturer and cleaning material manufacturer.
 - .d During Construction:
 - .i Execute periodic cleaning to keep the work the site and adjacent properties free from accumulations of waste materials, rubbish and wind blown debris, resulting from construction operations.
 - .ii Provide on-site containers for the collection of waste materials, debris and rubbish. Remove and dump as required to maintain orderly, neat site. Do not allow overflow of debris onto adjacent sites under any condition.
 - .iii Keep in slab ductwork in a clean and dry condition. Execute period cleaning as required to maintain this condition.

- .e Dust Control:
 - .i Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
 - .ii Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.
- .f Final Cleaning:
 - .i Employ only skilled workers for final cleaning.
 - .ii Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical.
 - .iii Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, fitments, walls and floors.
 - .iv Vacuum clean and dust all building interiors, behind grilles, louvres and screens.
 - .v Wax, seal, shampoo or prepare all floor finishes, as recommended by the manufacturer.
 - .vi Make a thorough inspection of all finishes, fitments, and equipment and ensure a proper workmanship and operation.
 - .vii Remove all dirt and other disfigurements from exterior surfaces.
 - .viii Clean and sweep roofs, gutters, areaways, sumps and catch basins.
 - .ix Sweep and wash clean all paved areas.
 - .x Perform final cleaning of interior and exterior of all windows and glass doors. This cleaning must include cleaning of all sliding door tracks.
 - .xi Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.

1.4 SYSTEMS DEMONSTRATION

- .1 Prior to final inspection, demonstrate operation of each system to the Consultant and Owner.
- .2 Instruct personnel in operation, adjustment, and maintenance of equipment and systems, using provided operation and maintenance data as the basis for instruction. Arrange and pay for all such instruction to be video taped and submit 4 copies of same to Consultant.

1.5 PROJECT COMMISSIONING

- .1 Expedite and complete deficiencies and defects identified by the Consultant.

- .2 Review maintenance manual contents, operating, maintenance instructions, record "as-built" drawings, spare parts, materials for completeness.
- .3 Submit required documentation such as statutory declarations, Workers' Compensation Certificates, warranties, certificates of approval or acceptance from regulating bodies.
- .4 Attend "end of work" testing and break-in or start-up demonstrations. Refer to Article 1.4.2.
- .5 Review inspection and testing reports to verify conformance to the intent of the documents and that changes, repairs or replacements have been completed.
- .6 Meet with other consultants, structural, mechanical electrical, to co-ordinate completion, testing approvals if and when requested by Consultant.
- .7 Arrange and co-ordinate instruction of Owner's staff in care, maintenance and operation of building systems and finishes by suppliers and Subcontractors. Arrange and pay for video taping of these instructions. Submit 4 copies to the Consultant.
- .8 When partial occupancy of uncompleted project is required by the Owner, co-ordinate Owner's uses, requirements, access, with Contractor's requirements to complete the project.
- .9 Provide on-going review, inspection and attendance to building call-back, maintenance and repair problems during the warranty periods.
- .10 Attend 1 year warrant inspection.

1.6 INSPECTION / TAKE OVER PROCEDURES

- .1 Prior to application for certificate of Substantial Performance, and/or completion, carefully inspect the work and ensure it is complete, that major and minor construction deficiencies are complete and/or corrected and the building is clean and in condition for occupancy and meets the terms and conditions of "Substantial Performance" as outlined by the Lien Legislation of British Columbia. Notify the Consultant in writing of satisfactory completion of the work and request an inspection.
- .2 During the Consultant's inspection, a list of deficiencies and defects will be tabulated. Correct same within the time allocated.

1.7 REINSPECTION FEES

- .1 Should the Contractor require reinspection of a partial list of deficiencies or should the Consultant be required to perform more than one reinspection due to the failure of the Work to comply with the claims of status and completion made by the Contractor:
 - .a The Owner will compensate the Consultant for such additional services.
 - .b The Owner will deduct the amount of such compensation from the final payment to the Contractor.

END OF SECTION 01 70 00
January 2021

1.1 DOCUMENTS

- .1 This section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 WASTE DIVERSION GOALS FOR THE PROJECT

- .1 The Owner has established that this Project shall generate the least amount of waste possible and that processes shall be employed that ensure the generation of as little waste as possible including prevention of damage due to mishandling, improper storage, contamination, inadequate protection or other factors as well as minimizing over packaging and poor quantity estimating.
- .2 The Waste Diversion Goals and Waste Management Plan shall apply to the full scope of this project including and not limited to deconstruction waste for the wading pool and deconstruction waste from the existing building. 85% waste diversion is a minimum requirement.
- .3 Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be salvaged for reuse and or recycled. Waste disposal in landfills or incinerators shall be minimized. On new construction projects this means careful recycling of job site waste, on demolition projects this also means careful removal for salvage.
- .4 The Contractor shall:
 - .a Separate and legally dispose of materials as required by law and regulations of authorities having jurisdiction and in accordance with the Waste Management Plan and its classified divisions of materials; and
 - .b divert from transfer stations and landfills in within the Greater Vancouver Sewerage and Drainage District 100% of all banned substances; and
 - .c divert from all transfer stations and landfills 85%, by weight, of the materials removed from the Site.

1.3 CODE OF PRACTICE

- .1 In addition to other requirements specified herein it is a requirement for the Work of this project that the Contractor comply with recommendations and remove materials to disposal and recycling facilities that comply with the "Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 183, 1996".
- .2 For a listing of licensed facilities, contact the Metro Vancouver Solid Waste Regulatory program at 604-436-6777 or, see:
<http://www.metrovancouver.org/services/permits/Pages/solidwaste.aspx>

1.4 WASTE MANAGEMENT PLAN

- .1 Waste Management Plan: Within 10 calendar days after receipt of Notice of Award of Contract, or prior to any waste removal, or prior to the commencement of the demolition or deconstruction work, whichever occurs soonest, the Contractor shall prepare, deliver to the District, and adhere to a Waste Management Plan consisting of a Waste Diversion Plan and a Waste Diversion, in each case as described in more detail below.
- .2 The Waste Diversion Plan shall include:
 - .a Analysis of the proposed job site waste to be generated, including all materials in the structure and the materials that need to be tracked (see below), the types of recyclable and waste materials generated (by volume or weight). In the case of demolition, a list of each item proposed to be salvaged during the course of the project should also be prepared.
 - .b Alternatives to Landfilling: the Contractor shall prepare a Removal Plan, including whether material will be salvaged (removed intact) for
 - (1) reuse,
 - (2) recycled, or
 - (3) disposed of;and the names of all proposed disposal, reuse and recycling facilities
 - .c List of compulsory materials to be recycled, shall include, at minimum, the following materials:
 - .i Corrugated cardboard.
 - .ii Clean dimensional wood, palette wood.
 - .iii Concrete/Brick/Concrete Block/Asphalt.
 - .iv Scrap Metal.
 - .v Drywall.
 - .vi Paint (return to Paint Depot).
- .2 The Waste Diversion Report shall identify, with respect to each tracked material (as identified in b. below), the tonnage of the material:
 - (1) salvaged,
 - (2) recycled and
 - (3) disposed of,and the name of each facility where material was hauled:
 - a. Legible copies of all receipts issued by all receiving facilities;

- b. The removal material is to be classified into the following material divisions:
 - 1. Wood
 - 2. Metals – copper
 - 3. Metals – aluminium
 - 4. Metals – steel
 - 5. Glass
 - 6. Masonry
 - 7. Concrete
 - 8. Drywall
 - 9. Architectural misc.
 - 10. Asphalt
 - 11. Miscellaneous fittings
 - 12. Hazardous materials discovered
 - 13. Other
- .3 Meetings: Contractor shall conduct Project Waste Management meetings. Meetings shall include subcontractors affected by the Waste Management Plan. At a minimum, waste management goals and issues shall be discussed at the following meetings:
 - .a Pre-bid meeting.
 - .b Pre-construction meeting.
 - .c Regular job-site meetings.
- .4 Materials Handling Procedures: prevent contamination of materials to be recycled and salvaged and handle materials consistent with requirements for acceptance by designated facilities. Where space permits, source separation is recommended. Where materials must be co-mingled they must be taken to a processing facility for separation off site.
- .5 Transportation: The Contractor may engage a hauling subcontractor or self haul or make each subcontractor responsible for their own waste. In any case compliance with these requirements is mandatory.
- .6 Submit to the Consultant and/or Owner way-bills, invoices and other documentation confirming that all materials have been hauled to the required locations.
- .7 Waste Management Plan Implementation:
 - .a Manager: The Contractor shall designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the project.
 - .b Distribution: The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner, and the Consultant.
 - .c Instruction: The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling to be used by all parties at the appropriate stages of the Project. On demolition projects the Contractor shall provide on-site instructions for salvage and requirements for reusing salvaged materials within the project, either in new construction or in a renovation.

- .d Separation facilities: The Contractor shall lay out and label a specific area to facilitate separation of materials for potential recycling and salvage. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials. The requirement for separation will only be waived if the Contractor can demonstrate to the Owner/Consultant that there is insufficient room to accommodate it. If this is the case the materials must be sent to a processing facility for separation off site.
- .e Hazardous wastes: Hazardous wastes shall be separated, stored, and disposed of in accordance with the requirements of the authorities having jurisdiction including the Provincial Waste Management Act and B.C. Special Waste Regulation.

END OF SECTION 01 74 00
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1.1 RELATED WORK

- .1 Section 01 30 00 Submittal Procedures - shop drawings, samples, manufacturer's instructions.
- .2 Section 01 32 00 Construction Progress Documentation.
- .3 Section 01 40 00 Quality Requirements - tests and inspection reports.
- .4 Individual Specifications Sections: Specific requirements for operation and maintenance.

1.2 DESCRIPTION OF WORK

- .1 Project record documents, samples, specifications.
- .2 Equipment and systems.
- .3 Product data, materials and finishes, and related information.
- .4. Operation and maintenance data.
- .5 Warranties, guarantees.

1.3 QUALITY ASSURANCE

- .1 Prepare instructions and data by personnel experienced in maintenance or operation of described products.

1.4 FORMAT

- .1 Organize data in the form of an instructional manual.
- .2 Binders: commercial quality, three ring size.
- .3 When multiple binders are used, correlate data into related consistent groupings.
- .4 As-built drawings to be provided as outlined in 1.5.3.

1.5 PROJECT RECORD DOCUMENTS

- .1 Maintain at the job site, one record copy of each of the following:
 - .a Contract drawings.
 - .b Project manual.
 - .c Addenda.
 - .d Change orders.
 - .e Other modifications to Contract, including field instructions.
 - .f Field reports.

- .g Reviewed shop drawings.
- .h Test reports.
- .i Copy of approved construction schedule.
- .j Manufacturer's installation and application instructions.
- .k Colour/material schedule.
- .l BC Building Code, B.C. Plumbing Code. B.C. and Canadian Electrical Codes, together with all supplements.
- .m Approved building permit drawings and posting card.
- .n Reports from building authorities/inspectors.
- .o Progress copies of as-built record drawings, updated regularly as the Work progresses.
- .2 Maintenance of documents and samples:
 - .a Store documents in Contractor's field office apart from documents used for construction.
 - .b Maintain documents in a clean, dry legible condition and in good order. Do not use record documents for construction purposes.
 - .c Make documents and samples available at all times for inspection by the Consultant.
- .3 Recording project record drawings:
 - .a Maintain one complete set of white prints: Architectural, Structural, Civil, Mechanical, Electrical and other disciplines applicable to project on site. Record variations from the original contract as they occur and update on a daily basis. Include in this recording any changes made by job site instruction, change order, clarification details or Drawings and other forms of written modification issued by the Consultant or his consultants. Record changes in red using suitable notation; ensure revisions to elevations and detailed location of concealed services are noted.
 - .b Review: Make the marked-up white prints available for the Consultant's or his consultant's review at any time. Locate the marked-up white prints in the site office and keep the marked-up white prints updated on a daily basis.
 - .c On completion of work: Prepare for the Owner a set of CAD, as-built record drawings showing changes in the Work made during construction. Provide the Owner with an electronic copy for each drawing and a set of whiteprints. The drawings shall include changes shown on marked-up prints, drawings and other data furnished and certified correct in writing by the Contractor in a manner acceptable to the Consultant. The Consultant will not be responsible for the accuracy of the information provided by the Contractor. The Consultant shall state in the Specifications the as-built information and format to be provided by the Contractor.

- .d Required detail: On as-built drawings shall include but not be limited to:
- .i Changes to structural elements showing new sizes, lengths, profiles, elevations, and materials used.
 - .ii Changes to architectural details, finishes, and locations, showing full extent of change by redrawn relevant details and noting the final type of material and finishes used.
 - .iii Changes to, and final actual type, size, and location of plumbing, mechanical, and electrical items; indicate accurate location in plan, of water, sewer and gas lines, and electrical ducts and conduits including telephone and fire alarm lines. Invert elevations, accurate to within 25mm are required at each junction, at high and low points, at horizontal and vertical changes in direction, and at every 30m of run of water, sewer, electrical, telephone, fire alarm, and gas lines. Similarly, provided information at both ends of culverts, at manholes, catch basins, cleanouts, hydrants, pulling pits, and at entry points to building.
 - .iv Refer: Refer to any special requirements specified under the Structural, Mechanical, and Electrical Divisions of Work.
 - .v Holdback: A holdback shall be withheld from the last progress draw until such time that acceptable "as-built drawings" and mechanical and electrical maintenance manuals are submitted to the Owner.
 - .vi Whiteprints: Sign each drawing for identification and to certify that each drawing is accurate. Provide a certificate in the words set out following this paragraph; signatures to be those of a person authorized to sign on behalf of and to bind the Contractor. Deliver one complete set of as-built drawings so certified to the Consultant; this certified set will be the official set of as-built drawings. Include the following information on the official as-built drawing set:

FORM OF CERTIFICATE

(Project Description)

I/We (the Contractor) hereby certify that the set of As-Built Drawings attached hereto, comprising (_____) sheets, is a complete set of the As-Built Drawings for this Project. I/We further certify that the drawings show fully and accurately structural details and services, whether exposed or hidden, (including the location thereof) and that these drawings are intended to be relied on by the Owner and his agents in repairs, modifications or additions to the project.

CONTRACTOR:	SIGNED: _____
	PER: _____
	DATE: _____
WITNESS:	SIGNED: _____

DATE: _____

1.6 OPERATING AND MAINTENANCE DATA

- .1 Copies: submit to Consultant four (4) copies of the approved manufacturer's latest printed specifications, directions and drawings fully describing the installation and operating instructions and in the case of equipment outlining the extent of available servicing and extent of any applicable guarantees. Without being limited to the following, include:
 - .a Copies of technical brochures and related printed data for all manufactured products.
 - .b Maintenance procedure for finished surfaces.
 - .c Copy of hardware schedule.
 - .d Copy of paint schedule with supplier's paint chips used and referenced with colour numbers.
 - .e Description, operation and maintenance procedure for equipment and systems installed including parts lists.
 - .f Names, addresses, telephone numbers, and contact of Subcontractors and suppliers.
 - .g Guarantees, warranties, and bonds, referencing project name and address, guarantee commencement date (i.e. date of Substantial Performance), length and expiry date of guarantee; signature and seal of Contractor; complete set of final reviewed shop drawings in form as specified.
 - .h Any supplementary requirements as per specific trades section of the specifications.
 - .i Balancing report.
- .2 Test reports: Provide two duplicate copies, unless otherwise specified, of test reports required under the specific sections of the Specification; reports shall be by an independent, recognized testing agency, with testing conforming to specified standard, acceptable to Consultant.
- .3 Certificates: issue minimum one copy to Consultant prior to any installation of related work.

1.7 EQUIPMENT AND SYSTEMS

- .1 Each Item of equipment and each system: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panelboard circuit directories: provide electrical service characteristics, controls and communications.
- .3 Include installed colour coded wiring diagrams.

- .4 Operating procedures: include start-up, break-in, and routing normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance requirements: include routine procedures and guide for troubleshooting, disassembly, repair and reassembly instructions; and alignment, adjusting balancing and checking instructions.
- .6 Provide servicing and lubrication schedule and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour code piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current price, and recommended quantities to be maintained in storage.
- .14 Additional requirements: as specified in individual Specification sections.

1.8 MATERIALS AND FINISHES

- .1 Building products, applied materials and finishes: include product data, with catalog number, size, composition, and colour and texture designations. Provide information for reordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agent and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture protection and weather exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

1.9 WARRANTIES, GUARANTEES AND BONDS

- .1 General:
 - .a Compile specified warranties, guarantees and bonds.
 - .b Co-execute submittals when so specified.

- .c Review submittals to verify compliance with Contract Documents.
- .d Submit to Consultant for review and then submit to the Owner.
- .2 Submittal Requirements:
 - .a Assemble warranties, guarantees, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and Subcontractors.
 - .b Number of original (fax or photocopies are not acceptable) copies required: one (1) each.
- .3 Time of Submittals:
 - .a Make submittals within ten (10) days prior to date of Substantial Performance and prior to final request for payment.
 - .b For items of work, where acceptance is delayed materially beyond the date of Substantial Performance, provide updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period
 - .c Submit warranties, guarantees bonds, service and maintenance contracts as specified in the respective sections of the specifications.

1.10 SUMMARY OF SUBMITTALS

- .1 Substantial performance: at the time of the Substantial performance inspection and prior to the issuance of the Certificate of Substantial Performance the Contractor will submit to the Owner, where applicable the following:
 - .a As-built and record drawings, operating and maintenance manuals, balancing reports, spare parts, keys, test reports, certificates and occupancy permit.
 - .b Provide 4 copies of each required submittal.

END OF SECTION 01 78 39
January 2021

1.1 GENERAL REQUIREMENTS

- .1 Refer to Division 1, General Requirements.
- .2 This section of the specification forms an integral part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 DESCRIPTION

- .1 Supply all products, labour, equipment, and services necessary for the demolition and removal of all materials as indicated in the contract documents.
- .2 The work shall include all coordination required for the shut-off, isolation and protection or capping of all utilities such as water, sewer, electricity, telephone and gas services.

1.3 RELATED WORK

- .1 Landscape Specifications by Binnie.

1.4 QUALITY ASSURANCE

- .1 Demolition to be carried out in accordance with BC Building Code, latest edition and all regulatory authorities as applicable.
- .2 Procedures and methods of demolition shall be to the approval of the Owner's Representative and Owner.
- .3 Codes and Regulations: Do all demolition work according to the requirements of the BC Building Code and WorkSafeBC Accident Prevention Regulations, and the Canadian Construction Safety Code.

1.5 QUALIFICATIONS

- .1 Qualifications of Workers: Provide a Supervisor who shall be present at all times during the demolition work and who shall be thoroughly familiar with the work required and who shall direct and coordinate all work.
- .2 All areas of responsibility for demolition and cutting shall be thoroughly coordinated by the Contractor.
- .3 Provide one (1) person on site who is responsible for maintaining the safety barriers and protection of the workers and the public. Provide the name of this person to the Owner's Representative.
- .4 Any changes in personnel must be reported to the Owner's Representative.

- .5 Each subtrade is required to coordinate its work with the work of this section as to the amount of demolition work required and as to termination conditions to be left at the junction of existing work to remain.
 - .6 Each subtrade shall be responsible to ensure that all demolition and cutting does not destroy more than is required, or what is needed for future construction.
 - .7 Any demolition and cutting carried beyond the necessary requirements shall be the responsibility of the Contractor, and shall be reinstated at no cost to the Owner.
- 1.6 JOB CONDITIONS**
- .1 The Contractor shall provide for temporary connections to power and water and drainage lines as required. No outages, limitations or obstructions shall be permitted unless with the prior approval of the Owner.
 - .2 The Contractor shall contact the Owner and/or Owner's Representative prior to any service interruptions and obtain permission for interruption at a specific time.
 - .3 The Contractor shall take the necessary precautions to fully protect existing surfaces against damage from demolition and/or removal of existing work.
- 3.1 HAZARDOUS MATERIALS**
- .1 Carefully examine work to be removed. Report the presence of hazardous materials or potentially hazardous materials to the Owner immediately.
 - .2 Hazardous materials are not to be disturbed if located or suspected until their presences has been reported to the Owner.
- 3.2 INSPECTION OF EXISTING CONDITIONS**
- .1 Carefully examine areas to be demolished. Report any discrepancies with the Contract Documents to the Owner's Representative immediately.
 - .2 The Contractor shall accept the site as it exists and will be responsible for all demolition work as required.
 - .3 The Contractor shall visit the site at their own expense prior to the submission of a Proposal and take whatever time is required to ascertain existing site conditions and surrounding features related to the proposed demolition and ensure that conditions are suitable for execution of the work.
 - .4 No additional sums of money will be allowed for any items resulting from lack of familiarity with the site conditions. Report any discrepancies to the Owner's Representative.

- .5 Arrange for a site visit together with Owner to examine existing site conditions adjacent to demolition. Take pictures of any existing damage and record them in writing to avoid any disputes at a later date.

3.3 PROTECTION

- .1 The Owner shall be saved harmless by the Contractor from any loss, damage, death or injury occurring through neglect, carelessness or incompetence of the Contractor, or the handling or condition of the Contractor's equipment.
- .2 Existing trees shall be fully protected at all times during the work of this Section as required.
- .3 Immediately make all repairs and replacements to adjacent existing works caused by the Work of this Section.
- .4 Provide temporary enclosures for securing the work area and the maintenance of any services necessary to the proper and efficient operation of the project.
- .5 Protect site improvements such as sidewalks, curbs, existing landscaped and asphalt areas and all interior finishes that lie along the path of removal.
- .6 Conduct construction operations with minimum interference to existing buildings operations, adjacent buildings, adjacent public or private roadways, parking lots, sidewalks and access facilities in general. Keep such areas free of material debris and equipment at all times.
- .7 The Contractor shall provide any hoardings, barricades, warning signs and lights, as necessary, for the protection of all people and property on and adjacent to the site as specified herein or by WorkSafeBC. The Contractor shall alter, adapt, maintain, relocate and remove these additional barricades, etc. as necessary due to the work.
- .8 All barricades provided by the Contractor shall be removed from the site upon completion of the work and any damage caused repaired to the satisfaction of the Owner.
- .9 Prevent movement, settlement or damage to existing building, finishes, services, walks, paving and parts of existing building to remain. Provide shoring and bracing as required. Make good any damage and be liable for injury caused by demolition.
- .10 Provide necessary temporary weather protection with dust screens if and when required to protect existing adjacent buildings from dust penetration during demolition work.
- .11 Protect adjacent work from damage, staining, disfigurement caused by the work of this section.
- .12 Promptly as the work proceeds, and on completion, keep the premises clean and free from rubbish, debris, surplus materials and equipment.
- .13 At the end of each days work, leave the work area and surrounds in a safe condition so that no parts are in danger of toppling or falling.

3.4 DEMOLITION

- .1 Remove materials from demolition promptly as the demolition work progresses. Materials shall not be sold, buried or burned at the site. The Contractor shall be assumed to have allowed for any credit that may be obtained for such materials.
- .2 Temporary stockpiling of demolished materials that are required to be removed from the site is not permitted. All demolition materials from excavations must be removed from site daily.
- .3 The Contractor is responsible for disposing of demolition materials in a legal manner.
- .4 Carry out all necessary temporary bracing and supporting to as required during demolitions.
- .5 Prevent debris from blocking surface drainage inlets and systems that must remain in operation.
- .6 Carry out all demolitions and making good. Patch and make good to a standard at least equal to that of adjacent surfaces when related work is completed.
- .7 Any items containing PCBs should be stockpiled in a safe location. The Owner should be notified and will arrange subsequently removal and disposal of items if not included in the base contract.
- .8 No heavy equipment causing excessive vibrations to the existing structures are permitted.
- .9 Make cut clean, true, smooth edges. Make patches inconspicuous in final assembly.
- .10 Demolish existing walls with care, do not damage adjacent surfaces noted to remain.
- .11 Remove existing millwork fixtures, services, and building components where required.
- .12 Remove existing asphalt and concrete paving, concrete curbs as required for new site development.
- .13 Remove existing site services and catch basins as noted.
- .14 Subsurface structure: remove all subsurface foundations, piles and pile caps as per the contract documents.
- .15 Refer to moving plans for equipment moving requirements.
- .16 Complete demolition work to produce clean exposed sub-grade where demolition is indicated. Remove extraneous materials.
- .17 Drilling through concrete and masonry shall be carried out using diamond drills.
- .18 Procedures and methods of drilling, coring and/or cutting shall be to the approval of the Owner.

3.5 DEBRIS

- .1 Condemned material becomes the Contractor's property and must be removed completely from the site. Keep clean all areas in use at all times.
 - .2 Contractor shall be held responsible for all costs, penalties, summonses and notices arising from the failure to comply with the keeping of the adjacent site, local roads, and thoroughfares clean and free from debris and damages caused by debris and demolition work.
- 3.6 **CLEANING**
- .1 Upon the completion of all demolition work remove all equipment, materials, and debris. Leave the area clean.

END OF SECTION 02 41 13
January 2021

1.1 WORK INCLUDED

- .1 Troweled finish.
- .2 Broom finish.
- .3 Concrete sealer surfaces where indicated.

1.2 RELATED WORK

- .1 Refer also to Structural drawings and specifications

1.3 SAMPLES

- .1 If requested submit samples of concrete finishes and sealer to prior to commencing the work.

1.4 QUALIFICATIONS

- .1 The work of this section shall be performed only by skilled workmen with a minimum of two years experience in this type of work.

2.1 SEALER

- .1 Sealer for horizontal surfaces: one coat Hempel Hempadur Mastic 45880 thinned 20% with xylene and second coat of Hempel Hempadur Mastic 45880 with slip-resistant additive or approved equivalent.

3.1 EXAMINATION

- .1 Examine all surfaces to which the work of this section is to be applied to ensure that they are adequate to provide a satisfactory application.

3.2 FINISHING OF FORMED SURFACES

- .1 Surfacing finishing of formed surfaces shall be classified as follows:
 - .a As cast.
- .2 Unless otherwise specified, the following surface finishes of formed surfaces exposed to view on the finished work shall be as follows:
 - .a As cast: Concrete requiring no further finish except repair to defects required to meet BC Building Code.

3.3 FINISHING OF FLAT SURFACES

- .1 Finishing of flat surfaces shall be classified as follows:
 - .a Troweled finish.
 - .b Broom finish.

- .2 Unless otherwise indicated, the following surface finish of flat surfaces shall be used:
- .a Troweled finish: For interior floors.
 - .b Broom finish: For sidewalks, ramps, stairs, and all areas of exterior exposed concrete slabs unless noted otherwise. See specific requirements in Landscape and Civil drawings and references to MMCD.
- .3 Troweled finish: After the concrete has been placed, struck off, consolidated, and screeded, the surface shall be bull floated, power floated, and steel troweled to produce a smooth, dense surface with abrupt irregularities no greater than .5 mm and out-of-plane no greater than 3 mm in 3 m. Coordinate with applied finishes.

Note: Where indicated to receive future finishes the slab must not be finished or cured in such a way as to prevent future adhesion of finishes.

- .4 Broom finish: Unless noted otherwise, all exterior sidewalks, ramps, stairs, and other surfaces where non-slip finish is required. Concrete shall be troweled finish except that the surface after floating shall be given a light broom finish by drawing the broom perpendicular to the length of the sidewalk or slab, leaving a sand textured finish. See specific requirements in Landscape and Civil drawings and references to MMCD.

3.4 SEALER COATING

- .1 Apply two even coats of sealer to exposed concrete surfaces, in strict accordance with the manufacturer's instructions.

3.5 CLEAN-UP

- .1 At the completion of the work, leave the building premises free from all accumulation of debris and sand. Clean the tops of all beams using compressed air, vacuum up all residue from sandblasting operations.

END OF SECTION 03 35 00
January 2021

1.1 WORK INCLUDED

- .1 Fabrication, supply and installation of all miscellaneous metal fabrication complete with fasteners, grout and accessories.
- .2 For steel beams and columns refer to structural drawings.

1.2 RELATED WORK

- .1 Structural steel refer to Structural drawings.
- .2 Section 08 70 00 Finish Hardware

1.3 QUALITY ASSURANCE

- .1 All materials and execution of work shall conform to the latest edition of the following standards or as otherwise specified:
 - .a CAN/CSA S16.1-M94 Limit States Design of Steel Structures.
 - .b CSA Standards W47.1-92 (R2001) Certification of Companies for Fusion Welding of Steel Structures and W59-1989 (2001) Welded Steel Construction (Metal Arc Welding).
 - .c CAN/CSA G164-M92 (R1998)(R1998) Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .d CSA-G40.20/G40.21-98 General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steels.
 - .e British Columbia Building Code (BCBC).

1.4 SUBMITTALS

- .1 Shop drawings: Submit shop drawings of specially fabricated items. Completely detail indicating all dimensions and methods of fixing.
- .2 Handrails, guardrails and canopies and other items as applicable shall be designed to meet or exceed the requirements of the BCBC. The shop drawing for the metal fabrications shall be signed and sealed by a Professional Engineer registered in the Province of British Columbia. The Engineer shall also submit with the shop drawings a signed and sealed Letter of Assurance in accordance with the BCBC.
- .3 At the completion of the work provide a Letter of Assurance in accordance with the BCBC signed and sealed by the Engineer confirming that the applicable metal fabrications have been designed and installed to meet or exceed the requirements of the BCBC.

2.1 MATERIALS

- .1 All materials used in the Contract shall be of the certifiable (mill certificates) quality, as manufactured by nationally recognized manufacturers, and of the type indicated on the drawings and in this specification.

2.2 STEEL

- .1 Rolled shapes and structural steel and plates: CSA-G40.20/G40.21-98 Grade 300 W.
- .2 Bolts, nuts, etc.: CSA-G40.20/G40.21-98.
- .3 Fastenings: Expose fasteners only where pre-approved by the Consultant.
- .4 Bar mill products: Mild steel, with low carbon content, for cold bending and hot forming.
- .5 Miscellaneous framing (clips, brackets, plates, backing, trim): Merchant bar quality of CSA-G40.20/G40.21-98 Grade 300 W. Sizes and weights as detailed or as required to suit fabrication requirements as presented on the shop drawings.
- .6 Steel pipe: Standard or extra heavy as per item description meeting ASTM A53/A53M-01, Grade B, continuous or electrical resistance welded, 35 k.s.i. unless otherwise noted. Sizes shown on the Architectural Drawings are actual O.D. sizes. Wherever CSA standards are written, ASTM standards where applicable may be used.

2.3 STEEL FINISHES

- .1 Galvanizing: Irregularly shaped items to CSA G164-M1992.
- .2 Galvanized metal primer: Cement oil base type, Pittsburg Ironhide, or Retardo Rust Inhibitive Paint.
- .3 Standard shop priming: Shop prime all exposed metal surfaces (not embedded in concrete) with primer meeting CAN/CGSB 1.40-97. Touch up or field-prime any damage or welds immediately after erection.
- .4 Touch-up: Touch up or field-prime any damages, cut or welds immediately after erection with galvicron paint, or special primer as required.

2.4 ALUMINUM

- .1 Shall be of the following types as designated on the drawings or specified herein:
 - .a Extrusions: In accordance with CSA HA-Series-M1980, 6063-T5 Alloy and Temper.
 - .b Plate bars etc: In accordance with CSA HA-Series-M1980, 6061-T6 Alloy and Temper.

2.5 OTHER MATERIALS

- .1 Grout: Premixed non-metallic sand/cement/expanding epoxy grout, normal grey colour.
- .2 Sand: Specially graded and processed to suit epoxy grout mix design.

2.6 SHOP FABRICATION - GENERAL

- .1 Materials cutting: All materials cut from stock shall be sheared or cleanly parted, trimmed, ground, and sanded to remove burrs. Where cuts are burred, all marks shall be ground smooth and cut true to line. All exposed welding, or welding in fitted surfaces, shall be ground smooth or filleted as the case may be. All work shall be accurate, neatly fitted, and executed in a workmanlike manner.
- .2 Welding of steel: All welding shall conform to CSA W59-1989 (R2001)-1989(R1998) and shall be executed by fabricators approved in conformance with CSA-W47.1-92 (R2001)-92 (R2001). All work must conform to CGSB, or ASTM standards of workmanship and fabrication.
- .3 Apply primer to prepared steel surfaces, Exterior steel to be commercial blast cleaned to SSPC-SP6 in accordance with and to the requirements of Section 09 90 00.

3.1 EXAMINATION

- .1 Examine all surfaces to which the work of this section is to be applied and ensure that all conditions are suitable to provide a complete and satisfactory installation.
- .2 Examine surfaces and conditions prior to installation of any items. Commencement of installation implies acceptance of surfaces and conditions.

3.2 CONCRETE HOLE DRILLING

- .1 3/8" (9 mm) to 1/2" (12 mm) greater than pipe or dowel diameter. Depth as indicated on detail drawings. By percussive or rotary machine, diamond coring for holes greater than 2" (50 mm) in diameter. First test holes and grouting to be approved on site by Consultant.

3.3 DOWEL SHANK

- .1 Deformed for full grout depth. Threaded or rebar type deformation. Remove mill scale, galvanized or other protective coatings by sandblasting, acid etching, or chemical stripping.

3.4 GROUTING

- .1 Set items with grout into drilled or cored grout pockets.
- .2 Trowel surface smooth and flush with adjacent surfaces.

3.5 INSTALLATION - GENERAL

- .1 Set in place, level and correctly aligned, miscellaneous metal items described.

3.6 PROTECTION AND CLEAN-UP

- .1 Protect the work of other sections from damage resulting from the work of this section, especially welding and cutting sparks. As work proceeds, and at completion, remove all surplus materials and deposit debris in containers provided or remove from site as directed.

3.7 SCHEDULE OF ITEMS

- .1 Items not specified above, includes but is not limited to, the following items as scheduled or detailed:

General: Quantities and sizes included but are not limited to those listed below. The list is given as general information only. The Contractor shall determine from the drawings the requirements of sizes, quantities, and locations for the specific items listed and shall confirm same on the shop drawings submitted in strict accordance with the conditions of the Contract.

	Description	Finish
.a	Anchors, bolts, and screws:	All fixing and anchorage for miscellaneous metalwork items shall be supplied as and where required to suit installation and erection.
.b	Shelf angles, clips, and beams:	Provide all the general angles, anchors, clips, plates, channels, etc., required to support or fix items of work installed by other sections, save where specifically excepted, and supply and fix any other miscellaneous ironwork items required in the work. Galvanize for exterior work and for interior.
.c	Vanity	Stainless steel, as detailed Manufactured by Action Stainless of Abbotsford BC 778-856-4599
.d	Vanity support steel	Stainless steel, as detailed
.e	Interior Metal Shroud	Stainless steel, as detailed

END OF SECTION 05 50 00
January 2021

1.1 SECTION INCLUDES

- .1 Work includes all sealants not specified in other sections.
- .2 Premoulded and expanding air barrier sealants.

1.2 QUALITY ASSURANCE

- .1 Installation of sealant and caulking work shall be carried out by a recognized specialized applicator having skilled mechanics, thoroughly trained and competent in all phases of caulking work, for at least five (5) years.
- .2 Reference Standards: The applicable current and/or latest editions of references and standards as published by the following organizations or agencies, designated by abbreviations in this section, are all to be considered as a part of this section. All work shall conform to the applicable requirements of these references and standards unless indicated or specified otherwise:
 - .a ASTM - American Society for Testing Materials.
 - .b CGSB - Canadian Government Specifications Board.
 - .c CSA - Canadian Standards Association.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Delivery: Do not expose primer, back-up or any sealant materials to moisture or damage of any nature prior to installation, and store in a manner to preclude damage of any nature. Deliver all materials required for sealants in the manufacturer's labeled containers. Remove all containers which are opened, burst, split, otherwise unsuitable for installation, and replace with material.

1.4 ENVIRONMENTAL CONDITIONS

- .1 Sealant and substrate materials to be minimum 5° C.
- .2 Should it become necessary to apply sealants below 5° C., consult the sealant manufacturer and follow their recommendations.

2.1 MATERIALS

- .1 General: All materials used in this Contract shall be of the highest quality, as manufactured by nationally recognized manufacturers and of the type indicated on the drawings and in this specification.

2.2 PRIMERS

- .1 A type recommended by the sealant manufacturer to suit substrate types and conditions.

2.3 BACK-UP RODS AND BOND BREAKERS

- .1 General: Diameter 25% larger than joint width.

.2 Joint fillers:

- .a General: Compatible with primers and sealants, outsized 30 to 50 percent.
- .b Polyethylene, urethane, neoprene or vinyl (vertical joints): Extruded closed cell foam, Shore A hardness 20, tensile strength 20 to 30 psi.
- .c Neoprene or butyl rubber (Horizontal Joints): Round solid rod, Shore A hardness 70.

.3 Bond breaker: Pressure sensitive plastic tape, which will not bond to sealants.**2.4 SEALANTS**

- .1 Exterior or interior concrete pavements (traffic surfaces): Polyurethane base multi-component, CAN/CGSB-19.24-M90, Type 1, self-leveling for horizontal joints; Type 2, non-sag for vertical portion of joints. Tremco THC 900, Tremco Dymeric, Sikaflex 2CNS or approved equivalent for horizontal joints.
- .2 Exterior (vertical and horizontal exposed locations except precast panels and as noted in .3 below): Two-component sealant meeting CAN/CGSB-19.24-M90, Tremco Dymeric or equivalent, or conforming to CAN/CGSB-19.13-M87, Sonnenborn NP 1, Tremco Dymonic, Dymonic FC or approved equivalent.
- .3 Interior exposed locations: Acrylic, one part, CAN/CGSB 19-GP-5M-1984, Tremco 555 or equivalent.
- .4 Concealed locations (exterior or interior): Butyl rubber, one component butyl-polyisobutylene base, CGSB 19-GP-14M-1976.
- .5 Mildew resistant sealant: Mildew resistant silicone to CAN/CGSB-19.13-M87.
- .6 Colour as selected by the Consultant from the manufacturer's standard colours and also to match or blend with adjoining materials in a manner to be determined by the Consultant.

3.1 EXAMINATION

- .1 Examine all surfaces to which the work of this section is to be applied and ensure that all conditions are suitable to provide a complete and satisfactory installation.
- .2 Commencement of work will indicate acceptance of surfaces and conditions.
- .3 Report any unsatisfactory surfaces or conditions to the Consultant.

3.2 WORKMANSHIP

- .1 It shall be the responsibility of the Contractor to remove all contaminant coatings, sealers, curing compounds, water repellents, or any deleterious substance, which has been sprayed, transferred or applied to joint surfaces, and which would impair the adhesion of the sealant in the opinion of the Contractor and the manufacturer's representative.

3.3 JOINT PREPARATION

- .1 Set joint filler units at proper depth of position in the joints to co-ordinate with other work, including the installation of bond breakers, backer rods, and sealers. Do not leave voids or gaps between the ends of joint filler units, except where shown to be omitted or recommended to be omitted by the sealant manufacturer for the application shown.

3.4 APPLICATION OF SEALANT TO JOINT LOCATIONS

- .1 External door and window frames, inside and outside - head and jambs.
- .2 Junction of toilet fixtures with walls and floors (mildew resistant); junction of vanities with walls (mildew resistant).
- .3 Interior joints between dissimilar materials where shown including but not limited to bath and wall, ceramic tile and stone and ceramic tile and gypsum board wall.
- .4 Exterior Thresholds: Set in two full beads.
- .5 All areas noted and obviously required and to protect interior from exterior water and air infiltration.
- .6 Control joints.
- .7 Joints in panel systems as recommended by panel system manufacturer.

3.5 APPLICATION

- .1 Comply with the manufacturer's printed instructions and recommendations.

3.6 CURE AND PROTECTION

- .1 Cure sealants in compliance with the manufacturer's instructions and recommendations.
- .2 Protect sealant and surfaces to receive sealant from contamination and other chemicals such as liquid water repellent which may affect bond of sealant to substrate.

3.7 PROTECTION

- .1 Do not allow sealants or compounds to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces.

3.8 PROTECTION AND CLEAN-UP

- .1 Protect adjacent work from damage, staining, disfigurement caused by the work of this section.
- .2 Promptly as the work proceeds, and on completion, keep the premises clean and free from rubbish, debris, surplus materials, and equipment accumulation.

END OF SECTION 07 92 00
January 2021

1.1 SECTION INCLUDES

- .1 Supply pressed steel frames and hollow metal doors. Heavy duty as noted on drawings.
- .2 Supply glazed and solid (where shown on drawings) partition framing.

1.2 RELATED SECTIONS

- .1 Section 06 20 00 Finish Carpentry
- .2 Section 08 70 00 Finish Hardware.
- .3 Section 08 81 00 Glazing

1.3 QUALITY ASSURANCE

- .1 Applicable Standards: Except where otherwise specified, materials and manufacture shall be in accordance with the Canadian Steel Door and Frame Manufacturers' Association "Canadian Manufacturing Specification for Doors and Frames" except as noted otherwise.

1.4 SUBMITTALS

- .1 Shop Drawings:
 - .a Submit shop drawings, showing typical details of pressed steel frames, including frame schedules and hardware details, to the Consultant for approval prior to fabrication.
 - .b Indicate doors and frames bearing ULC labels for ratings and opening classifications.
 - .c Note: Sizes shown on Door Schedule are clear frame opening sizes. All sizes (both wood and metal) shall be based on clear opening frame sizes.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Deliver all hollow metal work to the site fully protected and with adequate location and installation details.

2.1 MATERIALS

- .1 General: All materials used in this Contract shall be of the highest quality, as manufactured by nationally recognized manufacturers and of the type indicated on the drawings and in this specification.

2.2 DOOR FRAMES

- .1 1.52 mm (16 gauge) cold rolled steel stock, commercial grade to ASTM A653/A653M-01a. (latest edition) all door frames to be galvanized. Door frames galvanized to ZF075 (wiped zinc coating).
- .2 Floor anchors, channel spreaders and wall anchors: minimum 1.52 mm (16 gauge) base thickness steel.
- .3 Provide adjustable anchors of the manufacturer's standard to each frame as required.

- .4 Frames shall be welded type, of one piece construction.
- .5 Frames shall be blanked, reinforced, drilled, and tapped for mortised butts and strike. Mortised butts and strike cut-outs shall be protected with metal mortar guard boxes where required.
- .6 Frames shall be reinforced, when required, for surface mounted hardware. (Drilling and tapping in field by others.) Hardware preparation and location shall be in accordance with ANSI standard, each door opening to be prepared for single rubber bumpers, three (3) for single door openings, two (2) for double door openings.
- .7 Two (2) channel or angle spreaders to be welded to door jambs at bottom of door opening to ensure proper alignment.
- .8 Frames to be anchored to previously placed concrete or masonry shall be provided with anchors of suitable design as shown on reviewed shop drawings. Frames for casting in shall be as supplied by the manufacturer.
- .9 Labeled frames shall be provided for those openings requiring fire protection ratings as determined and scheduled by the Consultant. Such frames shall be in accordance with manufacturer's standards and shall be constructed as tested and approved by a nationally recognized testing agency having a factory inspection service.

2.3 HOLLOW METAL DOORS (FLUSH TYPE)

- .1 1.3 mm (18 gauge) cold rolled and leveled sheet stock and galvanized. Doors galvanized to ZF075 (wiped zinc coating).
- .2 Core materials to doors shall be honeycomb structural core and for fire rated doors to be ULC approved. Doors at exit stairs shall meet a temperature rise requirements of the B.C. Building Code.
- .3 Exterior doors shall be vertically stiffened with steel ribs and all voids filled with polystyrene insulation.
- .4 Construct doors in accordance with ULC or UL. Provide doors complete with appropriate ULC label for fire rating scheduled.
- .5 Doors shall be seamless type with no visible seams on door face.
- .6 Labeled doors shall be provided for those openings requiring fire protection ratings as determined and scheduled by the Consultant. Such doors shall be in accordance with the manufacturer's standard and/or type of construction as tested and approved by a nationally recognized testing agency having a factory inspection service.
- .7 Install tightly fitted vinyl top caps to all exterior doors.
- .8 Doors to be prepared to receive all hardware including all rough-in for any future electrified hardware as scheduled.
- .9 Provide for lights and door grilles as scheduled and detailed. Coordinate maximum light size with door use and fire rating.

- .10 Provide gasketed and sound rated doors where indicated.

2.4 HEAVY DUTY DOORS AND FRAMES

- .1 Where heavy duty doors are indicated, doors shall be constructed as indicated in 2.3 above except doors shall be constructed using 16 ga. material with 16 ga. end channels and 20 ga. stiffeners.
- .2 Where heavy duty frames are indicated frames shall be constructed as indicated in 2.2 above, except frames shall be constructed of 12 ga. material.

2.5 FABRICATION OF FRAMES

- .1 Fabricate frames as detailed, in accordance with Canadian Steel Door and Frame Manufacturer's Association, "Canadian Manufacturing Specifications for Steel Doors and Frames" latest edition, except where specified otherwise.
- .2 Cut mitres and joints accurately, assemble frames in position and weld continuously on inside of frame profile.
- .3 Mortise, reinforce, drill and tap frames and reinforcements to receive hardware including all rough-in for any future electrified hardware as scheduled using templates provided by finish hardware supplier.
- .4 Grind welded corners and joints to a flat plane, fill with metallic paste filler and sand to uniform smooth finish.
- .5 Protect strike and hinge reinforcements with steel guard boxes welded to frames.
- .6 Reinforce for all surface mounted hardware.
- .7 Weld in two channel spreaders per frame to ensure proper frame alignment.
- .8 Prepare doors for installation of electronic access control where indicated on door schedule. Reinforce as necessary for hardware and as necessary to maintain the fire-protection rating of the door. Provide all back boxes for electrified hardware including rough-in for any future electrified hardware.

2.6 FABRICATION OF METAL DOORS

- .1 Fabricate steel doors as detailed, in accordance with Canadian Steel Door and Frame Manufacturers' Association, "Canadian Manufacturing Specifications for Steel Doors and Frames" latest edition, for honeycomb core construction, except where specified otherwise.
- .2 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by finish hardware supplier.
 - .a Reinforce for all surface hardware.
 - .b Drill for all face function holes.

- .c Through-drill all mortise lock cylinder holes to permit standard reverse bevel interchangeability.
- .d Include lock case centering clips for mortise lock case reinforcing.
- .e Weld all reinforcing plates in place.
- .3 Install hinge reinforcing of sufficient strength and tolerances to insure that reasonably even clearances can be obtained on all sides when installed in properly dimensioned frames.
- .4 Manufacture to sufficient tolerances to insure that no additional work is required on site to fit properly dimensioned mortise hardware.
- .5 Bevel hinge and lock edges 3 mm in 50 mm.
- .6 Mechanically interlock seams on hinge and lock edges and seal with silicone or epoxy.
- .7 Spot weld hinge edge seams and grind smooth 25 mm (1") from each side of hinge locations.
- .8 Provide six wall anchors and two base anchors to suit wall construction. When providing anchors for existing walls, drill and countersink frames so that machine screws are flush with frames.
- .9 Install three bumpers on strike jamb for each single door and two bumpers at head for pairs of doors.
- .10 Touch up with primer where finish damaged during fabrication.
- .11 Manufacture to sufficient tolerances to insure that correctly installed frames will accept properly dimensioned doors with reasonably even clearances on all sides.

2.7 ANCHORS

- .1 All anchors to be galvanized to same standard as frame.
- .2 Floor Anchors: Minimum 1.90 mm (14 ga.) thickness, securely welded inside each jamb; provide 2 holes at each jamb for floor anchorage. Note areas with depressed floor slabs.
- .3 Wall Anchors:
 - .a Concrete Walls: "Existing wall type" with an expansion shield drilled into the concrete. Countersink flat head stove bolt 1.6 mm (1/16") into the frame and fill with body putty. Smooth and make good surface.
 - .b Masonry Walls: Wire masonry anchor.
 - .c Steel Stud Partitions: Welded "U" type steel anchor or steel stud anchor twist-in type to frame manufacturer's standard.
 - .d Number of Wall Anchors (Each Jamb):

Frames up to 2134 mm (7'-0") Height: 3 anchors minimum.
Frames over 2134 mm (7'-0") Height: 4 anchors minimum and not less than 1 per each 610 mm (2'-0") or portion thereof.

- .4 Steel Spreaders: Provide all metal frames with steel spreader temporarily attached to the feet of both jambs to serve as a brace during shipping and handling.

2.8 HARDWARE PREPARATION

- .1 Door Reinforcement: Mortised, reinforced, drilled and tapped at factory for fully templated hardware in conformance with hardware listed for each door in Hardware Schedule. Provide reinforcing plates only for surface mounted hardware. Drill and tap for surface mounted hardware on site.
- .2 Frames: Mortised, reinforced, drilled and tapped at the factory for fully templated and mortised hardware only, in conformance with hardware listed for each door including all rough-in for any future electrified hardware as scheduled in Hardware Schedule. Provide reinforcing plates only for surface mounted hardware. Drill and tap for surface mounted hardware on site.
- .3 Hardware Reinforcing Plates: Hard-tempered steel; minimum thickness 2.66 mm (12 ga.) except hinge and pivot reinforcements 4.55 mm (7 ga.).

2.9 FINISHING

- .1 Sand and clean surfaces prior to epoxy filler application.
- .2 Fill seams, depressions, intersecting corners completely with epoxy filler and sand smooth.
- .3 Clean and chemically treat metal to provide maximum paint adhesion.

3.1 INSPECTION

- .1 Examine all surfaces to which the work of this section is to be applied and ensure that all conditions are suitable to provide a complete and satisfactory installation.
- .2 Commencement of work will indicate acceptance of surfaces and conditions.
- .3 Report any unsatisfactory surfaces or conditions to the Consultant in writing.

3.2 INSTALLATION

- .1 General: Install hollow metal units and accessories in accordance with final shop drawings and manufacturer's data, and as specified in Section 06 20 00 finish carpentry.

3.3 ADJUST AND CLEAN

- .1 Check and readjust operating finish hardware items in hollow metal work just prior to final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including doors or frames which are warped, bowed or otherwise damaged.

END OF SECTION 08 11 13
January 2021

1.1 REQUIREMENTS INCLUDED

- .1 Furnish all labor, material, equipment and services necessary for the supply to the site, of the finish hardware as indicated on the drawings, schedules and specified herein.
- .2 Include also the furnishing of all templates and schedules required by manufacturers of hollow metal doors and pressed steel frames and other such work to enable the manufacturers to make proper provisions in their work to receive the finish hardware.
- .3 All finish hardware to made to conform to A.N.S.I. standard dimensions.

1.2 RELATED WORK

- .1 Section 08 11 13: Hollow Metal Doors and Frames

1.3 QUALITY ASSURANCE

- .1 Standards: In all cases where C.G.S.B. (Canadian Government Specifications Board), C.S.A. (Canadian Standards association), ASTM (American Society for Testing and Materials), or other standards are quoted, this shall be taken to mean the latest edition of that particular standard including all revisions.
- .2 Materials shall conform to those as specified, in brand and quality, unless otherwise approved in writing by the Consultant. No claim as to their unsuitability or unavailability or this Subcontractor's unwillingness to use the same, will be considered, unless such claims are made in writing prior to the closing of bids.
- .3 Qualifications: Hardware supplier shall be an established contract builders hardware firm who shall have in his employ one or more A.H.C. (Architectural Hardware Consultant) who are members in good standing of the DHI (Door and Hardware Institute) and who will be responsible for the complete hardware contract.

1.4 SUBMITTALS

- .1 Samples: If required by the Consultant, a returnable sample of each item of proposed hardware shall be submitted for approval not later than ten (10) days after requested. Samples to be properly tagged, indicating name of supplier, name of manufacturer, item number, intended function and location. Installed item to equal in all respects to approved samples.
- .2 Submit the following to Consultant:
 - .a Five (5) copies of a detailed hardware schedule for the Consultant's approval within two (2) weeks of being awarded this contract.
 - .b Indicate manufacturer's name and article number in complete detail including active hands of pairs of doors, degree of opening and other information pertinent to the intended function of the door and frame details.
- .3 In addition to hardware, the schedule shall include, for each heading or group of doors, Consultant's door reference number as per door schedule, the room designations, door size and material and label requirements.
- .4 The schedule shall also incorporate detailed keying for final approval by the owner.

- .5 Provide "as-installed" hardware list, including name of supplier, to the Consultant upon substantial performance of the contract.
- .6 List to be complete with key to explain manufacturer's names, abbreviations and codes.
- .7 Templates shall not be issued or material supplied until the hardware list has been approved. Provide additional copies of the hardware lists to the Consultant on request.

1.5 COMPLIANCE WITH REGULATIONS

- .1 The hardware supplier shall check the listed hardware for compliance with local fire codes and regulations regarding required hardware for fire doors and report to the Consultant, any discrepancies or omission in the listed hardware in this respect. Failure to report any such discrepancies or omission render supplier responsible for cost of rectification.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 All hardware shall be delivered to the site in accordance with the construction schedule prepared by the Contractor. All hardware shall be inspected on site for compliance to specifications before installation, stored in the original sealed packages in a locked, secure place until required for installation. The Contractor will be responsible for receiving and storing of hardware at the site. Hardware suppliers shall tag and deliver any sealed packages to the contractor.
- .2 Hardware shall be supplied complete with required screws, bolts and fastenings necessary for proper installation, wrapped in paper and packed in the same package as hardware. Each package shall be legibly labeled indicating that portion of work for which it is intended. Door hardware to delivered unopened original boxes.
- .3 Mail one copy of hardware delivery sheets to the Consultant at time of each shipment.

1.7 TEMPLATES

- .1 Templates shall be supplied by the hardware supplier to all trades requiring them.

1.8 GUARANTEE

- .1 All finish hardware, except door closers shall be guaranteed by the hardware manufacturer, by written certification, for a period of one (1) year from certified date of substantial performance against any defects in the design, materials, finish, function and workmanship and that any defects will be made good by the manufacturer at not additional cost to the Owner. A similar guarantee for a ten (10) year period shall be provided for door closers by the manufacturer.

2.1 MATERIALS

- .1 Hardware shall be best grade, entirely free from imperfections in manufacture and finish and shall be supplied in accordance with the hardware list specified herein.
- .2 The following list of manufactures and products are considered approved for this project and no variations from the listed or pre-approved alternate items will be permitted.
- .3 Installed item to be equal in all respects to approved samples.

- .4 Supply all templates as required. Frame manufacturer will allow for maximum swing of doors when templating for closers. On pairs of doors RHR Leaf is to be active unless otherwise noted.
- .5 Any doors not listed shall have hardware as listed for similar locations.
- .6 Package hardware with all necessary screws and fittings, clearly labeled with door number as per door schedule, as to intended location. Included all necessary installation instructions.

2.2 APPROVED MANUFACTURERS

- .1 Use one manufacturer's product only for all similar items.
- .2 The following is a list of approved manufacturers:

- .a Hinges:

- Lawrence Brothers Inc.
- Stanley of Canada
- Hagar Hinge Canada

All hinges shall be satin, stainless steel with NRP pins. 1½ pair bolts required for each door. Medium or heavy duty.

- .b Passage, privacy and locksets:

- Best T-Series locks with interchangeable cores

All with satin stainless steel finish.

- .c Closers:

- Sargent Hardware of Canada
- LCN of Canada, Super Smoothie, 4041 Series

Satin stainless steel.

- .d Wall and floor stops:

- Canadian Builders Hardware Manufacturers Hagar of Canada.

- .e Weatherstripping, thresholds and seals:

- Pemko Manufacturing Co.
- A.K. Draft Seal Ltd.

- .f Motorized Openers:

- Ditec Entrimatic HA-8

2.3 KEYS AND KEYING

- .1 All locks to be keyed to the existing master keying system and to Owner's requirements.

- .2 All keys stamped "Do Not Copy".
- .3 Supply:
 - .a 3 Ea. Keys per lock or cylinder.
 - .b 3 Only construction keys
 - .c 3 Only Master keys per MK group.
 - .d 1 Ea. Key cabinets to suit with 50% expansion capacity.
- .4 Obtain details of keying from the Owner before ordering. Allow sufficient type line spacing to allow the owner to insert keying information after each lock or cylinder.
- .5 Note:
 - .a All cylinders to be factory keyed and shipped installed in locks by contractor.
 - .b Construction keys only to Contractor at site.
 - .c Master keys, blank keys, operating keys, key control system and extractor keys to be sent via registered mail by factory direct to the Owner.

3.1 INSTALLATION

- .1 Installation will be done under other sections.

3.2 HARDWARE MOUNTING

- .1 Shall be in accordance with the recommended locations as per standard locations for builders hardware locations (metric) as listed in Canadian Metric conversion Guide for Steel Doors and Frames prepared by the Canadian Steel Door and Frame Manufacturers association and B.C. Code for the Physically and Visually Handicapped.

3.3 ATTACHMENT

- .1 Include all necessary screws, special screws, bolts, special bolts, expansion shields, and other devices required for proper hardware application.

3.4 COORDINATION

- .1 Confer with the various sections of work to be sure that they will conform to and fit actual conditions on the job.

END OF SECTION 08 70 00
January 2021

1.1 SECTION INCLUDES

- .1 All labor, materials, tools and other equipment, services and supervision required to complete all interior and exterior painting and decorating work as indicated on finish schedules and to the full extent of the drawings and specifications.
- .2 The work shall also include all touch-ups and field painting necessary to complete the noted work.
- .3 Surface preparation to receive painting and finishing is not included under this section of work, except for priming and back-priming and specific pre-treatments noted herein or specified in the Master Painters Institute (MPI) Painting Specification Manual.

1.2 QUALITY ASSURANCE

- .1 Only qualified journeymen who have a Tradesman Qualification Certificate of Proficiency shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyman in accordance with trade regulations.
- .2 All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Architectural Painting Specification Manual (hereafter referred to as the MPI Painting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.
- .3 All paint manufacturers and products used shall be as listed under the approved product list section of the MPI Painting Manual.

1.3 REGULATORY REQUIREMENTS

- .1 Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.

1.4 SUBMITTALS / MOCK-UP

- .1 Submit consent of surety with Bid Submission as proof of ability to supply a 100% two (2) year Maintenance Bond.
- .2 Submit an invoice list of all painting materials ordered for project work indicating manufacturer, types and quantities for verification and compliance with specification and design requirements.
- .3 Submit two sets of Material Safety Data Sheets (MSDS) prior to commencement of work for review and for posting at job site as required.
- .4 At project completion provide an itemized list complete with manufacturer, paint type and colour coding for all colours used for Owner's later use in maintenance.
- .5 When requested by the Consultant, prepare and paint a designated surface, area, room, or item (in each colour scheme) to requirements specified herein, with specified paint or coating showing selected colours, gloss/sheen, textures and workmanship to MPI Painting Specification Manual standards for review and approval. When approved, surface, area, room and/or items shall become acceptable standard of finish quality and workmanship for similar on-site work.

1.5 PRODUCT DELIVERY, STORAGE, HANDLING AND ENVIRONMENTAL REQUIREMENTS

- .1 Deliver and store all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and colour designation, standard compliance, materials content as well as mixing and/or reducing and application requirements in strict accordance with manufacturer and MPI requirements.
- .2 Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.
- .3 Perform no painting or decorating work when the ambient air and substrate temperatures, relative humidity and dew point and substrate moisture content is below or above requirements for both interior and exterior work.
- .4 Ensure adequate continuous ventilation and sufficient heating and lighting is in place.
- .5 Apply paint only to dry, clean, properly cured and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.

1.6 GUARANTEE

- .1 Provide and pay for a 100% two (2) year Maintenance Bond in accordance with MPI Painting Manual requirements. The Maintenance Bond shall warrant that all painting work has been performed in accordance with MPI Painting Manual requirements.

2.1 MATERIALS

- .1 All materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) shall be in accordance with the MPI Painting Manual approved product listing and shall be from a single manufacturer for each system used.
- .2 Other paint materials such as linseed oil, shellac, etc. shall be the highest quality product of an approved manufacturer listed in the MPI Painting Manual and shall be compatible with other coating materials as required.

2.2 MIXING AND TINTING

- .1 Unless otherwise specified herein or pre-approved, all paint shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity. Where thinner is used, addition shall not exceed paint manufacturer's recommendations.

2.3 FINISH, COLOUR, GLOSS / SHEEN

- .1 Unless otherwise specified herein, all painting work shall be in accordance with MPI premium grade finish requirements.
- .2 Colours shall be as selected by the Consultant from a manufacturer's full range of colours. Refer to Section 09 99 99 Finishes List for identification and location of colours.
- .3 Refer to the MPI Painting Manual for finish, colour and gloss / sheen requirements.

3.1 CONDITION AND PREPARATION OF SURFACES

- .1 The condition and preparation requirements for all surfaces shall be in accordance with MPI Painting Manual requirements.
- .2 If the existing surface to be repainted has epoxy paint it is the responsibility of this section to degloss the surface with the appropriate preparation method and apply a bonding primer.

3.2 APPLICATION

- .1 Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other subtrade work) are acceptable for applications of products.
- .2 Apply paint or stain in accordance with MPI Painting Manual premium grade finish requirements.
- .3 Painting coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations. Apply a minimum of four coats of paint where deep or bright colours are used to achieve satisfactory results.

3.3 EXTERIOR FINISH / COATING SYSTEMS

Paint exterior surfaces in accordance with the following MPI Painting Manual requirements:

- .1 Concrete vertical surfaces:
EXT 3.1A Latex semi-gloss finish.

3.4 INTERIOR PAINT AND COATING SYSTEMS

Paint interior surfaces in accordance with the following MPI Painting Manual requirements:

- .1 Galvanized metal: (doors, frames, railings, misc. steel, pipes, ducts, etc.)
EXT 5.3J WB Light Industrial.
- .2 Concrete vertical surfaces in washrooms:
EXT 3.1A Latex semi-gloss finish.

3.5 MECHANICAL / ELECTRICAL EQUIPMENT AND RELATED SURFACES

- .1 Unless otherwise specified or noted, paint all "unfinished" conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and texture to match adjacent surfaces, in the following areas:
 - .a where exposed-to-view in all exterior and interior areas.
 - .b in all interior high humidity interior areas.
 - .c in all boiler room, mechanical and electrical rooms.

- .2 In unfinished areas leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks. Do not paint over nameplates.
- .3 Refer to Mechanical and Electrical Specifications for painting, banding, stenciling of other surfaces / equipment.

3.6 FIELD QUALITY CONTROL

- .1 Painted surfaces shall be considered to lack uniformity and soundness in accordance with defects noted in the MPI Painting Manual.
- .2 Painted surfaces rejected by the inspector shall be made good at the expense of the Contractor in accordance with MPI Painting Manual requirements.

3.7 PROTECTION AND CLEAN-UP

- .1 Protect all newly painted exterior surfaces from elements condensation and contamination until paint coatings are completely dry. Erect barriers or screens and post signs to warn of or limit or direct traffic.
- .2 Remove all spilled, splashed, splattered or over sprayed paint as work progresses, remove waste materials and keep area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.

END OF SECTION 09 91 00
January 2021

1.1 GENERAL

- .1 This Section of the Specification forms part of the Contract Documents and is to be read, interpreted, and coordinated with all the other parts.

1.2 RELATED WORK UNDER OTHER SECTIONS

- | | | |
|----|------------------|-------------------------------|
| .1 | Section 03 35 00 | Concrete Finishes |
| .3 | Section 06 10 00 | Rough Carpentry |
| .6 | Section 08 11 13 | Hollow Metal Doors and Frames |
| .8 | Section 09 25 00 | Gypsum Board Systems |
| .9 | Section 09 91 00 | Painting |

1.3 REGULATORY REQUIREMENTS

- .1 Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.

1.4 SUBMITTALS / Mock-Up

- .1 At project completion provide an itemized list complete with manufacturer, paint type and coding for all colours used for Owner's later use in maintenance.
- .2 Prepare and paint a designated surface, area, room or item (in each colour scheme) to requirements specified herein, with specified paint or coating showing selected colours, gloss/sheen, textures and workmanship to MPI Painting Specification Manual standards for review and approval. When approved, surface, area, room and/or items shall become acceptable standard of finish quality and workmanship for on-site work and colour designation.

2.1 SCHEDULE

2.1 PAINT		
PT-1	Exterior concrete roof and roof vents	BM-2132-10-BLACK
PT-2	Exterior concrete walls	BM-CW-720-GEDDY GRAY
PT-3	Hollow metal doors and frames	BM-2032-30-FRESH LIME
PT-4	Building signage	BM OC-66 SNOW WHITE
PT-5	Washroom signage	BM OC-66 SNOW WHITE
PT-6	Interior concrete walls and ceiling	BM OC-66 SNOW WHITE
PT-7	Holding tank service hatch	BM-2132-10-BLACK
Exposed piping and conduit	Typical	To match adjacent painted surface typical
RB-1	Rubber Base	Tarkett-Traditional Wall Base-282 VAPORIZE

2.2 METAL

Vanity	Stainless steel
Vanity Supports	Stainless steel
Interior Metal Shroud	Stainless Steel

2.3 FLOORING

Concrete floor	Sealed	Refer to Section 03 35 00
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END OF SECTION 09 99 99

January 2021

1.1 WORK INCLUDED

- .1 Refer to listed items Article 3.3.

1.2 COORDINATION

- .1 Purchasing, installation, expediting and coordination are the responsibility of this section.

1.3 SUBMITTALS

- .1 Shop drawings: Submit manufacturer's literature showing all construction details, dimensions, gauges, thicknesses, description of materials and metal finishing specifications.
- .2 Samples: Submit colour or representation of manufacturer's standard samples showing finish or operation, if required by the Consultant.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Deliver items to site in manufacturer's unopened labeled containers and crating, store inside building off floor on pallets or shelves, covered in approved manner to protect from damage.

2.1 PRODUCTS

- .1 Article 3.4 - Schedule of Items.

3.1 INSTALLATION

- .1 Install manufactured specialty items in accordance with details, approved shop drawings and manufacturer's latest instructions, specifications and approved installation templates.
- .2 Exposed fastenings, unless otherwise approved, shall be of the same material, colour, and finish as the base metal on which they occur.
- .3 Finished work shall be plumb and level and free from distortion and defects, detrimental to appearance or performance. Starting work implies that the installer accepts substrates and conditions on which its work depends.
- .4 Securely install at heights and locations indicated or if not indicated at heights and locations as field directed by the Consultant. Where toilet room is indicated to be handicapped accessible, install toilet accessories at locations and heights required by the B.C. Building Code and as approved by the Consultant.

3.3 PROTECTION AND CLEAN-UP

- .1 Adjust operating parts to work easily, smoothly, and correctly.
- .2 Repair minor damage to eliminate all evidence of repairs.
- .3 Clean exposed surfaces using non-abrasive materials and methods recommended by the manufacturer of the product being cleaned.
- .4 Remove and replace any item that cannot in the opinion of the Consultant be successfully cleaned or repaired.

- .5 Protect during installation any adjacent surfaces from damage due to the work of this section.
- .6 Protect items installed under this section from damage resulting from the work of other sections.
- .7 Promptly as the work proceeds and on completion, remove all crating, wrapping surplus materials and equipment.


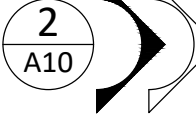

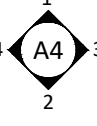
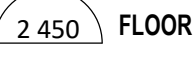








3.4 SCHEDULE OF ITEMS

- .1 General: Manufacturer's model numbers and brand names have been given to indicate a standard of quality only. Other manufacturers having equal or alternative type products of the standards named are invited to submit to the Consultant their request for approval as equal or alternative.
- .2 Toilet and bath accessories:
 - .1 Bottle Filler: See civil.
 - .2 Toilet Paper Dispenser: Supplied and installed by owner.
 - .3 Sanitary Napkin Disposal: Supplied and installed by owner.
 - .4 Hand Dryer: Dyson V-Blade, 120V, Nickel finish.
 - .5 Grab Bars: Stainless steel, satin finish with knurled grip area 38 mm (1 ½") dia., concealed fasteners with cover plate to BCBC standards.
 - .7 Soap Dispenser: Supplied and installed by owner.
 - .8 Hooks: Type-304 stainless steel 11-gauge clothes hook to the back of each inswing and outswing door.
 - .10 Push Button: Camden CM-45/A2, square push plate with 'active wheelchair' symbol.

END OF SECTION 10 80 00
January 2021

APPENDIX B

DRAWINGS

ABBREVIATIONS			DRAWING SYMBOLS		
ALUM	ALUMINUM	PS	PRESSED STEEL		GRID BUBBLE
BC	BAR GRATING	PRTN	FOLDING PARTITION		PLAN OR SECTION DETAIL ELEV SECTION USES SOLID ARROW DETAIL SECTION USES OPEN ARROW PLAN DETAIL USES NO ARROW
CF	CLEAR FINISH	RB	RUBBER BASE		ROOM NAME AND NUMBER
CIP	CAST-IN-PLACE	RH	RADIANT HEATER		INTERIOR ELEVATIONS
CP	CARPET	RSF	RESILIENT SHEET FLOORING		FLOOR ELEVATION TAG
CMU	CONCRETE BLOCK	S	SEALER		MILLWORK TAG
CONC	CONCRETE	SCN	SCREEN		WALL TYPE TAG
CT	CERAMIC TILE	SCW	SOLID CORE WOOD		DOOR TAG
EPXF	EPOXY FLOORING	SF	SAFETY FLOORING		REVISION TAG
EXMM	EXPANDED METAL MESH	SFS	SPORTS FLOORING SYSTEM		WINDOW TAG
EX	EXISTING	SM	SURFACE MOUNT		EXISTING ELEVATION IN METERS
FD	FLOOR DRAIN	SP	SEPARATE PRICE		DESIGN ELEVATION IN METERS
FF	FIXED FURNITURE	SS	SPECIAL SHEATHING		HEIGHT Ⓞ UNDERSIDE OF CEILING WITH MATERIAL DESIGNATION
FFD	FUNNEL FLOOR DRAIN	STS	STAINLESS STEEL		
FM	FLUSH MOUNT	TB	MOLD RESISTANT TILE BACKER		
GALV	GALVANIZED	TP	TOILET PARTITION		
GF	GROUND FACE	TBAR	T-BAR SUSPENDED CEILING (NOT USED)		
GL	GLAZING	TG	TEMPERED GLAZING		
GS	GALVANIZED STEEL	T.O.	TOP OF		
GWB	GYPSUM WALL BOARD	U/S	UNDERSIDE		
HDPE	HIGH-DENSITY POLYETHYLENE	V	VINYL		
HM	HOLLOW METAL	WB	WOOD BASE		
IRP	IMPACT RESISTANT PANEL	WD	WOOD		
MD	METAL DECK	WP	WORK POINT		
MO	MASONRY OPENING				
MP	METAL PANELS				
NA	NOT APPLICABLE				
N.I.C.	NOT IN CONTRACT				
OC	ON CENTRE				
PFAB	PRE-FABRICATED				
PL	PLASTIC LAMINATE				

1 DRAWING SYMBOLS AND ABBREVIATIONS



2 LOCATION PLAN

1:10000

PROJECT DESCRIPTION

NEW WASHROOM FACILITIES IN MUNDY PARK AT THE MARINER WAY/CHILKO DRIVE ENTRANCE. THE PROJECT CONSISTS OF TWO PREFABRICATED CONCRETE BUILDINGS EACH 3.8 SM CONCRETE AND TWO SANITARY HOLDING TANKS. PROJECT INCLUDE ACCESS ROAD FOR HOLDING TANK MAINTENANCE.

GENERAL NOTES

- SUPPLY AND INSTALL OF PREFABRICATED BUILDING (INCLUDING WALLS, ROOF, SLAB, DOORS, DOOR FRAMES, AND VENT STACK) HAS BEEN PURCHASED BY THE OWNER. THE SUBCONTRACTOR FOR THIS WORK IS LEKO. REFER TO LEKO INVOICE IN PROJECT SPECIFICATION.
- GC IS RESPONSIBLE FOR COORDINATING WITH LEKO TO FACILITATE BUILDING DELIVERY AND INSTALLATION.
- GC TO OBTAIN AND SUBMIT SHOP DRAWINGS OF PREFABRICATED BUILDING AND CONFIRM ALL DIMENSIONS OF PREFABRICATED PARTS PRIOR TO INSTALLATION.
- GC TO PROVIDE THE FOLLOWING FOR BUILDING INSTALLATION:
 - ON-SITE PLUMBER TO COORDINATE WITH PREFABRICATED BUILDING DESIGN AND CONFIRM ANY ADJUSTMENTS. REFER TO MECH.
 - ON-SITE ELECTRICIAN TO COORDINATE WITH PREFABRICATED BUILDING DESIGN AND CONFIRM ANY ADJUSTMENTS.
 - MINIMUM 1' OF MINUS 3/4" GRAVEL WORKING PAD AT BASE OF WASHROOM BUILDINGS AS PER LEKO REQUIREMENTS.
 - 150MM DEEP LAYER OF MINUS 19MM CLEAN CRUSHED GRANULAR BASE AND 6-MIL VAPOUR BARRIER AS PER GEOTECHNICAL. REFER TO GEOTECHNICAL REPORT IN PROJECT SPECIFICATION.
 - CORING EQUIPMENT FOR SLAB PENETRATIONS.
- UNLESS OTHERWISE NOTED ALL WORK IS BY GENERAL CONTRACTOR

OPTIONAL PRICES

- ACCESSIBLE PATH AND PARKING
OPTIONAL PRICE 1 IS AN EXTRA TO ADD ACCESSIBLE PATH AND PARKING. REFER TO CIVIL.
- ASPHALT RESTORATION
OPTIONAL PRICE 2 IS AN EXTRA TO ADD A PORTION OF THE ACCESSIBLE PATH REGRADING. REFER TO CIVIL.
- CONCRETE SLAB FOR HOLDING TANKS
OPTIONAL PRICE 3 IS A CREDIT TO DELETE THE CONCRETE SLAB UNDER THE HOLDING TANKS. REFER TO GEOTECHNICAL MEMORANDUM IN PROJECT SPECIFICATION.

CITY OF COQUITLAM MUNDY PARK CHILKO WASHROOMS

OWNER

City of Coquitlam
Scott Groves, Project Manager
sgroves@coquitlam.ca

ARCHITECTURAL

CARSCADDEN STOKES MCDONALD ARCHITECTS INC.
310 - 1930 Pandora Street, Vancouver, BC V5L 0C7
(604) 633-1830 www.carsscadden.ca

Glen Stokes, PARTNER, ARCHITECT AIBC,
glen@carsscadden.ca

A0.0 COVER SHEET
A0.1 CODE SUMMARY
A0.2 SCHEDULES
A0.3 SUBTRADE GENERAL REQUIREMENTS

A1.1 SITE PLAN
A1.2 BUILDING LAYOUT PLAN

A2.1 PLANS & DETAILS

A3.1 SECTIONS & INTERIOR ELEVATIONS

A4.1 ELEVATIONS

STRUCTURAL

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1025 West Broadway, Suite 300
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(604) 730-0048

Tommy Lai, Project Engineer
tlai@rjc.ca

MECHANICAL

AME Consulting Group Ltd.
200 - 638 Smithe St
Vancouver, BC V6B 1E3
(604) 684-5995

Erni Nakamura, Project Manager,
eminakamura@amegroup.ca

M0.01 SITE PLAN, SYMBOL
SCHEDULES, NOTES
M1.01 PLUMBING RENOVATION PLAN
M2.01 MECHANICAL SPECIFICATIONS I

ELECTRICAL

DMD & Associates
Electricrical Consultants Ltd.
12-17358 - 104A Ave
Surrey, BC V4N 5M3
(604) 589-9010

Bob Kellie, Project Manager
b.kellie@dmdeng.com

E-1.0 POWER DISTRIBUTION

CIVIL

Van Der Zalm & Associates
102 - 355 Kingsway
Vancouver, BC V5T 3J7
(604) 882-0024

George Burns, Project Manager
george@vdz.ca

CV-01 COVER SHEET
CV-02 SITE PLAN
CV-03 WASHROOM AREA PLAN
CV-04 CIVIL DETAILS
CV-05 CIVIL DETAILS
CV-06 CIVIL NOTES
CV-07 ESC NOTES
CV-08 ESC PLAN
CV-09 ESC DETAILS



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ISSUED FOR RFP	2021 JAN 14
ISSUED FOR 100% CD	2020 DEC 17
ISSUED FOR BP	2020 DEC 02
ISSUED FOR 90% CD	2020 NOV 13
ISSUED FOR 50% CD	2020 OCT 30
ISSUED FOR 25% CD	2020 OCT 16
ISSUED FOR COC REVIEW	2020 SEP 25
ISSUED FOR 100% DD	2020 SEP 18
ISSUED FOR SD	2020 SEP 11

REVISIONS

Cariscadden

PROJECT ADDRESS

490 MARINER WAY,
COQUITLAM

JOB TITLE

MUNDY PARK CHILKO
WASHROOMS

SHEET TITLE

COVER

DRAWN

VT

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JOB NO.

2026

DATE

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SCALE

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OWNER'S REFERENCE INFORMATION

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ADDRESS	490 MARINER WAY
LEGAL DESCRIPTION	N/A

BUILDING CODE	BCBC 2018		
MAJOR OCCUPANCY	A2		
GOVERNING CODE	PART 3		
CODE CLASSIFICATION	3.2.2.28 – A2 UP TO 1 STOREY LESS THAN 400 SM COMBUSTIBLE OR NON-COMBUSTIBLE NO SPRINKLERS REQUIRED NO RATINGS FOR FLOORS OR MEZZANINES		
BUILDING AREA	TOILET ROOM 01		= 3.8 SM
	TOILET ROOM 02		= 3.8 SM
	TOTAL		= 7.6 SM
BUILDING HEIGHT	1 STOREY		
OCCUPANT LOAD 3.1.17.1	TOILET ROOM 01 (# OF TOILETS)		= 1
	TOILET ROOM 02 (# OF TOILETS)		= 1
	TOTAL		= 2
NUMBER OF EXITS 3.4.2.1	1 EXIT REQUIRED EXCEPT WHEN SUITE IS MORE THAN 150 SM AND DISTANCE TO EXIT IS MORE THAN 15M FOR GROUP A2		
ACCESSIBILITY	REQUIRED AS PER 3.8.2.1 AND 3.8.2.39 FOR PUBLIC TOILETS		

REQUIRED TABLE 3.7.2.2.A	OCCUPANT LOAD FOR CALCULATION 1-25 PERSONS OF EACH SEX	= 2 = MALE: 1 & FEMALE: 1
TOILET ROOM	REQUIRED IN BUILDING PER 3.8.2.39	

CODE DIAGRAM KEY

- 2 OCCUPANT LOAD
- A2 OCCUPANCY
- EXIT EXIT
- 150 EXIT CAPACITY IN PERSONS
- A ACCESSIBLE ROUTE
- 0 MIN FRR FIRE SEPARATION
- 45 MIN FRR FIRE SEPARATION
- 60 MIN FRR FIRE SEPARATION
- 120 MIN FRR FIRE SEPARATION
- Spatial Separation Limit
- CLEAR FLOOR SPACE IN FRONT OF LAVATORY AS PER BCBC
- CLEAR FLOOR SPACE PARALLEL AND ADJACENT TO THE WATER CLOSET AS PER BCBC

FLOOR SPACE NOT LESS THAN 3.75M WITH NO DIMENSION LESS THAN 1.700 WHEN THE DOOR SWINGS OUT AS PER BCBC 3.8.3.12(1)(i)

AS PER FRASER HEALTH SEWAGE HOLDING TANK MINIMUM REQUIREMENTS FOR CONSTRUCTION AND USE

AS PER FRASER HEALTH SEWAGE HOLDING TANK MINIMUM REQUIREMENTS FOR CONSTRUCTION AND USE

1780 (1700 MIN.)

1060 (1000 MIN.)

3420

920 MIN. IN FRONT OF LAVATORY

610 (460 MIN.)

150

MIN. 200X400 MM SHELF OR COUNTER SPACE AS PER BCBC 3.8.3.12(1)(h)

CLEAR FLOOR SPACE IN FRONT OF LAVATORY AS PER BCBC 3.8.3.15(1)(b)

1350 MIN. IN FRONT OF LAVATORY

EXIT 150

1500 MIN.

CLEAR AND LEVEL SPACE ON THE SIDE OF THE ASSEMBLY INTO WHICH A SWINGING DOOR DOES NOT SWING AS PER BCBC 3.8.3.6(11)(b)

1200 MIN.

900 MIN. ADJACENT TO WATER CLOSET

450 MIN.

TOILET ROOM 01 A2

TOILET ROOM 02 A2

1860 (1000 MIN.)

920 MIN. IN FRONT OF LAVATORY

610 (460 MIN.)

150

1350 MIN. IN FRONT OF LAVATORY

EXIT 150

1500 MIN.

ENSURE MIN 1500X1500 MM CLEAR AND FLAT SPACE IN FRONT OF BOTTLE FILLER FOR WHEELCHAIR ACCESS

1'

2'

3'

A

B

C

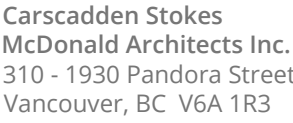
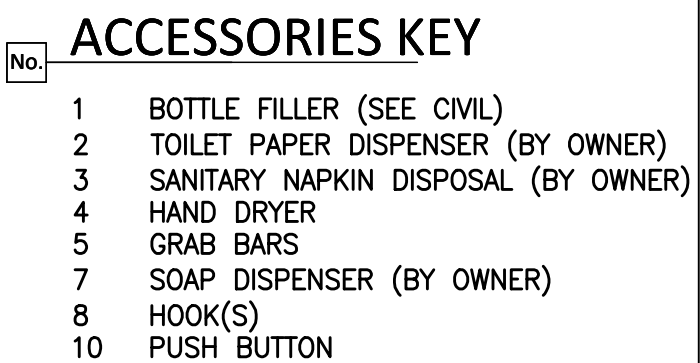
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[illegible]

3 ROOM & FINISH SCHEDULE

1 REFER TO MANUFACTURER RECOMMENDED CLEARANCES TYPICAL
2 REFER ALSO TO INTERIOR ELEVATIONS



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ISSUED FOR 25% CD	2020 OCT 16
ISSUED FOR COC REVIEW	2020 SEP 25
ISSUED FOR 100% DD	2020 SEP 18
ISSUED FOR SD	2020 SEP 11

REVISIONS

Carscadden

PROJECT ADDRESS

490 MARINER WAY,
COQUITLAM

JOB TITLE

MUNDY PARK CHILKO WASHROOMS

SHEET TITLE

SCHEDULES

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SUBTRADE GENERAL REQUIREMENTS

ELECTRICAL GENERAL REQUIREMENTS

1.

A QUALIFIED ELECTRICIAN REGISTERED IN THE PROVINCE OF BC SHALL BE RESPONSIBLE FOR THE DESIGN AS REQUIRED FOR THE COMPLETE ELECTRICAL SYSTEM. THE ELECTRICAL SUB-TRADE SHALL PRODUCE DESIGN DRAWINGS, SHOP DRAWINGS AND LETTERS OF ASSURANCE (B AND CB) – AS REQUIRED BY THE ELECTRICAL INSPECTION AUTHORITY HAVING JURISDICTION.
2.

IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, THAT IS TESTED AND READY FOR OPERATION.
3.

UNLESS OTHERWISE NOTED OR SPECIFIED, PROVIDE ALL EQUIPMENT AND/OR MATERIALS SHOWN ON THE DRAWINGS AND DEFINED IN THE SPECIFICATIONS.
4.

ANY APPARATUS, APPLIANCES, MATERIALS, OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED, DELIVERED AND INSTALLED BY THE ELECTRICAL DIVISION WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
5.

THE WORK SHALL BE IN ACCORDANCE WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. WORK SHALL INCLUDE ALL MATERIALS, LABOUR, TOOLS, EQUIPMENT AND SERVICES REQUIRED FOR THE CONSTRUCTION, INSTALLATION AND COMMISSION INTO REGULAR OPERATION OF THE COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND AS DESCRIBED AND SPECIFIED IN THIS AND ACCOMPANYING SECTIONS AND TO INCLUDE THE DESIGN, SUPPLY AND INSTALLATION OF THE FOLLOWING:

A.

SWITCHES AND RECEPTACLES AS REQUIRED.

B.

WIRING FOR MECHANICAL SYSTEMS. ALL LINE VOLTAGE WIRING FOR CONTROL PANELS AND POWER SUPPLY TO CONTROLS FOR MECHANICAL EQUIPMENT.

C.

TEST REPORTS, COMMISSIONING AND CERTIFICATIONS TO INCLUDE: ELECTRICAL INSPECTOR'S CERTIFICATE OF COMPLETION. LOW VOLTAGE LIGHTING CONTROL SYSTEM TEST REPORT.

D.

CONNECTION OF ALL NEW SYSTEMS TO THEIR CONTROLS FOR POWER AND LOW VOLTAGE LIGHTING SYSTEMS. CONNECTIONS OF SYSTEMS TO CENTRAL CONTROLS SHALL INCLUDE ALL MATERIALS AND APPARATUS REQUIRED TO EXTEND WIRING FROM DEVICES TO THE CENTRAL FACILITIES IN ORDER TO PROVIDE FOR A FULLY OPERATING SYSTEM THROUGHOUT THE FACILITY.

E.

BRANCH CIRCUIT WIRING TO ALL NEW LIGHTING FIXTURES, SWITCHES, RECEPTACLES, FANS, MOTORS, OWNER'S EQUIPMENT AND LINE/LOW VOLTAGE CONTROLS SUPPLIED AND/OR INSTALLED UNDER THIS CONTRACT. BRANCH CIRCUIT WIRING SHALL INCLUDE: CONDUIT, CONDUCTORS, FITTINGS, PULL BOXES, DEVICE BOXES WIRE, TERMINATIONS AND IN GENERAL THE COMPLETE BRANCH CIRCUIT WIRING.

F.

WIRING TO AND THE CONNECTION OF ALL THE OWNER'S EQUIPMENT AS INDICATED ON THE DRAWINGS AND AS LISTED IN THE SPECIFICATIONS.

G.

ALL NECESSARY HANGERS, SUPPORTS, ATTACHMENTS, BRACKETS AND BRACES FOR MOUNTING AND SUPPORTING ELECTRICAL EQUIPMENT TO LATEST B.C. BUILDING CODE SEISMIC REQUIREMENTS.
6.

THE MECHANICAL SCOPE, DRAWINGS AND SPECIFICATION ARE TO BE READ IN CONJUNCTION. LOCATIONS OF MECHANICAL EQUIPMENT TO BE COORDINATED ON SITE.
7.

PROVIDE SHOP AND PLACEMENT DRAWINGS FOR ALL ELECTRICAL EQUIPMENT, INCLUDING RUNS OF CONDUIT/CABLE RACKS SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY. PROVIDE ANCHORAGE/ATTACHMENT DETAILS FOR REVIEW BY THE CONSULTANT. SUBMIT SAMPLES OF MATERIALS REQUIRED TO COMPLETE THE SEISMIC RESTRAINT WORK FOR REVIEW IF AND WHEN REQUIRED. THE ELECTRICAL SUB-TRADE SHALL DESIGN ALL ANCHORAGE/ATTACHMENTS TO INSPECT SAME ON SITE (NOTE THAT MULTIPLE INSPECTIONS WILL BE REQUIRED AS THE WORK PROGRESSES) AND TO PROVIDE TYPEWRITTEN INSPECTION REPORTS TO THE CONSULTANT THROUGHOUT CONSTRUCTION. SEISMICALLY RESTRAIN THE FOLLOWING: LIGHT FIXTURES, CABLE TRAY, CONDUIT BANKS, ELECTRICAL DISTRIBUTIONS, MISC. ELECTRICAL DEVICES.
8.

THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE FOLLOWING: THE LATEST ADOPTED REVISION OF PART 1 OF THE CANADIAN ELECTRICAL CODE, THE CURRENT EDITION OF "SAFETY STANDARD FOR ELECTRICAL INSTALLATIONS" AND THE B.C. PROVINCIAL AMENDMENTS TO THIS CODE, THE NATIONAL BUILDING CODE, ALL LOCAL BYLAWS, RULES, AND ORDINANCES APPLICABLE TO THIS INSTALLATION.
9.

OBTAIN ALL NECESSARY PERMITS AND PAY ALL PERMIT FEES.
10.

UPON COMPLETION, PRESENT A CERTIFICATE OF APPROVAL FOR ALL ELECTRICAL WORK FROM THE ELECTRICAL INSPECTION AUTHORITY HAVING JURISDICTION.
11.

EQUIPMENT AND MATERIALS SHALL BE NEW AND BEAR THE APPROVAL OF C.S.A. OR EQUIVALENT.

12.

SUBMIT SHOP DRAWINGS OF ELECTRICAL EQUIPMENT. MANUFACTURE OF EQUIPMENT MUST NOT BE COMMENCED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

13.

UPON COMPLETION OF THE WORK, ALL CHANGES AND SITE INFORMATION SHALL BE TRANSFERRED TO ONE SET OF ELECTRICAL DRAWINGS BY THE CONTRACTOR.

14.

PROVIDE ACAD "AS-BUILT DRAWINGS" AND THREE (3) HARDCOPY SETS OF AS-BUILT DRAWINGS AND A USB WITH CONTRACT DRAWINGS INCLUDING SHOP DRAWINGS FOR PERMANENT USE.

15.

WHERE WORK PERFORMED INCLUDES THE SUPPLY AND INSTALLATION OF ELECTRICAL EQUIPMENT OR CONTROLS, TWO IN-SERVICE DEMONSTRATIONS FOR EACH SYSTEM WILL BE CONDUCTED FOR THE OWNER'S MAINTENANCE PERSONNEL. FOUR (4) COPIES OF THE COMPLETE MANUALS DETAILING THE PROPER MAINTENANCE AND OPERATION OF THE EQUIPMENT AND SYSTEMS WILL BE PROVIDED PRIOR TO THE START OF THE IN-SERVICE DEMONSTRATION.

16.

BEFORE INTERRUPTING ANY SERVICES, COMPLETE ALL PREPARATORY WORK AS FAR AS REASONABLY POSSIBLE AND HAVE ALL NECESSARY MATERIALS ON SITE AND PREFABRICATED (WHERE PRACTICAL). WORK CONTINUOUSLY TO KEEP THE LENGTH OF INTERRUPTION TO A MINIMUM.

17.

INCLUDE IN THE CONTRACT PRICE THE COST OF ALL WORK THAT MAY BE REQUIRED OUT OF REGULAR HOURS.

18.

LIGHTING FIXTURE TYPE CATALOGUE NUMBERS DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ALL APPROPRIATE MOUNTING ACCESSORIES FOR ALL MOUNTING CONDITIONS.

19.

PROVIDE APPROPRIATE ACCESSORIES FOR PROPER MOUNTING OF ALL FIXTURES.

20.

ALL FIXTURES SHALL BE PROVIDED WITH PROPER, NEW, AND OPERABLE LAMPS. PROVIDE LAMPS INDICATED ON THE FIXTURE SCHEDULE, OR, IF NOT INDICATED, AS RECOMMENDED BY THE FIXTURE MANUFACTURER. LAMPS SHALL BE COMPATIBLE WITH THE RESPECTIVE FIXTURE IN ALL CASES.

21.

ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR, BEGINNING WITH THE DATE OF SUBSTANTIAL PERFORMANCE. THIS WARRANTY SHALL BE IN WRITING AND SHALL INCLUDE WRITTEN COPIES OF FACTORY WARRANTIES.



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ISSUED FOR RFP 2021 JAN 14
ISSUED FOR 100% CD 2020 DEC 17

REVISIONS
Carscadden

PROJECT ADDRESS
**490 MARINER WAY,
COQUITLAM**

JOB TITLE
**MUNDY PARK CHILKO
WASHROOMS**

SHEET TITLE:
**SUBTRADE GENERAL
REQUIREMENTS**

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VT GS

JOB NO. DATE
2026 SEP 2020

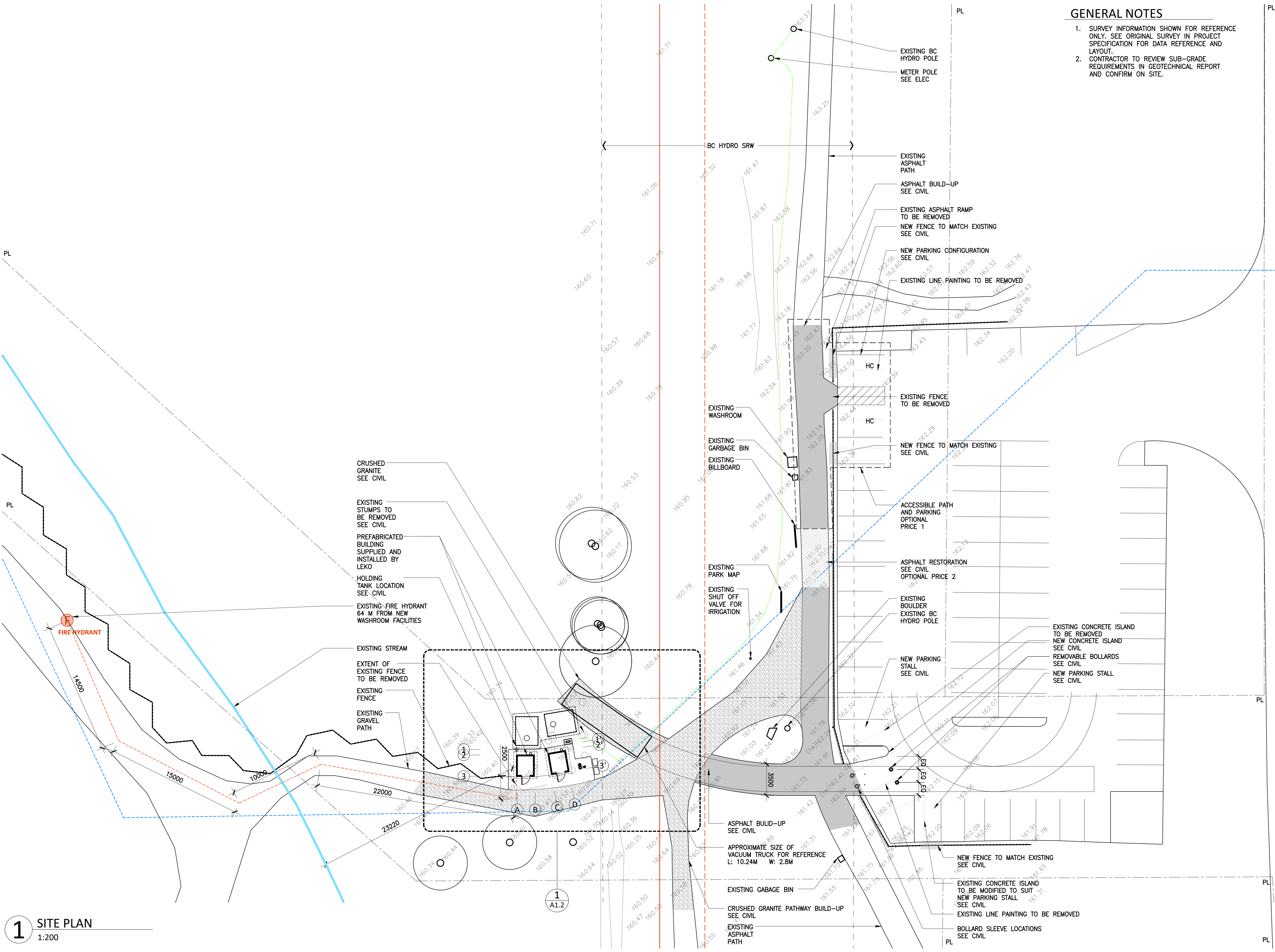
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OWNER'S REFERENCE INFORMATION

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GENERAL NOTES

1. SURVEY INFORMATION SHOWN FOR REFERENCE ONLY. SEE ORIGINAL SURVEY IN PROJECT SPECIFICATION FOR DATA REFERENCE AND LAYOUT.
2. CONTRACTOR TO REVIEW SUB-GRADE REQUIREMENTS IN GEOTECHNICAL REPORT AND CONFIRM ON SITE.



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LEGEND

- EXISTING WATER LINE
- NEW ELECTRICAL CONNECTION
- EXISTING FORTIS BC GAS LINE
- 2017 CONSTRUCTED GAS LINE

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ISSUED FOR SD	2020 SEP 11

Revisions
Carscadden

PROJECT ADDRESS
490 MARINER WAY,
COQUITLAM

JOB TITLE
MUNDY PARK CHILKO
WASHROOMS

SHEET TITLE
SITE PLAN

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2026

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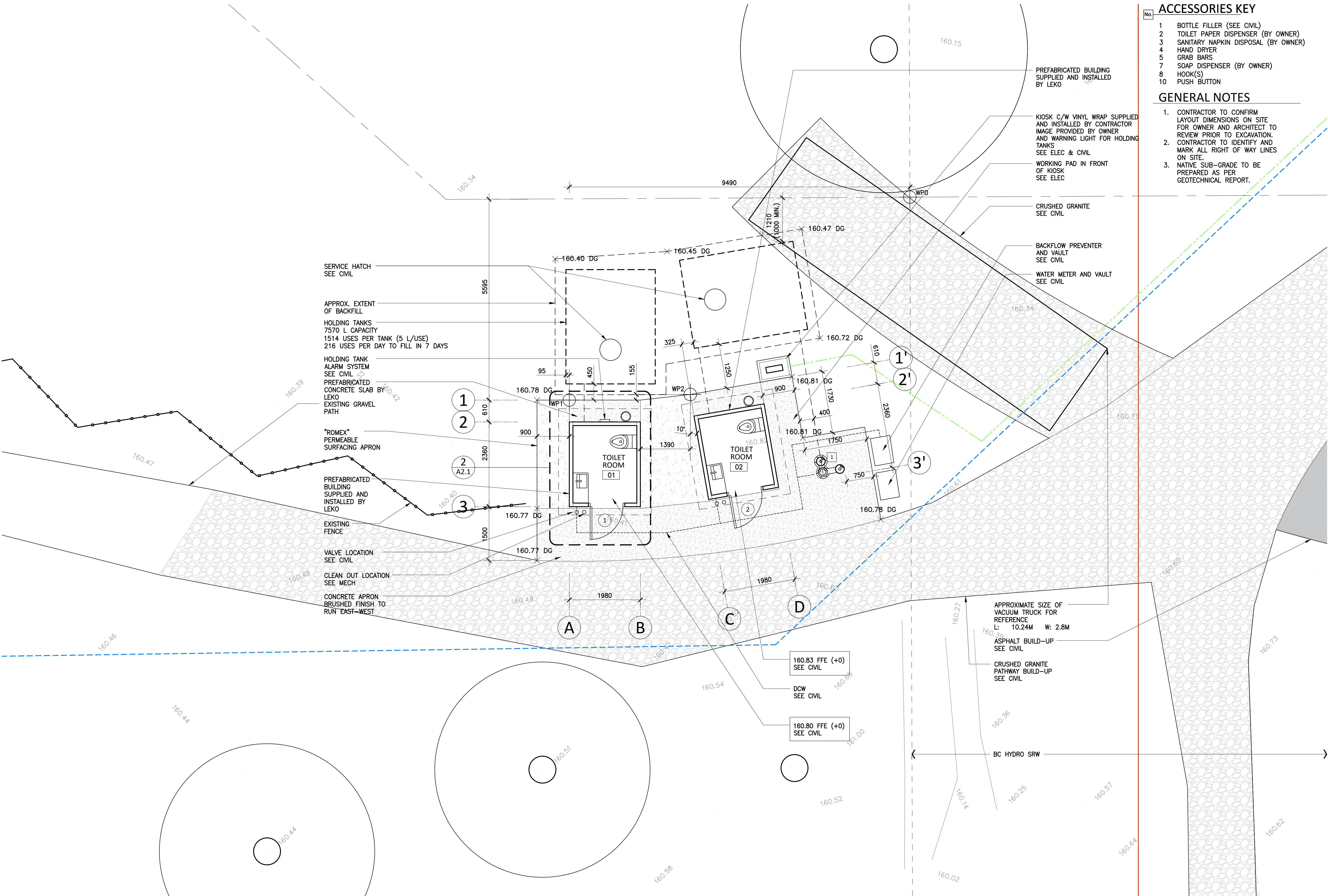
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- ACCESSORIES KEY**
- | No. | Description |
|-----|-------------------------------------|
| 1 | BOTTLE FILLER (SEE CIVIL) |
| 2 | TOILET PAPER DISPENSER (BY OWNER) |
| 3 | SANITARY NAPKIN DISPOSAL (BY OWNER) |
| 4 | HAND DRYER |
| 5 | GRAB BARS |
| 7 | SOAP DISPENSER (BY OWNER) |
| 8 | HOOK(S) |
| 10 | PUSH BUTTON |

GENERAL NOTES

1. CONTRACTOR TO CONFIRM LAYOUT DIMENSIONS ON SITE FOR OWNER AND ARCHITECT TO REVIEW PRIOR TO EXCAVATION. CONTRACTOR TO IDENTIFY AND MARK ALL RIGHT OF WAY LINES ON SITE.
2. NATIVE SUB-GRADE TO BE PREPARED AS PER GEOTECHNICAL REPORT.



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LEGEND

- EXISTING WATER LINE
- NEW ELECTRICAL CONNECTION
- EXISTING FORTIS BC GAS LINE
- 2017 CONSTRUCTED GAS LINE
- × 38.5 DG DESIGN GRADE

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**490 MARINER WAY,
COQUITLAM**

JOB TITLE
**MUNDY PARK CHILKO
WASHROOMS**

SHEET TITLE
**BUILDING LAYOUT
PLAN**

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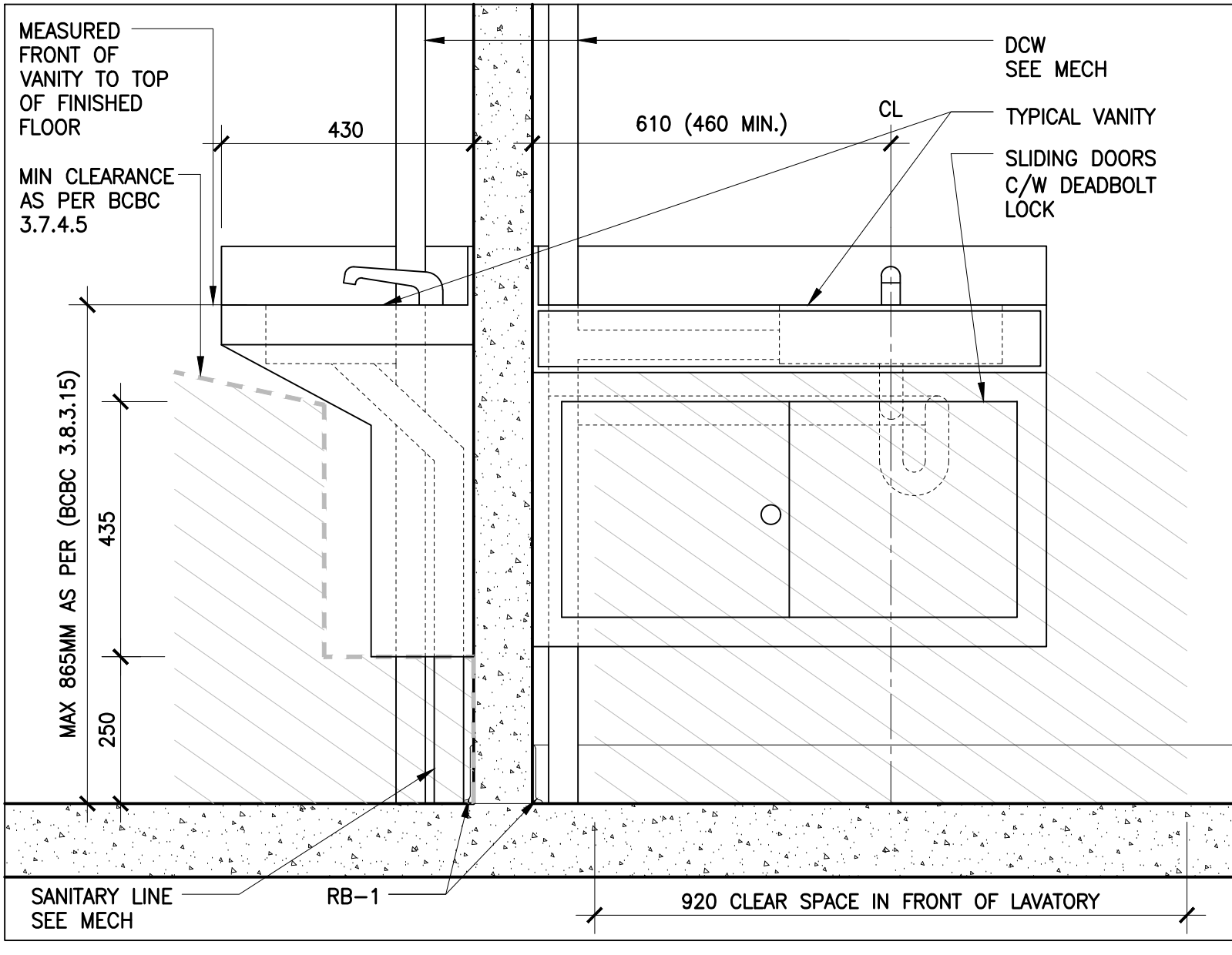
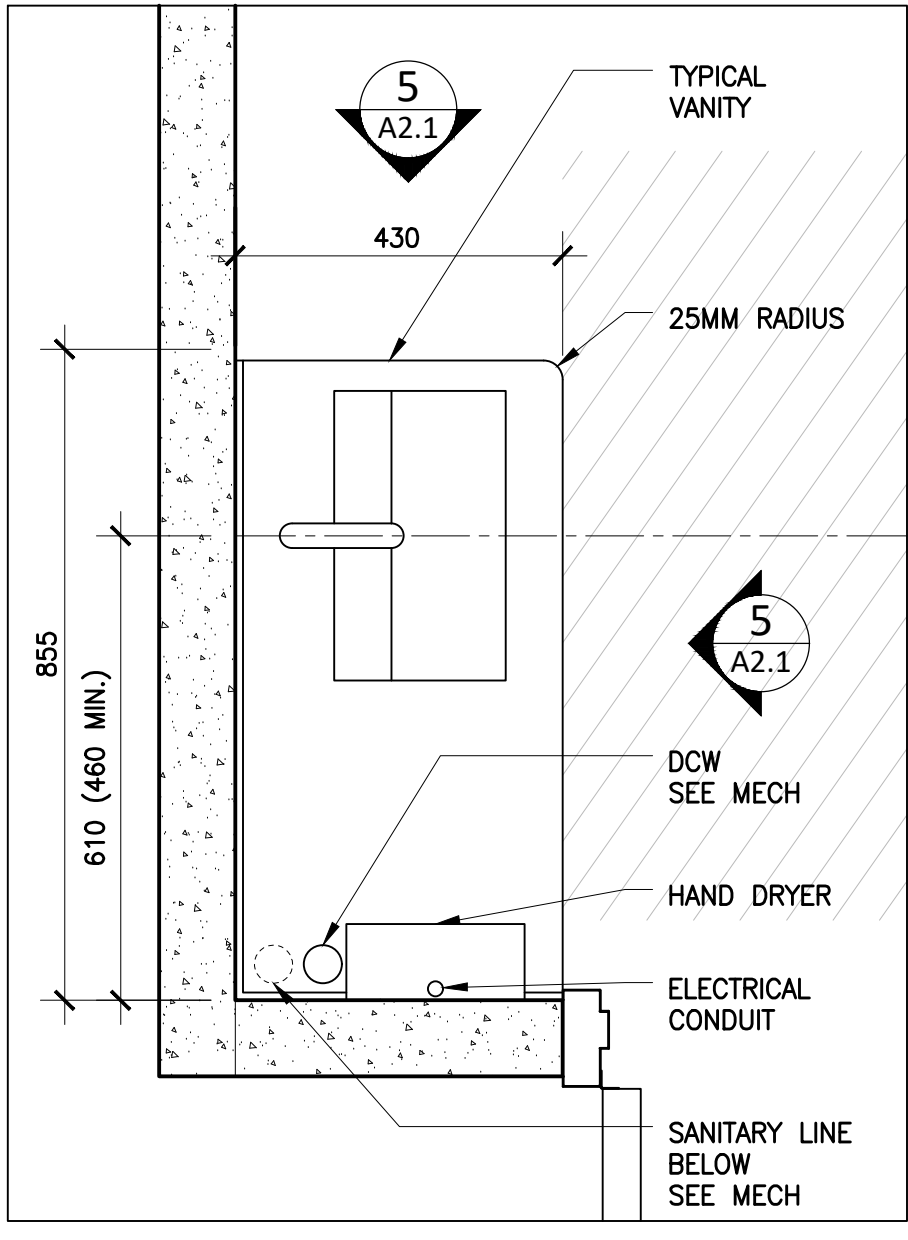
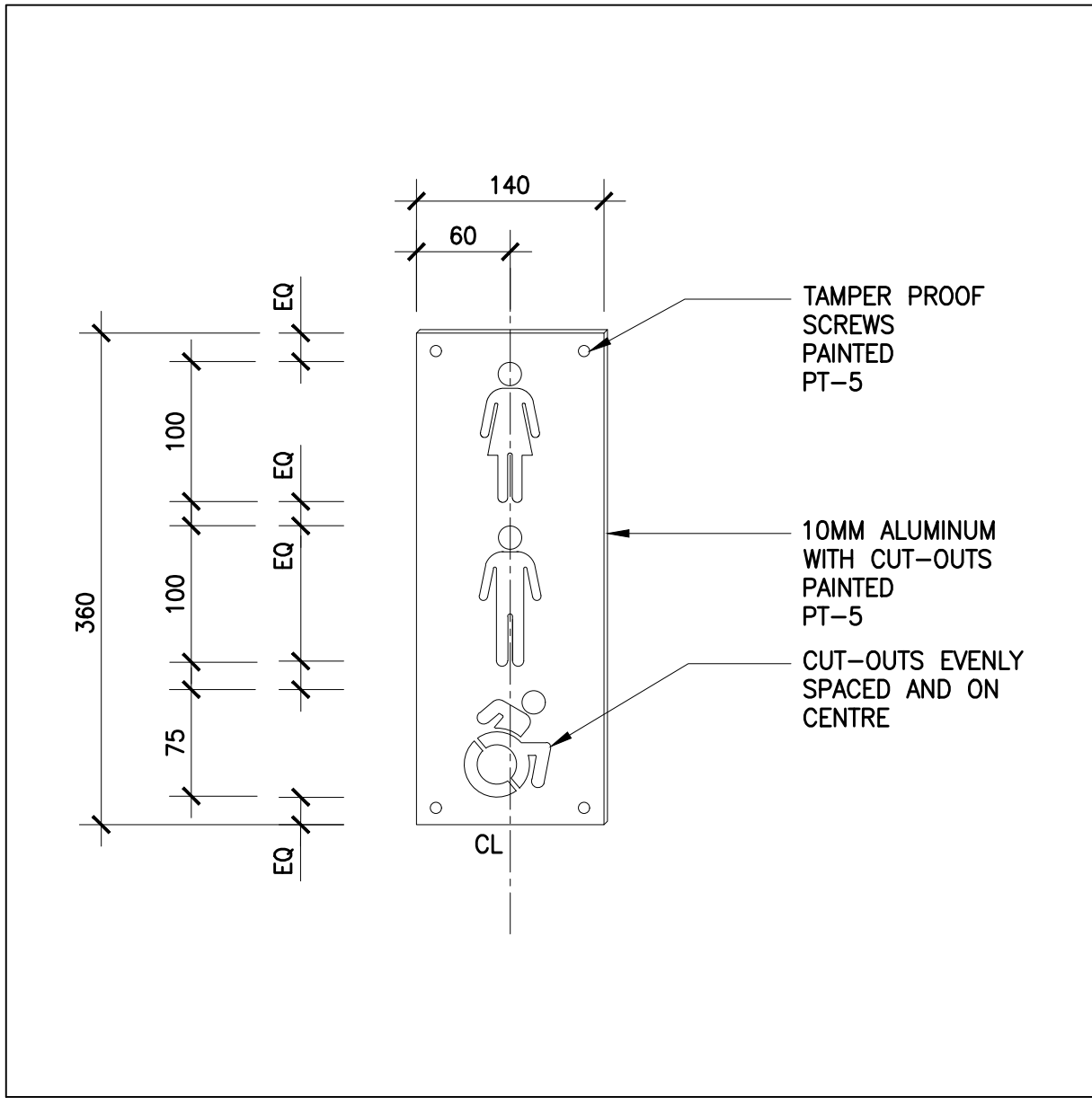
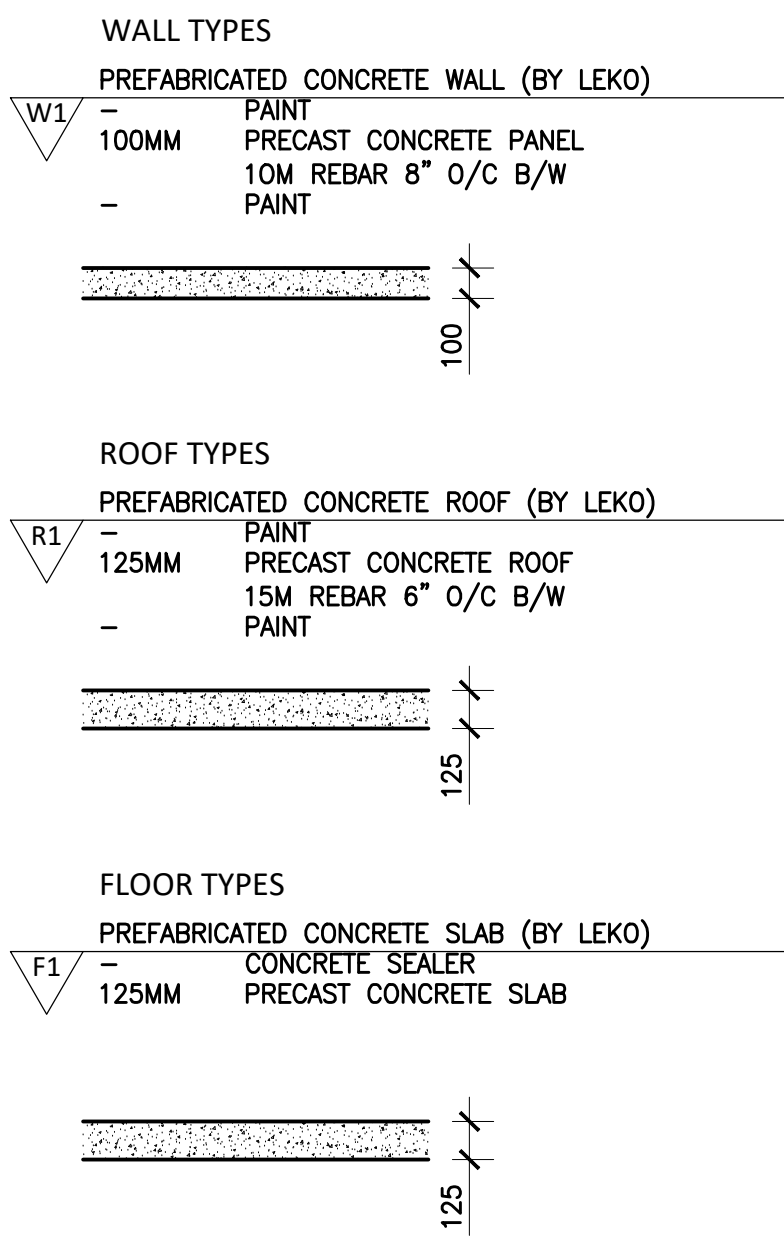
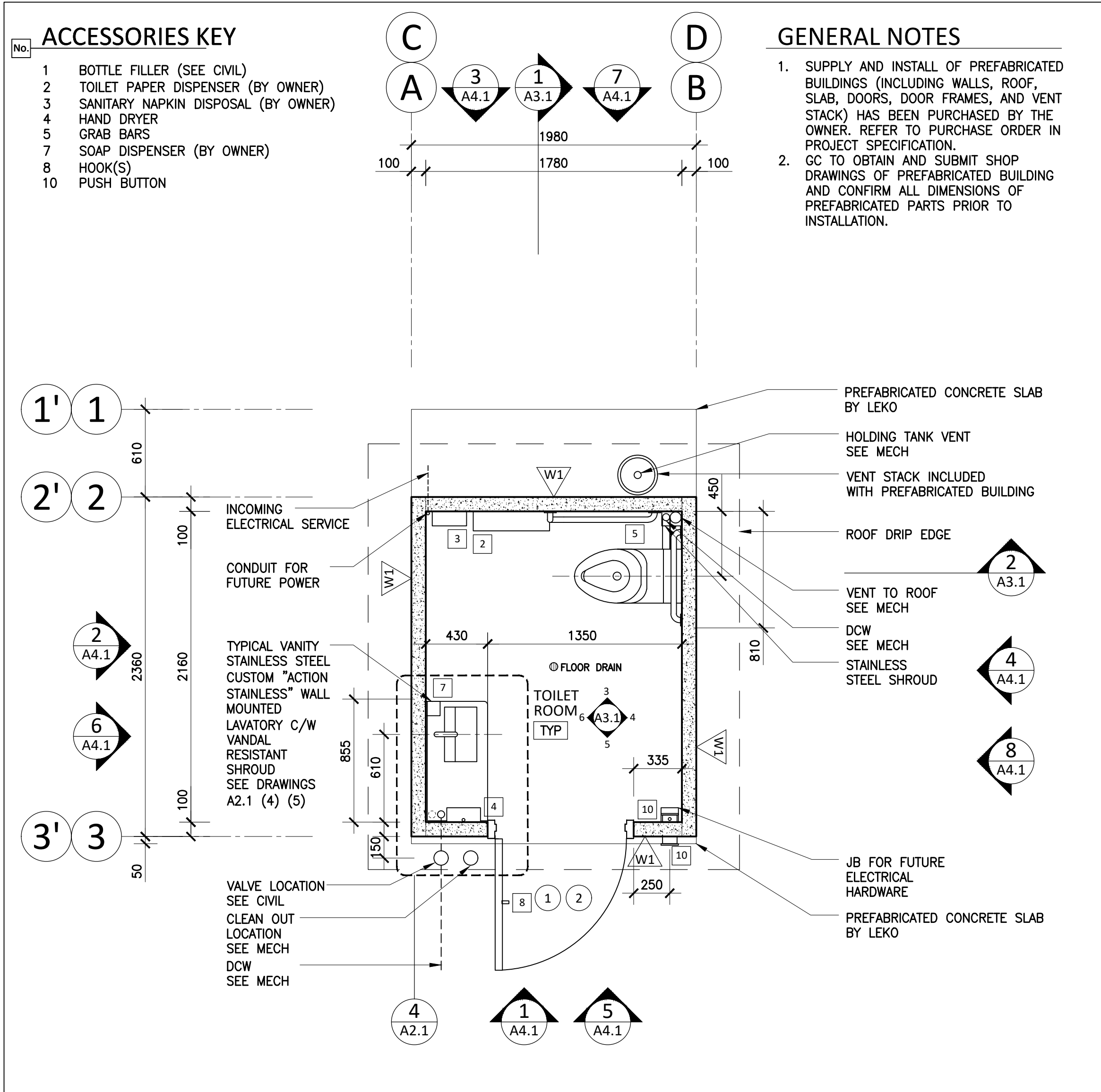
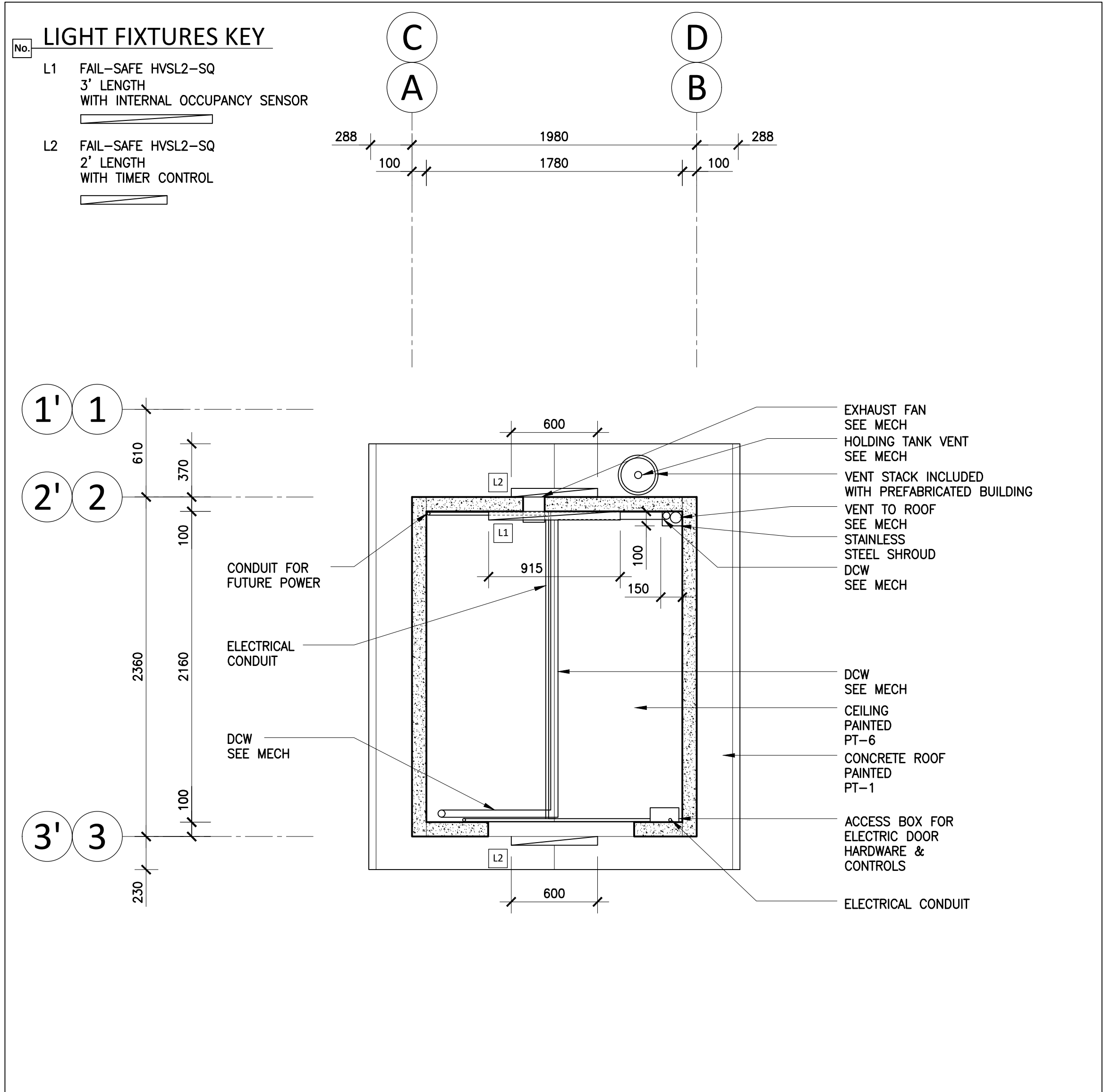
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REVISIONS

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JOB TITLE

**MUNDY PARK CHILKO
WASHROOMS**

SHEET TITLE

PLANS & DETAILS

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SEP 2020

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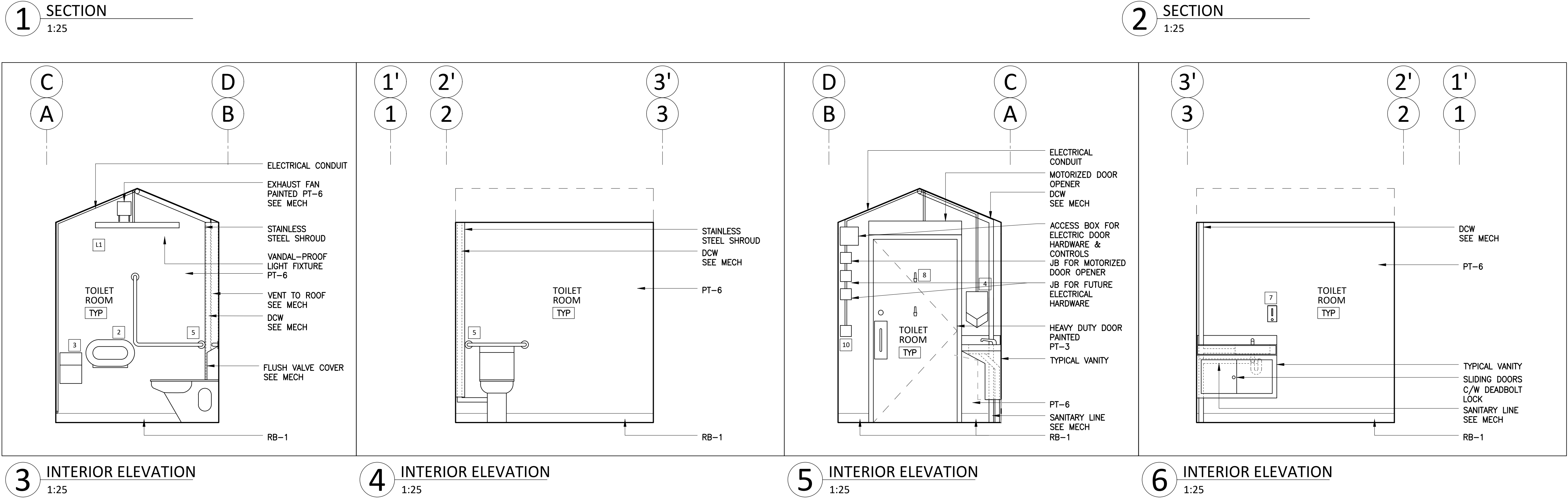
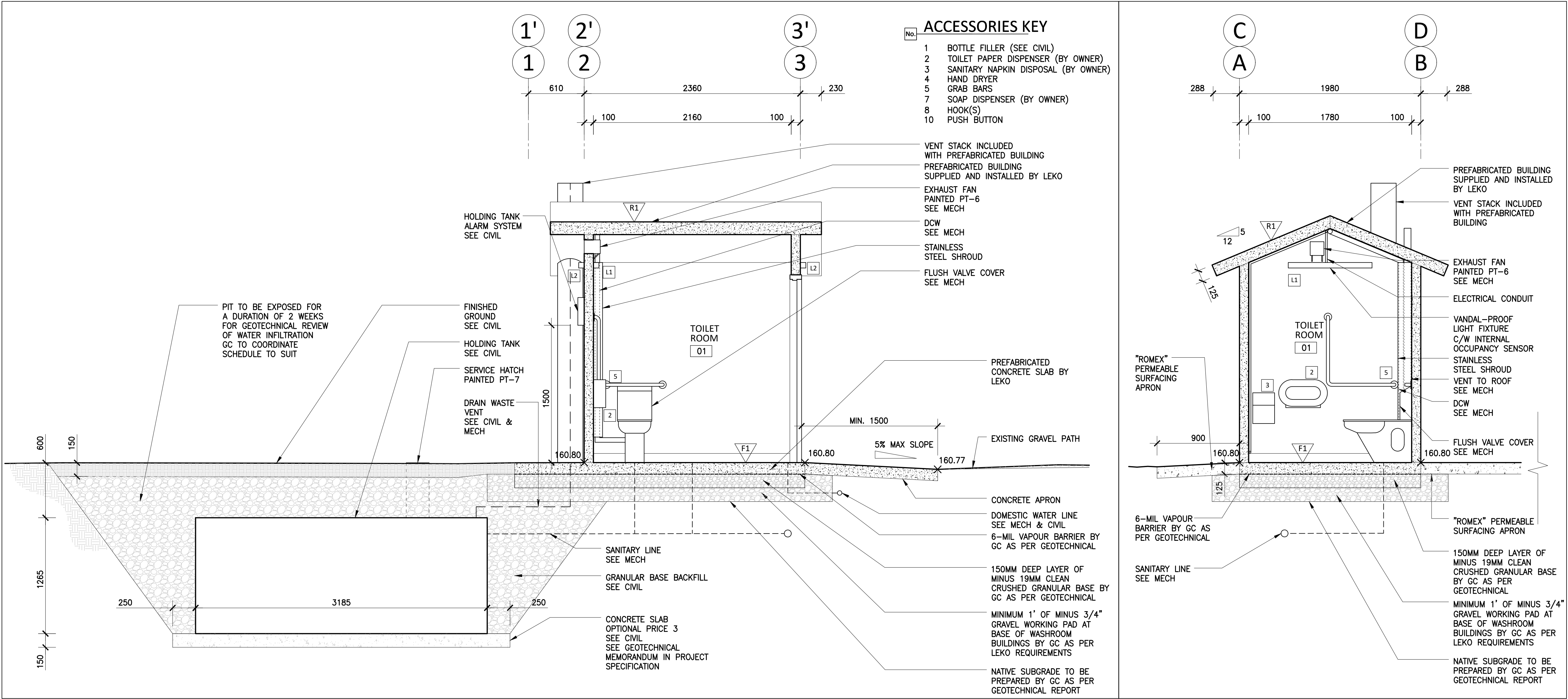
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REVISIONS
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PROJECT ADDRESS
**490 MARINER WAY,
COQUITLAM**

JOB TITLE
**MUNDY PARK CHILKO
WASHROOMS**

SHEET TITLE
**SECTIONS & INTERIOR
ELEVATIONS**

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2026

DATE
SEP 2020

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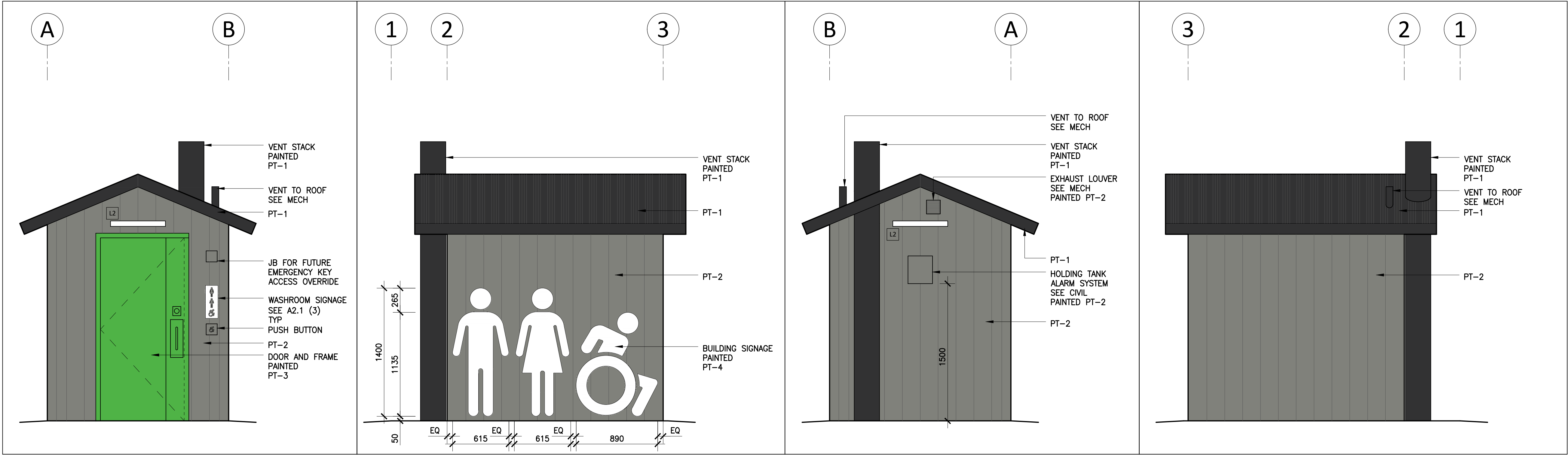
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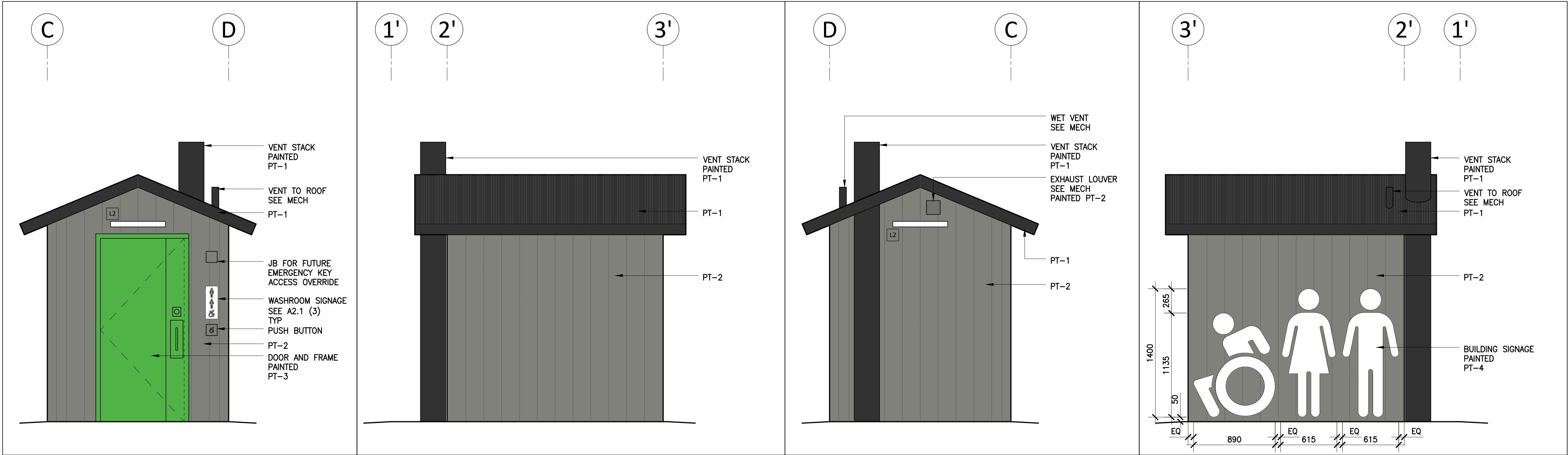
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ELEVATIONS - TOILET ROOM 01



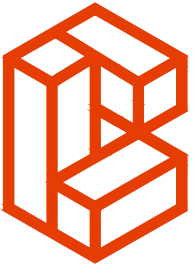
1 ELEVATION 1:25 2 ELEVATION 1:25 3 ELEVATION 1:25 4 ELEVATION 1:25

ELEVATIONS - TOILET ROOM 02



5 ELEVATION 1:25 6 ELEVATION 1:25 7 ELEVATION 1:25 8 ELEVATION 1:25

GENERAL NOTES
1. ALL PAINTING BY GENERAL CONTRACTOR



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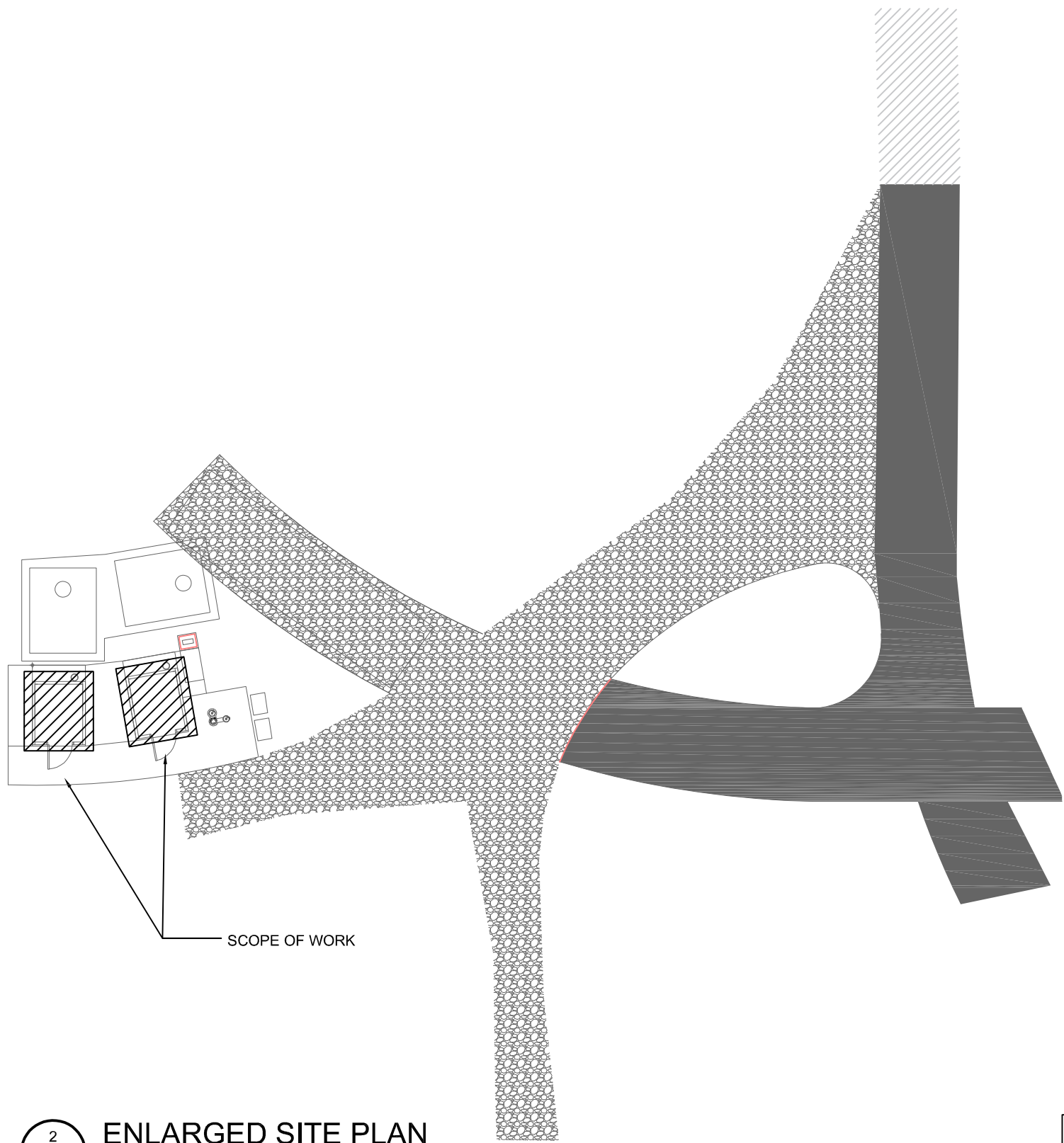
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1 SITE PLAN
SCALE: NTS



2 ENLARGED SITE PLAN
SCALE: NTS

SYMBOL SCHEDULE			
PIPING		FITTINGS AND VALVES	
NEW		NEW	
— · —	DOMESTIC COLD WATER (DCW)	→	DIRECTION OF FLOW
— · · —	DOMESTIC HOT WATER (DHW)	○	PIPE DROP
— · · · —	DOMESTIC HOT WATER RECIRC. (DHWR)	○	PIPE RISE
— V —	SANITARY VENT	○	PIPE TEE UP
— SAN —	SANITARY SEWER ABOVE GRADE	○	PIPE TEE DOWN
— SAN —	SANITARY SEWER BELOW GRADE	○	PIPE UNION
— I —	PIPE CLEAN-OUT	○ NO	ISOLATION VALVE (NORMALLY OPEN)
— G —	PIPE CLEAN-OUT TO GRADE	○ NC	ISOLATION VALVE (NORMALLY CLOSED)
		↔	CHECK VALVE
OUTLETS AND DRAINS		EQUIPMENT TAGS	
○	FLOOR DRAIN (FD)	○	GRILLE TYPE
		○	NECK/GRILLE SIZE
		○	AIR VOLUME
		○	EQUIPMENT/FIXTURE TYPE
		○	GENERAL NOTE
		○	DRAWING REVISION
		○	DETAIL NUMBER
		○	DRAWING NUMBER
		○	SECTION NUMBER
		○	DRAWING NUMBER

MECHANICAL DRAWING LIST		
DRAWINGS NO.	DESCRIPTION	SCALE
M0.01	SITE PLAN, SYMBOL SCHEDULES, NOTES	AS NOTED
M1.01	FLOOR PLAN, MECHANICAL DETAILS	AS NOTED
M2.01	MECHANICAL SPECIFICATIONS I	NTS

BUILDING LOADS			
DESCRIPTION	LOAD	UNITS	PIPE SIZE (MM)
DOMESTIC WATER	3.4	FU	500
SANITARY	10	FU	750

SITE ADDRESS	
490 MARINER WAY, COQUITLAM, BC	

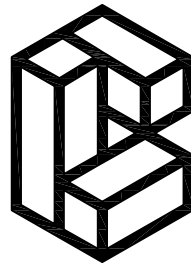
PLUMBING ROUGH-IN SCHEDULE							
EQUIPMENT TAG	DESCRIPTION/TYPE	ROUGH-IN CONNECTIONS (INCH)					REMARKS
		WASTE	VENT	COLD WATER	HOT WATER	STORM WATER	
WC-1	HANDICAP WATER CLOSET/WALL HUNG OR FLOOR MOUNTED	75	40	40	-	-	ALL
LAV-1	BASIN/WALL HUNG	30	30	15	-	-	ALL
FD-1	FLOOR DRAIN	100	-	-	-	-	ALL
NOTES: 1 REFER TO ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS. 2 USE THIS SIZE FOR FLOOR DRAIN CONNECTIONS UNLESS NOTED OTHERWISE ON SAN / VENT SCHEMATIC							

PLUMBING FIXTURE SCHEDULE	
WC-1: WATER CLOSET WHITEHALL LIGATURE RESISTANT SIPHON JET TOILET, MODEL WH2142-ADA-T-EGE-10, ELONGATED BOWL, ADA COMPLIANT, CSA APPROVED, 1.28 GPF, 1-1/2" FLUSHING INLET CONNECTION, CUSTOM HINGE SEAT IS TO BE PROVIDED.	
LAV-1: LAVATORY SINK BASIN: REFER TO ARCH. FAUCET: TOTO STANDARD ECOPOWER FAUCET, MODEL #TELS105-D10E, SELF-GENERATING HYDROPOWERED ECOPOWER SYSTEM, KIT INCLUDES SPOUT BODY, CONTROLLER BOX, AND MOUNTING HARDWARE SINGLE HOLE MOUNT, EQUIPPED WITH 0.5GPM FLOW CONTROL PTRAP: MCGUIRE MANUFACTURING CO. OFFSET LAVATORY GRID STRAINER, PART NO. 155WC, ADA COMPLIANT, CSA APPROVED MIXING VALVE: BRADLEY S59-4016 SERIES NAVIGATOR THERMOSTATIC MIXING VALVE	

MECHANICAL MOTORLIST																							
UNIT NUMBER	QTY	UNIT DESCRIPTION	UNIT LOCATION	ELECTRICAL LOAD				VOLT	PH	EQUIPMENT			STARTER			DISCONNECT			CONTROL			NOTES	
				MCA	FLA	KW	HP			S	I	C	S	I	C	TYPE	S	I	C	S	I		C
EF-1	2	FAN	TOILET ROOM		0.19			115	1	M	M	E	E	E	E		E	E	E	E	E	TC	
<u>SUPPLIER / INSTALL / WIRE CODES:</u> MECH = MECHANICAL ELEC = ELECTRICAL G = GENERAL CONTRACTOR S = SUPPLIED BY I = INSTALLED BY C = CONNECTED BY <u>STARTER CODES:</u> WS = WALL SWITCH CP = CONTROL PANEL			<u>CONTROL DEVICE CODES:</u> WS = WALL SWITCH TC = TIME CLOCK <u>EMERGENCY POWER CODES:</u> VP = VITAL POWER DVP = DELAYED VITAL POWER CP = CONDITIONAL POWER NP = NORMAL POWER			<u>ELECTRICAL LOAD CODES:</u> BHP = BREAK HORSEPOWER FLA = UNIT FULL LOAD AMPS HP = UNIT OR MOTOR HORSE POWER PH = POWER PHASE MCA = MINIMUM CIRCUIT AMPS VOLT = REQUIRED SUPPLY VOLTAGE			<u>GENERAL NOTES:</u> A. ALL FIRE ALARM DEVICES WIRED BY ELECTRICAL B. CONTROL PANELS ARE SHIPPED LOSS & REQUIRE FIELD WIRING <u>NOTES:</u> 1. SINGLE POINT POWER CONNECTION (EXCEPT FOR LIGHTS).														

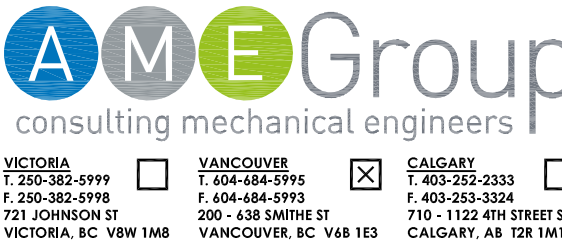
DIFFUSERS AND GRILLES					
EQUIPMENT TAG	DESCRIPTION/TYPE	MANUFACTURER	SERVICE	MODEL NUMBER	NOTES
L-1	EXHAUST LOUVER	EH PRICE	EXHAUST	520	
NOTES: 1 PROVIDE DIFFUSERS AND GRILLES WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT WALLS AND CEILING SYSTEMS. REFER TO ARCHITECTURAL DRAWINGS. 2 NC LEVELS BASED ON OCTAVE BANDS 2-7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91. 3 CUSTOM COLOUR OF PRODUCT TO BE SELECTED BY THE ARCHITECT DURING THE SHOP DRAWINGS SUBMITTAL PROCESS. 4 MATERIAL TO BE STAINLESS STEEL CONSTRUCTION 5 CONTRACTOR TO REFER TO MECHANICAL AND ARCHITECTURAL DETAILS FOR SUPPLY AND INSTALLATION OF LINEAR GRILLE.					

FANS													
EQUIPMENT TAG	QTY	SERVICE	LOCATION	TYPE	MANUFACTURER	MODEL	AIR FLOW (LPS)	E. S. P. (PA)	FAN (RPM)	DRIVE TYPE	SOUND LEVEL (SONES)	WEIGHT (KG)	NOTES
EF-1	2	WASHROOM EXHAUST	TOILET ROOM	WALL MOUNT	GREENHECK	AER-E20C-610-VG	33	100.0	763	DIRECT	5.1	27.2	
NOTES: 1 ACOUSTICALLY LINED CABINET. 2 REFER TO MOTORLIST FOR ELECTRICAL REQUIREMENTS 3 PRODUCT COLOUR TO BE SELECTED BY THE ARCHITECT DURING SHOP DRAWING SUBMITTAL PROCESS 4 FACTORY MOUNTED SPEED CONTROL DIAL ON FAN FOR BALANCING. 5 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.													



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ISSUED FOR 100% CD 2020 DEC 17
ISSUED FOR BP 2020 DEC 2
ISSUED FOR HEALTH PERMIT 2020 NOV 27
ISSUED FOR 90% CD 2020 NOV 13
ISSUED FOR 50% CD 2020 OCT 30
ISSUED FOR 25% CD 2020 OCT 15

REVISIONS
Carscadden

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490 MARINER WAY,
COQUITLAM, BC

JOB TITLE
MUNDY PARK CHILKO
WASHROOMS

SHEET TITLE
SITE PLAN, SYMBOL
SCHEDULE

DRAWN
DY

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JOB NO.
040B-103-20

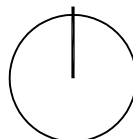
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SCALE
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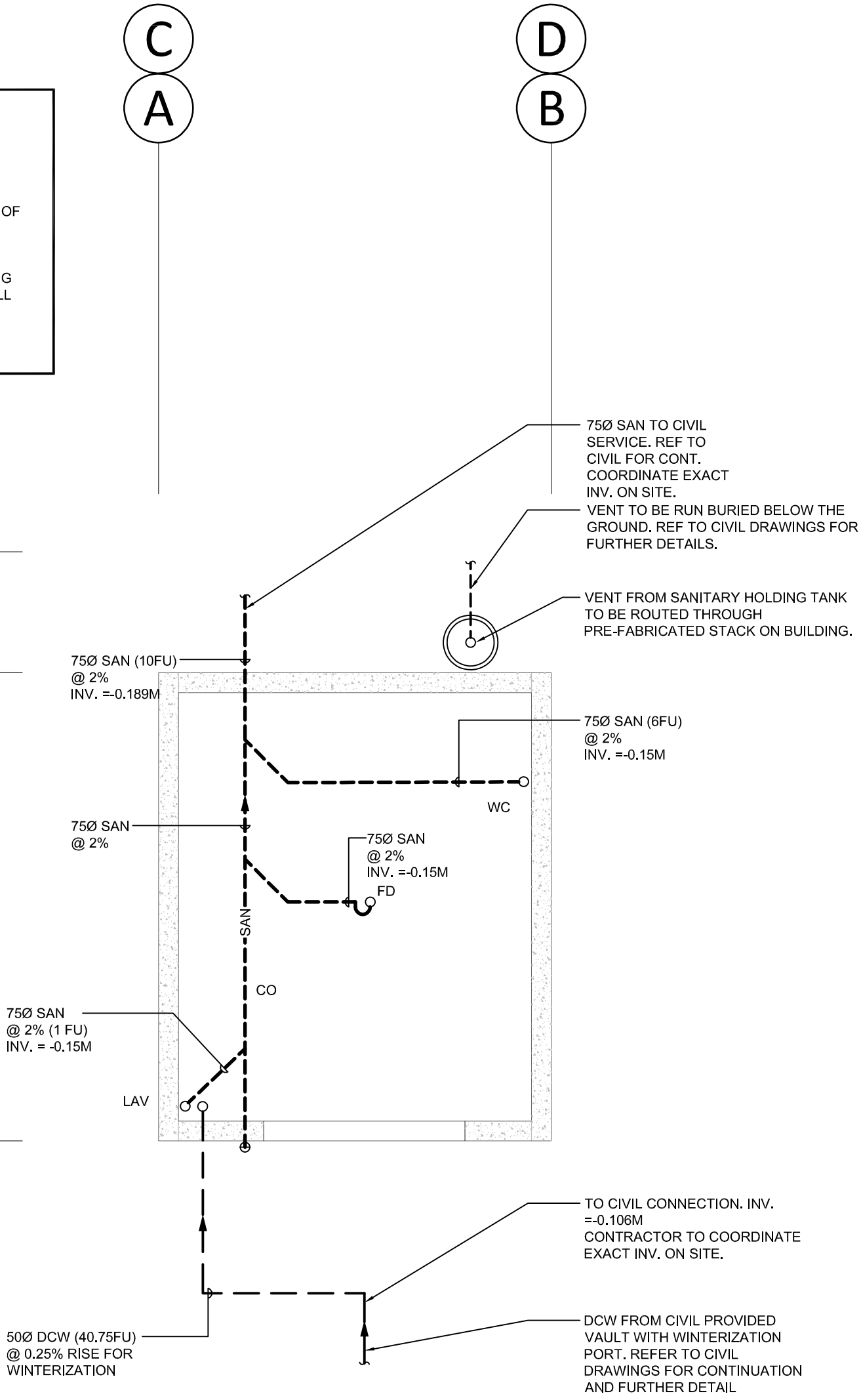
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- GENERAL NOTES
1. REFER TO PLUMBING ROUGH-IN SCHEDULE FOR CONNECTION SIZES
 2. EACH FIXTURE TO BE C/W AUTOMATIC SHUT-OFF VALVE
 3. PROVIDE CONCRETE THRUST BLOCK AT ALL CHANGES OF DIRECTION OF UNDERGROUND PIPING, INCLUDING UNDERSLAB PIPING. PROVIDE THRUST BLOCKS AT FITTING WHERE AN ESSENTIALLY HORIZONTAL WATER MAIN TURNS UP THROUGH A SLAB INTO THE BUILDING.
 4. SLAB PENETRATIONS TO BE CONFIRMED WITH THE PRE-CAST BUILDING MANUFACTURER. A SHOP DRAWING INDICATING THE LOCATIONS SHALL BE ISSUED PRIOR TO CORING/INSTALLATION.
 5. PROVIDE TRAP PRIMER C/W AIR GAP

1' 1

2' 2

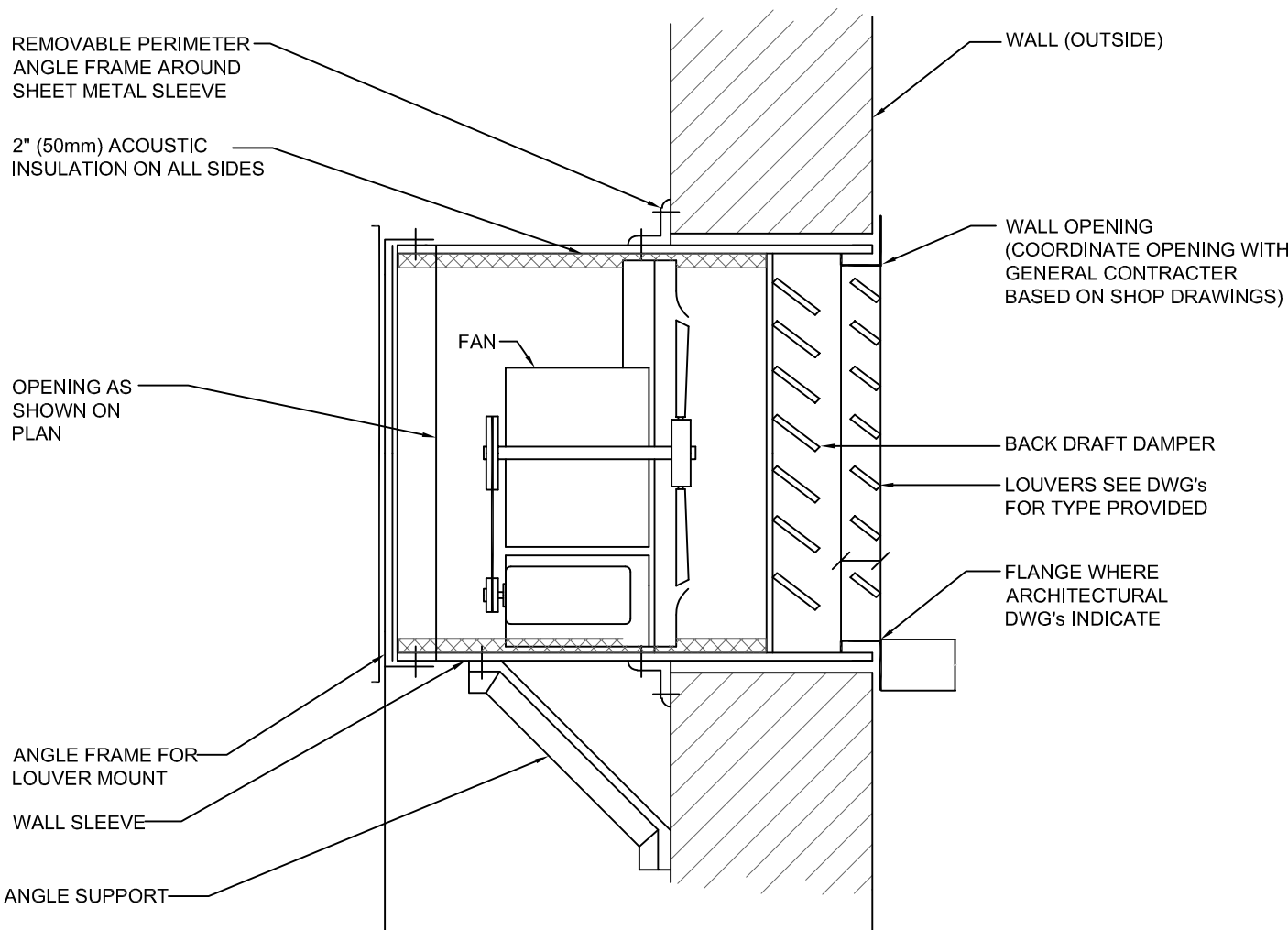
3' 3



FOUNDATION PLAN (TYP. OF TWO WASHROOMS)

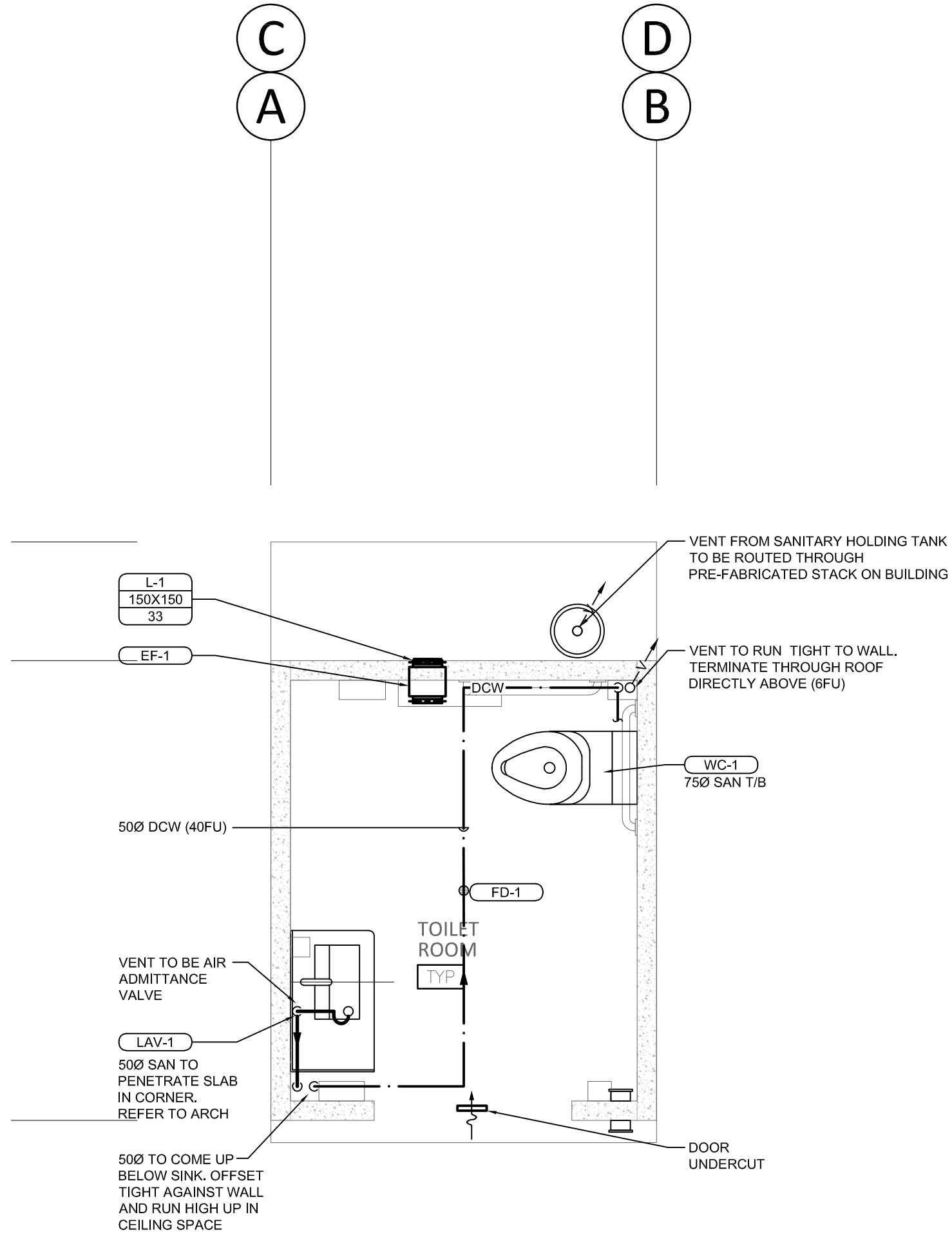
1
M1.01 SCALE: 1:25

WEST WASHROOM
FFE: 160.80M
EAST WASHROOM
FFE: 160.83M



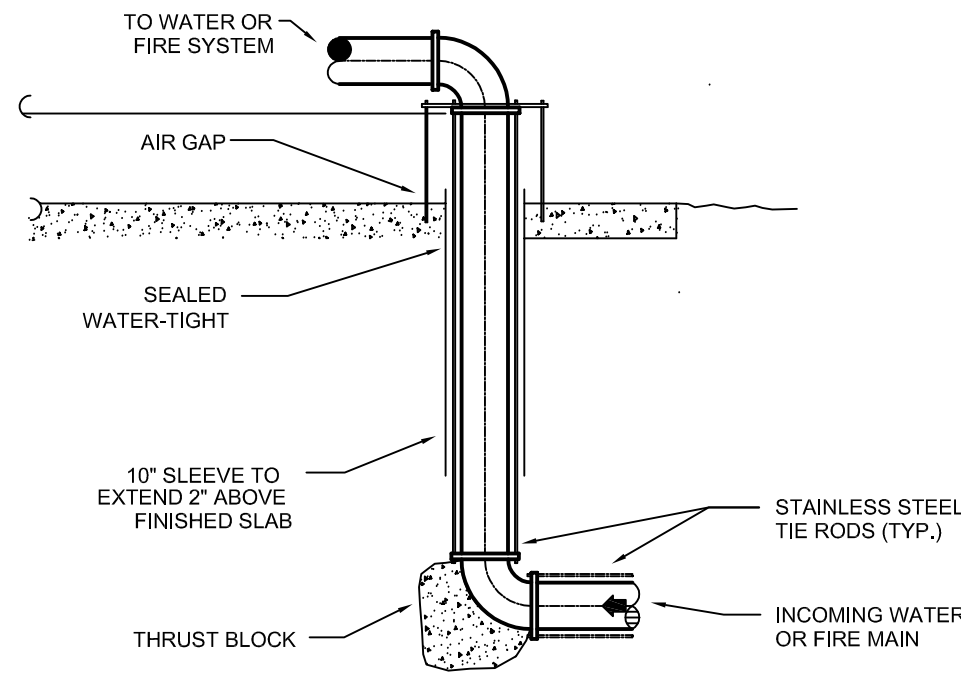
- DETAIL NOTES
1. RETAINING ANGLES: MINIMUM 1/2"x1/2"x0.054 (37mmx37mmx1.35mm) (16 ga.) RETAINING ANGLES SHALL LAP STRUCTURAL OPENING 1" (25 mm) MINIMUM AND COVER CORNERS OF OPENING
 2. CLEARANCE BETWEEN DUCT AND OPENING: 1/2" (3mm) PER LINEAR FOOT, BOTH DIRECTIONS
 3. DUCT WORK TO BE 16 ga. GALVANIZED STEEL TO SUPPORT FAN ASSEMBLY
 4. THROUGH WALL OPENING TO BE MINIMUM 16 1/2" x 15 1/2" (400mmx400mm)

4
M1.01 WALL FAN DETAIL
SCALE: NTS



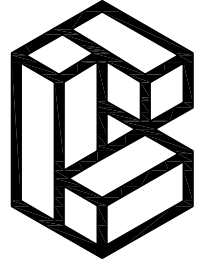
FLOOR PLAN (TYP. OF TWO WASHROOMS)

2
M1.01 SCALE: 1:25



- DETAIL NOTES
1. REFER TO DRAWINGS FOR LOCATION AND PIPE SIZES
 2. PROVIDE ALL BRACKETS, SUPPORTS AND HANGERS AS REQUIRED

6
M1.01 WATER ENTRY
PIPING DETAIL
SCALE: NTS



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COQUITLAM, BC

JOB TITLE
MUNDY PARK CHILKO
WASHROOMS

SHEET TITLE
FLOOR PLAN,
MECHANICAL DETAILS

DRAWN
DY

CHECKED
EN

JOB NO.
040B-103-20

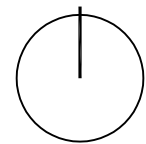
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COMMON WORKS

1. GENERAL

1.1 GENERAL SCOPE

*PROVIDE SHALL MEAN SUPPLY AND INSTALL.

*CONSULTANT SHALL MEAN AME GROUP CONSULTING PROFESSIONAL ENGINEERS

PROVIDE COMPLETE, FULLY TESTED AND OPERATIONAL SYSTEMS TO MEET THE REQUIREMENTS DESCRIBED HEREIN AND IN COMPLETE ACCORD WITH APPLICABLE CODES AND ORDINANCES.

CONTRACT DOCUMENTS AND DRAWINGS ARE DIAGRAMMATIC. THEY ESTABLISH SCOPE, MATERIAL AND INSTALLATION QUALITY BUT ARE NOT DETAILED INSTALLATION INSTRUCTIONS.

FOLLOW MANUFACTURERS' RECOMMENDED INSTALLATION INSTRUCTIONS, DETAILS AND PROCEDURES FOR EQUIPMENT, SUPPLEMENTED BY REQUIREMENTS OF THE CONTRACT DOCUMENTS.

BEFORE SUBMITTING TENDER, VISIT AND EXAMINE THE SITE AND NOTE ALL CHARACTERISTICS AND FEATURES AFFECTING THE WORK. NO ALLOWANCES WILL BE MADE FOR ANY DIFFICULTIES ENCOUNTERED OR ANY EXPENSES INCURRED BECAUSE OF ANY CONDITIONS OF THE SITE OR ITEM EXISTING THEREON, WHICH IS VISIBLE OR KNOWN TO EXIST AT THE TIME OF TENDER. CLARIFICATIONS OR REQUESTS FOR ALTERNATE MATERIALS OR EQUIPMENT MUST BE SUBMITTED IN WRITING TO THE CONSULTANT NO LATER THAN SEVEN (7) WORKING DAYS PRIOR TO THE MECHANICAL TRADES' CLOSING TENDER DATE. APPROVAL OF REQUESTS SHALL ONLY BE GIVEN BY ADDENDUM.

MAKE REFERENCE TO ELECTRICAL, MECHANICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS WHEN SETTING OUT WORK. CONSULT WITH RESPECTIVE DIVISIONS IN SETTING OUT LOCATIONS FOR DUCTWORK, EQUIPMENT, AND PIPING, SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL EVEN SPACING IS MAINTAINED. JOINTLY WORK OUT ALL CONFLICTS ON SITE BEFORE FABRICATING OR INSTALLING ANY MATERIALS OR EQUIPMENT.

1.2 CODE COMPLIANCE, PERMITS AND FEES

ALL WORK SHALL COMPLY WITH CURRENT EDITIONS OF THE NATIONAL, PROVINCIAL AND MUNICIPAL CODES, STANDARDS, ACTS AND BYLAWS AND WILL MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

OBTAIN ALL PERMITS AND PAY ALL FEES APPLICABLE TO THE SCOPE OF WORK. CONTRACTOR SHALL ARRANGE FOR INSPECTIONS OF THE WORK BY THE AUTHORITIES HAVING JURISDICTION AND SHALL PROVIDE CERTIFICATES INDICATING FINAL APPROVAL.

1.3 TENDER PRICE BREAKDOWN

SUBMIT A TENDER PRICE BREAKDOWN WITHIN THIRTY (30) DAYS OF TENDER CLOSING AND BEFORE FIRST PROGRESS CLAIM, IN A FORMAT AGREED TO WITH THE CONSULTANT. AS A MINIMUM INCLUDE EQUIPMENT, MATERIALS AND LABOUR FOR MECHANICAL, PLUMBING, SHEET METAL, FIRE PROTECTION AND CONTROLS.

1.4 SUBMITTALS

COMPLY WITH DIVISION 1 - SUBMISSION AND CLOSEOUT PROCEDURES AND IN ADDITION THE FOLLOWING:

CONTRACTOR SHALL PROVIDE AND SUBMIT TO THE CONSULTANT ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW SCHEDULE B AND ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE SCHEDULE C-B FOR SEISMIC ENGINEERING.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT AS ELECTRONIC FILES (FILE FORMAT: .DWG, .DXF, .PDF, OR COMPARABLE), WHEN MANUFACTURERS CUT SHEETS APPLY TO A PRODUCT SERIES RATHER THAN A SPECIFIC PRODUCT. THE DATA SPECIFICALLY APPLICABLE TO THE PROJECT SHALL BE HIGHLIGHTED OR CLEARLY INDICATED BY OTHER MEANS. EACH SUBMITTED PIECE OF LITERATURE AND DRAWINGS SHALL CLEARLY REFERENCE THE SPECIFICATION AND/OR DRAWING THAT THE SUBMITTAL IS TO COVER. GENERAL CATALOGS SHALL NOT BE ACCEPTED AS OUT SHEETS TO FULFILL SUBMITTAL REQUIREMENTS.

CLOSEOUT SUBMITTALS: PROVIDE A MINIMUM OF TWO (2) MECHANICAL OPERATION AND MAINTENANCE MANUALS AND ONE DIGITAL COPY, PREPARED BY THE TAB CONTRACTOR.

OPERATION AND MAINTENANCE MANUAL: APPROVED BY, AND FINAL COPIES DEPOSITED WITH THE CONSULTANT A MINIMUM OF 7 DAYS BEFORE FINAL INSPECTION.

OPERATION AND MAINTENANCE MANUAL TO INCLUDE BUT NOT LIMITED TO: LAYMAN'S DESCRIPTION OF THE SYSTEMS AND ASSOCIATED CONTROLS; OPERATIONAL INSTRUCTIONS; SERVICING, MAINTENANCE, OPERATION AND TROUBLE-SHOOTING INSTRUCTIONS FOR EACH ITEM OF EQUIPMENT; WARRANTIES; EQUIPMENT MANUFACTURERS' PERFORMANCE DATASHEETS INDICATING POINT OF OPERATION AS LEFT AFTER COMMISSIONING IS COMPLETE; TESTING, ADJUSTING AND BALANCING REPORTS.

RECORD DRAWINGS: CONSULTANT WILL PROVIDE 1 SET OF WHITE PRINTS AT CONTRACTORS COST TO MARK CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. USE DIFFERENT COLOUR WATERPROOF INK FOR EACH SERVICE. DO NOT USE PENCIL OR BLACK INK. TRANSFER INFORMATION WEEKLY TO SHOW WORK AS ACTUALLY INSTALLED. DRAWINGS SHALL BE AVAILABLE ON A WEEKLY BASIS FOR REVIEW BY THE CONSULTANT.

IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 12 MM HIGH AS FOLLOWS: - 'AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW MECHANICAL SYSTEMS AS INSTALLED' (SIGNATURE OF CONTRACTOR) (DATE).

SUBMIT TO CONSULTANT FOR APPROVAL AND MAKE CORRECTIONS AS DIRECTED.

SUBMIT COMPLETED CAD RECORD DRAWINGS WITH FINAL OPERATING AND MAINTENANCE MANUALS WITHIN TWO (2) WEEKS OF SUBSTANTIAL COMPLETION. FAILURE TO SUBMIT DRAWINGS WILL RESULT IN THE WORK BEING UNDERTAKEN BY THE OWNER AND DEDUCTED FROM THE CONTRACTORS HOLD BACK AMOUNT. COST TO TRANSFER RECORD INFORMATION ONTO REPRODUCIBLE MEDIA & AUTO-CAD DISKS ARE THIS CONTRACTORS RESPONSIBILITY. CONSULTANT WILL RELEASE DRAWINGS TO CONTRACTOR AFTER SIGNING A COPYRIGHT FORM. SHOULD THE CONTRACTOR CHOOSE TO UTILISE THIS CONSULTANT FOR TRANSFERRING AS BUILT INFORMATION, ALLOW \$400 / SHEET FOR ALL DRAWINGS IN THE CONSTRUCTION SET. THIS WILL COVER COSTS FOR DRAFTING TIME & PRINTING COSTS.

1.5 QUALITY OF WORK

ALL WORK SHALL BE BY QUALIFIED TRADESMEN WITH VALID PROVINCIAL TRADE QUALIFICATION CERTIFICATES. SPOT CHECKS WILL BE MADE BY THE CONSULTANT. WORK WHICH DOES NOT CONFORM TO STANDARDS MAY BE REJECTED BY THE CONSULTANT. THE CONTRACTOR SHALL REDO REJECTED WORK TO THE ACCEPTED STANDARD AT NO COST TO THE OWNER.

1.6 METRIC CONVERSION

ALL UNITS ARE EXPRESSED IN SI UNITS. ON ALL SUBMITTALS (SHOP DRAWINGS ETC.) USE THE SAME SI UNITS AS STATED IN THE SPECIFICATION.

WHERE PIPES ARE SPECIFIED WITH METRIC DIMENSIONS AND IMPERIAL SIZED PIPES ARE AVAILABLE, PROVIDE EQUIVALENT NOMINAL SIZED PIPE AS INDICATED IN THE TABLE, AND PROVIDE AT NO EXTRA COST ADAPTERS TO ENSURE COMPATIBLE CONNECTIONS TO ALL METRIC SIZED FITTINGS, EQUIPMENT AND PIPING.

WHEN CSA APPROVED SI METRIC PIPES ARE PROVIDED, THE CONTRACTOR SHALL PROVIDE AT NO EXTRA COST ADAPTERS TO ENSURE COMPATIBLE CONNECTIONS BETWEEN THE SI METRIC PIPES AND ALL NEW AND EXISTING PIPES, FITTINGS, AND EQUIPMENT.

EQUIVALENT NOMINAL DIAMETER OF PIPES

15MM = NPS ½

20MM = NPS ¾

25MM = NPS 1

30MM = NPS 1-1/4

40MM = NPS 1-1/2

50MM = NPS 2

65MM = NPS 2-1/2

75MM = NPS 3

100MM = NPS 4

150MM = NPS 6

200MM = NPS 8

THE METRIC DUCT SIZES ARE EXPRESSED AS 25 MM ± 1 INCH.

1.7 DRAWINGS AND SPECIFICATIONS

SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS OBTAIN WRITTEN CLARIFICATION FROM THE CONSULTANT DURING THE TENDER PERIOD. WITHOUT A WRITTEN CLARIFICATION THE BETTER QUALITY AND/OR GREATER QUANTITY OF WORK OR MATERIALS SHALL BE ESTIMATED, PERFORMED AND FURNISHED WITHIN THE TENDERED PRICE.

1.8 CUTTING, PATCHING AND CORING

PROVIDE HOLES AND SLEEVES, CUTTING AND FITTING REQUIRED FOR MECHANICAL WORK. RELOCATE IMPROPERLY LOCATED HOLES AND SLEEVES. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES.

OBTAIN WRITTEN APPROVAL FROM THE STRUCTURAL CONSULTANT BEFORE CUTTING OR BURNING STRUCTURAL MEMBERS.

1.9 INSTALLATION OF EQUIPMENT

PIPE, ALL EQUIPMENT DRAINS TO BUILDING DRAINS EXCEPT SYSTEMS CONTAINING GLYCOL.

UNIONS AND FLANGES SHALL BE PROVIDED IN PIPING OR DUCTWORK TO PERMIT EASY REMOVAL OF EQUIPMENT.

MAINTAIN PERMANENT ACCESS TO EQUIPMENT FOR MAINTENANCE.

1.10 CONNECTIONS TO EXISTING SERVICES

MAINTAIN LIAISON WITH THE OWNER AND PROVIDE A MUTUALLY ACCEPTABLE SCHEDULE TO INTERRUPT, REROUTE, OR CONNECT TO EXISTING BUILDING SERVICES WITH THE MINIMUM OF INTERRUPTION OF THOSE SERVICES.

1.11 EQUIPMENT AND MATERIALS

WHERE TWO OR MORE PRODUCTS OF THE SAME TYPE ARE REQUIRED, PRODUCTS SHALL BE OF THE SAME MANUFACTURER.

NOTIFY THE CONSULTANT IN WRITING TEN (10) DAYS PRIOR TO THE TENDER CLOSE, ANY MATERIALS OR EQUIPMENT SPECIFIED WHICH IS NOT CURRENTLY AVAILABLE OR WILL NOT BE AVAILABLE FOR USE AS CALLED FOR HEREIN. FAILING THIS, THE CONTRACT WILL ASSUME THAT THE MOST EXPENSIVE ALTERNATE HAS BEEN INCLUDED IN THE TENDER PRICE. APPROVED EQUIVALENTS AND/OR ALTERNATIVES TO SPECIFIED PRODUCTS SHALL BE EQUAL TO THE SPECIFIED PRODUCT IN EVERY RESPECT, OPERATE AS INTENDED, AND MEET THE SPACE, CAPACITY, AND NOISE REQUIREMENTS OUTLINED.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ADDITIONAL LABOUR AND MATERIALS REQUIRED BY ANY TRADES OR OTHER CONTRACTORS TO ACCOMMODATE THE USE OF OTHER THAN SPECIFIED MATERIALS OR EQUIPMENT. THE CONTRACTOR SHALL BEAR ANY AND ALL COSTS FOR DESIGN/SYSTEM MODIFICATIONS TO ACCOMMODATE THE "ALTERNATE" EQUIPMENT. EXTRAS WILL NOT BE APPROVED TO COVER SUCH WORK.

1.12 DELIVERY, STORAGE AND HANDLING

STORE MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN A CLEAN, DRY, WELL-VENTILATED AREA.

REPLACE DEFECTIVE OR DAMAGED MATERIALS WITH NEW.

1.13 ACCESS DOORS

PROVIDE ACCESS DOORS FOR MAINTENANCE OR ADJUSTMENT OF ALL PARTS OF THE MECHANICAL SYSTEM.

PROVIDE 300 MM X 300 MM MINIMUM SIZE FOR INSPECTION AND HAND ACCESS.

600 MM X 600 MM MINIMUM SIZE, LARGER IF INDICATED ON DRAWINGS, WHERE ENTRY IS REQUIRED AND ACCESS IS DIFFICULT.

1.14 ESCUTCHEONS AND PLATES

PROVIDE ESCUTCHEONS AND PLATES ON ALL PIPING AND DUCTWORK PASSING THROUGH FINISHED WALLS, FLOORS, AND CEILINGS.

1.15 GUARANTEE / WARRANTY

FURNISH A WRITTEN GUARANTEE STATING THAT ALL WORK EXECUTED IN THIS CONTRACT WILL BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE.

1.16 BALANCING

THE APPROVED BALANCING AGENCIES ARE: WESTERN MECHANICAL; K.D. ENGINEERING, FLOTECH MECHANICAL, BLUE COLLAR GROUP.

BALANCE EXHAUST FANS AND AIR OUTLETS TO AIR QUANTITIES INDICATED ON THE DRAWINGS AND IN THIS SPECIFICATION. WHERE OUTLET QUANTITIES ARE NOT INDICATED, DIVIDE BOX CAPACITY EQUALLY AMONG ALL OUTLETS.

SUBMIT TWO (2) COPIES OF THE REPORT TO THE CONSULTANT WITHIN TWO (2) WEEKS AFTER SUBSTANTIAL COMPLETION. FAILURE TO SUBMIT THE REPORT WITHIN THE SPECIFIED TIME WILL RESULT IN THE WORK BEING DONE BY THE OWNER AND THE COSTS DEDUCTED FROM FINAL PAYMENT.

BALANCING SHALL BE PERFORMED TO THE FOLLOWING:

AIR-TERMINAL OUTLETS ± 10%

COOPERATE WITH THE BALANCING AGENCY AND MAKE ANY CORRECTIONS AS REQUIRED BY BALANCING AGENCY.

PROVIDE BALANCING VALVES AND DAMPERS, PULLEYS, SHEAVES ETC. AS REQUESTED BY THE BALANCING AGENCY AND/OR NECESSARY TO PROPERLY ADJUST OR CORRECT THE SYSTEMS TO DESIGN FLOWS, WITHOUT ADDITIONAL COST TO OWNER.

1.17 COMMISSIONING AND DEMONSTRATION

BE RESPONSIBLE FOR THE PERFORMANCE AND COMMISSIONING OF ALL EQUIPMENT SUPPLIED AND RE-USED UNDER DIVISIONS 22 AND 23 INCLUDING EXHAUST FAN.

CONFIRM OPERATION AND REVIEW CONDITION OF ALL EXISTING [AIR VALVES] [FAN-COIL UNITS] [HEAT PUMPS] AND ASSOCIATED CONTROL DEVICES IN THE RENOVATED AREA. SUBMIT REPORT NOTING ANY REMEDIAL WORK REQUIRED.

AT THE CONCLUSION OF COMMISSIONING, DEMONSTRATE THE OPERATION OF THE SYSTEMS TO THE CONSULTANT AND THEN TO THE OWNER'S OPERATING STAFF.

AT THE COMPLETION OF THE COMMISSIONING, TESTING, BALANCING AND DEMONSTRATION SUBMIT TO THE CONSULTANT A LETTER CERTIFYING THAT ALL WORK SPECIFIED UNDER THIS CONTRACT IS COMPLETE, CLEAN AND OPERATIONAL IN ACCORDANCE WITH THE SPECIFICATION AND DRAWINGS.

1.18 SEISMIC CONTROL

PROVIDE SEISMIC RESTRAINTS FOR ALL REQUIRED EQUIPMENT, PIPING, AND DUCTWORK IN ACCORDANCE WITH THE LATEST EDITION OF THE SEISMIC RESTRAINTS MANUAL FOR MECHANICAL SYSTEMS PRODUCED BY SMACNA, AND THE LATEST EDITION OF THE ASHRAE APPLICATION HANDBOOK CHAPTER 49, SEISMIC RESTRAINTS.

THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED PROFESSIONAL SEISMIC ENGINEER (SEISMIC ENGINEER) REGISTERED IN THE PROVINCE OF (ALBERTA) (BRITISH COLUMBIA). THE SEISMIC ENGINEER SHALL DESIGN AND REVIEW THE INSTALLATION OF ALL SEISMIC RESTRAINTS AS WELL AS MECHANICAL EQUIPMENT AND MECHANICAL SYSTEM SUPPORTS. THE RESTRAINTS AND

SUPPORTS SHALL BE SPECIFICALLY DESIGNED TO FASTEN TO THE STRUCTURE INDICATED IN THE CONTRACT DOCUMENTS AND INSTALLED IN THE FIELD. THE COMPLETE DESIGN FOR THESE SYSTEMS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS.

SEISMIC ENGINEER SHALL PROVIDE AND SUBMIT TO THE OWNER'S CONSULTANT ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW SCHEDULE B AND ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE SCHEDULE C-B FOR SEISMIC ENGINEERING.

SUBMIT SHOP DRAWINGS OF ALL SEISMIC RESTRAINT DETAILS PREPARED AND SEALED BY THE SEISMIC ENGINEER. PRIOR TO SUBSTANTIAL COMPLETION, THE SEISMIC ENGINEER SHALL VISIT THE SITE AND VERIFY THE SEISMIC RESTRAINT INSTALLATION AS REQUIRED TO SATISFY THE ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE SCHEDULE [C-B] [C-2] OF THE BUILDING CODE.

THE CONTRACTOR SHALL OBTAIN APPROVAL FOR THE LOCATION OF ALL RESTRAINT FIXING POINTS FROM THE STRUCTURAL ENGINEER, ON SITE, PRIOR TO INSTALLATION. WHERE EQUIPMENT IS MOUNTED ON SPRING OR RESILIENT MOUNTS FOR VIBRATION ISOLATION IT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER OF THE MOUNT TO INCORPORATE SEISMIC RESTRAINT. PROVIDE STEEL FRAME BASES WHERE NECESSARY TO ACHIEVE THIS AND ALSO AVOID OVERTURNING. THE MANUFACTURER SHALL SUPPLY CERTIFICATES, SIGNED BY A PROFESSIONAL ENGINEER REGISTERED WITHIN THE JURISDICTION, VERIFYING THE DESIGN OF THE SEISMIC RESTRAINTS IS IN ACCORDANCE WITH THIS SECTION.

1.19 VIBRATION ISOLATION

PROVIDE NEOPRENE ISOLATORS FOR DEFLECTIONS 6MM (1/4") AND UNDER.

PROVIDE EITHER NEOPRENE OR STEEL SPRING ISOLATORS FOR DEFLECTIONS BETWEEN 6MM AND 12MM (1/2").

PROVIDE STEEL SPRING ISOLATORS FOR DEFLECTIONS OF 12MM (1/2") AND OVER.

PROVIDE ADJUSTABLE LIMIT STOPS FOR SPRING ISOLATION MOUNTS ON EQUIPMENT WITH OPERATING WEIGHTS SUBSTANTIALLY DIFFERENT FROM THE INSTALLED WEIGHTS

ALL SPRING ISOLATORS SHALL BE "OPEN SPRING" UNLESS OTHERWISE STATED. SEISMICALLY RATED HOUSED SPRING ISOLATORS MAY BE USED IN LIEU PROVIDED THAT THEY MEET THIS PROJECT'S REQUIREMENTS FOR SEISMIC RESTRAINT.

SELECT ISOLATORS IN ACCORDANCE WITH EQUIPMENT WEIGHT DISTRIBUTION TO ALLOW FOR AN AVERAGE DEFLECTION MEETING OR EXCEEDING THE SPECIFIED DEFLECTION REQUIREMENTS AND SO THAT NO ISOLATOR HAS A DEFLECTION LESS THAN 80% OF THE STATIC DEFLECTION SPECIFIED. A MINIMUM OF 4 ISOLATORS ARE REQUIRED FOR EACH PIECE OF EQUIPMENT, UNLESS SPECIFIED OTHERWISE.

1.20 SUBSTANTIAL AND TOTAL PERFORMANCE

PRIOR TO REQUESTING AN INSPECTION FOR SUBSTANTIAL PERFORMANCE, PROVIDE A COMPLETE LIST OF ITEMS, WHICH ARE DEFICIENT.

A CERTIFICATE OF SUBSTANTIAL PERFORMANCE WILL NOT BE GRANTED UNLESS THE FOLLOWING ITEMS ARE COMPLETED AND AVAILABLE TO THE OWNER'S CONSULTANT:

FINAL PLUMBING INSPECTION CERTIFICATE FROM THE AUTHORITY HAVING JURISDICTION.

SCHEDULE [C-B] FOR SEISMIC ENGINEERING.

DRAFT OPERATING/MAINTENANCE MANUALS HAVE BEEN SUBMITTED FOR REVIEW.

ALL MECHANICAL SYSTEMS HAVE BEEN COMMISSIONED AND ARE CAPABLE OF OPERATION WITH ALARM CONTROLS FUNCTIONAL AND AUTOMATIC CONTROLS IN OPERATION.

AIR AND WATER SYSTEMS HAVE BEEN BALANCED WITH DRAFT REPORT SUBMITTED TO THE CONSULTANT.

OPERATING AND MAINTENANCE DEMONSTRATIONS HAVE BEEN PROVIDED TO THE OWNER.

RECORD DRAWINGS HAVE BEEN SUBMITTED.

ALL PREVIOUSLY IDENTIFIED DEFICIENCIES HAVE BEEN CORRECTED AND ACCEPTED.

PRIOR TO A TOTAL PERFORMANCE INSPECTION PROVIDE DECLARATION IN WRITING THAT SUBSTANTIAL PERFORMANCE DEFICIENCIES HAVE BEEN CORRECTED AND FINAL TAB REPORTS AND O&M MANUALS HAVE BEEN SUBMITTED.

THE CONSULTANT SHALL PROVIDE ONE (1) VISITATION FOR THE PURPOSE OF TOTAL PERFORMANCE INSPECTION. SUBSEQUENT VISITATIONS IF REQUIRED SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

2. PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

LISTED MANUFACTURERS ARE ACCEPTABLE FOR THEIR ABILITY TO MEET THE GENERAL DESIGN INTENT, QUALITY AND PERFORMANCE CHARACTERISTICS OF THE SPECIFIED PRODUCT. THE LIST DOES NOT ENDORSE THE ACCEPTABILITY OF ALL PRODUCTS AVAILABLE FROM THE LISTED MANUFACTURERS/SUPPLIERS.

IT REMAINS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE PRODUCTS SUPPLIED ARE EQUAL TO THE SPECIFIED PRODUCTS IN EVERY RESPECT, OPERATE AS INTENDED, AND MEET THE PERFORMANCE SPECIFICATIONS AND PHYSICAL DIMENSIONS OF THE SPECIFIED PRODUCT.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ADDITIONAL WORK OR MATERIALS, TO ACCOMMODATE THE USE OF EQUIPMENT FROM THE ACCEPTABLE MANUFACTURERS AND SUPPLIERS LISTED.

2.2 PIPE HANGERS AND SUPPORTS

PROVIDE HANGERS AND SUPPORTS TO SECURE EQUIPMENT IN PLACE, PREVENT VIBRATION, PROTECT AGAINST DAMAGE FROM EARTHQUAKE, MAINTAIN GRADE, PROVIDE FOR EXPANSION AND CONTRACTION, AND ACCOMMODATE INSULATION.

2.3 VIBRATION ISOLATION

SPRING HANGERS: HANGERS SHALL CONSIST OF RIGID STEEL FRAMES CONTAINING MINIMUM 32MM (1 1/4") THICK NEOPRENE ELEMENTS AT THE TOP AND A STEEL SPRING SEATED IN A STEEL WASHER REINFORCED NEOPRENE CUP ON THE BOTTOM. PROVIDE A COMBINATION RUBBER AND STEEL REBOUND WASHER AS THE SEISMIC UPSTOP FOR SUSPENDED PIPING, DUCTWORK AND EQUIPMENT. RUBBER THICKNESS SHALL BE A MINIMUM OF 6MM (1/4"), COLOUR CODED SPRINGS, RUST RESISTANT, PAINTED BOX TYPE HANGERS, TO MAINTAIN STABILITY THE BOXES SHALL NOT BE ARTICULATED AS CLEVIS HANGERS NOR THE NEOPRENE ELEMENT STACKED ON TOP OF THE SPRING.

ACCEPTABLE MANUFACTURER: MASON HD, HS OR EQUAL.

ALTERNATE VIBRATION ISOLATION ACCEPTABLE MANUFACTURERS, KORFUND, VIBRO-ACOUSTICS

3. EXECUTION

3.1 PAINTING REPAIRS AND RESTORATION

DO PAINTING IN ACCORDANCE WITH DIVISION 09 - INTERIOR PAINTING. PRIME AND TOUCH UP MARKED FINISHED PAINTWORK TO MATCH ORIGINAL. RESTORE TO NEW CONDITION, FINISHES WHICH HAVE BEEN DAMAGED.

CLEAN EXPOSED BARE METAL SURFACES SUPPLIED UNDER DIVISIONS 21, 22, 23 AND 25. APPLY AT LEAST ONE COAT OF CORROSION RESISTANT PRIMER PAINT TO ALL SUPPORTS AND EQUIPMENT FABRICATED FROM FERROUS METAL.

3.2 DEMONSTRATION

SUPPLY TOOLS, EQUIPMENT, PERSONNEL TO DEMONSTRATE AND INSTRUCT THE OPERATING, AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLE-SHOOTING, AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.

3.3 ACCESS DOORS

PROVIDE ALL ACCESS DOORS REQUIRED TO ACCESS WORK INSTALLED BY DIVISIONS 21, 22, 23 AND 25. BE RESPONSIBLE FOR COORDINATING LOCATIONS, CUTTING OPENING AND INSTALLING PANELS. ANY SECONDARY SUPPORTS, BLOCKING ETC. WILL BE BY THE CEILING OR WALL CONTRACTOR. ENSURE THAT EQUIPMENT IS WITHIN VIEW AND ACCESSIBLE FOR OPERATING, INSPECTING, ADJUSTING, SERVICING WITHOUT USING SPECIAL TOOLS.

3.4 PIPE PRESSURE TESTING

ADVISE CONSULTANT OR PROJECT MANAGER 48 HOURS MINIMUM PRIOR TO PERFORMANCE OF PRESSURE TESTS.

HYDROSTATIC TEST: 150% OF WORKING PRESSURE, BUT NOT LESS THAN 800 KPA (125 PSIG). FOR P&R PIPING, DO NOT EXCEED 1034 KPA (150 PSI). FOR P&R PIPING, DO NOT EXCEED 680 KPA (100 PSI). MAINTAIN TEST PRESSURE WITHOUT LOSS FOR 4 HOURS MINIMUM UNLESS SPECIFIED FOR LONGER PERIOD OF TIME IN RELEVANT MECHANICAL SECTIONS.

PRIOR TO TESTS, ISOLATE EQUIPMENT AND OTHER PARTS WHICH ARE NOT DESIGNED TO WITHSTAND TEST PRESSURE OR MEDIA.

CONDUCT TESTS IN PRESENCE OF CONSTRUCTION MANAGER OR PROJECT MANAGER.

EXAMINE ALL JOINTS FOR LEAKS AND REMAKE ALL LEAKING JOINTS WITH NEW MATERIALS. PAY COSTS FOR REPAIRS OR REPLACEMENT, RETESTING, AND MAKING GOOD. CONSULTANT TO DETERMINE WHETHER REPAIR OR REPLACEMENT IS APPROPRIATE.

INSULATE OR CONCEAL WORK ONLY AFTER APPROVAL AND CERTIFICATION OF TESTS BY AUTHORITIES.

PRESSURE TEST ALL GAS PIPING IN ACCORDANCE WITH CSA B149.1. PURGE ALL PIPING AFTER PRESSURE TESTS IN ACCORDANCE WITH CSA B149.1.

SUBMIT COPIES OF PRESSURE TEST REPORTS FOR ALL SECTIONS OF PIPING.

3.5 VIBRATION ISOLATION

SPRING HANGERS: LOCATE ISOLATION HANGERS AS NEAR TO THE OVERHEAD SUPPORT STRUCTURE AS POSSIBLE. INSTALLATION SHALL PERMIT HANGER BOX OR ROD TO MOVE THROUGH A 30 DEGREES ARC WITHOUT METAL TO METAL CONTACT. ALL DISCHARGE DUCTWORK RUNS FOR A DISTANCE OF 15M (50') FROM THE CONNECTED EQUIPMENT SHALL BE ISOLATED FROM THE BUILDING STRUCTURE BY MEANS OF SPRING HANGERS. SPRING DEFLECTION SHALL BE A MINIMUM OF 19MM (0.75").

DIVISION 22 PLUMBING

4. GENERAL

4.1 SECTION SCOPE

PIPING, VALVES AND SPECIALTIES SERVING BUILDING WATER DISTRIBUTION SYSTEMS TO 1M (36") OUTSIDE THE BUILDING AND SANITARY AND STORM DRAIN WASTE AND VENT PIPING, EQUIPMENT AND ACCESSORIES BETWEEN PLUMBING FIXTURES TO 1M (36") FROM THE BUILDING.

4.2 CLEANOUTS

PROVIDE SANITARY AND STORM PIPING CLEANOUTS AT ALL CHANGES IN DIRECTION, AT THE ENDS OF ALL HORIZONTAL RUNS, AT THE BASE OF EVERY STACK, WHERE DRAINS LEAVE THE BUILDING; WHERE SHOWN ON THE DRAWINGS AND IN COMPLIANCE WITH THE LOCAL PLUMBING CODE, BYLAWS AND ORDINANCES.

PROVIDE CAULKED OR THREADED TYPE CLEANOUTS EXTENDED TO FINISHED FLOOR WALL SURFACE.

PROVIDE BOLTED COVER PLATE CLEAN OUTS ON VERTICAL RAINWATER LEADERS ONLY. ENSURE AMPLE CLEARANCE AT CLEAN OUT FOR RODDING OF DRAINAGE SYSTEM.

5. PRODUCTS

5.1 PIPE AND FITTINGS

SANITARY AND STORM DRAINAGE, AND VENT (ABOVE GRADE) SHALL BE DWV COPPER, CAST IRON CLASS 4000, PVC-15 SCHEDULE 40 OR PVC-15XFR SCHEDULE 40.

SANITARY AND STORM DRAINAGE AND VENT (BELOW GRADE INSIDE BUILDING TO 1M OUTSIDE) SHALL BE CAST IRON CLASS 4000, PVC-DWV SCHEDULE 40 OR ABS-DWV (SOLID CORE) SCHEDULE 40.

DOMESTIC WATER (ABOVE GRADE INSIDE BUILDING) SHALL BE TYPE "K" HARD COPPER FOR HOT AND P&R FOR COLD WATER, HIGH DENSITY CROSSLINKED POLYETHYLENE PIPE (PEX) NPS AND SMALLER (FOR IN-SUITE DISTRIBUTION DOWNSTREAM OF A DISTRIBUTION MANIFOLD ONLY) TO ASTM F876, ASTM F873 CSA B137.5, ALL PEX TUBING, FITTINGS AND FITTING ASSEMBLIES SHALL BE BY ONE MANUFACTURER.

DOMESTIC WATER (BELOW GRADE INSIDE BUILDING TO 1M OUTSIDE) SHALL BE TYPE "K" SOFT COPPER TO 4 NPS DIAMETER OR PVC C900 D1818 FROM 4 NPS TO 12 NPS (ADAPT TO APPROVED NON-PLASTIC MATERIAL PRIOR TO PENETRATION THROUGH THE FLOOR SLAB.

5.2 VALVES

WHEREVER POSSIBLE ALL VALVES SHALL BE OF ONE MANUFACTURER.

GROOVED VALVES SHALL BE OF THE SAME MANUFACTURER AS THE ADJOINING COUPLINGS.

PROVIDE VALVES WITH MANUFACTURERS NAME AND PRESSURE RATING CLEARLY MARKED ON OUTSIDE OF BODY. ALL VALVES MUST BE SUITABLE IN ALL RESPECTS FOR SERVICE USED.

ALL VALVES SHALL HAVE A PROVINCIAL CRN NUMBER WHICH IS CURRENT.

BALL VALVES 2 NPS AND UNDER SHALL BE LOW LEAD FORGED BRASS BODY, 2 PIECE BODY, FULL PORT, CHROME PLATED BALL, PTFE SEATS, BLOW OUT PROOF STEM, ADJUSTABLE PACKING NUT, FOR DOMESTIC WATER SERVICE, CLASS 1440 KPA (600 PSI) W.O.G.

GATE VALVES 2 NPS AND UNDER SHALL BE LEAD FREE BRONZE BODY, SOLID WEDGE DISC, BRONZE OR STAINLESS STEEL TRIM, NON-RISING STEM, FOR DOMESTIC WATER SERVICE, CLASS 1380 KPA (200 PSI) W.O.G.

GATE VALVES 2½ NPS AND OVER SHALL BE CAST IRON BODY, SOLID WEDGE DISC, BRONZE OR STAINLESS STEEL TRIM, RISING STEM, OUTSIDE SCREW AND YOKE COMPLYING WITH MSS SP 70, CLASS 1380 KPA (200 PSI) W.O.G.

GLOBE VALVES 2 NPS AND UNDER SHALL BE LEAD FREE BRONZE BODY, SWIVEL TYPE STAINLESS STEEL DISC, UNION BONNET, FOR DOMESTIC WATER SERVICE, CLASS 1380 KPA (200 PSI) W.O.G.

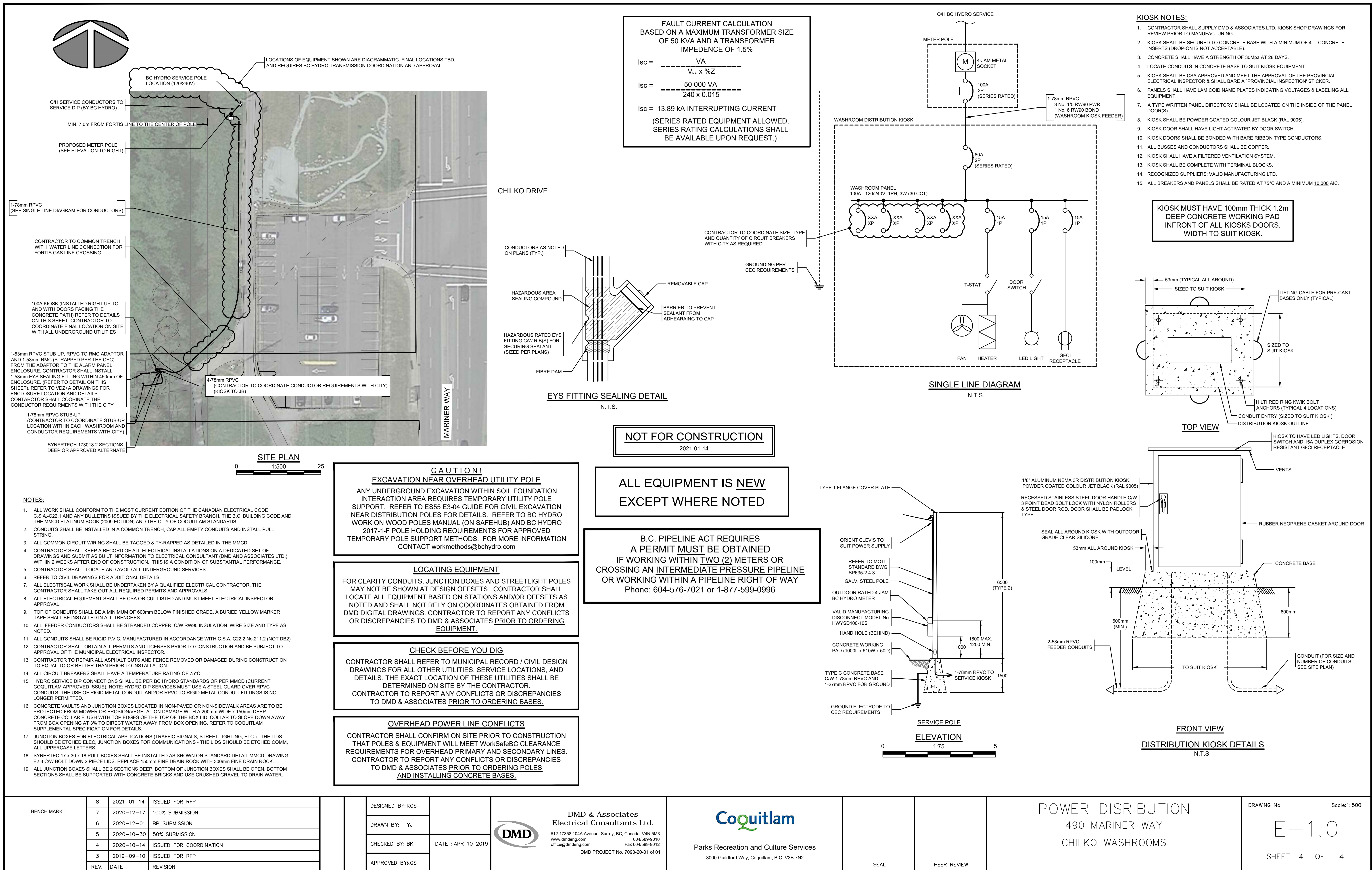
CHECK VALVES 2 NPS AND SMALLER SHALL BE LEAD FREE BRONZE SWING CHECK WITH BRONZE DISC CAPABLE OF BEING REGROUND, Y PATTERN, SUITABLE FOR DOMESTIC WATER USE, CLASS 1380 KPA (200 PSI) W.O.G.

CIRCUIT SETTER VALVE (FOR DOMESTIC HOT WATER RECIRCULATION) SHALL BE SCREWED, LEAD FREE BRASS, REGULATING VALVE SUITABLE FOR POTABLE WATER, COMBINATION PIT TEST PORTS WITH EPT INSERTS/CHECK VALVES, DRAIN PORT, MEMORY STOP HANDLE WITH GRADUATED MARKINGS, POSITIVE SHUT OFF, 1035 KPA @ 83°C (150 PSI @ 200°F) RATING.

PRESSURE REDUCING VALVE NPS 1 AND SMALLER SHALL BE LEAD FREE COPPER SILICON ALLOY BODY OR LOW LEAD BRONZE BODY, SS INTEGRAL, STRAINER, RENEWABLE SS SEAT, SERVICEABLE IN LINE, BUILT IN BYPASS OR FOR HOT WATER, RATED AT MAXIMUM INLET PRESSURE OF 1034 KPA (150 PSI) AND 82°C (180°F) TEMPERATURE.

PRESSURE REDUCING VALVE NPS 1½ NPS TO NPS 2 SHALL BE LEAD FREE OPERATED WITH LOW FLOW BYPASS, DIAPHRAGM ACTUATED GLOBE VALVE, LEAD FREE, BRONZE BODY OR DUCTILE IRON TO ASTM A536, LEAD FREE BRONZE, STAINLESS STEEL OR DUCTILE IRON INTERNALS. ALL DUCTILE IRON COMPONENTS INCLUDING BODY AND COVER SHALL BE LINED AND COATED WITH EPOXY COATINGS.

STRAINERS SHALL BE ½ - 2 NPS THREADED ENDS, BRONZE BODY, 1034 KPA



Mundy Park Chilko Washrooms - Civil Engineering Drawings

Issued for RFP



Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	SITE PLAN
3	WASHROOM AREA PLAN
4	CIVIL DETAILS
5	CIVIL DETAILS
6	CIVIL NOTES
7	ESC NOTES
8	ESC PLAN
9	ESC DETAILS

Location Map (NTS)

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VDZ+A

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Legal Address and Description:

Lots 359, 360, 361, 362 and 363 Group 1 NWD Plan BCP25271

Edge of pavement	Hydrant	Sanitary service	Hydro Guy Wire
Watermain and valve	Water air valve	Sanitary cleanout	Hydro Kiosk
Drainage sewer, MH	Water blowoff	Utility pole(joint pole)	Vegetation Conifer
Drainage ditch	Water service	Utility pole with light	Vegetation Deciduous
Sanitary sewer, MH	Catch basin, top inlet	Streetlight, davit	Vegetation Shrub
Sanitary forcemain	Catch basin, side inlet	Streetlight, post top	Survey Traverse Hub
Gasmain and valve	Catch basin, round	Comb signal pole	Survey Iron Pin
Hydro duct, MH	Drainage service	Traffic signal pole	Survey Lead Plug
Telephone duct, MH	Drainage cleanout	Junction box	Survey Monument

7	20210114	TW	ISSUED FOR RFP
6	20201217	TW	ISSUED FOR 100% REVIEW
5	20201202	TW	ISSUED FOR BP SUBMISSION
4	20201127	TW	ISSUED FOR HEALTH SUBMISSION
3	20201113	TW	ISSUED FOR 90% REVIEW
2	20201029	TW	ISSUED FOR 50% REVIEW
1	20210114	TW	ISSUED FOR 25% REVIEW
No.	Date	By	Revisions

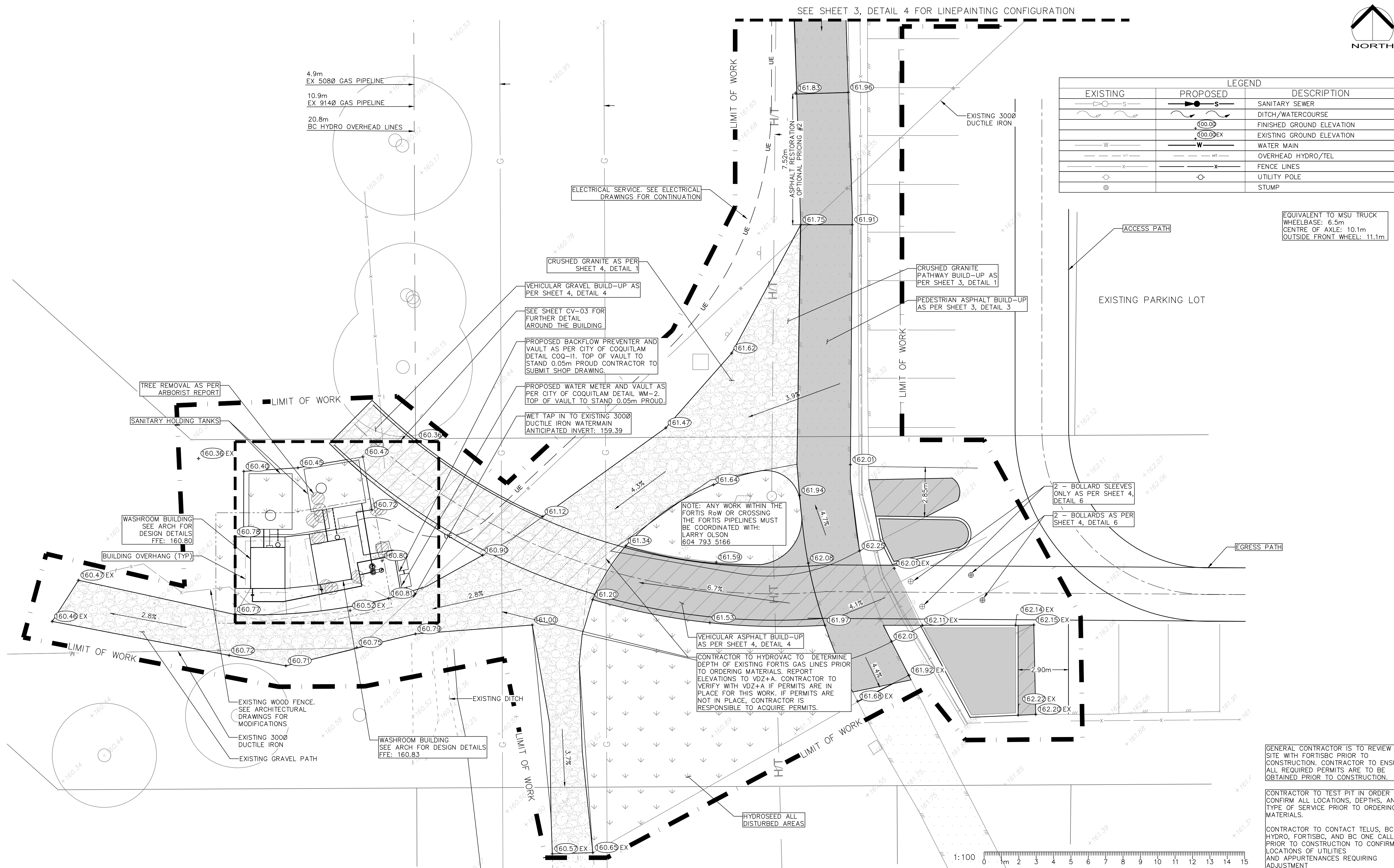
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TW	20210114	
Drawn by	Date	
TW	20210114	
Checked by	Date	
GB	20210114	
Approved by	Date	
GB	20210114	

ACCEPTED FOR CONSTRUCTION
Date:
Manager of Development Servicing

Coquitlam
Engineering & Public Works
3000 Guildford Way, Coquitlam, B.C. V3B 7N2

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Eng. Project No.	CV2020-08		

Project	MUNDY PARK WASHROOMS 490 MARINER WAY
Description	COVER SHEET
File:	CV-01 - COVER SHEET



LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		SANITARY SEWER
		DITCH/WATERCOURSE
		FINISHED GROUND ELEVATION
		EXISTING GROUND ELEVATION
		WATER MAIN
		OVERHEAD HYDRO/TEL
		FENCE LINES
		UTILITY POLE
		STUMP

EQUIVALENT TO MSU TRUCK
WHEELBASE: 6.5m
CENTRE OF AXLE: 10.1m
OUTSIDE FRONT WHEEL: 11.1m

2 - BOLLARD SLEEVES
ONLY AS PER SHEET 4,
DETAIL 6

2 - BOLLARDS AS PER
SHEET 4, DETAIL 6

GENERAL CONTRACTOR IS TO REVIEW ON SITE WITH FORTISBC PRIOR TO CONSTRUCTION. CONTRACTOR TO ENSURE ALL REQUIRED PERMITS ARE TO BE OBTAINED PRIOR TO CONSTRUCTION.

CONTRACTOR TO TEST PIT IN ORDER TO CONFIRM ALL LOCATIONS, DEPTHS, AND TYPE OF SERVICE PRIOR TO ORDERING MATERIALS.

CONTRACTOR TO CONTACT TELUS, BC HYDRO, FORTISBC, AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

Edge of pavement			Hydrant		Sanitary sewer		Hydro Guy Wire	
Watermain and valve	W		Water air valve		Sanitary cleanout		Hydro Kiosk	
Drainage sewer, MH	D		Water blowoff		Utility pole(joint pole)		Vegetation Conifer	
Drainage ditch			Water service		Utility pole with light		Vegetation Deciduous	
Sanitary sewer, MH	S		Catch basin, top inlet		Streetlight, davit		Vegetation Shrub	
Sanitary sewer, valve	SV		Catch basin, side inlet		Streetlight, post top		Survey Benchmark Hub	
Gasmain and valve	G		Catch basin, round		Comb. main		Survey Iron Pin	
Hydro duct, MH	UE		Drainage sewer		Traffic signal pole		Survey Lead Plug	
Telephone duct, MH	T		Drainage cleanout		Junction box		Survey Monument	

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1	20201114	TW	ISSUED FOR 25% REVIEW
No.	Date	By	Revisions

Design by	Date	 VDZ+A <small>LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • DESIGN THEORY</small>
TW	20210114	
Drawn by	Date	FORT LANGLEY STUDIO <small>102-9181 Church St</small> <small>Fort Langley, BC</small> <small>V3M 2J6</small>
TW	20210114	
Checked by	Date	MOUNT PLEASANT STUDIO <small>102-355 Kingsway</small> <small>Vancouver, BC</small> <small>V5M 1J8</small>
GB	20210114	
Approved by	Date	www.vdz.ca 604-882-0024
GB	20210114	

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CONSTRUCTION
Date: _____

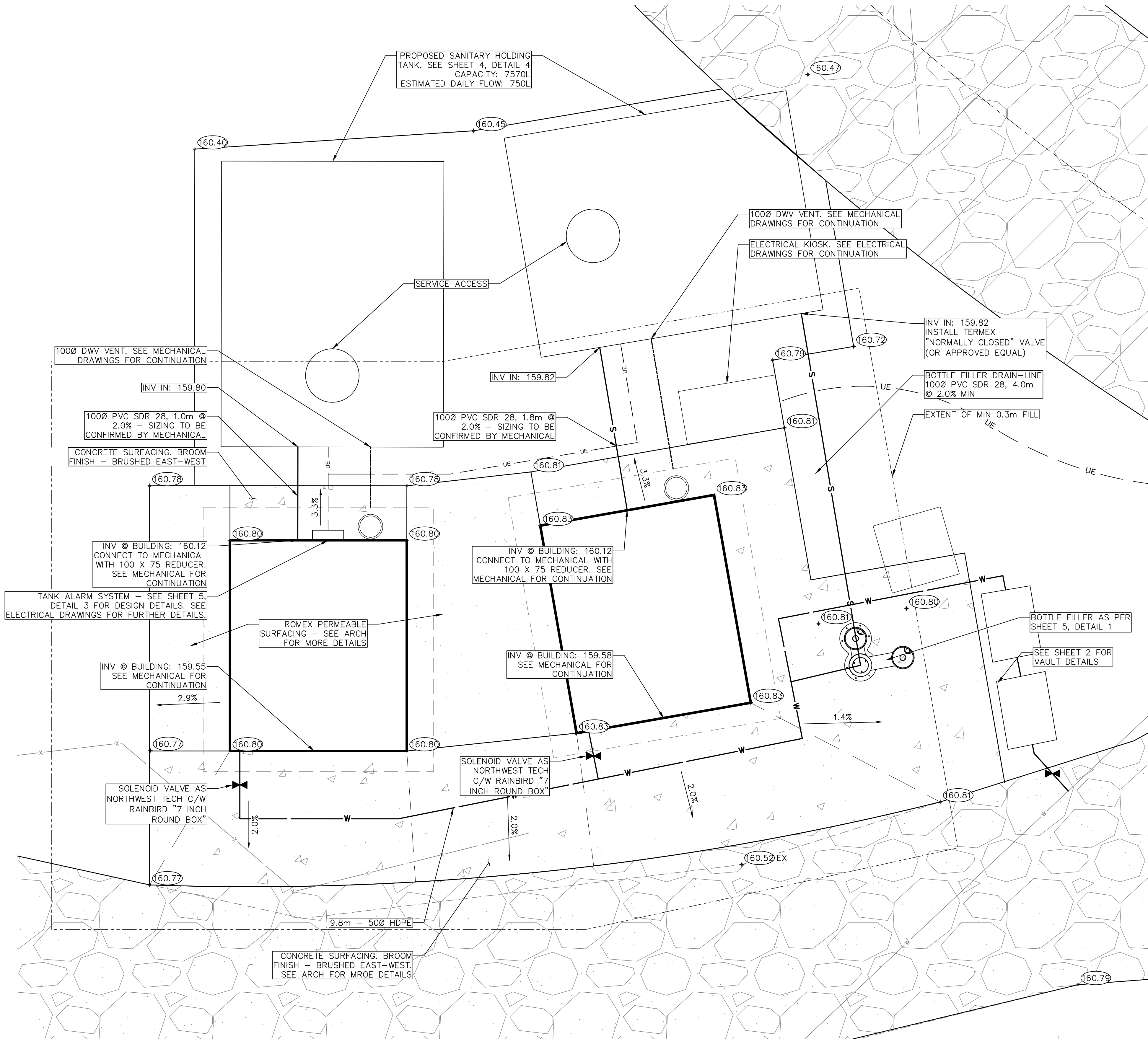
Manager of
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3000 Guildford Way, Coquitlam, B.C. V3B 7N2

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Sheet of 2 OF 9
Eng. Project No. CV2020-08

Project	MUNDY PARK WASHROOMS 490 MARINER WAY
Description	SITE PLAN
File:	CV-02 - SITE PLAN

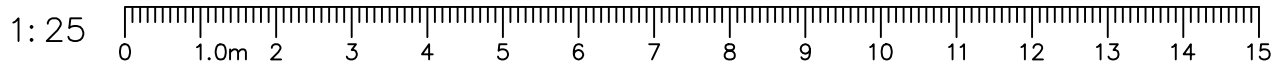
LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		SANITARY SEWER
		DITCH/WATERCOURSE
		FINISHED GROUND ELEVATION
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Edge of pavement	W	Hydrant	Sanitary service
Watermain and valve	D	Water air valve	Sanitary cleanout
Drainage sewer, MH	S	Water blowoff	Utility pole (joint pole)
Drainage ditch	SFM	Water service	Utility pole with light
Sanitary sewer, MH	G	Catch basin, side inlet	Streetlight, davit
Sanitary forcemain	UE	Catch basin, round	Streetlight, post top
Gasmain and valve	T	Drainage service	Comb signal pole
Hydro duct, MH		Drainage cleanout	Traffic signal pole
Telephone duct, MH			Junction box

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4	20210127	TW	ISSUED FOR HEALTH SUBMISSION
3	20210113	TW	ISSUED FOR 90% REVIEW
2	20210209	TW	ISSUED FOR 50% REVIEW
1	20210114	TW	ISSUED FOR 25% REVIEW
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Design by
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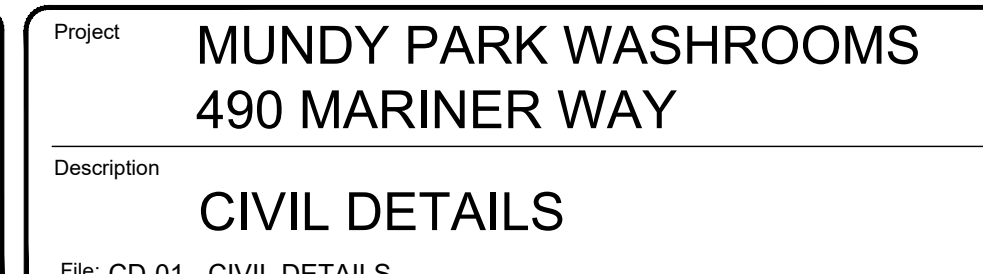
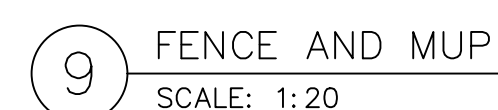
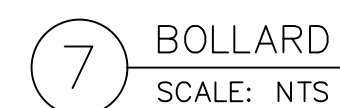
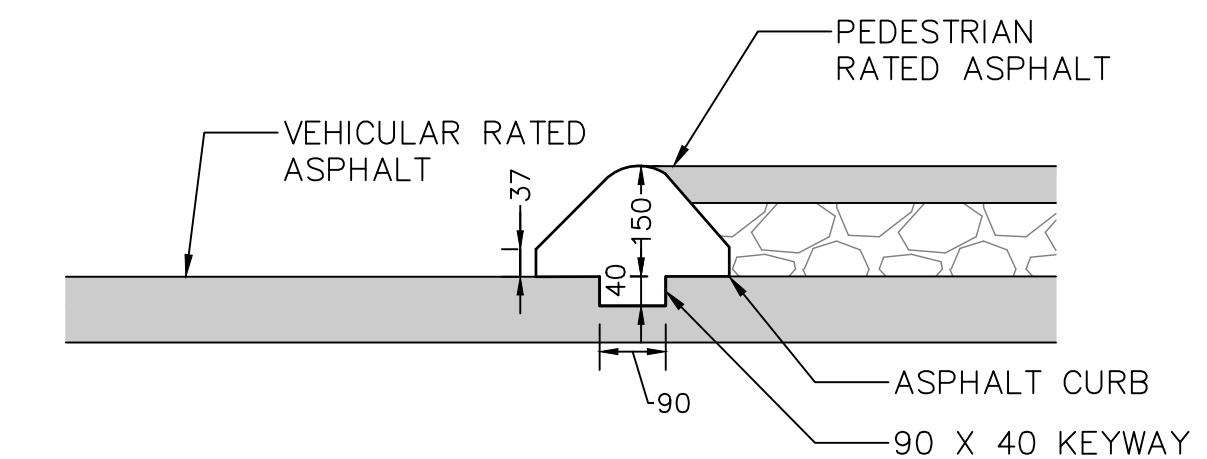
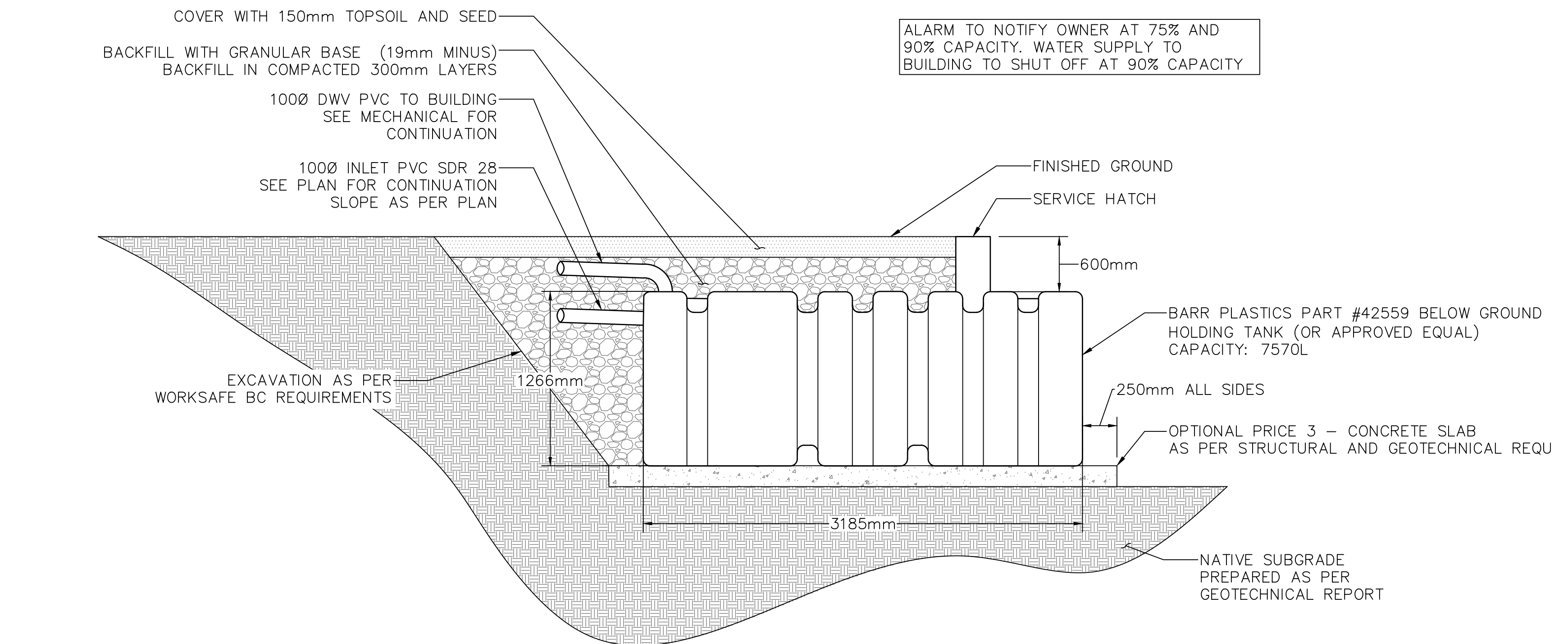
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Eng. Project No. CV2020-08

Project
Description
File: CV-03 - WASHROOM AREA PLAN

MUNDY PARK WASHROOMS
490 MARINER WAY
WASHROOM AREA PLAN



CIVIL CONSTRUCTION NOTES:

1.0 ALL WORK MUST BE IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT (PLATINUM EDITION), THE NATIONAL BUILDING CODE, B.C. BUILDING CODE (2018), AND TO THE CITY OF COQUITLAM SPECIFICATIONS AND STANDARD DETAIL DRAWINGS AND THE CIVIL PROJECT SPECIFICATIONS LABELED:

2.0 THE GENERAL CONTRACTOR SHALL NOTIFY THE PRIMARY PROJECT CONTACT PRIOR TO COMMENCING WORK TO ENSURE THE PROJECT TEAM HAS THE LATEST PLANS AND SPECIFICATIONS ISSUED FOR CONSTRUCTION. THE GENERAL CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ISSUING PLANS AND SPECIFICATIONS TO ASSIGNED SUBCONTRACTORS. CIVIL PLANS PREPARED BY VAN DER ZALM AND ASSOCIATES WILL CONTAIN "ISSUED FOR CONSTRUCTION" WITHIN THE REVISIONS TABLE TO IDENTIFY CONSTRUCTION DRAWINGS.

3.0 THE CONTRACTOR IS CAUTIONED THAT THE UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK BY CONTACTING BC ONE CALL AND OTHER APPLICABLE METHODS. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD). SUBSURFACE UTILITY INFORMATION HAS NOT BEEN PROVIDED TO CSA STANDARD S250 DETAIL.

4.0 IF THE CONTRACTOR ENCOUNTERS ANY UTILITY LINES WITHIN THE SITE INCLUDING DRAIN TILE OR IRRIGATION LINES, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND DIRECTION OF THOSE UTILITY LINES. NO UTILITY LINE SHALL BE BACKFILLED OR ALTERED WITHOUT REVIEW, DISCUSSION AND WRITTEN APPROVAL FROM THE PRIMARY PROJECT CONTACT. THE CONTRACTOR SHALL BEAR RESPONSIBILITY OF THE RELOCATING ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS AT NO ADDITIONAL PAYMENT BY THE OWNER.

5.0 THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

6.0 ACTIVITIES PROHIBITED OUTSIDE OF THE CONSTRUCTION BOUNDARIES WOULD INCLUDE, BUT NOT BE LIMITED TO: SOIL AND OTHER MATERIAL STOCKPILING, EQUIPMENT OR MACHINERY STORAGE, DRIVING OF ANY VEHICLE, LEAKAGE OR SPILLAGE OF ANY "WASHOUT" OR OTHER TOXIC MATERIAL.

7.0 ALL RESTRICTED AREAS SHALL BE CLEARLY DELINEATED FROM THE ACTIVE AREA OF WORK. FINAL PLACEMENT OF ALL PROTECTIVE FENCING SHALL BE COMPLETE BEFORE ANY WORK COMMENCES ON-SITE.

8.0 ALL WATER AND SEWER UTILITY WORK WILL CONFORM TO THE BC BUILDING CODE, THE CITY OF COQUITLAM CONSTRUCTION STANDARDS AND THE MMCD. IF THERE IS A CONFLICT BETWEEN APPLICABLE STANDARDS, THE MORE STRINGENT STANDARD WILL GOVERN.

9.0 REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER, PRIOR TO CONSTRUCTION.

10.0 PRIOR TO PLACEMENT OF STRUCTURAL SOIL, SUBGRADE OR SOIL DRAINAGE MEDIUM, REFER TO GEOTECHNICAL SOIL RECOMMENDATIONS AND VERIFY PLACEMENT IS ACCEPTABLE TO THE PROJECT GEOTECHNICAL ENGINEER.

11.0 SUBSTITUTIONS OR DEVIATIONS FROM THE CIVIL PROJECT PLANS OR SPECIFICATIONS ARE NOT ALLOWED WITHOUT WRITTEN APPROVAL FROM THE PROJECT ENGINEER.

12.0 OPEN TRENCH OPERATIONS IN EXISTING PAVEMENT SHALL BE VERTICAL AND REPLACED WITH HOT MIX ASPHALT AFTER BACKFILL AND COMPACTION. ALL PAVEMENTS, BOULEVARD, ETC. ARE TO BE RESTORED TO ORIGINAL CONDITION WHERE NO IMPROVEMENTS ARE PROPOSED UNDER THIS CONTRACT.

13.0 THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE CITY OF COQUITLAM OR OTHER APPROVING AGENCIES.

14.0 ANY MATERIAL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.

15.0 ANY SURVEY MONUMENTS MUST BE PROTECTED AND ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

16.0 ALL EXISTING IMPROVEMENTS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OF COQUITLAM. IN SPECIAL CASES THE CITY INSPECTOR MAY REQUIRE WRITTEN ACCEPTANCE BY THE AFFECTED PROPERTY OWNERS FOR RESTORATION WORKS PERFORMED BY THE CONTRACTOR.

17.0 SEE LANDSCAPE ARCHITECT'S DRAWINGS FOR FEATURE LAYOUTS AND DIMENSIONS.

18.0 CONTRACTOR TO PROVIDE 48 HOURS PRIOR TO CONSTRUCTION WITHIN ROAD ALLOWANCES.

19.0 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT.

20.0 CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS UPON COMPLETION OF THE PROJECT.

ROADWORKS NOTES:

1.0 ALL ELEVATIONS AND DIMENSIONS ARE METRIC.

2.0 ALL MANHOLE LIDS, VALVE COVERS, CATCH BASINS AND LIDS OF ANY OTHER STRUCTURE TO BE ADJUSTED TO SUIT FINAL OR PROPOSED ROAD, DRIVEWAY, SIDEWALK, PATHWAY, AND BOULEVARD/LANDSCAPE AREAS.

3.0 GEOTECHNICAL ENGINEER TO APPROVE ALL SUBGRADES PRIOR TO PLACING BASE MATERIALS.

4.0 COMPACTION TESTING, ASPHALT TESTING AND CONCRETE TESTING BY CONTRACTOR.

5.0 FOR FENCE LOCATIONS, SEE LANDSCAPE ARCHITECT PLANS.

6.0 ALL PAVEMENT MARKINGS TO BE INCLUDED IN CONTRACT.

7.0 LOCATIONS OF DRIVEWAYS, WHEELCHAIRS RAMPS, ETC., SHALL BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION OF THE PROPOSED CONCRETE CURB/GUTTER AND SIDEWALK.

8.0 ALL LOOSE, ORGANIC, OTHERWISE DELETERIOUS MATERIALS OR SOFT SPOT(S) ARE TO BE EXCAVATED AND REMOVED FROM THE ROADWAY AND

UTILITY TRENCHES IN THE ROADWAY AS PER THE GEOTECHNICAL CONSULTANT'S REPORT OR AS DIRECTED BY THE CITY.

9.0 ALL NEW SURFACES SHALL BE SMOOTHLY TIED INTO EXISTING SURFACES.

10.0 BOULEVARDS ARE TO BE CONSTRUCTED TO THE CURRENT EDITION OF THE MMCD AND CITY OF COQUITLAM.

WATERWORKS NOTES:

1.0 ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE MMCD AND CITY OF COQUITLAM SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS.

2.0 CONTRACTOR NOT TO INSTALL SERVICES OR WORK ON PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM PROPERTY OWNER, APPROVAL TO BE OBTAINED BY THE DEVELOPER.

3.0 CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL DRIVEWAY LOCATIONS PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR ANY NECESSARY WATER SERVICE CONNECTION RELOCATIONS.

4.0 ALL WATER MAIN 100mm TO 300mm SHALL BE AWWA PVC C900. ALL WATER MAIN 350mm OR GREATER SHALL BE AWWA PVC C905. MINIMUM PIPE COVER SHALL BE 1.0 METER. REFER TO THE IRRIGATION PLAN, CIVIL PLANS AND DETAILS, AND THE PROJECT SPECIFICATIONS FOR MAIN SMALLER THAN 100mm IN DIAMETER. CONTACT THE PRIMARY PROJECT CONTACT REGARDING USE OF SUITABLE MAIN FITTINGS UNLESS SPECIFIED IN PLANS AND DETAILS.

5.0 RESTORATION OF EXISTING DRIVEWAYS, PARKING AREAS, AND WALKWAYS TO CONFORM TO CITY SPECIFICATIONS.

6.0 THE CONTRACTOR SHALL SUPPLY ALL MATERIALS AND FITTINGS REQUIRED FOR THE TIE-IN OF THE NEW WATER MAINS BY THE CITY.

7.0 ALL NEW WATER MAINS, AT TIE-IN POINTS, ARE TO BE CAPPED 1.5m FROM THE EXISTING WATER MAIN. THE PROPOSED WATER MAIN IS TO BE SET AT THE LIN EAND GRADE TO MEET THE EXISTING WATER MAIN.

8.0 TIE-INS TO EXISTING PUBLIC WATER MAINS IS TO BE PERFORMED BY THE CITY OF COQUITLAM.

9.0 ALL DOMESTIC SERVICE CONNECTIONS ARE TO BE A MINIMUM OF 19mm IN DIAMETER UNLESS OTHERWISE SPECIFIED.

10.0 NO CAST IRON VALVES ON FITTINGS.

11.0 ASSUME TEST PRESSURE OF 1380kPa (200 psi).

12.0 ALL WATER VALVES ARE TO BE KEPT FLUSH WITH THE FIRST LIFT OF ASPHALT BOXES TO BE ADJUSTED TO FINAL GRADE PRIOR TO PLACING FINAL LIFT.

13.0 MINIMUM GRADE OF WATER MAINS IS TO BE 0.1%.

14.0 ALL FITTINGS, BENDS, AND PIPE JOINTS TO HAVE JOINT RESTRAINTS THROUGHOUT.

15.0 ALL FITTINGS AND BENDS TO HAVE CONCRETE THRUST BLOCKS.

16.0 VALVES AND BOXES TO BE INSTALLED AS PER MMCD W3.

17.0 VALVE BODIES, COMPONENTS AND HYDRANTS TO BE DUCTILE IRON.

18.0 CONTRACTOR TO PROVIDE THIRD PARTY TEST RESULTS FOR CHLORINATION TEST, PRESSURE TEST, AND BACTERIOLOGICAL TEST FOR ALL WATERWORKS.

STORM AND SANITARY NOTES:

1.0 ALL STORM AND SANITARY PIPES LESS THAN OR EQUAL TO 150mm DIAMETER SHALL BE PVC SDR 28 UNLESS OTHERWISE NOTED. ALL STORM AND SANITARY PIPES GREATER THAN 150mm DIAMETER SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED. REFER TO PLANS, DETAILS, AND SPECIFICATIONS REGARDING SEWER FITTINGS AND APPURTENANCES. CONTACT THE PRIMARY PROJECT CONTRACT REGARDING USE OF SUITABLE MAIN FITTINGS IF NOT SPECIFIED IN PLAN, DETAILS, OR SPECIFICATIONS. MINIMUM COVER SHALL BE 1.0m FOR ANY SANITARY MAIN OR SERVICE. ADDITIONAL PIPE PROTECTION WILL BE REQUIRED IF MINIMUM COVER IS NOT FEASIBLE.

2.0 ALL MANHOLE BARRELS SHALL BE 1050mm DIAMETER UNLESS OTHERWISE NOTED.

3.0 ALL WYES TO BE MANUFACTURED.

4.0 EXISTING INVERTS MUST BE VERIFIED IN THE FIELD BY CONTRACTOR PRIOR TO ORDERING MATERIALS.

5.0 ALL CBs IN ASPHALT AND PARKING AREAS TO BE 600mm DIAMETER AND SHALL BE CONSTRUCTED WITH DONUT FRAME AND GRATE TO SUPPORT H-20 LIVE ROAD REQUIREMENTS AS APPROVED BY THE ENGINEER.

6.0 STORM AND SANITARY CONNECTIONS ARE TO TERMINATE 1m FROM BUILDINGS AND HAVE 1m OF COVER. SEE MECHANICAL ENGINEER'S DRAWINGS FOR CONFIRMATION OF LOCATION, DESIGN AND REQUIREMENT OF INSPECTION CHAMBERS OR STORM SUMPS ARE THE RESPONSIBILITY OF THE MECHANICAL ENGINEER.

6.0 ALL MANHOLE AND CATCH BASIN LIDS SHOWN ON CONTRACT DRAWINGS ARE TO FINISHED GRADE ELEVATIONS.

7.0 ELEVATION OF MANHOLE LID AND CATCH BASIN ON PAVEMENT TO BE SET TO TOP OF BASE COURSE ELEVATION, WHEN THE FINAL LIFT IS LAID (AT A LATER DATE) THE MANHOLE LID AND CATCH BASE GRATE ARE TO BE RAISED TO FINISH GRADE AT THE DEVELOPER'S COST.

8.0 ALL GRANULAR PIPE BEDDING SHALL BE EITHER TYPE 1 OR TYPE 2 ONLY AS PER MMCD UNLESS SUPERCEDED BY MUNICIPAL REQUIREMENTS.

9.0 ALL MANHOLE AND CATCH BASIN LIDS SHOWN ON CONTRACT DRAWINGS

ARE TO FINISHED GRADE ELEVATIONS.

10.0 ALL CATCH BASIN/LAWN BASIN LEADS TO BE 150mm IN DIAMETER AT 1.0% SLOPE MIN UNLESS OTHERWISE NOTED. DOUBLE CATCH BASIN LEADS TO BE 200mm IN DIAMETER.

11.0 OFFSET OF ALL INSPECTION CHAMBERS (I.C.) TO BE IN ACCORDANCE WITH THE CURRENT CITY OF COQUITLAM SUPPLEMENTARY SPECIFICATIONS, MMCD, AND CITY DETAIL DRAWINGS.

12.0 CONNECT ALL EXISTING PIPES UP TO 150mm DIAMETER WITH TYPE1 I.C. IN BOULEVARDS AND TYPE 2 I.C. IN DRIVEWAYS. TOP ELEVATIONS OF ALL TYPE 1 AND TYPE 2 I.C.'S ARE TO BE PLACED IN CONFORMANCE WITH THE CITY OF COQUITLAM SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS.

13.0 ALL EXISTING I.C.'S ARE TO BE FLUSHED TO ENSURE PROPER WORKING ORDER AND REPLACED IF NECESSARY.

14.0 MARK ALL CAPPED STUB ENDS WITH STAKE IN ACCORDANCE WITH MMCD.

15.0 ALL GAS AND WATER CONNECTIONS CROSSINGS UNDER DITCHES ARE TO BE RAISED OVER STORM SEWER BEFORE BACKFILLING OF TRENCH AT DEVELOPER'S COST.

16.0 FLOW ARROWS SHOWN ON PLAN PROVIDE DIRECTION OF FLOW DOWNHILL.

TESTING:

1.0 ALL TESTING TO BE PERFORMED BY A CSA OR CCIL (CANADIAN CERTIFIED TESTING LABORATORY).

2.0 FREQUENCY OF DENSITY TESTS FOR EXCAVATING, TRENCHING, AND BACKFILLING SHALL BE ONE TEST PER 50 LINEAL METERS OR TRENCH PER METER DEPTH. MATERIAL TO BE COMPACTED IN 300mm LIFTS.

3.0 FREQUENCY OF DENSITY TEST FOR ROADWAY/GENERAL EXCAVATION, EMBANKMENT, (SUBGRADE FILL) AND COMPACTION SHALL BE ONE TEST PER 250m² PER 300mm LIFT.

4.0 FREQUENCY OF DENSITY TEST FOR GRANULAR BASE AND SUB-BASE SHALL BE ONE TEST FOR 30 LINEAL METERS OF LANE WIDTH STAGGERED EACH SIDE OF CENTRELINE PER 150mm LIFT OR SPECIFIED THICKNESS.

5.0 FREQUENCY OF DENSITY TESTS FOR SIDEWALK BASE SHALL BE ONE TEST PER 30 LINEAL METERS WITHIN SIDEWALK AND DRIVEWAY AREA.

6.0 FREQUENCY OF DENSITY TESTS FOR CURB BASE SHALL BE ONE TEST PER 100 LINEAL METERS.

7.0 FREQUENCY OF MARSHALL TEST FOR HOT-MIX ASPHALT CONCRETE PAVING SHALL BE ONE TEST PER 500 TONNES OF MIX PLACED OR ONE TEST FOR EACH TYPE OF ASPHALT MIX, MIN ONE PER DAY.

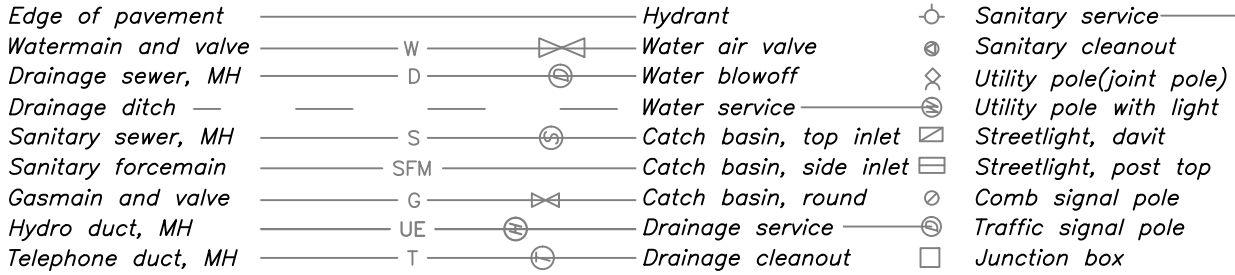
8.0 FOR STREET PAVING, CORE LOCATIONS WILL BE SELECTED FOR EACH PASS OF THE PAVING MACHINE AS FOLLOWS:

- 8.1 ACROSS THE WIDTH, CORE LOCATIONS WILL BE SELECTED RANDOMLY FROM ONE-SIXTH INCREMENTS.
- 8.2 ALONG THE LENGTH, CORE LOCATIONS WILL HAVE A RANDOMLY SELECTED START WITH CORES AT A SPACING OF APPROXIMATELY, BUT NOT TO EXCEED 30 METERS.
- 8.3 FOR OTHER PAVING OPERATIONS A MINIMUM OF ONE CORE FOR EVERY 250 SQUARE METERS OF ASPHALT MIX PLACED.

9.0 FREQUENCY OF PLASTIC CONCRETE TEST FOR SIDEWALK SHALL BE ONE TEST PER 150 LINEAL METERS OR A MINIMUM OF ONE PER DAY.

10.0 FREQUENCY OF PLASTIC CONCRETE TEST FOR CURB AND GUTTER SHALL BE ONE TEST PER 150 LINEAL METERS OR A MINIMUM OF ONE PER DAY.

11.0 THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING.



Plot Date: January 14, 2021

Design by	Date	VDZ+A <small>LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • TRUCK FORESTRY</small> FORT LANGLEY STUDIO MOUNT PLEASANT STUDIO <small>102-355 Kingsway Fort Langley, BC V1M 0J8</small> <small>www.vdz.ca</small> <small>604-882-0024</small>	
TW	20210114		
Drawn by	Date		
TW	20210114		
Checked by	Date		
GB	20210114		
Approved by	Date		
GB	20210114		
No.	Date	By	Revisions

ACCEPTED FOR CONSTRUCTION
Date: _____

Manager of Development Servicing

Coquitlam
Engineering & Public Works
3000 Guildford Way, Coquitlam, B.C. V3B 7N2

Scale horiz. **1:100** Scale vert. **1:100**
Sheet of **6** OF **9**
Eng. Project No. **CV2020-08**

Project **MUNDY PARK WASHROOMS**
490 MARINER WAY
Description **CIVIL NOTES**
File: CN-01 - CIVIL NOTES

1. THIS EROSION CONTROL PLAN REPRESENTS MINIMUM SUGGESTED SITE CONTROLS THAT ARE REQUIRED FOR THIS PROJECT. CONTRACTOR SHOULD USE THIS PLAN AND OTHER PLANS FOR REFERENCE AS TO ADD OR REPLACE ADDITIONAL SITE CONTROLS AS REQUIRED TO CONTROL CONSTRUCTION RUNOFF. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES OCCURRING TO THE ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
2. THE CONTRACTOR IS RECOMMENDED TO TRACK ALL REVISIONS AND CHANGES TO THE EROSION CONTROL PLAN AND PLACE IN PLAIN SIGHT AT ALL TIMES. CONTRACTOR MUST OBTAIN THE ESC PERMIT FROM THE City of Coquitlam PRIOR TO MOBILIZATION OF EQUIPMENT.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER IF ANY WORK OUTSIDE THE CONSTRUCTION LIMITS (IF DEFINED ON THE EROSION CONTROL PLAN) IS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK PERMITS OR EASEMENTS IF NEEDED TO COMPLETE SITEWORK.
4. THE ESC PLAN AND ALL OTHER SITEWORK, EXCAVATING, GRADING OPERATIONS, ETC., RELATED DOCUMENTS MUST BE KEPT AT THE SITE IN PLAIN VIEW DURING CONSTRUCTION.
5. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE ESC PLAN & THE ESC PERMIT. THE CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, AND IS APPROVED BY ALL AUTHORITIES. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
6. BMP'S AND CONTROLS SHALL CONFORM TO PROVINCIAL OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL

CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

7. EROSION CONTROL MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO ANY SITEWORK OR SOIL DISTURBANCE. THIS INCLUDES ROCK CONSTRUCTION ENTRANCES, CONCRETE WASHING FACILITIES, AND SERVICE AREAS.
8. IF TEMPORARY SEDIMENT BASINS ARE REQUIRED OR PLANNED, THE CONTRACTOR IS RECOMMENDED TO CONSULT WITH THE ENGINEER TO DISCUSS BASIN OPERATION AND FUNCTION. BASINS SHALL BE FULLY OPERATIONAL BEFORE SITEWORK COMMENCES.
9. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR A PERIOD OF SEVEN DAYS OR MORE, OR HAS POTENTIAL TO MOBILIZE SEDIMENT TO DOWNSTREAM AREAS SHOULD BE COVERED IN ACCORDANCE WITH THE MUNICIPALITY REQUIREMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE PROPER COURSE OF ACTION FOR EXPOSED SOIL IN AREAS WHERE CONSTRUCTION ACTIVITY HAS STOPPED.
10. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. OPERATION OF SEDIMENT BASINS USED FOR CONSTRUCTION SHALL HAVE SUFFICIENT CAPACITY TO MEET NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS AND MUNICIPAL REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
11. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROJECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP INCLUDING OFF-SITE AREAS AT NO ADDITIONAL COST TO THE OWNER.
12. TEMPORARY SOIL STOCKPILES SHOULD HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & SHOULD NOT BE PLACED IN AREAS THAT CAN RUNOFF UNCONTROLLED TO SURFACE WATERS, INCLUDING STORM WATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES. NO SOIL STOCKPILES ON

PAVED ASPHALT AREAS ALLOWED

13. ADDITIONAL INLET PROTECTION MEASURES SHALL BE IN PLACE ON ALL INSTALLED INLETS UNTIL FINAL STABILIZATION (OR SUBSTANTIAL COMPLETION) IS REACHED AT NO ADDITIONAL COST TO THE OWNER. INLET PROTECTION DEVICES SHALL BE PROPERLY SECURED AS TO PREVENT MOVEMENT BY SEDIMENT OR WATER.
14. MINIMUM SITE INSPECTION REQUIREMENTS
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL PERMIT CONDITIONS ARE SATISFIED FOR A COMPLETED PHASE OF WORK. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 25 MM IN 24 HOURS. THE DESIGNATED PERSON SHOULD BE FAMILIAR WITH INSPECTION AND MAINTENANCE OF BEST MANAGEMENT PRACTICES. THE CONTRACTOR SHALL VERIFY ALL APPLICABLE BMP'S ARE CONTAINED IN AN INSPECTION LOG FOR THE PROJECT. AT A MINIMUM, THE LOG SHOULD MONITOR THE FOLLOWING EROSION AND SEDIMENTATION CONTROL MEASURES:
- ALL STORM DRAIN INLETS AND INLETS IMMEDIATELY DOWNSTREAM OF THE PROJECT LOCATION.
 - ALL SEEDED AREAS
 - SILT FENCES
 - VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE
 - THE TEMPORARY PARKING AND STORAGE AREAS
 - OUTLET STRUCTURES IN THE TEMPORARY AND PERMANENT SEDIMENTATION BASINS
 - POTENTIAL SOURCES OF MOBILIZED SOILS AND DUST
 - WASHING AND CONSTRUCTION VEHICLE SERVICE FACILITIES
15. CONTRACTOR TO ENSURE DURING RAIN EVENTS THAT NO OFFSITE DISCHARGE OCCURS WITH SILT LADEN RUNOFF ENTERING NEARBY CATCH BASINS. CONTRACTOR TO CONTACT ESC INSPECTOR IMMEDIATELY IF THIS SITUATION OCCURS. CONTRACTOR TO USE ADDITIONAL BEST MANAGEMENT PRACTICES TO CONTAIN RUNOFF ONSITE AS REQUIRED.

EROSION AND SEDIMENT CONTROL
PROGRAM IN EFFECT
BY CITY REGULATION BYLAW NO. 4403, 2013

EROSION AND SEDIMENT CONTROL FACILITIES HAVE BEEN INSTALLED ON THIS SITE AND ARE TO BE MAINTAINED FOR THE DURATION OF DEVELOPMENT TO CONTROL SITE EROSION AND REDUCE THE AMOUNT OF SEDIMENT ENTERING THE DRAINAGE SYSTEM AND CREEKS. THIS SITE IS MONITORED REGULARLY BY AN EROSION AND SEDIMENT CONTROL SUPERVISOR, AND IS INSPECTED PERIODICALLY BY THE CITY OF COQUITLAM. IF THE SITE REQUIRES ATTENTION, PLEASE CONTACT:

GEORGE BURNS, P. ENG
604 546 0922
OR
CITY OF COQUITLAM CUSTOMER SERVICE HOTLINE 604-927-3500
REFERENCE SITE ADDRESS: 550 COTTONWOOD AVE
REFERENCE CITY PERMIT #: 20 106834 PL

CITY OF COQUITLAM GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE IN COMPLIANCE WITH:
- CITY OF COQUITLAM SUBDIVISION AND DEVELOPMENT SERVICING BYLAW NO. 3558, 2003 AS AMENDED MARCH 2016 AND STREAM AND DRAINAGE SYSTEM PROTECTION BYLAW NO. 4403, 2013.
 - SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (ESC) IN APPLICABLE CONTRACT DOCUMENTS.
 - MINISTRY OF ENVIRONMENTAL AND FEDERAL FISHERIES REQUIREMENTS.
2. A PRE-DEVELOPMENT APPROVAL MEETING WILL BE REQUIRED PRIOR TO CONSTRUCTION OR ANY SITE EARTHWORKS COMMENCING. CONTACT BELA PIOCZA, ENVIRONMENTAL SERVICES WORKSITE BYLAW OFFICER AT 604-927-4301 OR VIA E-MAIL BPIOCZA@COQUITLAM.CA 72 HOURS PRIOR TO CONSTRUCTION.

EROSION AND SEDIMENT CONTROL
CONSTRUCTION NOTES

1. ALL CONSTRUCTION ACTIVITIES ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE CITY OF COQUITLAM STREAM AND DRAINAGE SYSTEM PROTECTION BYLAW NO. 4403, 2013.
2. CONTRACTOR TO INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES INCLUDING CATCH BASIN (CB) FILTER INSERTS, SILT FENCES, TREE PROTECTION FENCES OR ANY OTHER FACILITY DEEMED NECESSARY BY THE ESC DESIGNER OR MONITOR.
3. ALL VEHICULAR ACCESS TO THE SITE IS TO BE VIA EXISTING ROADS OR CLEAN GRAVEL SURFACES.
4. ALL EXCAVATION, STOCKPILING, AND GRADING TO OCCUR IN A MANNER THAT MINIMIZES DISTURBANCE TO EXISTING VEGETATION.
5. ALL ASPHALT PATCHING TO BE COMPLETED THE SAME DAY AS SERVICING.
6. ANY EXCAVATION SPOIL AND/OR MATERIAL STOCKPILES ARE TO BE COVERED WITH POLY TO MINIMIZE THE WASHING OF PARTICLES INTO THE STORM FLOWS AND/OR STORM SEWER SYSTEM. PILES SHOULD BE COVERED WITH 4MIL POLY LAPPED MINIMUM 0.5 M. ALL POLY IS TO BE ANCHORED SUCH THAT IT CANNOT EXPOSE THE COVERED MATERIAL IN THE EVENT OF RAIN AND/OR WIND STORMS. THIS WILL INCLUDE, BUT NOT BE LIMITED TO, SECURING THE PERIMETER IN 0.3 M TRENCHES.
7. ALL GROUND SURFACES EXPOSED DURING GRADING, SERVICING OR ROAD BUILDING ARE TO BE COMPACTED WITH A STEEL DRUMMED ROLLER TO ENSURE THAT THE SOIL DOES NOT ABSORB EXCESS MOISTURE. ALL AREAS DISTURBED ARE TO BE GRADED SUCH THAT FOLLOWING COMPACTING, NO PUDDLES OR STANDING WATER CAN FORM. UPON COMPLETION OF GRADING ALL EXPOSED SURFACES ARE TO BE COVERED USING HYDROSEED, SOD OR ROLLED EROSION CONTROL PRODUCT (RECP) WITH SEED, OR WHAT ESC SUPERVISOR INDICATES.
8. UPON INSTRUCTION/NOTIFICATION BY THE ENGINEER OF RECORD OR ESC SUPERVISOR; PERSONS RESPONSIBLE ARE REQUIRED TO UNDERTAKE MAINTENANCE ACTIVITIES AS DEEMED SPECIFIED TO MODIFY OR MAINTAIN ESC FACILITIES.
9. THE DEVELOPER OR BUILDING MUST REGULARLY CLEAN PAVED ROAD SURFACES OF ACCUMULATED SEDIMENTS AT THE END OF EACH DAY OR AS REQUIRED. NO SOIL, SAND OR OTHER MATERIAL SHALL BE DEPOSITED OR PILED OUTSIDE OF THE PROPERTY BOUNDARIES, PARTICULARLY ON PAVED ROAD SURFACES.
10. ALL SEDIMENT REMOVED FROM ESC CONTROL FACILITIES TO BE DISPOSED OF IN A MANNER AS TO NOT COMPOUND OR COMPROMISE THE SEDIMENT LOADING OF OTHER CONTROL MEASURES.
11. ALL EXPOSED SOILS ARE TO BE SUITABLY COVERED OR ALTERNATIVELY KEPT DAMP TO PREVENT EXCESS DUST IN THE AIR.
12. WET WEATHER SHUT DOWN PROCEDURES ARE TO BE IMPLEMENTED IF A RAIN EVENT IN EXCESS OF 25MM IN A 24-HOUR PERIOD IS FORECAST. ADDITIONALLY, REACTIVE WET WEATHER SHUT DOWNS ARE TO BE

IMPLEMENTED WHERE THE INTENSITY AND/OR DURATION OF THE PRECIPITATION RESULTS IN THE SATURATION OF THE OVERLAYING SURFACE MATERIAL AND SIGNIFICANT PONDING OR SURFACE RUN OFF OCCURS.

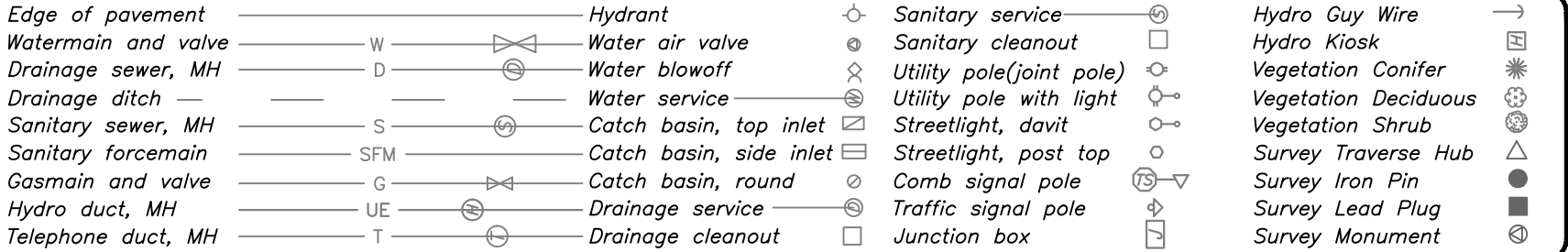
13. SITE SIGNAGE REQUIRED TO IDENTIFY ESC FACILITIES WITH 24-HR CONTACT INFORMATION FOR ESC SUPERVISOR AND THE CITY SITE ADDRESS AND PERMIT NUMBER.

EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES

1. AREA STREETS AND CATCH BASINS ARE TO BE INSPECTED DAILY AND CLEANED IF REQUIRED AT THE END OF EACH WORK DAY.
2. STREETS ARE TO BE SWEEP (NOT FLUSHED) TO ENSURE THAT MINIMUM DEBRIS ENTERS THE STORM DRAINAGE SYSTEMS.
3. CONSTRUCTION ACTIVITIES ARE TO BE STOPPED AND MAINTENANCE UNDERTAKEN IF WEATHER CONDITIONS OR GRAVEL ACCESS PADS, OR OTHER SITUATION ALLOW EXCESSIVE CONSTRUCTION MATERIAL TO BE DEPOSITED ON THE ROAD SURFACES.
4. SILT FENCE MAINTENANCE:
- INSPECT IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIR AS NECESSARY.
 - SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY ONE THIRD OF THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.

EROSION AND SEDIMENT CONTROL MONITORING PROGRAM

1. THE OWNER IS TO RETAIN AN ESC MONITOR TO INSPECT ALL ESC FACILITIES, TEST WATER QUALITY AT THE DESIGNATED TESTING POINTS, AND RECOMMEND NEW ESC MEASURES AND/OR MAINTENANCE REQUIREMENTS. ALL DISCHARGE TO MEET THE PH REQUIREMENT RANGE OF 6.5 TO 8.0 AND TURBIDITY NOT EXCEEDING 25 NTU, EXCEPT DURING AND FOR 24 HOURS FOLLOWING A SIGNIFICANT RAINFALL EVENT, A DISCHARGE SHALL NOT EXCEED 100 NTU. ALL RESULTS ARE TO BE SUBMITTED TO THE CITY OF COQUITLAM AS WELL AS THE APPROPRIATE FEDERAL AND PROVINCIAL AGENCIES.
2. IF DURING ANY CONSTRUCTION WORK, ANY WASTE, DELETERIOUS SUBSTANCE, OR WATER THAT EXCEEDS THE LIMITS OUTLINED IN S.3.4, IS BEING RELEASED DIRECTLY OR INDIRECTLY INTO THE DRAINAGE SYSTEM, OR OTHERWISE IMPEDES THE DRAINAGE SYSTEM AS DESCRIBED IN S.3.1, THE DEVELOPER PERFORMING THE WORK MUST IMMEDIATELY NOTIFY THE CITY, AS WELL AS THE APPROPRIATE FEDERAL AND PROVINCIAL AGENCIES.
3. MAINTENANCE/MONITORING PROGRAM WILL BE COORDINATED BY:
- INDIVIDUAL: TAYLOR WEBBER
COMPANY: VDZ+A CONSULTING INC.
COMPANY PHONE NUMBER: 604 546 0930
E-MAIL ADDRESS: twebber@vdz.ca
4. A RECORD OF THE MAINTENANCE PROCEDURES ARE TO BE FILED WITH THE CITY OF COQUITLAM.
5. ENVIRONMENTAL MONITORING BY A QUALIFIED ENVIRONMENTAL PROFESSIONAL MUST BE CONDUCTED AT A MINIMUM, WEEKLY DURING WET SEASON (OCTOBER 15 TO MAY 15), BI-WEEKLY DURING DRY SEASON (MAY 16 TO OCTOBER 14). ENVIRONMENTAL MONITORING SHALL ALSO BE CONDUCTED 48 HOURS PRIOR, DURING, AND 24 HOURS AFTER A SIGNIFICANT RAINFALL EVENT, TO ENSURE THAT THE ESC MEASURES ARE WORKING EFFECTIVELY AND THAT THERE IS NO OFF-SITE DISCHARGE OF SEDIMENT-LADEN WATER INTO CITY DRAINAGE INFRASTRUCTURE OR WATERCOURSES.
6. MINIMUM REPORTING FREQUENCY WILL BE BI-WEEKLY DURING THE WET SEASON (OCTOBER 15 TO MAY 15), MONTHLY DURING THE DRY SEASON (MAY 16 TO OCTOBER 14), AND WITHIN SEVEN (7) DAYS OF A SIGNIFICANT RAINFALL EVENT.
7. INSPECTION OF ESC MEASURES, ASSESSMENT OF INSTALLED ESC MEASURES AND RECOMMENDATIONS OF MAINTENANCE AS REQUIRED.
8. FAILURE TO REPORT WILL RESULT IN ISSUANCE ON A STOP WORK ORDER.



7	20210114	TW	ISSUED FOR RFP
6	20201217	TW	ISSUED FOR 100% REVIEW
5	20201202	TW	ISSUED FOR BP SUBMISSION
4	20201127	TW	ISSUED FOR HEALTH SUBMISSION
3	20201113	TW	ISSUED FOR 80% REVIEW
2	20201029	TW	ISSUED FOR 50% REVIEW
1	20210114	TW	ISSUED FOR 25% REVIEW
No.	Date	By	Revisions

Design by Date 20210114

Drawn by Date 20210114

Checked by Date 20210114

Approved by Date 20210114

VDZ+A
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • TRAFFIC ENGINEERING
FORT LANGLEY STUDIO | MOUNT PLEASANT STUDIO
800-588-0900 | 604-546-0930
Fort Langley, BC | Vancouver, BC
V3M 2B8 | V3T 1J7
www.vdz.ca 604-982-0034

ACCEPTED FOR
CONSTRUCTION
Date: _____
Manager of
Development Servicing

Coquitlam

Engineering & Public Works

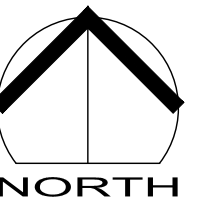
3000 Guildford Way, Coquitlam, B.C. V3B 7N2

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horiz. vert.
Sheet of 7 OF 9
Eng. Project No. CV2020-08

Project MUNDY PARK WASHROOMS
490 MARINER WAY

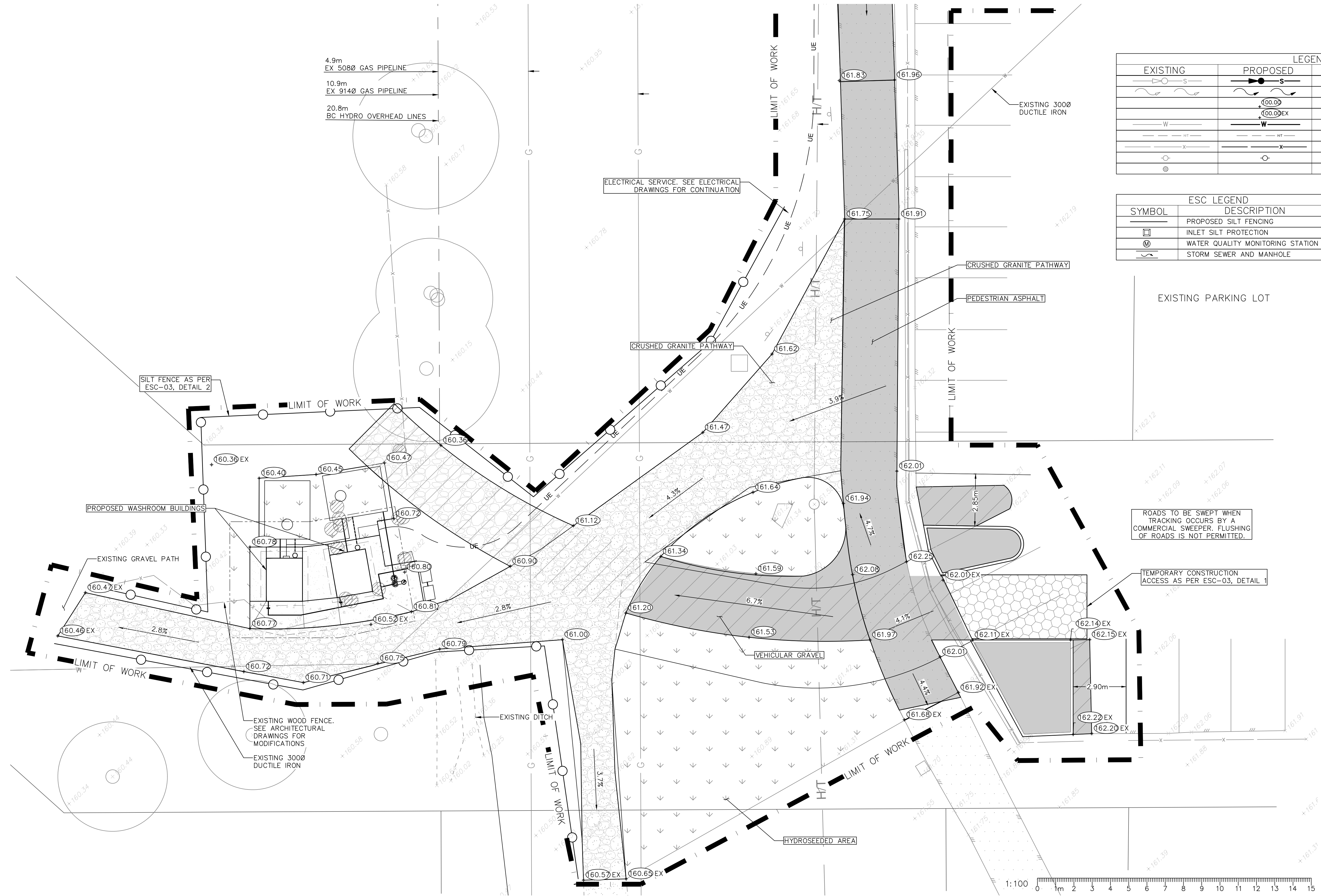
Description ESC NOTES

File: ESC-01 - ESC notes



LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		SANITARY SEWER
		DITCH/WATERCOURSE
		FINISHED GROUND ELEVATION
		WATER MAIN
		OVERHEAD HYDRO/TEL
		FENCE LINES
		UTILITY POLE
		STUMP

ESC LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED SILT FENCING
	INLET SILT PROTECTION
	WATER QUALITY MONITORING STATION
	STORM SEWER AND MANHOLE



ROADS TO BE SWEEPED WHEN TRACKING OCCURS BY A COMMERCIAL SWEEPER. FLUSHING OF ROADS IS NOT PERMITTED.

TEMPORARY CONSTRUCTION ACCESS AS PER ESC-03, DETAIL 1

CONTRACTOR TO TEST PIT IN ORDER TO CONFIRM ALL LOCATIONS, DEPTHS, AND TYPE OF SERVICE PRIOR TO ORDERING MATERIALS.

CONTRACTOR TO CONTACT TELUS, BC HYDRO, FORTISBC, AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

Edge of pavement	W	Hydrant	○	Sanitary service	○	Hydro Guy Wire	—
Watermain and valve	W	Water air valve	○	Sanitary cleanout	□	Hydro Kiosk	■
Drainage sewer, MH	D	Water blowoff	○	Utility pole(joint pole)	○	Vegetation Conifer	■
Drainage ditch	—	Water service	○	Utility pole with light	○	Vegetation Deciduous	■
Sanitary sewer, MH	S	Catch basin, top inlet	○	Streetlight, davit	○	Vegetation Shrub	■
Sanitary forcemain	SFM	Catch basin, side inlet	○	Streetlight, post top	○	Survey Traverse Hub	■
Gasmain and valve	G	Comb signal pole	○	Traffic signal pole	○	Survey Iron Pin	■
Hydro duct, MH	UE	Drainage service	○	Junction box	□	Survey Lead Plug	■
Telephone duct, MH	T	Drainage cleanout	○			Survey Monument	■

7	20210114	TW	ISSUED FOR RFP
6	20201217	TW	ISSUED FOR 100% REVIEW
5	20201202	TW	ISSUED FOR BP SUBMISSION
4	20201127	TW	ISSUED FOR HEALTH SUBMISSION
3	20201113	TW	ISSUED FOR 90% REVIEW
2	20201029	TW	ISSUED FOR 50% REVIEW
1	20210114	TW	ISSUED FOR 25% REVIEW
No.	Date	By	Revisions

Design by TW Date 20210114

Drawn by TW Date 20210114

Checked by GB Date 20210114

Approved by GB Date 20210114

VDZ+A

LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • DESIGN CONSULTING

FORT LANGLEY STUDIO 100-1005 KINGSWAY FORT LANGLEY, BC V4W 0B8 971-117

604-982-0034

ACCEPTED FOR CONSTRUCTION

Date:

Manager of Development Servicing

Coquitlam

Engineering & Public Works

3000 Guildford Way, Coquitlam, B.C. V3B 7N2

Scale horiz. 1:100 Scale vert. 1:100

Sheet of 8 OF 9

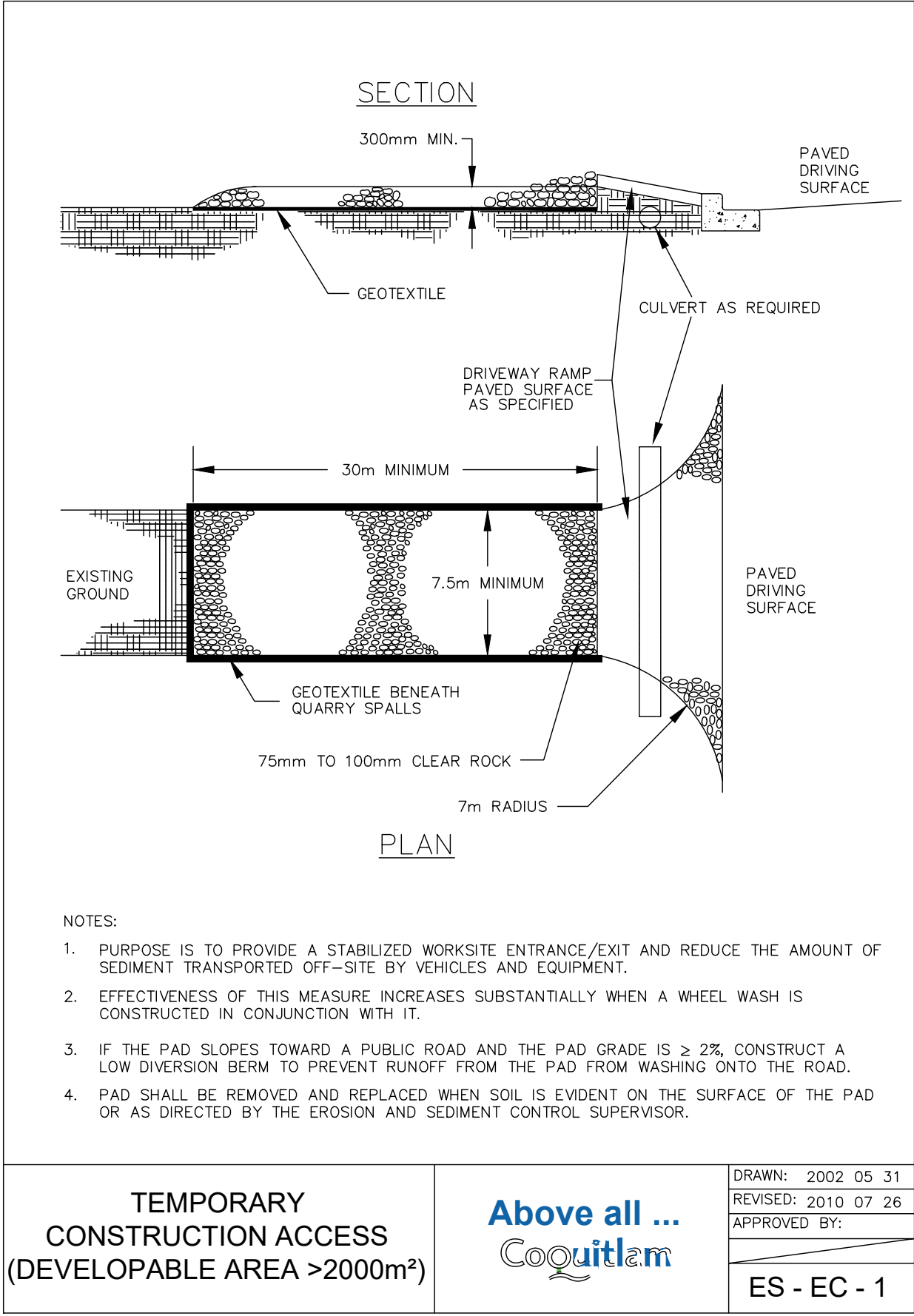
Eng. Project No. CV2020-08

Project **MUNDY PARK WASHROOMS**

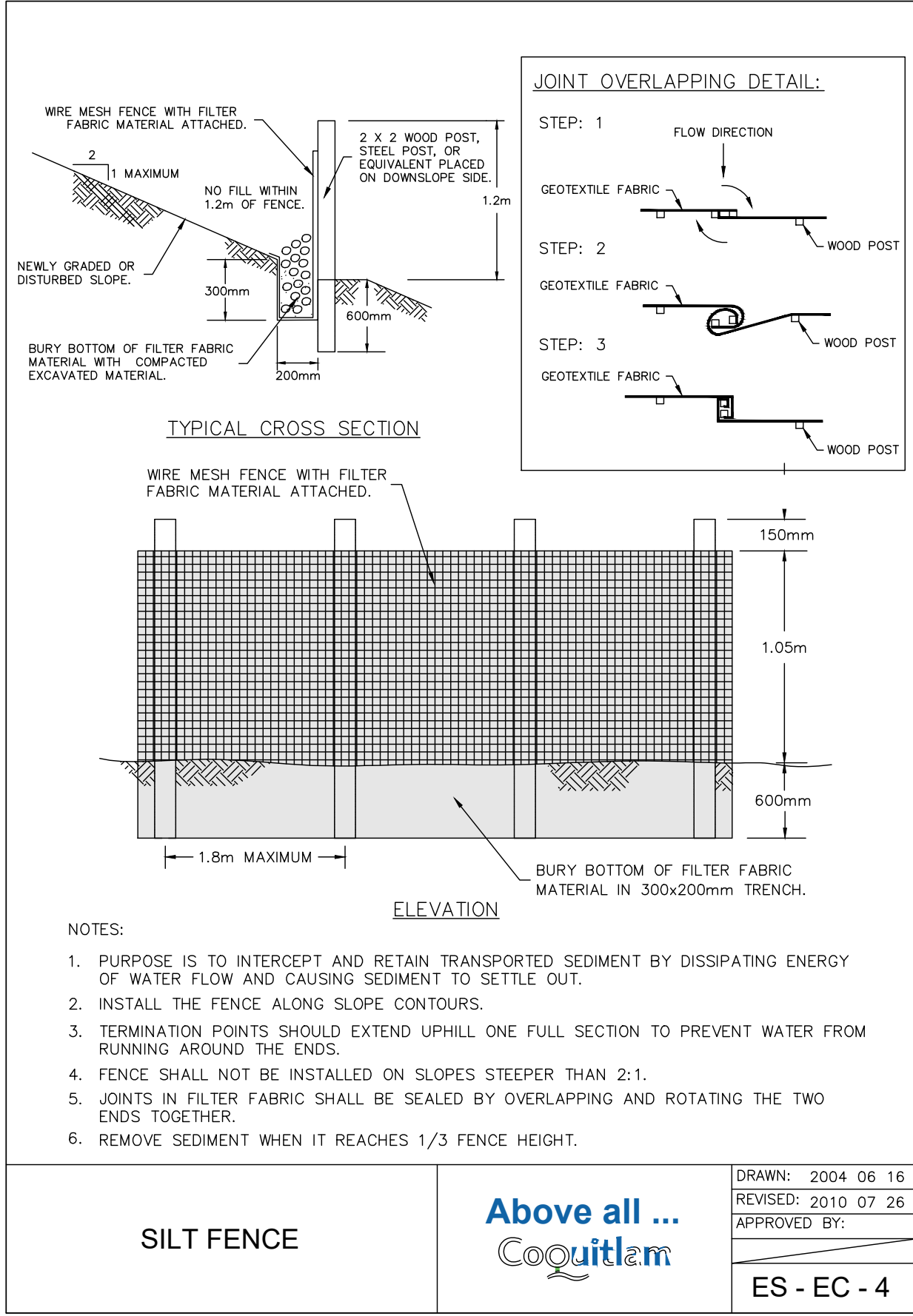
490 MARINER WAY

Description **ESC PLAN**

File: ESC-02 - ESC PLAN



1 TEMPORARY CONSTRUCTION ACCESS
SCALE: NTS



2 SILT FENCE
SCALE: NTS

Edge of pavement	Hydrant	Sanitary service	Hydro Guy Wire
Watermain and valve	Water air valve	Sanitary cleanout	Hydro Kiosk
Drainage sewer, MH	Water blowoff	Utility pole(joint pole)	Vegetation Conifer
Drainage ditch	Water service	Utility pole with light	Vegetation Deciduous
Sanitary sewer, MH	Catch basin, top inlet	Streetlight, davit	Vegetation Shrub
Sanitary forcemain	Catch basin, side inlet	Streetlight, post top	Survey Traverse Hub
Gasmain and valve	Catch basin, round	Comb signal pole	Survey Iron Pin
Hydro duct, MH	Drainage service	Traffic signal pole	Survey Lead Plug
Telephone duct, MH	Drainage cleanout	Junction box	Survey Monument

7	20210114	TW	ISSUED FOR RFP
6	20201217	TW	ISSUED FOR 100% REVIEW
5	20201202	TW	ISSUED FOR BP SUBMISSION
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3	20201113	TW	ISSUED FOR 90% REVIEW
2	20201029	TW	ISSUED FOR 50% REVIEW
1	20210114	TW	ISSUED FOR 25% REVIEW
No.	Date	By	Revisions

Design by	Date	VDZ+A <small>LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • DESIGN FORECAST</small> FORT LANGLEY STUDIO 100-1088 Church St. 200-355 Kingsway Fort Langley, B.C. Vancouver, B.C. V3M 2B6 V3T 1J7 www.vdz.ca 604-882-0034
Drawn by	Date	
Checked by	Date	
Approved by	Date	
GB	20210114	

ACCEPTED FOR CONSTRUCTION Date:	
Manager of Development Servicing	

Coquitlam
Engineering & Public Works
3000 Guildford Way, Coquitlam, B.C. V3B 7N2

Scale horiz.	1:100	Scale vert.	1:100
Sheet of	P	OF	9
Eng. Project No.	CV2020-08		

Project	MUNDY PARK WASHROOMS 490 MARINER WAY
Description	ESC DETAILS
File:	ESC-03 - ESC DETAILS

APPENDIX C

SUPPLEMENTARY GENERAL CONDITIONS

SUPPLEMENTARY GENERAL CONDITIONS

STIPULATED PRICE CONTRACT CCDC 2 2008

These Supplementary General Conditions modify and amend Standard Construction Document CCDC-2 – 2008 and form a part of this *Contract*.

In the event of any conflict between the provisions of the Standard Construction Documents and any provision of these Supplementary General Conditions, these Supplementary General Conditions shall govern.

Standard Construction Document CCDC-2—2008 is amended as follows:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-3 CONTRACT DOCUMENTS

1. The Agreement is amended by including “Part C – Schedule 1 - City of Coquitlam Certificate of Insurance Form – Construction”.

ARTICLE A-5 PAYMENT

2. The Agreement is amended by deleting Article A-5.3, including all of 5.3.1 and 5.3.2, in its entirety.

NEW ARTICLE

3. The Agreement is amended by adding the following new Article after Article A-8:

ARTICLE A-9 TIME OF THE ESSENCE

- 9.1 All time limits stated in this *Contract* are of the essence of the *Contract*.

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

PART 1 GENERAL PROVISION

GC 1.1 CONTRACT DOCUMENTS

4. Section 1.1.8 is amended by replacing the term “sufficient copies” with “a pdf copy”.
5. Section 1.1 is amended by adding the following new subsection:
 - 1.1.11 The *Contractor* is responsible for the installation and the coordination of metric and imperial dimensioned products and materials as may be applicable.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

6. Section 2.1 is amended by adding a new subsection after subsection 2.1.3 as follows:

2.1.4 If a Consultant is not engaged on the Project, the Owner will fulfill the requirements of a Consultant.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

7. Section 2.3 is amended by adding a new subsection after subsection 2.3.7 as follows:

2.3.8 Should the *Consultant* be required to make more than one review of rejected work or should the *Consultant* perform additional reviews due to failure of the *Work* to comply with the contract documents, the *Contractor* is required to compensate the *Owner* for such additional *Consultant* services, including expenses incurred. Adjustments for such compensation should be made as outlined under Part 6 CHANGES IN THE WORK.

PART 3 EXECUTION OF THE WORK

G.C. 3.5 CONSTRUCTION SCHEDULE

8. Section 3.5 is amended by adding the following new subsection after subsection 3.5.1.3:

3.5.1.4 The *Contractor* will perform the *Work* in compliance with the construction schedule. If, for any reason, the *Work* falls behind the schedule for the *Work* set forth in the construction schedule the *Contractor* shall as part of the *Work* either:

- (a) if in accordance with the *Contract Documents* the delay entitles the *Contractor* to a time extension the *Contractor* shall forthwith prepare and deliver to the *Consultant* a revised construction schedule to the reasonable satisfaction of the *Consultant* indicating the revised dates for the remaining activities of the *Work*; or
- (b) if in accordance with the *Contract Documents* the delay does not entitle the *Contractor* to a time extension then the *Contractor* shall take such steps as required to bring the *Work* back into conformity with the construction schedule.

Failure to comply with the requirements of this section shall be deemed to be a default under the *Contract* to which the provisions of GC 7.1.2 apply.

GC 3.6 SUPERVISION

9. Subsection 3.6.1 is amended by adding the following sentence at the end of the subsection: "The appointed *Contractor* representative shall not change without consultation with and written acceptance of the *Owner*, which acceptance will not be unreasonably withheld."

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

10. Subsection 3.7.2 is amended by adding the following sentence at the end of the subsection: "The *Contractor* shall not employ any *Subcontractor*, or change *Subcontractor*, without the written approval of the *Owner*, which approval will not be unreasonably withheld."
11. Subsection 3.7.3 is deleted in its entirety and replaced with the following:
 - 3.7.3 If the *Owner* reasonably objects to the performance, qualifications, experience or suitability of any of the *Contractor's* personnel, *Subcontractors* or *Suppliers*, then the *Contractor* will, on written request from the *Owner*, replace such personnel, *Subcontractor* or *Supplier* immediately.
12. Section 3.7 is amended by adding the following new subsections after subsection 3.7.6:
 - 3.7.7 The *Contractor* will provide only personnel who have qualifications, experience and capabilities to perform the *Work*.
 - 3.7.8 The *Contractor* shall coordinate the *Work* of all of its *Subcontractors* and *Suppliers* and determine to what extent *Work* specified in each section of the specifications is effected by *Work* indicated elsewhere and make all necessary allowances for their integration. All additional *Work* resulting from the failure to make such determination shall be done at no cost to the *Owner*.
 - 3.7.12 The *Contractor* shall indemnify and hold harmless the *Owner*, its agents, servants and employees, from and against all costs, claims, damages, debts, sums, actions and causes of action whatsoever and whensoever arising out of any claim of lien or action by a *Subcontractor*, *Supplier* or labourer with whom the *Contractor* or any of its *Subcontractors* or *Suppliers* has contracted in relation to the *Work*.

GC 3.8 LABOUR AND PRODUCTS

13. Subsection 3.8.2 is amended by adding the following after “consultant”: “Products which are not specified shall conform to current applicable specifications and regulations of the Canadian Standards Association, Technical Builders' Bulletin, Canadian Government Specifications Board, National Building Code, British Columbia Building Code, American Society for Testing and Materials, Trade Association Specifications and all authorities having jurisdiction at the Place of the Work.”
14. Section 3.8 is amended by adding the following new subsections after subsection 3.8.3:
 - 3.8.4 Immediately upon receiving from the *Consultant* or the *Owner* a written notice stating the *Consultant's* or the *Owner's* reasonable objection to the work conduct of any superintendent, foreman or worker on the Project site, the Contractor will remove such persons from the Project site.
 - 3.8.5 No person shall with relation to his employment or eligibility for employment be discriminated against by reason of his or her race, colour, ancestry, place of original, political belief, religion, marital status, family status, physical or mental disability, sex, sexual orientation or age, or because he or she has been convicted of a criminal or summary conviction offence that is unrelated to the employment.
 - 3.8.6 The *Contractor* shall supply labour that is compatible with other labour employed on the Work. In the event of labour disputes arising from the provision of skilled or unskilled labour by the *Contractor* or its *Subcontractors*, the *Contractor* shall, to the satisfaction of the *Owner* or *Consultant*, as applicable,, make such arrangements as are necessary to preclude delay to the Work or to the work of others at the Project Site.

GC 3.9 DOCUMENTS AT THE SITE

15. Subsection 3.9.1 is amended by inserting the words “reviewed shop drawings” immediately after “*Contract Documents*”.
16. Section 3.9 is amended by adding the following as a new subsection after subsection 3.9.1:
 - 3.9.2 Record drawings to be maintained and available to view by *Consultant* and *Owner*.

GC 3.10 SHOP DRAWINGS

17. Section 3.10 is amended by adding the following new subsections after subsection 3.10.12:

3.10.13 Upon *Substantial Performance of the Work*, the *Contractor* will submit all reviewed and revised *Shop Drawings* to the *Owner* as a permanent record of the *Work*. As of the date of issuance of a final certificate for payment, the *Shop Drawings* will be retained by the *Owner* as the *Owner's* property.

3.10.14 Electronic submissions and electronic review stamp by the *Consultant* are acceptable.

GC 4.1 CASH ALLOWANCES

18. Subsection 4.1.4 is amended by:

- a) in all instances deleting the words “any cash allowance”, and replacing them with “all cash allowances”.
- b) at the end of the last sentence, adding the following new sentence: “The *Contractor's* overhead and profit on costs exceeding the amount of the allowance shall be ten (10%) percent on *Work* performed directly by the *Contractor*, and five (5%) percent on *Work* performed by *Subcontractors*.”

19. Section 4.1 is amended by add the following new subsection after subsection 4.1.7:

4.1.8 Expenditures of the cash allowance are to be directed as per GC 6.2 CHANGE ORDER or GC 6.3 CHANGE DIRECTIVE, at the *Owner's* directive. All *Work* under cash allowance is to be competitively bid unless directed by the *Owner*. The *Contractor* shall keep records and submit a monthly update on expenditures of a cash allowance, including all unallocated amounts.

PART 5 PAYMENTS

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

20. Section 5.1 is deleted in its entirety.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

21. Subsection 5.2.3 is amended by:

- a) deleting “and Products delivered to the Place of the Work”; and

- b) adding the following at the end of the subsection: “The *Contractor* will identify separately, with reference to the applicable *Change Order*, any application for payment for *Work* performed pursuant to a *Change Order*. No payment for extras or changes will be made before the issuance of the applicable *Change Order*.”
- 22. Subsection 5.2.7 is deleted in its entirety and replaced with:
 - 5.2.7 No claim shall be made for any *Product* which is delivered to the *Place of the Work* until it is incorporated into the *Work* and any claim for *Products* which are incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to estimate the value of such *Products*.
- 23. Section 5.2 is amended by adding the following new subsections after subsection 5.2.7:
 - 5.2.8 A draft application for payment is to be submitted to the *Owner* on the 25th of the month.
 - 5.2.9 An application for payment shall be deemed received only if submitted complete with required supporting documentations as determined by the *Owner*.

GC 5.3 PROGRESS PAYMENT

- 24. Subsection 5.3.1.3 is deleted in its entirety and replaced with:
 - 5.3.1.3 The *Owner* shall use its best efforts to make payment to the *Contractor* on account as provided in Article A-5 of the agreement, such payment to be net 30 days from the date on which the invoice is delivered to the *Owner*.
- 25. Section 5.3 is amended by adding the following new subsections after subsection 5.3.1:
 - 5.3.2 The *Owner* may set off from payments owing to the *Contractor* costs, expenses and damages the *Owner* incurs or suffers as a result of the *Contractor's* wrongful or negligent act or omission, or which the *Owner* incurs on the *Contractor's* behalf.
 - 5.3.3 The *Owner* may, in addition to other holdbacks as provided by the *Contract Documents*, hold back an amount equal to any lien which has been filed with respect to the *Work*, plus 10% as security for costs. The *Owner* may, at its option, after five days written notice to the *Contractor*, pay such amount into court to discharge the lien. If the lien is discharged without payment of the holdback into court, then the *Owner* shall pay such holdback to the *Contractor*, without interest.
 - 5.3.4 In addition to builders lien holdbacks, the *Owner* may retain holdbacks to cover deficiencies in the *Work*, in an amount equal to twice the amount the *Consultant* or *Owner* estimates as the total cost to complete the deficiencies and three times the amount if less than \$10,000.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

26. Section 5.4 is amended by:

- a) adding the words “or Owner” after the word “Consultant” in subsection 5.4.2 and 5.4.3; and
- b) adding the following new subsection after subsection 5.4.3:

5.4.4 Should the *Consultant* or *Owner* find significantly more incomplete or deficient *Work* than those listed by the *Contractor* with its application, the *Consultant* or *Owner* may elect to terminate its inspection and to not issue a certificate of *Substantial Performance*. If the *Consultant* or *Owner* terminates its inspection, the *Contractor* shall compensate the *Owner* for the additional time and expenses incurred by the construction manager, *Consultant*, *Subconsultants* and *Owner* in relation to multiple inspections.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

27. Subsection 5.5.3 is deleted in its entirety.

GC 5.7 FINAL PAYMENT

28. In subsection 5.7.4, the words “no later than 5 days after the issuance of a final certificate for payment” are deleted and replaced with “net 30 days from invoice date, on a best effort basis”.

29. Section 5.7 is amended by adding the following new subsection after subsection 5.7.4:

5.7.5 The issuance of a final certificate for payment in no way relieves the *Contractor* from correcting defects or deficiencies not apparent at the time the certificate is issued.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

30. Subsection 6.1.2 is amended by adding the following to the end of the sentence: “[...] or written approval to proceed.”

GC 6.2 CHANGE ORDER

31. Subsection 6.2.1 is amended by adding the following at the end of the subsection: “A *Change Order* shall be a final determination of adjustments in the *Contract Price*, *Contract Time* or both, as applicable. There shall be no adjustment to the *Contract Price* or *Contract Time* should the *Contractor* fail to present a request for a specific adjustment in response to a notice describing a proposed change in the *Work*.”
32. Subsection 6.2.2 is amended by adding “[...] and be noted on the Change Order schedule of values” at the end of the sentence.
33. Section 6.2 is amended by adding the following new subsection after subsection 6.2.2:
 - 6.2.3 The value of a change in the *Work* shall be determined in one or more of the following methods as selected by the *Consultant* in consultation with the *Owner*:
 - (a) by estimate and acceptance in a lump sum;
 - (b) where unit prices are set out in the *Contract Documents* or subsequently agreed upon, in accordance with such unit prices;
 - (c) by costs and a percentage fee for overhead and profit as calculated below:
 - (i) for *Change Orders* not covered by allowances, the *Contractor's* overhead and profit and supervision shall be 10% on *Work* performed directly by the *Contractor*, and 5% on work performed by *Subcontractors*;
 - (ii) the *Subcontractor's* allowance for overhead and profit and supervision shall be 10% of the actual cost of all *Change Orders* attributed to the *Subcontractor's Work*, as determined by this paragraph;
 - (iii) where the *Change Order* involves the substitution of one type of *Product* for another the “actual cost” of the *Change Order*, whether credit or extra, shall be the net difference in the “actual cost” defined above.

GC 6.3 CHANGE DIRECTIVE

34. Subsection 6.3.7.1 is amended by adding the word “construction” before “personnel”, and after “personnel” adding: “[...] excluding administrative, clerical and supervisory personnel, and for only the portion of their time required for the Work attributable to the change.”
35. Section 6.3. is amended by adding the following new subsection after subsection 6.3.13:
- 6.3.14 all other costs attributable to the change in the *Work* including the costs of all administrative or supervisory personnel are included in overhead and profit calculated in accordance with the provisions of section 6.2.3 of GC6.2 CHANGE ORDER.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

36. Section 6.4 is amended by adding the following new subsection after subsection 6.4.4:
- 6.4.5 The *Contractor* acknowledges that it has inspected the *Place of the Work* for the physical conditions described in GC 6.4.1 and has disclosed its findings to the *Owner*. The *Contractor* agrees not to seek any increases in the *Contractor's* cost or time to perform the *Work* in respect of any conditions that were or ought to have been discovered upon reasonable inspection by the *Contractor* prior to the date of the *Contract*.

GC 6.5 DELAYS

37. Subsection 6.5.4 is amended by adding the following at the end of the subsection: “[...]. No claim for additional time arising from a delay will be applicable to the *Contractor* unless the *Contractor* has prepared, or caused to be prepared, records of all *Work* and the costs of the *Work*, on a daily basis as the *Work* proceeds, and submits such records in support of the claim.”

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

38. Subsection 6.6.5 is amended by adding the following at the end of the subsection: “[...]. No claim for additional payment arising from a delay will be payable to the *Contractor* unless the *Contractor* has prepared, or caused to be prepared, records of all *Work* and the costs of the *Work*, on a daily basis as the *Work* proceeds, and submits such records in support of the claim.”

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

39. Subsection 7.2.3.1. is deleted in its entirety.

PART 8 DISPUTE RESOLUTIONS

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

40. Section 8.2 is deleted in its entirety and replaced with the following:

- 8.2.1 The parties will make reasonable efforts to resolve any dispute, claim, or controversy arising out of this *Contract* or related to this *Contract* ("Dispute") using the dispute resolution procedures set out in this section.

Negotiation

The parties will make reasonable efforts to resolve any Dispute by amicable negotiations and will provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate negotiations.

Mediation

If all or any portion of a Dispute cannot be resolved by good faith negotiations within 30 days, either party may, by delivery of written notice to the other party, refer the matter to mediation. Within 7 days of delivery of the notice, the parties will mutually appoint a mediator. If the parties fail to agree on the appointment of the mediator, then either party may apply to the British Columbia International Commercial Arbitration Centre for appointment of a mediator. The parties will continue to negotiate in good faith to resolve the Dispute with the assistance of the mediator. The place of mediation will be Coquitlam, British Columbia. Each party will equally bear the costs of the mediator and other out-of-pocket costs, and each party will bear its own costs of participating in the mediation.

Litigation

If within 90 days of the request for mediation the Dispute is not settled, or if the mediator advises that there is no reasonable possibility of the parties reaching a negotiated resolution, then either party may without further notice commence litigation in the metro Vancouver area.

PART 9 - PROTECTION OF PERSONS AND PROPERTY

G.C. 9.1 PROTECTION OF WORK AND PROPERTY

41. Section 9.1 is amended by adding the following new subsection after subsection 9.1.4:

9.1.5 In the event of a delay or shut down which results in a stoppage of the Work, the Contractor shall take all reasonable steps to protect the Work for the entire period of the delay or shut down. The cost of such protection shall be paid as follows:

- (a) if under 6.5.1, or 6.5.2, the Owner will pay,
- (b) if under 6.5.3, the Contractor will pay.

PART 11 – INSURANCE AND CONTRACT SECURITY

G.C. 11.1 INSURANCE

42. Section 11.1 is deleted in its entirety and replaced with the following:

- 11.1.1 The *Contractor* shall, without limiting its obligations or liabilities under this *Contract* or otherwise, and at its own expense, provide and maintain for the duration of the *Contract Time* and the applicable warranty period, insurance policies in the following forms and amounts:
- (a) **commercial general liability** insurance on an occurrence basis, in an amount not less than five million (\$5,000,000) dollars inclusive per occurrence against death, bodily injury and property damage arising directly or indirectly out of the *Work* or operations of the *Contractor*, its employees and agents;
 - (b) **automobile liability** insurance on all vehicles owned, operated or licensed in the name of the Contractor in an amount not less than two million (\$2,000,000) dollars per occurrence for bodily injury, death and damage to property; and
 - (c) **all risk contractors equipment or property** insurance covering all equipment owned or operated by the Contractor or its agents or employees for the performance of the Work, for all risks of loss or damage with coverage in such amounts and on such terms as to allow for immediate replacement.
 - (d) **builders risk and wrap up** liability for the value of the project for 24 months completed operations. The Contractor is responsible to pay for the premiums

and deductible amounts to cover all risks of loss or damage with coverage in such amounts and on such terms as to allow for immediate replacement.

11.1.2 All insurance policies required under this *Contract* must:

- (a) name the Owner and School District #43 Coquitlam as an additional insured;
- (b) be primary and not require the sharing of any loss by the Owner or any insurer of the Owner;
- (c) include cross liability and severability of interests clauses such that the coverage shall apply in the same manner and to the same extent as though a separate policy had been issued to each insured;
- (d) include, but not be limited to: premises and operators liability, broad form products and completed operations, Owner's and Contractor's protective liability, blanket contractual, employees as additional insureds, broad form property damage, non-owned automobile, contingent employers liability, broad form loss of use, personal injury, and incidental medical malpractice;
- (e) be endorsed to provide the Owner with at least 30 days advanced written notice of cancellation or material change restricting coverage;
- (f) be issued by insurers licensed to conduct business in British Columbia.

11.1.3 In the event the insurance requirements specified in the City of Coquitlam Insurance Certificate Form—Construction, attached to the *Contract* differs from the requirements in section 11.1.1 above, then the provisions of the City of Coquitlam Insurance Certificate Form shall prevail.

11.1.4 The *Contractor* shall provide the *Owner* with evidence of the required insurance prior to commencement of the *Work* and as requested by the *Owner* from time to time.

PART 12 – INDEMNIFICATION, WAIVER OF CLAIMS, AND WARRANTIES

G.C. 12.1 INDEMNIFICATIONS

Section 12.1 is deleted in its entirety and replaced with the following:

- 12.1.1 The Contractor will indemnify and save harmless the *Owner*, its employees and agents, including the *Consultants*, from and against any and all losses, claims, damages, action, causes of action cost and expenses that the owner may sustain, incur, suffer or be put to at any time either before or after the expiration or termination of this *Contract*, where the same or any of them are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission of the *Contractor* pursuant to this *Contract*, excepting always liability arising out of the independent negligent acts of the *Owner*.
- 12.1.2 At the *Owner's* option, the *Contractor* shall, at his own expense, promptly assume the defense of any claim, suit or any other proceeding and promptly pay any and all costs that may be incurred by or against the *Owner*. The *Owner* may, as a condition precedent to any payment hereunder, require the *Contractor* to submit waivers or releases extinguishing all claims of any person, firm or corporation.
- 12.1.3 If any encumbrance be placed upon or obtained against the property comprising the site of the *Work*, or as a result of any such suit or proceeding, the *Contractor* shall forthwith cause the same to be discharged. In the event that the *Contractor* fails to remove the said encumbrance(s), the *Owner* may pay whatever monies are necessary to fully discharge these encumbrances and all of its cost in that regard may be deducted from monies otherwise payable to the *Contractor*.

GC 12.2 WAIVER OF CLAIMS

- 43. Subsections 12.2.3, 12.2.4, 12.2.5, 12.2.9 and 12.2.10 are deleted in their entirety and subsections 12.2.6, 12.2.7 and 12.2.8 renumbered accordingly.

GC 12.3 WARRANTY

- 44. Subsections 12.3.1 and 12.3.6 are deleted in their entirety. Subsection 12.3.1 is replaced with the following:

- 12.3.1 The warranty period under the *Contract* is one year from the date on which final certificate of payment is issued by the *Owner* under subsection 5.7.3.

45. Subsection 12.3.3 is deleted and replaced with the following:

12.3.3 The Owner, through the Consultant, shall promptly give the Contractor Notice in Writing of observed defects and deficiencies which occur during the one year warranty period, which Notice in Writing may specify the time within which the defects or deficiencies must be rectified. Defects or deficiencies shall include, but not be limited to, shrinkage, expansion and movement.

46. Subsection 12.3.4 is amended by adding the following at the end of the subsection: "The *Contractor* shall make good all deficiencies within such time period as specified in the *Notice of Writing* provided under subsection 12.3.3 or, if no time period is specified, then within thirty (30) days from the end of the warranty period. It shall be understood that in effecting the replacement, the *Contractor* shall also bear all costs involved in removing or replacing adjacent affected materials that may be disturbed and which shall be required in the complete restoration of the original finish."

47. Subsection 12.3 is amended by adding the following new subsection after subsection 12.3.6:

12.3.7 Acceptance of the *Work* by the *Owner* does not relieve the *Contractor* from correcting deficiencies which are missed at the time of drawing up the list of deficiencies or from correcting hidden deficiencies which become apparent during the warranty period.

ADD THE FOLLOWING:

48. Standard Construction Document CCDC-2-2008 is further amended by adding the following new sections after Section 12:

PART 13 FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

13.1 FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

13.1.1 All documents submitted to the *Owner* will be in the custody or control of, or become the property of, the *Owner* and as such are subject to the *Freedom of Information and Protection of Privacy Act* (B.C.) and may be disclosed pursuant to that Act or otherwise required by law.

PART 14 CONFIDENTIALITY

14.1 CONFIDENTIALITY

- 14.1.1 Except as provided for by law or otherwise permitted or required pursuant to this *Contract* (including, without limitation, section 13.1), the *Owner* and the *Contractor* will keep strictly confidential any information supplied to, obtained by, or which comes to the knowledge of the *Owner* and the *Contractor* as a result of the provision of the goods or performance of the services under this *Contract*, and will not, without the prior express written consent of the *Owner*, publish, release, disclose or permit to be disclosed any such information to any person or corporation, either before, during or after termination of this *Contract*, except as reasonably required to provide the goods or complete the services.
- 14.1.2 The *Contractor* shall return to the *Owner* all of the *Owner's* property at the completion of the *Contract*, including any and all copies or originals of reports provided by the *Owner*.
- 14.1.3 The *Contractor* shall not publish any statement, paper, photograph or document, or hold any ceremony with respect to the *Contract* or the *Work* performed under the *Contract* without the prior written approval of the *Owner*, which approval shall not be withheld unreasonably.

PART 15 SEVERABILITY

15.1 SEVERABILITY

- 15.1 Any provision of this *Contract* which is found to be illegal, invalid, void, prohibited or unenforceable will be:
 - (a) separate and severable from this *Contract*; and
 - (b) ineffective to the extent of such illegality, invalidity, avoidance, prohibition or unenforceability without affecting any of the remaining provisions of this *Contract*, which will remain in force, be binding upon the parties and be enforceable to the fullest extent of the law.

END OF SUPPLEMENTAL GENERAL CONDITIONS

APPENDIX D

GEOTECHNICAL REPORT & GEOTECHNICAL MEMORANDUM

November 25, 2020

File: 29800

City of Coquitlam
3000 Guilford Way
Coquitlam, B.C.
V3B 7N2

Attention: Scott Groves, P.Eng. - Director Strategic & Capital Projects, Civic Lands & Facilities

**MUNDY PARK, COQUITLAM, B.C.
CHILKO PUBLIC WASHROOM FACILITY - TANKED OPTION
SUPPLEMENTARY GEOTECHNICAL INVESTIGATION AND IN-SITU INFILTRATION
TESTING**

Dear Scott:

As requested, Thurber Engineering Ltd. has conducted a field investigation comprising a geotechnical test hole and in-situ infiltration testing for the proposed public washroom facility near the East parking area of Mundy Park in Coquitlam, B.C. This letter describes the results of our field investigation, provides preliminary geotechnical recommendations for the proposed facility and provides input for in-situ infiltration of non-sewage wastewater. Assessment of soil and groundwater contamination is not within our scope of work.

It is a condition of this letter that Thurber's performance of its professional services is subject to the attached Statement of Limitations and Conditions.

1. BACKGROUND

The City of Coquitlam (the City) is proposing to construct a public washroom facility near the East parking area of Mundy Park, near Chilko Drive and Mariner Way in Coquitlam. The City initially envisaged that the facility would be tied to the existing sanitary sewer on Alice Lake Place by installing a sewer connection under Mariner Way. Considering the costs of installing the sewer connection, the City has proposed a tanked, temporary storage system for the facility instead. The City has also elected to relocate the public washroom to the west of the FortisBC transmission pipeline.

Thurber completed a geotechnical investigation in 2019 in support of the original proposed facility that comprised three auger test holes and dynamic cone penetration test (DCPT) profiling. The test holes were located adjacent to the East parking area, at the initial proposed facility location.

Our scope of services in support of the revised project concept includes a field investigation within the new proposed building footprint to characterize soil and groundwater conditions, and complete in-situ infiltration testing.

Assessment of soil and groundwater contamination was not included in our scope of work.



2. FIELD INVESTIGATION

The field investigation was completed on November 9, 2020 and comprised a single, geotechnical test hole using a track-mounted auger rig operated by On-Track Drilling Inc, and in-situ infiltration testing. Appended to this report is a test hole location plan (Dwg. No. 29800-1) and test hole log that includes the soil descriptions, backfill details and laboratory soil test results.

Prior to drilling, a BC OneCall ticket was submitted and a utility locator, Quadra Utility Locating Ltd., was retained to scan the proposed area ahead of the investigation. Due to the proximity of the proposed drilling location to the FortisBC transmission pipeline, a Fortis BC inspector attended site during the field investigation.

The geotechnical test hole was advanced to 10.7 m depth using a solid stem auger drill. Dynamic cone penetration test (DCPT) profiling and standard penetration testing (SPT) were completed at the test hole location. The SPT consists of advancing a 50 mm split-barrel sampler using a 63.5 kg hammer with a 760 mm drop height. The split-barrel sampler is driven either 450 mm or 600 mm while recording the number of blows per 150 mm of penetration. The SPT provides an estimate of the density/consistency of the soils. The DCPT tip is similar in size and shape to the SPT sampler and is driven using the same hammer energy. The DCPT provides a qualitative estimate of in-situ density of granular soil and is useful for identifying stiffness and strength contrasts within and between different soil strata.

DCPT profiling was completed from surface to refusal at approximately 4.2 m depth and from 6.9 m to refusal at 7.1 m depth. SPTs were carried out at 4.6 m, 6.1 m, 8.5 m and 10.1 m. The DCPT and SPT results are presented on the test hole log.

The soil and groundwater conditions were recorded during drilling and disturbed soil samples were collected for laboratory testing comprising routine visual classification and water content determination. Gradation testing was completed on one sample.

An infiltration test was performed at location IT20-01 shown on Dwg. 29800-1. IT20-01 was located approximately 1 m north of TH20-01. The infiltration test was carried out using a 2800K1 Guelph Permeameter (GP), manufactured by Soil Moisture Equipment Corp., to estimate the field saturated hydraulic conductivity. Prior to testing, Thurber hand-augered a shallow 89 mm (3.5 inch) diameter shallow test hole to approximately 0.5 m depth, approximately 1 m above the groundwater table observed in TH20-01. A grab sample was collected from the shallow test hole for laboratory grain size analysis. The GP was then installed in the hand-augered hole for infiltrating testing.

The infiltration test was conducted using the inner reservoir method which is appropriate for low permeability soils. Three infiltration tests were attempted at IT20-01. A 10 cm of head value was used for the first test; however, no-flow conditions were observed. The head was then increased to 25 cm, the maximum recommended height of water for the inner reservoir method, to induce



flow under a greater pressure head. The test was repeated twice at a head value of 25 cm; however, no-flow conditions were observed.

3. SOIL AND GROUNDWATER CONDITIONS

The results of the site investigation and laboratory testing are summarized on the attached test hole log. The soil descriptions on the log should be used in preference to the generalised soil profile descriptions given below.

The subsurface profile comprised a thin layer of topsoil, overlying compact to dense gravelly sand with a trace of silt to 1.2 m depth over dense to very dense, inferred till-like soils. The till-like soils are granular, and have a high sand content with varying silt and gravel contents. Although not encountered in the test hole, the till-like soils are known to include cobbles and boulders.

Wet conditions were encountered below 1.5 m depth, and standing water was observed at 1.1 m upon completion of drilling. The investigation was conducted at the beginning of the wet season, where the groundwater table is typically near its minimum elevation. However, several days of precipitation preceded the investigation, which could have elevated the groundwater table. Although the groundwater level fluctuation in the study area is unknown, the seasonally high groundwater levels are expected to occur in late spring (April/May).

4. ENGINEERING ASSESSMENT

The site is underlain by competent, dense to very dense till-like material at relatively shallow depth and our field observations indicate a shallow groundwater regime. Based on the subsurface stratigraphy and the results of the in-situ testing, it is feasible to support the proposed the washroom facility on shallow foundations comprising strip or spread footings. Given the shallow groundwater conditions, the contemplated tanked system will be subject to hydrostatic uplift pressures. As the sustained loads (i.e. dead load of structure and other permanent loads) are expected to be significantly less than the hydrostatic uplift, the tank must be designed to provide full restraint against buoyancy.

Geotechnical input is provided herein for site preparation and foundation design including lateral earth pressures, placement and compaction of granular fill, permanent anchors, seismic site classification and pavement structures. The report also includes interpretation and discussion of the infiltration testing results.

4.1 Foundations

Based on the subsurface conditions encountered in the geotechnical investigation, the foundations will likely be founded in competent, undisturbed native soils or on compacted granular fill over competent native soils. Table 1 below summarizes preliminary recommended factored ultimate and serviceability bearing resistance values for strip and pad footings.



Table 1 - Foundation Design Bearing Resistances and Pressures

Foundation Soil	Factored Ultimate Bearing Resistance¹ (kPa)	Serviceability Bearing Resistance (kPa)
Till-like Soils	500	300
Compact to Dense Sand Compacted Granular Fill	225	150

¹ Factored ultimate bearing resistance values include a geotechnical resistance factor $\Phi=0.5$.

The bearing resistance was evaluated for strip and pad footings assuming minimum widths of 450 mm and 600 mm, respectively. The footings must have a minimum embedment depth of 450 mm minimum below adjacent finished grade for frost protection. Anticipated total and differential settlements under service limit states (SLS) conditions are not expected to exceed 25 mm and 15 mm, respectively. These settlement estimates and bearing resistances must be confirmed during detailed design when the structural loads become available.

The foundation drawings should be reviewed by Thurber prior to construction. Further, Thurber must be given the opportunity to inspect the exposed bearing surfaces to confirm that the conditions are as assumed, and to provide an opportunity to amend the recommendations if required.

4.2 Subgrade Preparation

All construction work must be completed in safe manner and must conform to the all applicable regulations such as WorkSafeBC, laws, codes and any other relevant regulations in the Province of British Columbia and to any applicable company-specific regulations.

Site preparation should proceed with the removal of any vegetation and trees within the area of the washroom facility. Any underground services and utilities crossing this area should also be relocated or terminated appropriately. Trench backfill material must be removed and replaced with compacted granular fill.

Excavation should be carried out using excavators equipped with a smooth-edge trimming bucket. The base of all excavations should be free of loose, organic, or disturbed material. All standing and water must be drained away to prevent ponding.

The native foundation soils will typically be sensitive to changes in moisture content and disturbance by construction and repeated pedestrian traffic. Therefore, unless the footing concrete will be placed within 24 hours of exposing the bearing surface, we recommend placing a concrete blinding layer (or equivalent) on the bearing surface to reduce the likelihood of disturbance of the bearing surface.

Structural / grade restoration fill should typically comprise free draining (<5% passing the 75 μ m sieve) granular fill, free of organics and other deleterious material. Suitable materials include



MMCD minus 75 mm well graded pit run sand and gravel. Other granular fill may also be acceptable but samples or representative gradation curves of the material should be submitted to Thurber for review and approval prior to use. Fill should be placed in maximum loose lifts of 300 mm compacted to 100% Standard Proctor Maximum Dry Density (SPMDD).

Unless walls are specifically designed to support compaction-induced lateral stresses, backfill placed within 1 m of a foundation/buried structures wall should be compacted using light weight equipment such as a plate tamper to avoid build-up of excessively high lateral soil pressure on the wall.

4.3 Re-use of Existing Material

The bulk of the excavation will be in till-like deposits which are classified as sand with varying silt and gravel contents, and that may possibly include cobbles and boulders. The excavated till-like material can be re-used as fill provided that it is handled, placed and compacted properly. This will also likely involve the removal of over-sized material (i.e. cobbles and boulders) in some instances. Till-fill can also be used for grade restoration under the footprint of the slab-on-grade provided that it is free from organics and other deleterious material.

The excavated, existing material will be sensitive to changes in moisture content due to its relatively high fines content and it may not be possible to place and compact during wet weather. If the material cannot be compacted, clean, imported fill material will be required. Where used, the fill must be placed in maximum loose lifts of 300 mm and compacted to the equivalent of 100% SPMDD.

4.4 Slab-On-Grade

The concrete slab-on-grade should be underlain by a minimum of 150 mm thick layer of minus 19 mm, clean, crushed granular base course, conforming to MMCD gradation specifications, and compacted to at least 100% SPMDD. All loose material, organic, soft or wet soils, or other deleterious material must be removed before placement of the base course fill. Where the fill is placed on a high fines soil, a non-woven geotextile separator (i.e. Nilex 4553, or approved equivalent) should typically be placed on the subgrade prior to the placement of the fill.

A vapour barrier comprising 6-mil (minimum) polyethylene sheeting and conforming to ASTM E1745 should be placed below the slab. Adjacent sheets of polyethylene should be overlapped by a minimum of 300 mm.

4.5 Sub-Drainage

As mentioned in Section 3, standing water was observed at 1.1 m during the field investigation which indicates a relatively shallow groundwater regime. Further, there is a likelihood that the groundwater may be shallower in late spring (April/May).



In consideration of the shallow groundwater conditions and the potential for portions of the building substructure to be founded below the groundwater, a sub-drainage system is recommended. Alternatively, the grade could be raised locally by at least 300 mm such that the slab-on-grade and other building substructure components are founded above a worst-case, near surface groundwater level. This will negate the need for a sub-drainage system (the exception is the buried tank, to be discussed in the following section). The grade raise must be extended at least 2 m laterally beyond the edge of the structure, and must comprise free-draining compacted granular fill with a low permeability soil cap around the perimeter of the structure.

Where a subsurface drainage system is installed, we recommend that the system comprise a perimeter drain and a sub-floor drainage layer which would be placed in-lieu of the granular base course layer underlying the slab-on-grade (refer to Section 4.4). The perimeter drain should comprise 100 mm to 150 mm diameter perforated PVC pipe (with perforations down) surrounded by a minimum of 150 mm of drain rock. The drain rock should be fully separated from the general backfill by a non-woven geotextile (such as Nilex 4553 or equivalent approved by Thurber). The perimeter drain should be installed with an invert level at or nominally below the underside of the granular base course layer. The sub-floor drainage layer should comprise a 300mm thick, 25 mm minus clean crushed gravel meeting MMCD specifications for Coarse Drain Rock, and should be separated from all adjacent soils using a medium weight non-woven geotextile (filter fabric). The sub-floor drainage layer.

The sub-drainage system, comprising both the perimeter drain and sub-floor drainage layer, should be designed and constructed in a manner that provides unimpeded discharge of the intercepted groundwater. This is typically achieved by connecting the sub-drainage system to a suitable drainage system, which may require a dedicated pump or pumps. Other means of discharge may be considered at the discretion of the civil designer.

Within 2 m of a building, the yard grade should be sloped to provide surface drainage away from the building.

The groundwater inflow rate should be confirmed during construction to determine the adequacy of the drainage measures.

4.6 Buried Tank

Buried structures subjected to hydrostatic uplift may fail in two modes; the structural failure of the base slab and tank floatation. The latter occurs when the sustained compressive loads of the structure are less than the groundwater-generated buoyancy force. The check against tank floatation failure should be carried out assuming groundwater level at surface along with an effective unit weight of 8 kN/m³.

To prevent a tank floatation failure, the design of the structure may be modified to increase the sustained loads. This can be accomplished by increasing the base slab thickness or by using an expanded base slab that will utilize the surrounding backfill to increase the sustained load of the



structure. Alternatively, permanent ground anchors could be used to provide full restraint against floatation.

The capacity of the anchors resisting the hydrostatic uplift loads is derived from the side shear resistance between the ground and the anchor bond zone. For preliminary design purposes, we recommend an ultimate load transfer of 150 kN/m for a ground anchor constructed in the till-like soils with a diameter of 150 mm to 200 mm, a minimum 3.0 m free stressing length, and an anchor bond length of up to 8 m in the till-like soils. These recommendations apply where the anchors are installed with a minimum center to center spacing of four times the anchor diameter or 20% of the bond length zone.

The factored ultimate tensile resistance is determined by multiplying the ultimate load transfer by the anchor bond length and a geotechnical resistance factor of 0.4. We recommend that a pull out test be completed to take advantage of using a geotechnical resistance factor of 0.6.

Reference should be made to the 2018 British Columbia Building Canada (BCBC) regarding waterproofing requirements of the buried tank.

4.7 Underground Services and Utilities

Underground services and utilities, including sub-drains, that run parallel to the footings should not be located within a zone defined by a plane sloping down and away from the bottom perimeter edge of footing at 1 horizontal to 1 vertical (1H:1V). If services cannot be relocated, they must be fully encased in concrete or the affected footing must be lowered.

4.8 Lateral Earth Pressure

The buried tank walls should be designed using the lateral earth pressure distribution shown on Dwg. 29800-2 (attached). We have assumed that the walls will be unyielding under static conditions and seismic conditions.

4.9 Seismic Considerations and Liquefaction Susceptibility

The site is underlain by dense to very dense, till-like soils at relatively shallow depth. From Table 4.1.8.4.A of the British Columbia Building Code (2018) and based on the results of the DCPT/SPT profiling, the subsurface stratigraphy is classified as Site Class C. From the Natural Resources Canada website, the 2015 National Building of Canada Seismic Hazard Calculator provided a Firm Ground Peak Ground Acceleration (PGA) of 0.323 g for the 1:2,475 seismic event at this location.

As the subsurface stratigraphy comprises very dense, till-like soils at shallow depths, there is a low probability of liquefaction.



5. INFILTRATION

The field observations made during the infiltration testing suggest poor to practically impervious drainage conditions in soils above the perched groundwater table.

The Toronto and Region Conservation – Storm Management Criteria Document (TCRA, 2012) does not recommend any engineered recharge facilities where the following conditions are present:

- Bedrock or an impervious layer within 1 m of the bottom of the proposed recharge facility; or
- Seasonally high-water table elevations that are within 1 m of the bottom of the proposed recharge facility.

Based on observations during the field investigation both of the above conditions are present, permanently or seasonally, at the site.

6. CONSTRUCTION INSPECTION

Geotechnical field review will be required during construction to satisfy the requirements of the Letters of Assurance in the BCBC and document that the recommendations of our geotechnical report are followed. Geotechnical field review will be required to address the following issues:

- Confirmation of subsurface conditions, at the start of construction, to verify our assumptions and provide an opportunity to amend the recommendations if required.
- Review of subgrade for footings to confirm bearing resistance.
- Review and density testing of compacted granular fill.
- Review of drainage installation, if completed.
- Review of anchor installation and testing.



7. CLOSURE

We trust this information is sufficient for your current needs. If have questions or require any clarification, please contact us at your convenience.

Yours truly,
Thurber Engineering Ltd.
David Tara, P.Eng.
Review Principal



Tareq Dajani, M.Eng., P.Eng.
Geotechnical Engineer

Sarah Bergstrom, E.I.T.
Project Engineer

Attachments: Statement of Limitations and Conditions (1 page)
Symbols and Terms (1 page)
Test Hole Location Plan (1 page)
Test Hole Log (2 pages)
Grain Size Distributions (2 pages)
Lateral Earth Pressure Distribution Drawing (1 page)

STATEMENT OF LIMITATIONS AND CONDITIONS

1. STANDARD OF CARE

This Report has been prepared in accordance with generally accepted engineering or environmental consulting practices in the applicable jurisdiction. No other warranty, expressed or implied, is intended or made.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report, which is of a summary nature and is not intended to stand alone without reference to the instructions given to Thurber by the Client, communications between Thurber and the Client, and any other reports, proposals or documents prepared by Thurber for the Client relative to the specific site described herein, all of which together constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. THURBER IS NOT RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF REPORT

The Report has been prepared for the specific site, development, design objectives and purposes that were described to Thurber by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the Report, subject to the limitations provided herein, are only valid to the extent that the Report expressly addresses proposed development, design objectives and purposes, and then only to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Thurber, unless Thurber is specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT THURBER'S WRITTEN CONSENT AND SUCH USE SHALL BE ON SUCH TERMS AND CONDITIONS AS THURBER MAY EXPRESSLY APPROVE. Ownership in and copyright for the contents of the Report belong to Thurber. Any use which a third party makes of the Report, is the sole responsibility of such third party. Thurber accepts no responsibility whatsoever for damages suffered by any third party resulting from use of the Report without Thurber's express written permission.

5. INTERPRETATION OF THE REPORT

- a) Nature and Exactness of Soil and Contaminant Description: Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other persons making use of such documents or records with our express written consent should be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other persons. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.
- b) Reliance on Provided Information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to Thurber. Thurber has relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, Thurber does not accept responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of misstatements, omissions, misrepresentations, or fraudulent acts of the Client or other persons providing information relied on by Thurber. Thurber is entitled to rely on such representations, information and instructions and is not required to carry out investigations to determine the truth or accuracy of such representations, information and instructions.
- c) Design Services: The Report may form part of design and construction documents for information purposes even though it may have been issued prior to final design being completed. Thurber should be retained to review final design, project plans and related documents prior to construction to confirm that they are consistent with the intent of the Report. Any differences that may exist between the Report's recommendations and the final design detailed in the contract documents should be reported to Thurber immediately so that Thurber can address potential conflicts.
- d) Construction Services: During construction Thurber should be retained to provide field reviews. Field reviews consist of performing sufficient and timely observations of encountered conditions in order to confirm and document that the site conditions do not materially differ from those interpreted conditions considered in the preparation of the report. Adequate field reviews are necessary for Thurber to provide letters of assurance, in accordance with the requirements of many regulatory authorities.

6. RELEASE OF POLLUTANTS OR HAZARDOUS SUBSTANCES

Geotechnical engineering and environmental consulting projects often have the potential to encounter pollutants or hazardous substances and the potential to cause the escape, release or dispersal of those substances. Thurber shall have no liability to the Client under any circumstances, for the escape, release or dispersal of pollutants or hazardous substances, unless such pollutants or hazardous substances have been specifically and accurately identified to Thurber by the Client prior to the commencement of Thurber's professional services.

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SYMBOLS AND TERMS

FOR SOIL DESCRIPTION AND TEST HOLE LOGS

BASIC SOIL SYMBOLS

Predominant Material	Secondary Material
GRAVEL	gravelly to some gravel
SAND	sandy to some sand
SILT	silty to some silt
CLAY	clayey to some clay
PEAT / ORGANICS	some organics
Undifferentiated BEDROCK	
ORGANIC SILT	
FILL / DEBRIS	

PROPORTION OF MINOR COMPONENTS BY WEIGHT ⁽²⁾

and	35 - 50%
y / ey	20 - 35%
some	10 - 20%
trace	0 - 10%

SYMBOL VARIATIONS - EXAMPLES ⁽¹⁾

SAND and GRAVEL	
SAND, silty	
SILT with some clay	

DENSITY OF GRANULAR SOILS

Description	SPT N ⁽⁵⁾ ⁽⁶⁾
Very Loose	0 - 4
Loose	4 - 10
Compact	10 - 30
Dense	30 - 50
Very Dense	> 50

CONSISTENCY OF COHESIVE SOILS

Description	Undrained Shear Strength (kPa) ⁽⁶⁾
Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

PENETRATION TESTS

Dynamic Cone Penetration	
Standard Penetration	
Becker Closed Casing	
Becker Open Casing	
Bounce Chamber Pressure	

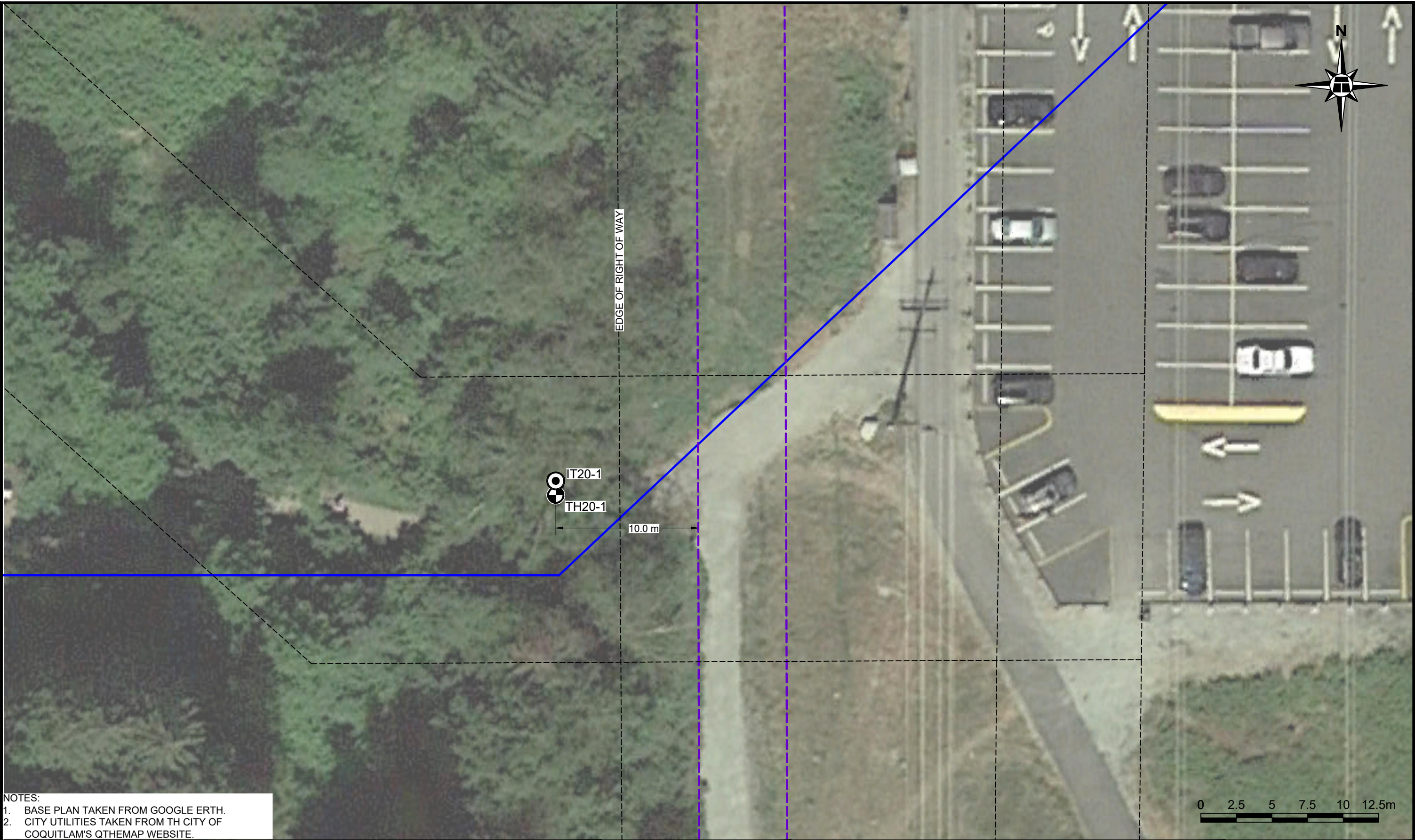
CLASSIFICATION BY PARTICLE SIZE

Name	Size Range ⁽⁶⁾		
	(mm) ⁽³⁾	U.S. Standard Sieve Size	
		Retained	Passing
Boulders	> 200	8 inch	-
Cobbles	75 - 200	3 inch	8 inch
Gravel: coarse	19 - 75	0.75 inch	3 inch
Gravel: fine	5 - 19	No. 4	0.75 inch
Sand: coarse	2 - 5	No. 10	No. 4
Sand: medium	0.4 - 2	No. 40	No. 10
Sand: fine	0.075 - 0.4	No. 200	No. 40
Fines (Silt or Clay) ⁽⁴⁾	< 0.075	-	No. 200

- (1) Only selected examples of the possible variations or combinations of the basic symbols are illustrated.
- (2) Example: SAND, silty, trace of gravel = sand with 20 to 35% silt and up to 10% gravel, by dry weight. Percentages of secondary materials are estimates based on visual and tactile assessment of samples.
- (3) Approximate metric conversion.
- (4) Fines are classified as silt or clay on the basis of Atterberg limits.
- (5) SPT N values on test hole logs are uncorrected field values.
- (6) Reference Canadian Foundation Engineering Manual 4th Edition, 2006.

Plotted: November 24, 2020

S:\Data\BST Projects\29xxx\29800\06_Drafting\03_Working\29800 TH LOCATIONS.dwg



- NOTES:
1. BASE PLAN TAKEN FROM GOOGLE EARTH.
 2. CITY UTILITIES TAKEN FROM TH CITY OF COQUITLAM'S QTHEMAP WEBSITE.

LEGEND:

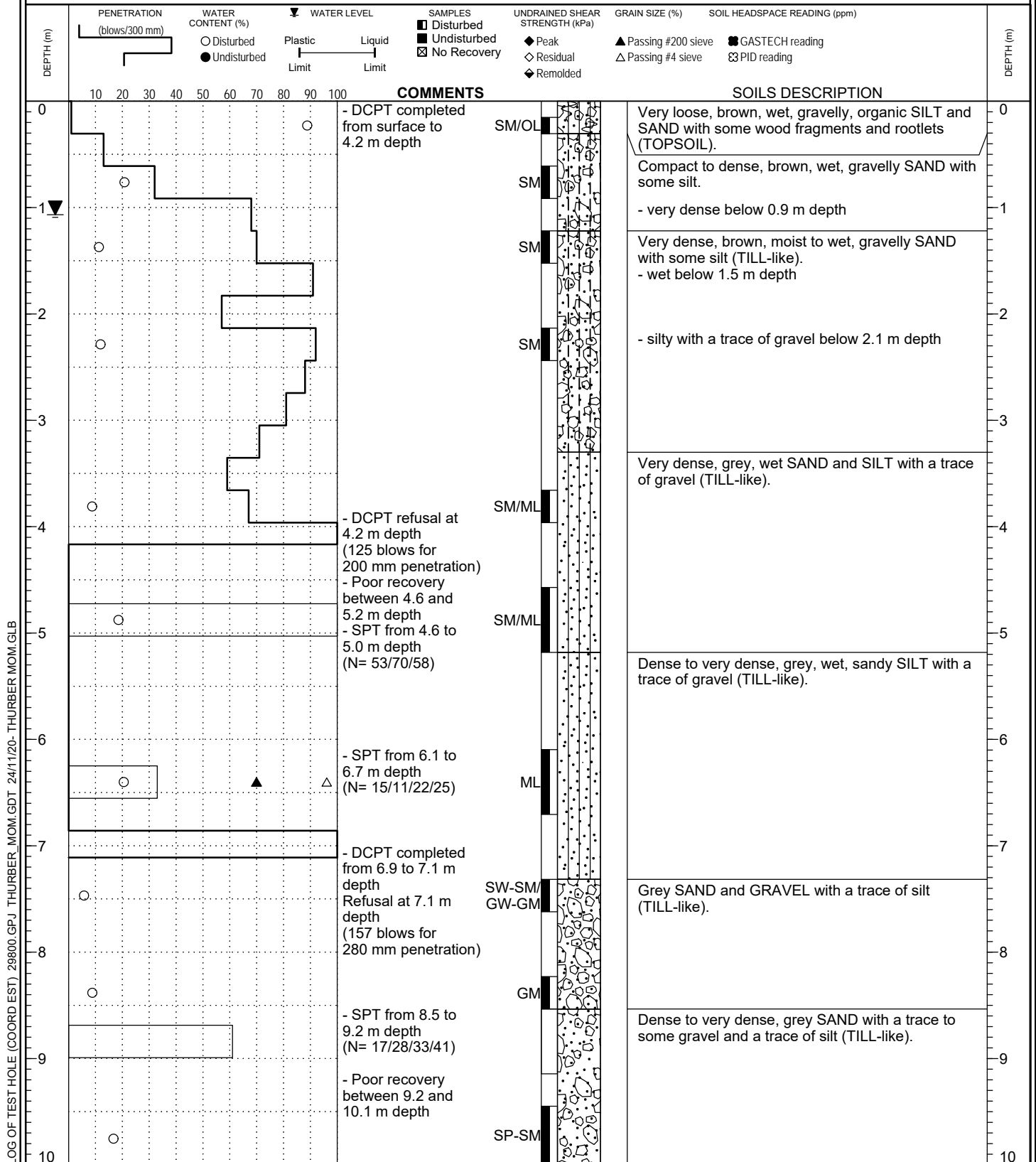
	TEST HOLE		WATER MAIN
	INFILTRATION TEST		GAS TRANSMISSION LINE

THURBER ENGINEERING LTD.

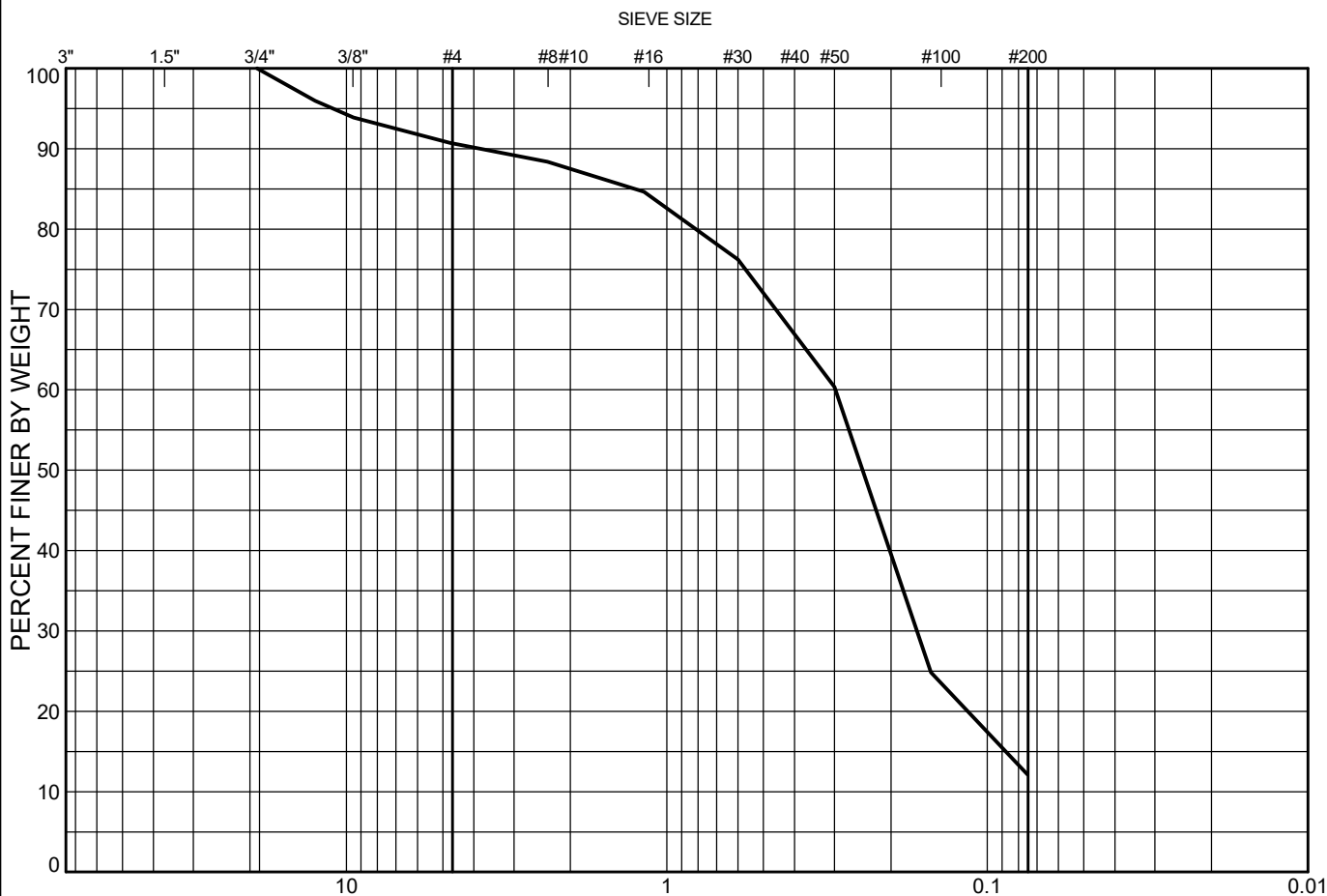
CLIENT	CITY OF COQUITLAM		
TEST HOLE LOCATION PLAN			
CHILKO (MUNDY PARK) PUBLIC WASHROOM FACILITY		COQUITLAM, B.C.	

DESIGNED PSM	DRAWN MOM	APPROVED	
DATE NOV. 24, 2020		SCALE 1:250	
PROJECT No. 29800		DWG. No. 1	REV. 0

LOG OF TEST HOLE

TEST HOLE NO.
TH20-1**LOCATION:** See Dwg. 29800-1
N 5455862, E 513324 (Est.)**CLIENT:** City of Coquitlam
PROJECT: Chilko (Mundy Park)
Public Washroom Facility**TOP OF HOLE ELEV:****METHOD:** Solid Stem Auger**DATE:** November 9, 2020**DRILLING CO.:** On-Track Drilling Inc.**FILE NO.:** 29800**INSPECTOR:** SJB**REVIEWED BY:** TFD

DATE: November 9, 2020
FILE NO.: 29800
REVIEWED BY: TFD



GRAVEL		SAND			SILT
coarse	fine	coarse	medium	fine	

Sample Location: **IT20-1**

Sample: **1**

Sample Depth: **0.3 - 0.45 m**

Date Sampled: **November 9, 2020**

Sampled By: **SJB**

Date Received: **November 9, 2020**

Date Tested: **November 12, 2020**

Tested By: **KM**

Test Method: **ASTM C136 and C117**

Specification: _____

Gravel	9.3%
Sand	78.6%
Fines	12.1%
Moisture Content	50.4%
D10	
D30	0.166
D60	0.298
Cu	4.46
Cc	1.38

Sieve Size		Percent Passing
inches	mm	
3	75	
1.5	37.5	
0.75	19	100.0
0.375	9.5	93.9
#4	4.75	90.7
#8	2.36	88.4
#16	1.18	84.6
#30	0.6	76.2
#50	0.3	60.3
#100	0.15	24.8
#200	0.075	12.1

Description: **SAND, some silt and a trace of gravel (SM).**

Comments: **Contains some organics.**

The results are for the sole use of the designated client only. This report constitutes a testing service only and does not represent any interpretation or opinion regarding the specification compliance or material suitability. Engineering interpretation will be provided by Thurber upon request.

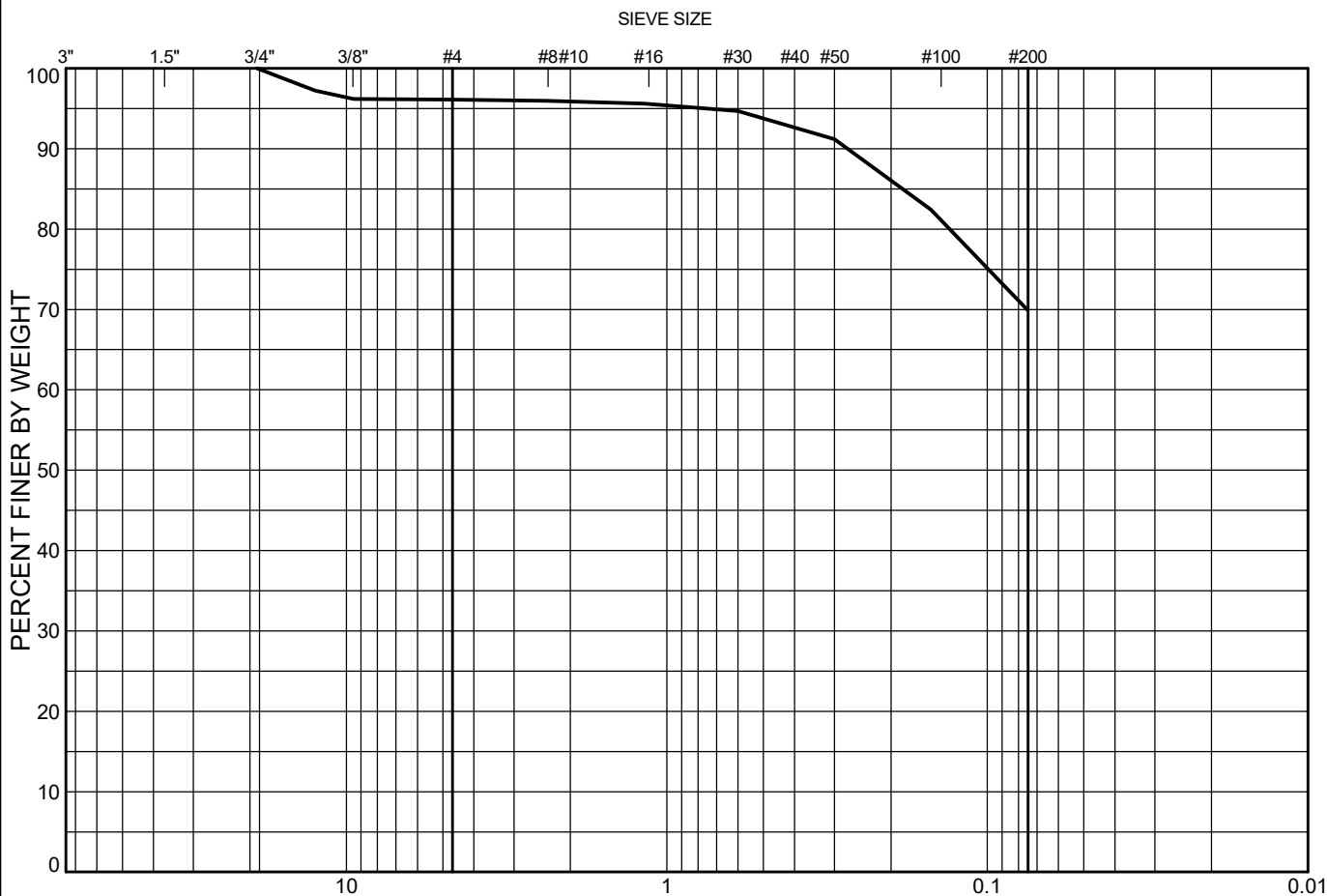


Thurber Engineering Ltd.
 #900 - 1281 West Georgia Street
 Vancouver, BC V6E 3J7
 Telephone: (604) 684-4384
 Fax: (604) 684-5124

GRAIN SIZE DISTRIBUTION

CLIENT: City of Coquitlam
PROJECT: Mundy Park

FILE NO.: 29800



GRAVEL		SAND			SILT
coarse	fine	coarse	medium	fine	

Sample Location: **TH20-4**

Sample: **7**

Sample Depth: **6.1 m**

Date Sampled: **November 9, 2020**

Sampled By: **SJB**

Date Received: **November 9, 2020**

Date Tested: **November 17, 2020**

Tested By: **KM**

Test Method: **ASTM C136 and C117**

Specification: _____

Gravel	3.9%
Sand	26.2%
Fines	69.9%
Moisture Content	20.5%
D10	
D30	
D60	
Cu	
Cc	

Sieve Size		Percent Passing
inches	mm	
3	75	
1.5	37.5	
0.75	19	100.0
0.375	9.5	96.2
#4	4.75	96.1
#8	2.36	96.0
#16	1.18	95.6
#30	0.6	94.7
#50	0.3	91.2
#100	0.15	82.4
#200	0.075	69.9

Description: **Sandy SILT, trace of gravel (ML).**

Comments: _____

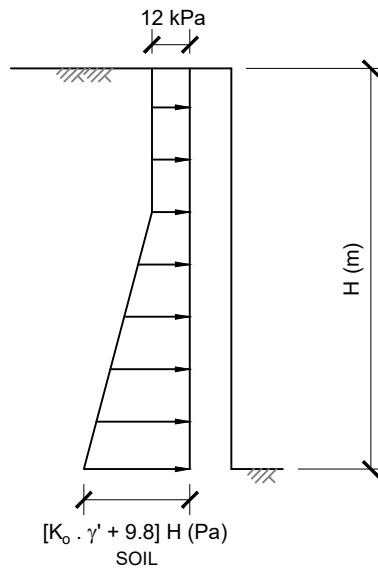
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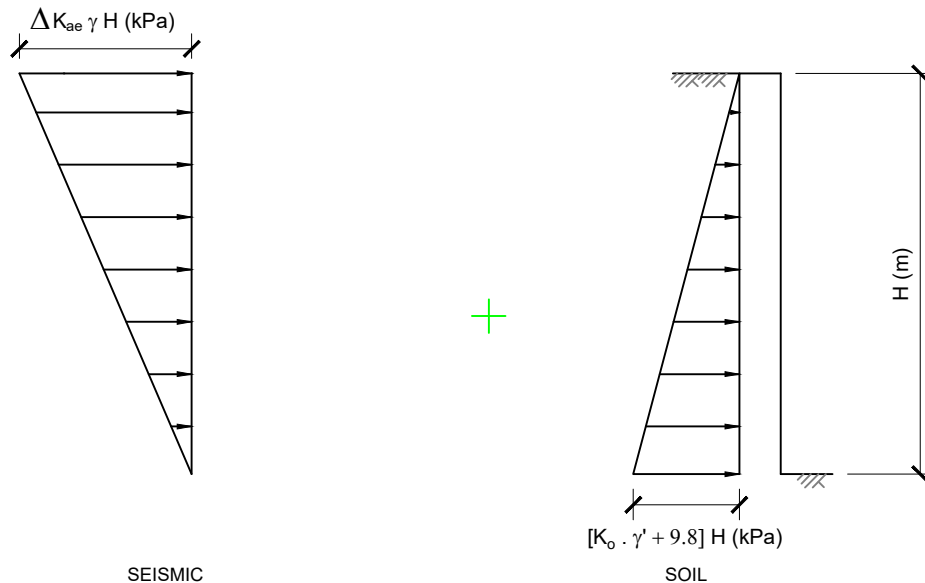
Thurber Engineering Ltd.
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 Vancouver, BC V6E 3J7
 Telephone: (604) 684-4384
 Fax: (604) 684-5124

GRAIN SIZE DISTRIBUTION

CLIENT: City of Coquitlam
PROJECT: Proposed Bathroom Buildings at Chilko Entrance to Mundy Park
FILE NO.: 29800



STATIC LOADING CONDITION



SEISMIC LOADING CONDITION

LOADING CONDITIONS				
$\gamma \text{ (kN/m}^3\text{)}$	$\gamma' \text{ (kN/m}^3\text{)}$	K_o	K_A	ΔK_{ae} (2475 YR EQ)
20	10	0.43	0.27	0.19



THURBER ENGINEERING LTD.

CLIENT

CITY OF COQUITLAM

LATERAL EARTH PRESSURE DIAGRAM

CHILKO (MUNDY PARK)
PUBLIC WASHROOM FACILITY

COQUITLAM, B.C.

DESIGNED

TFD

DRAWN

MOM

APPROVED

DATE

NOV. 25, 2020

SCALE

N.T.S.

PROJECT No.

29800

DWG. No.

2

REV.

0

MEMORANDUM

To: Scott Groves, P.Eng. | Director Strategic &
Capital Projects - Civil Land & Facilities
City of Coquitlam

Date: January 12, 2021

From: Tareq Dajani, P.Eng.
(Reviewed by David Tara, P.Eng.)

File: 29800

MUNDY PARK, COQUITLAM, B.C. CHILKO PUBLIC WASHROOM FACILITY - TANKED OPTION RECOMMENDATIONS FOR BURIED WASTEWATER TANK

This memorandum provides additional geotechnical input for the buried wastewater sewage tanks for the proposed Chilko public washroom facility near the East parking area of Mundy Park in Coquitlam, B.C. The information contained in this memorandum should be used in conjunction with the recommendations provided in our geotechnical recommendations report dated November 25, 2020.

It is a condition of this memorandum that Thurber's performance of its professional services is subject to the attached Statement of Limitations and Conditions.

1. BACKGROUND

The City of Coquitlam (the City) is proposing to construct a public washroom facility near the East parking area of Mundy Park, near Chilko Drive and Mariner Way in Coquitlam. The wastewater generated from the facility will be collected in a temporary storage system comprising buried tanks. We understand that the tanked system will be located outside the footprint of the facility to provide access for wastewater discharge. The system will comprise two plastic tanks that have individual holding capacities of 2,000 Gallons (see attached tank drawing). The tanks, manufactured by BARR® plastics, are approximately 1.3 m in height with the base measuring 3.2 m by 2.5 m. We understand that the tanks will have a soil cover of 0.6 m.

Thurber completed a field investigation on November 9, 2020 that comprised a single, geotechnical test hole using a track mounted auger rig and in-situ infiltration testing. The subsurface profile comprised a thin layer of topsoil, overlying compact to dense gravelly sand with a trace of silt to 1.2 m depth over dense to very dense, inferred till-like soils. During the investigation, wet conditions were encountered below 1.5 m depth, and standing water was observed at 1.1 m upon completion of drilling. Considering the subsurface conditions encountered and the general site elevation (about 150 m above mean sea level), it is inferred that the shallow groundwater encountered during the field investigation is likely perched on the very dense till-like deposit.



As the investigation was conducted at the beginning of the wet season, where the groundwater table is typically near its minimum elevation, there is a high likelihood that groundwater may be shallower in late spring (April/May) or following periods of intense rainfall.

Based on the observed and anticipated fluctuation of the groundwater, Thurber provided high-level recommendations for the design of the tanked system against hydrostatic uplift in our November 25, 2020 recommendations report. Below are supplemental recommendations for the design of against hydrostatic uplift based on the selected tanked system and discussions with the design team.

2. RECOMMENDATIONS FOR RESTRAINT AGAINST BOUYANCY

Considering the relatively light weight of tanks, the proposed soil cover, the inferred shallow perched groundwater and the depth to the underside of the tanks, we recommend the construction of a concrete slab below the tanks to provide sufficient restraint against buoyancy. For preliminary design, the slab must be continuous and extend at least 0.25 m beyond the footprint of the tanks. The tanks must be properly attached to the underlying concrete slab using straps or other suitable methods. Further, the slab must be designed against structural failure and the design of the straps should consider the potential for corrosion.

The tanks may be filled with water during placement to increase their stability against uplift, particularly where the soil cover has not been placed yet, and to reduce the potential for damage during placement of adjacent fill.

3. CLOSURE

The recommendations provided in this memorandum are based on field observations made to date. Where differing conditions are encountered in the future during construction, Thurber must be notified to confirm that our assumptions are reasonable and allow us the opportunity to amend our design if deemed required. This includes the potential of eliminating the concrete slab where it is determined that hydrostatic uplift will not be of a concern.

Attachments Statement of Limitations and Conditions (1 page)
 BARR® plastics Wastewater Tank Details and Installation Instructions (5 pages)

January 12, 2021

STATEMENT OF LIMITATIONS AND CONDITIONS

1. STANDARD OF CARE

This Report has been prepared in accordance with generally accepted engineering or environmental consulting practices in the applicable jurisdiction. No other warranty, expressed or implied, is intended or made.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report, which is of a summary nature and is not intended to stand alone without reference to the instructions given to Thurber by the Client, communications between Thurber and the Client, and any other reports, proposals or documents prepared by Thurber for the Client relative to the specific site described herein, all of which together constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. THURBER IS NOT RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF REPORT

The Report has been prepared for the specific site, development, design objectives and purposes that were described to Thurber by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the Report, subject to the limitations provided herein, are only valid to the extent that the Report expressly addresses proposed development, design objectives and purposes, and then only to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Thurber, unless Thurber is specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT THURBER'S WRITTEN CONSENT AND SUCH USE SHALL BE ON SUCH TERMS AND CONDITIONS AS THURBER MAY EXPRESSLY APPROVE. Ownership in and copyright for the contents of the Report belong to Thurber. Any use which a third party makes of the Report, is the sole responsibility of such third party. Thurber accepts no responsibility whatsoever for damages suffered by any third party resulting from use of the Report without Thurber's express written permission.

5. INTERPRETATION OF THE REPORT

- a) **Nature and Exactness of Soil and Contaminant Description:** Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other persons making use of such documents or records with our express written consent should be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other persons. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.
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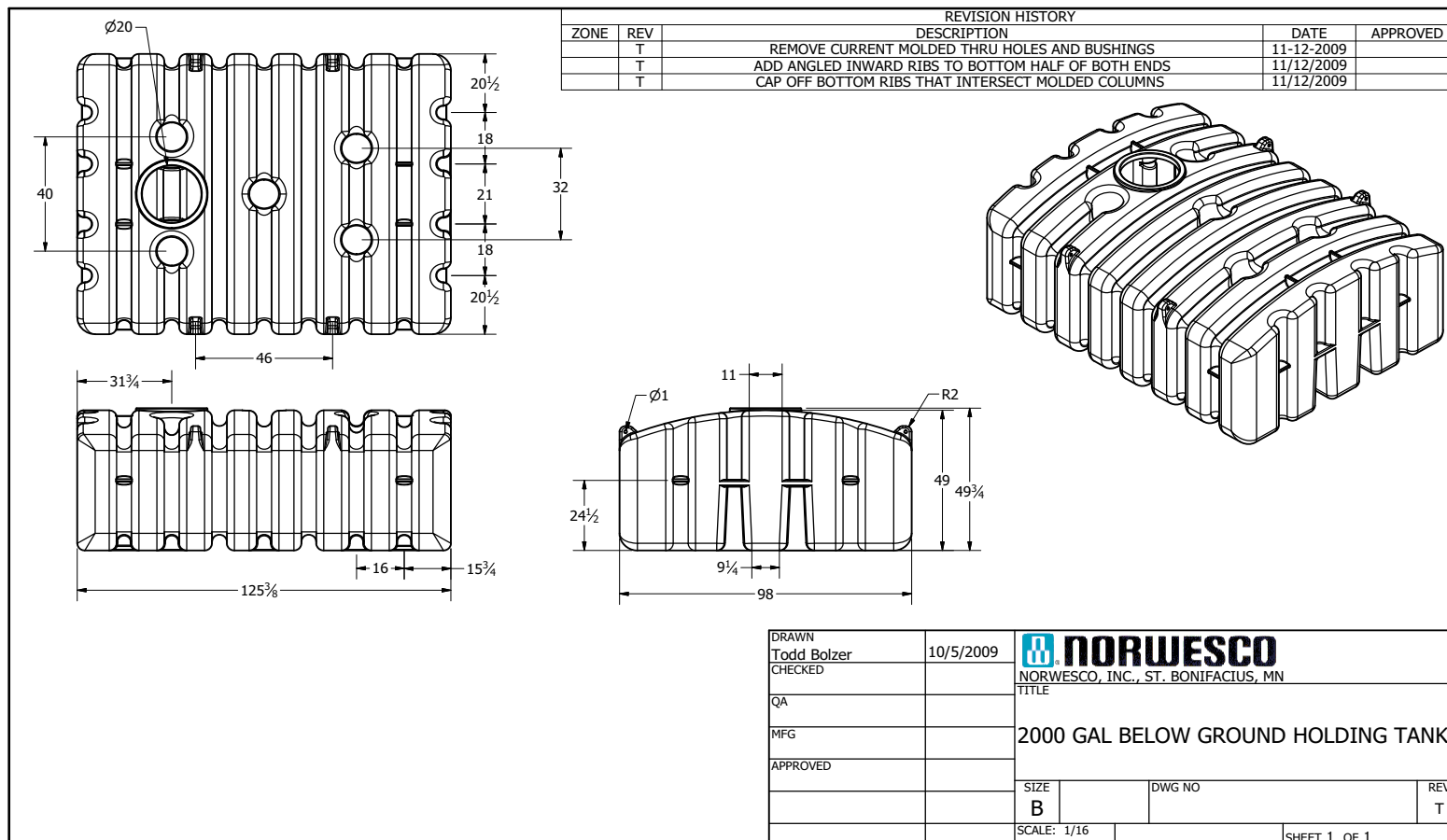
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if it flows,
we go with it

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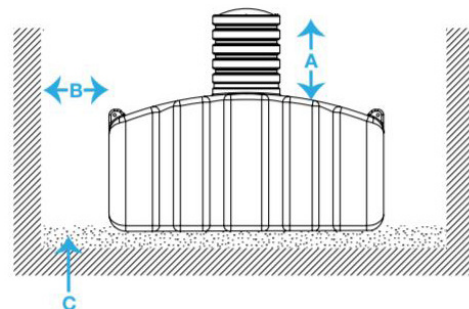
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Installation Instructions

2000 or 2500 Below Ground Holding Tank

1. EXCAVATION

- Excavate to a depth that will provide a minimum of 6" and a maximum of 24" of cover over the top of the tank.
- Allow 18" to 24" on both sides and both ends of the tank.
- Bed the tank in well-compacted sand - 6" minimum in soil terrain, 12" minimum in rock terrain.



2. CONNECTIONS TO TANK

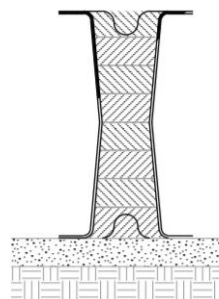
- Install fittings in any location required for holding tank use.
- Contact factory for approval if multiple fittings are installed in close proximity.
- Tank must be vented.
- For water-tight seal, lid should be sealed with silicone or urethane caulking. Re-use stainless steel screws supplied with lid to re-attach lid to tank.

3. MANHOLE EXTENSION

- Install manhole extension before you backfill.
- Norwesco manhole extensions are supplied with gaskets and screws. Re-use the stainless steel screws to attach the lid at the top of the manhole extension.

4. BACKFILLING EXTERIOR

- Backfill with 12" layers and compact each layer. Always compact ends first.
- Each of the interior support cones must be filled and compacted in 6" layers; the bottom half of the cones are tapered and must have the soil compacted to provide structural support. See diagram.
- Maximum backfill over the top of the tank is 24". Mound soil over the top to provide positive drainage.



Fill Cones
in 6" layers
from the bottom
up, compact
each layer. Use
recommended
backfill
material.

5. BACKFILL MATERIALS

- The preferred material for backfilling, surrounding and covering the tank is a sand and gravel mixture - 100% smaller than 1 1/2" and approx. 50% smaller than 1/4". Native soil can be used if this mixture is not available.
- All fill must be free of any wood, masonry debris, silt or clay. Sharp objects must not come in contact with the wall of the tank.



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CAUTION

Failure to comply with the points below voids warranty

- A.** Maximum burial depth is 24 inches.
- B.** Do not install tank in water-saturated clay or in high water table.
- C.** Do not install tank across the path of vehicles or heavy equipment.
- D.** Protect tank from sharp objects which could puncture it and cause leakage.
- E.** Tanks are not fire-resistant. Do not store them near an open flame or in heat in excess of 180° F.
- F.** Do not lift tank by lugs unless tank is empty. Always lift using 4 lugs simultaneously.

Norwesco advises against the use of a plastic underground tank for any other uses! Such uses would void any Norwesco product warranty either stated or implied. In no event shall Norwesco be held liable for any consequential damages.

WARRANTY

The Norwesco underground tanks, when installed in accordance to manufacturer's instructions, are warranted against defective materials and/or workmanship for a full three (3) years from date of manufacture. Should a defect appear within the warranty period, Norwesco will supply a new, equivalent tank in replacement thereof. Norwesco's liability is limited to the value of the tank itself and specifically excludes the cost of installation and/or removal and consequential damages.



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Standard and Bruiser Septic and Cistern tank Additional Install Guidelines

During dry conditions, place the tank back in the hole exactly where it needs to go and add 6" - 1' of water in it so it is still moveable then rotate the tank slightly back and forth to get the ribs to fully bed into the sand. After bedding, ensure the tank is level side to side and end to end. Then, fill the tank as you backfill so it will not move during backfilling. Follow main instructions for backfilling process. Ensure that manways and lids are all fastened in place during the backfilling process.

VERY IMPORTANT: Below Ground Tanks should never be placed in low-lying areas where surface water is draining toward and into the tank area as this can create high ground water levels directly around the tank which can collapse or otherwise damage the tank or the fitting connections.

Backfill tank with the material listed in the installation instructions and 1 foot at a time while keeping water approx.. at the same level as the backfill (or a bit ahead of) height throughout the entire backfill process. Compact each foot starting with the end first and then sides as equal as possible and again - 1 foot at a time. Foot compact - avoid use of compacting equipment.

Ensure that absolutely no clay or mucky soil is used or mixed in with the backfill material.

Ground water should be kept away from tank area by drainage at base level of tank and ground cover should be sloped away from the top of the tank - ie: approx. 6" higher over center of tank than the surrounding area so ground is sloped away in all directions to direct water away from the tank area.

A vertical inspection pipe (4" - 8" dia. with removable cap on top) or sump tube can be installed next to the tank if necessary for inspection of ground water level before pump-outs or dewatering with a pump if ever necessary.

Following the main Installation Instructions as well.

In case of partial collapse of tank from allowing water to fill in the tank excavation area after tank has been freshly back-filled - ie: install tank on Fri. and rain over weekend fills into tank hole:

Best things to do at this point is to excavate the tank out fully and remove it from the hole (remove only if necessary to re-excavate and re-bed the tank as below) Will likely be necessary to reshape the tank back to normal by placing on firm level surface and fill $\frac{1}{2}$ to $\frac{2}{3}$ with water and pry up under ends to get bottom ribs to stretch back out from their compression and leave tank for a half day or so.



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Standard and Bruiser Septic and Cistern tank Additional Install Guidelines - Continued

Redo the base elevation leveling with minimum 6" of coarse, loose and levelled sand (no sharp stones) to bed the tank back into.

Ensure excavation is 18 - 24" wider and longer than the tank all the way around the tank.

If the tank is free from buckling and creasing then it may be OK to reuse but will no longer be covered by the manufacturer's warranty.

Contact Barr with any questions.

APPENDIX E

ARBORIST REPORT

July 2, 2020

Scott Groves

City of Coquitlam

Re: Arborist review of washroom construction in Mundy Park

Diamond Head Consulting Ltd. (DHC) was asked by Scott Groves to review the proposed locations of a washroom facility in Mundy Park, Coquitlam. This report serves to compare the effects of building location on the Park's forest. Michael Harray and Cassandra Cummings met with Scott Groves on June 25, 2020. The assessment area was defined in the field.

In preparing this comparison we have evaluated:

- Tree condition
- Physical conflict between building locations and tree's root zones
- Anticipated tree risk to the building location
- Aesthetics
- and Wildlife and ecological value of the trees.

Site description and building options:

The assessment area is a small patch of forest located west of the East Parking Lot, accessed from Mariner Way at Chilko Drive. The forest edge begins at a Right of Way for overhead power lines and a buried gas pipeline. We evaluated the trees within an area north of Interlaken Trail, within an area approximately 25m wide and 10m deep; as described by Mr. Groves.

Two potential building situations were discussed:

1. The "Western" building site. This is farther west on the trail and would be separated from the parking lot by a stand of trees.
2. The "Eastern" building site. This is closer to the parking lot and would be located at the edge of the Right of Way.

We understand that the proposed structures are standard BC- Parks washroom facilities with an underground storage tank and a footprint of ~3m by 5m.

Observations:

The assessed forest is a young, mixed species stand in poor health. Tree species included red alder, paper birch, willow, and western redcedar. Clearing of the adjacent right of way is the most likely origin of the stand. The assessed section of forest appears to be in decline. Approximately half of the trees were dead or dying. Changes in site hydrology and climate change are the most likely culprits for the declining condition of the stand. A dense shrub layer of salmonberry indicates that the soils are rich and capable of supporting trees.

Comparing the two proposed locations:

Table 1 summarizes the effect of the proposed locations on the surrounding forest. A third option was presented where trees between the washrooms and parking lot would be pruned and underbrush removed to improve sightlines between the washrooms and parking lot or kiosk if the building were located farther west on the trail.

Table 1. Comparison of different building locations' effect on the surrounding forest.

Criteria	Western site	Western site with cleared sightline	Eastern site
Number of trees removed	7	15	16
Number of trees retained	12	4	3
Relative risk from trees	Low	Low	Moderate

Summary

Building the washrooms on the western site, farther into the park will require fewer trees to be removed because an existing opening of the forest can be exploited for the siting. Pruning trees and removing underbrush to improve the sightline will require the removal of a similar number of trees as building the washrooms farther east, closest to the parking lot. Pruning the dead trees is not a practical option to improve sightlines. The trees are small and have limited wildlife value that will be similar if they are standing or on the ground.

Overall, the forest in the assessment area is in poor condition. Most trees are dead and dying. No significant, high-value trees will be affected by either location. Dead trees can be retained if the washroom is constructed on the western site, but doing so will come with a moderate risk to those facilities.

Recommendations and Conclusion

We have compared the effect on the forest of two proposed locations for a washroom, and considered how trees would be affected if sightlines were to be improved. This assessment is based on field observations and conversations with the project manager. Exact locations of the trees or the proposed building locations are not known. Successful management of trees through this project will require the presence of a qualified arborist to review tree removals and retention at the time of construction; this report is an educated estimate based on the available information.

If the City decides to prune to improve sightlines or build the washroom on the east siting, we recommend that the removed trees be chipped and replaced. Planting longer-lived species such as Douglas-fir around the washroom will have better long-term outcomes. Chipped woody material can help prevent the reestablishment of invasive species on the disturbed area and help the replacement trees establish.



Figure 1. Map showing approximate tree locations. GPS accuracy is around 5m.



Photo 1: Subject stand of trees as viewed from parking lot.

Tag	Tree Species	DBH	Height	Condition	Tree comments	Retention Value	West site	West with cleanup	East site
2101	Willow (S. scouleriana)	19	8	Moderate	Small, young tree closest to trail and corner of stand. Decent crown condition. A history of heavy pruning. This tree could be retained alone.	Medium	Retain	Retain	Remove
2102	Birch (B. papyrifera)	13	6	Poor	At edge of trail. In decline. Poor structure in crown. Not a good candidate for retention if work is in immediate area.	Low	Remove	Remove	Remove
2103	Birch (B. papyrifera)	10		Dead	A soft snag near edge of trail. Removal recommended to reduce risk to future worksite.	Nil	Remove	Remove	Remove
2104	Cedar (T. plicata)	28	8	Dead	Snag. Reasonably stable. Lowest branches reach ground.	Low	Retain	Remove	Remove
2105	Cedar (T. plicata)	21	12	Dead	Snag. Reasonably stable. Lowest branches reach ground.	Low	Retain	Remove	Remove
2106	Cedar (T. plicata)	25	12	Dead	Snag. Reasonably stable. Lowest branches reach ground.	Low	Retain	Remove	Remove
2107	Birch (B. papyrifera)	20	10	Dead	Snag losing fine twigs. Most likely to fail onto ROW. Not a risk to trail or west site. Remove for east sitting.	Low	Retain	Remove	Remove

2108	Birch (B. papyrifera)	12	10	Dead	Snag losing fine twigs. Most likely to fail onto ROW. Not a risk to trail or west site. Remove for east siting.	Low	Retain	Remove	Remove
2109	Hemlock (T. heterophylla)	14	10	Dead	Soft snag hung up in adjacent trees, leaning toward trail. Not likely to reach trail, but should be removed for east site.		Retain	Remove	Remove
2110	Birch (B. papyrifera)	26	15	Poor	One of the larger trees in the group. Poor crown is in decline but tolerable. This would be the best option for an edge tree if the structure was built on the east site.	Medium	Retain	Retain	Retain
2111	Cedar (T. plicata)	24	8	Dead	Snag. Reasonably stable. Lowest branches reach ground.	Low	Retain	Remove	Remove
2112	Birch (B. papyrifera)	13	6	Poor	Small, suppressed tree in dense group. In decline. Remove for either siting.	Low	Remove	Remove	Remove
2113	Birch (B. papyrifera)	33	16	Poor	Mature tree with failing crown. Unsuitable for retention near either proposed siting.	Low	Remove	Remove	Remove
2114	Cedar (T. plicata)	18	8	Dead	Located at edge of clearing.	Low	Remove	Remove	Remove
2115	Birch (B. papyrifera)	23	6	High Risk	Soft snag with cracked stem. Leans toward trail posing a risk to trail users. Prompt removal is recommended, failure imminent.	Nil	Remove	Remove	Remove
2116	Cedar (T. plicata)	12	6	Dead	Soft base. Remove for east site.	Low	Remove	Remove	Remove

2117	Birch (B. papyrifera)	18	4	Poor	Small tree with declining crown. Leans west. Remove for east siting.	Low	Retain	Remove	Remove
2118	Birch (B. papyrifera)	32	12	Good	Open grown with good crown. This is a solid tree worth consideration.	Medium	Retain	Retain	Retain
2119	Cedar (T. plicata)	10	12	Good	Young tree with good form at north edge of clearing should form edge of west site is selected. Not tagged, inaccessible.	Medium	Retain	Retain	Retain



Please don't hesitate to call us if you have any questions regarding the material discussed in this report.

Sincerely,

Project Staff:

Michael Harrhy, B.Sc., MSFM
Registered Professional Forester
ISA Certified Arborist (PN-8025A)
ISA Tree Risk Assessment Qualified (TRAQ)
BC Wildlife and Danger Tree Assessor
Biologist in Training

Contact Information:

Phone: 604-733-4886
Email: mikeharrhy@diamondheadconsulting.com
Website: www.diamondheadconsulting.com

Insurance Information:

WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506, \$10,000,000
Errors and Omissions: Lloyds Underwriters – Policy #1010615D, \$1,000,000

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- 2) The work undertaken in connection with this report and preparation of this report have been conducted by Diamond Head for the "Client" as stated in the report above. It is intended for the sole and exclusive use by the Client for the purpose(s) set out in this report. Any use of, reliance on or decisions made based on this report by any person other than the Client, or by the Client for any purpose other than the purpose(s) set out in this report, is the sole responsibility of, and at the sole risk of, such other person or the Client, as the case may be. Diamond Head accepts no liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm (including without limitation financial or consequential effects on transactions or property values, and economic loss) that may be suffered or incurred by any person as a result of the use of or reliance on this report or the work referred to herein. The copying, distribution or publication of this report (except for the internal use of the Client) without the express written permission of Diamond Head (which consent may be withheld in Diamond Head's sole discretion) is prohibited. Diamond Head retains ownership of this report and all documents related thereto both generally and as instruments of professional service.
- 3) The findings, conclusions and recommendations made in this report reflect Diamond Head's best professional judgment given the information available at the time of preparation. This report has been prepared in a manner consistent with the level of care and skill normally exercised by arborists currently practicing under similar conditions in a similar geographic area and for specific application to the trees subject to this report on the date of this report. Except as expressly stated in this report, the findings, conclusions and recommendations it sets out are valid for the day on which the assessment leading to such findings, conclusions and recommendations was conducted. If generally accepted assessment techniques or prevailing professional standards and best practices change at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification if generally accepted assessment techniques and prevailing professional standards and best practices change.
- 4) Conditions affecting the trees subject to this report (the "Conditions", include without limitation, structural defects, scars, decay, fungal fruiting bodies, evidence of insect attack, discoloured foliage, condition of root structures, the degree and direction of lean, the general condition of the tree(s) and the surrounding site, and the proximity of property and people) other than those expressly addressed in this report may exist. Unless otherwise stated information contained in this report covers only those Conditions and trees at the time of inspection. The inspection is limited to visual examination of such Conditions and trees without dissection, excavation, probing or coring. While every effort has been made to ensure that any trees recommended for retention are both healthy and safe, no guarantees, representations or warranties are made (express or implied) that those trees will not be subject to structural failure or decline. The Client acknowledges that it is both

professionally and practically impossible to predict with absolute certainty the behavior of any single tree, or groups of trees, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure and this risk can only be eliminated if the risk is removed. If Conditions change or if additional information becomes available at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification of Conditions change or additional information becomes available.

- 5) Nothing in this report is intended to constitute or provide a legal opinion and Diamond Head expressly disclaims any responsibility for matters legal in nature (including, without limitation, matters relating to title and ownership of real or personal property and matters relating to cultural and heritage values). Diamond Head makes no guarantee, representation or warranty (express or implied) as to the requirements of or compliance with applicable laws, rules, regulations, or policies established by federal, provincial, local government or First Nations bodies (collectively, "Government Bodies") or as to the availability of licenses, permits or authorizations of any Government Body. Revisions to any regulatory standards (including by-laws, policies, guidelines and any similar directions of a Government Bodies in effect from time to time) referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification if any such regulatory standard is revised.
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- 8) Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
- 9) Loss or alteration of any part of this report invalidates the entire report.

APPENDIX F

SURVEY DRAWINGS

Mundy Park, adjacent to Mariner Way & Chilko Drive, Coquitlam
PID: 026-803-984

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APPENDIX G

LEKO DRAWINGS

GENERAL NOTES

These documents are to represent the structural design only. It is not the engineers responsibility to determine any locations on site. It is the sole responsibility of the legal land surveyor. Any reference to lot line are for display purposes only. It is the owners sole responsibility to confirm appropriatly to setbacks, or to confirm whether there is a statutory building scheme or other change on title to the land that in any way restrict construction on, or use of the lands.

These drawings are to be held to determine the general character and quality of work, as well as details of the same. Parts not detailed shall be constructed in accordance with the best practice of work of this class, so as to afford the required strength and quality of the design to logically complete the parts they compose.

All necessary fire, theft and liability insurance (including W.C.B.) shall be provided by the contractor, and shall be accounted for.

The Contractor shall be responsible for obtaining all required permits for construction.

Quality of construction and materials used shall generally conform to the British Columbia Building Code, latest edition, or the requirements of the local authorities having jurisdiction, or as otherwise shown on the drawings, whichever is most restrictive.

Check all notes and dimensions on site before commencing any work. Any conflict in dimensioning between notes, or in the requirements of the local authorities having jurisdiction, or as otherwise shown on the drawings, whichever is most restrictive.

Locate all service runs, connections and install to suit the requirements of the authorities having jurisdiction.

Where any doubt exists as to the extent or intent of the work, the Contractor shall seek clarification from the Owner or Project Engineer.

The Engineer reserves the right to reject any materials which, in his opinion, are defective, faulty, or in any way do not conform to the drawings or specifications. The Contractor must bear the full cost of replacing such defective materials without an extra charge.

REFERENCE STANDARDS

British Columbia Building Code, 2018 and documents designated in table 1.3.1.2, therein.

DESIGN LOADS

1. Ground snow load :	100 psf
2. Roof design snow load:	55 psf
3. Floor live load:	50 psf
4. Roof dead load:	61.4 psf
5. Floor dead load:	60 psf
6. Live load deflection floors:	L/360
7. Live load deflection roof:	L/240
8. 1/50 wind load:	20 psf

EXCAVATION AND BACKFILL

The following section provides general guidelines for Excavation and Backfill. All notes herein should be verified by the Geotechnical Engineer.

Remove all topsoil and organic material from building site.

Foundations are to be placed on original undisturbed soil.

Bulk fill below slabs to be well graded pit run gravel, compacted to 95% standard proctor density. Fill to be placed in maximum of 8" lifts.

Compaction testing by a qualified technician, shall be scheduled by the Contractor at the Owner's expense.

Do not backfill until elements providing lateral support, including slab-on-grade, and framed floors, are completed. Backfill simultaneously on both sides of wall below grade.

Protect footings, walls slab-on-grade, and adjacent soil against freezing and frost action at all times during construction.

Do not place concrete in water or on frozen soil.

Backfill for retaining walls shall be clean granular fill compacted in 1'-0" layers.

TEMPORARY BRACING AND SHORING

Make adequate provisions for all loads acting on the structure during erection. Provide temporary shoring and bracing to keep the structure plumb and in true alignment during construction.

Temporary bracing and shoring are the responsibility of the contractor. All shoring shall be designed by a professional engineer retained by the contractor. Prepare shoring drawings signed and sealed by the Engineer; said Engineer is also responsible for field reviews of shoring.

PRECAST CONCRETE

Manufacture, transportation and erection of precast concrete elements shall be by a company specializing in providing precast products and services associated with precast products and services associated with precast concrete construction. This manufacturer must show evidence of completion of similar and comparable work. When requested by the Engineer, written evidence shall be submitted to show experience, qualifications, and adequacy of plant capability and facilities for performance of contract requirements.

The manufacturer shall check, prior to erection, all bearing surfaces, and location and alignment of inserts and anchorage items cast in the structure, and report any deficiencies to the Engineer in writing. Corrections of deficiencies are the responsibility of the General Contractor.

Design of precast concrete shall be in accordance with CSA A23.3-14 Article 16.

Shop drawings shall show the complete work, and include a layout plan, fabrication details, estimated camber, connection and anchorage details, and component identification marks. Identification shall be marked on the manufactured units to aid correct field placement.

Design changes will be permitted only after the Engineer's review of the manufacturer's proposed design supported by complete design calculations and drawings.

Design changes shall provide an installation equivalent to the basic intent without incurring additional costs to the Owner.

Manufacturing, testing, and erection procedures shall be in compliance with CSA A23.4-16.

At all times protect the concrete from potential damage that may result from rain, snow, sun and temperature during and after placing.

CONCRETE MIX DESIGN		
Category	Design Value	Notes
Exposure Class	A-1	Use HSe Cement
Strength	35 MPa @ 28d	
Air Content	4.0% - 7.0%	
Aggregate Size	Max. 20mm	CSA/CAN A23.4
Water Cement Ratio	0.40	
Admixtures		CSA/CAN A23.4

DESIGN NOTES:

01: LEKO PRECAST LTD. SHALL NOT BE RESPONSIBLE FOR ANY INSTALLATION PRACTICES FOLLOWED ON-SITE UNLESS PREFORMED BY LEKO PRECAST LTD.

CONCRETE REINFORCEMENT

Submit acceptable evidence, if requested, that materials conform to applicable standards. A certified, properly correlated mill test from Canadian Mills, showing physical and chemical analysis, is acceptable evidence.

All reinforcing steel and placement is subject to the approval of the Engineer, and no work shall be covered or concrete placed prior to approval.

Testing of reinforcing steel, if required, shall be done as directed by the Engineer and will be paid for by the owner.

All reinforcing shall be kept free of all oil, mud, etc., and contaminating material at all times. Under no conditions will any contaminated steel be permitted in the work. All steel stocks on the job are to be adequately blocked up from the earth to satisfy the Engineer.

Reinforcing steel 10M and larger shall be deformed and shall be new billet stock conforming to CSA G30.18-M82, Grade 400 R.

Tie wire shall be 1.52mm annealed iron wire.

Reinforcement is to be accurately positioned according to the drawings and rigidly supported and secured in place with approved chairs, bolsters, spacers, hangers and/or risers, tie and support bars, and other approved devices, and all tied in place with 1.52mm annealed iron wire. All reinforcement shall be placed within the permitted tolerances of CSA A23.1-09.

Reinforcing in footings must be blocked up with approved masonry blocks or suspended from formwork with tie wire.

Do not field bend reinforcement unless authorized by the Engineer.

Minimum reinforcing bar lap splicing (except as noted otherwise):
10M bars = 16" (1'-4") 20M bars = 36" (3'-0")
15M bars = 24" (2'-0") 25M bars = 44" (3'-8")

CONCRETE ACCESSORIES

The General Contractor shall be responsible for the design and inspection of all formwork, falsework, ties, shoring and re-shoring to maintain structural integrity and stability and to withstand any loads likely to be imposed upon them. Adhere to Workers' Compensation Board regulations.

Form release agent shall be mineral oil type - use Uniform D by Universal Concrete Accessories, Noxcrete, Duogard or other pre-approved form release agent. Application is to be according to manufacturer's directions. A consistency of colour on all exposed walls will be insisted upon by the Engineer, and in order to obtain the same, the proper use of form release agent is mandatory.

Ties and spreaders shall be commercially manufactured types, minimum tensile strength of 13 KN, adjustable to permit tightening of forms, not leaving any metal within 25mm of the concrete surface. Wire ties are not acceptable.

Unless otherwise specifically authorized or ordered by the Engineer, no formwork, shoring, bracing or other device used in retention of and support of cast concrete shall be removed before a lapse of (7) full and normal curing days (28 days for suspended slabs) from the time of placement of concrete.

CONCRETE FINISHES

Provide steel trowel finish for slabs to be left exposed or to receive applied floor finish.

Concrete slabs to receive ceramic tile to be screeded off to true lines

and levels shown on drawings. Make ready to receive finish.

Materials:

1. Curing and hardening compound: clear liquid curing and sealing compound to ASTM C-30g Type 1, and CGSB 90-GP01A Standard.
2. Lumber: #3 Grade softwood.
3. Retardant: Initially set retarder conforming to ASTM 494 by W.R. Grace and Co.

CONCRETE ANCHORS

Predrilled adhesive anchors are Hilti Products or Approved Equivalent.

Anchors shall be installed according to manufacturer's instructions.

HILTI Epoxies to be used as follows:

1. HY-200 max: Clean, dry, match tolerance hole diameter, and hammer drill hole.
2. All holes to be blown out with air gun and brushed prior to injecting epoxy.
- Follow Manufacturer's hole cleaning requirements / procedures.

Threaded rods to be HILTI HAS Rods as below, see drawing details for selected rods:

1. HILTI HAS E Standard (ISO 898 Class 5.8)
2. HILTI HAS Super (ASTM 193 B7)
3. HILTI SS (AISI 304/316 SS)
4. HILTI HIT-TZ Rods & HILTI TZ Rods+HY-200 max can be used in un-cleaned holes.

Alternate Rods such as all threaded rods may be acceptable,

if they meet the following HILTI Requirements:

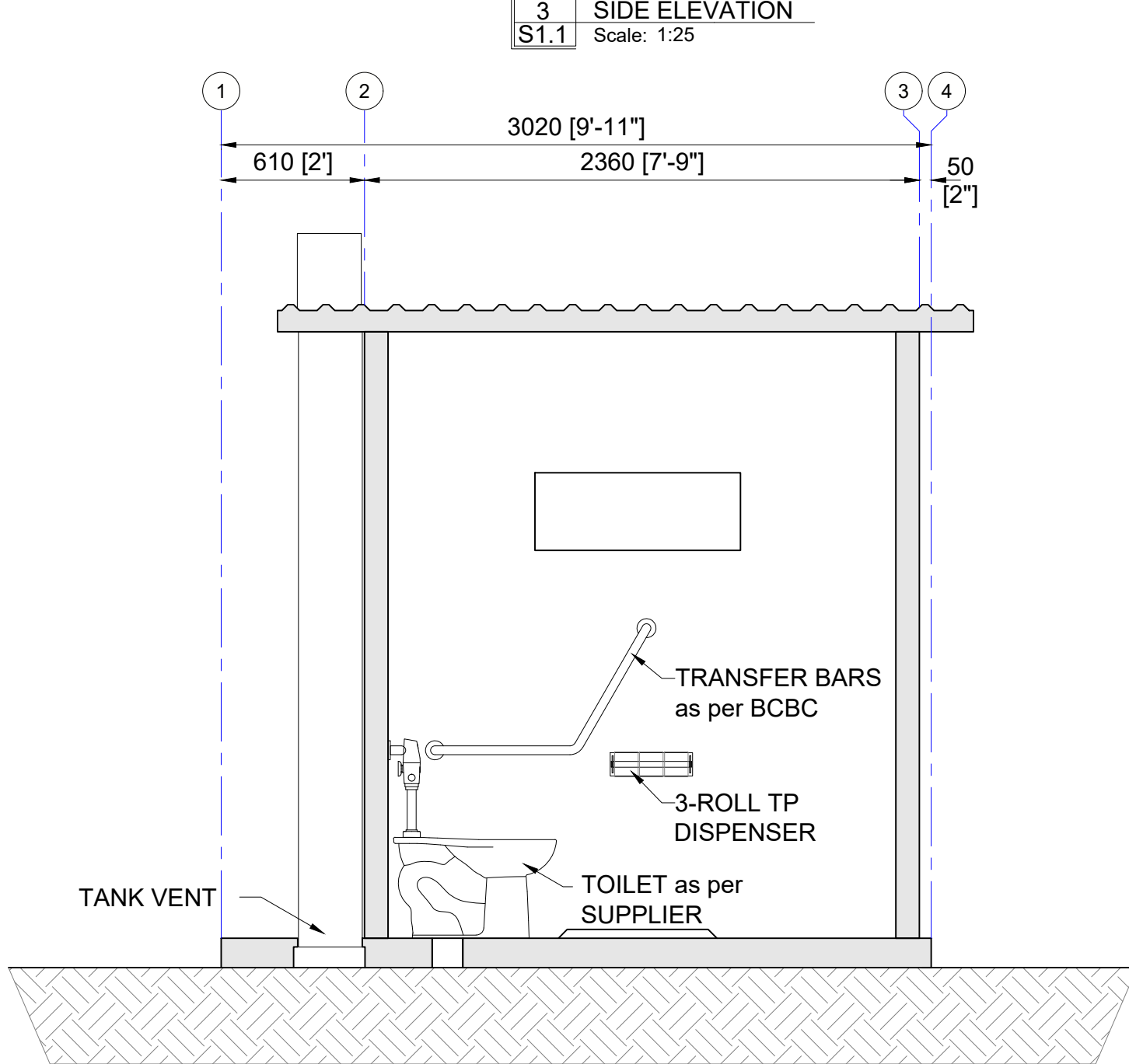
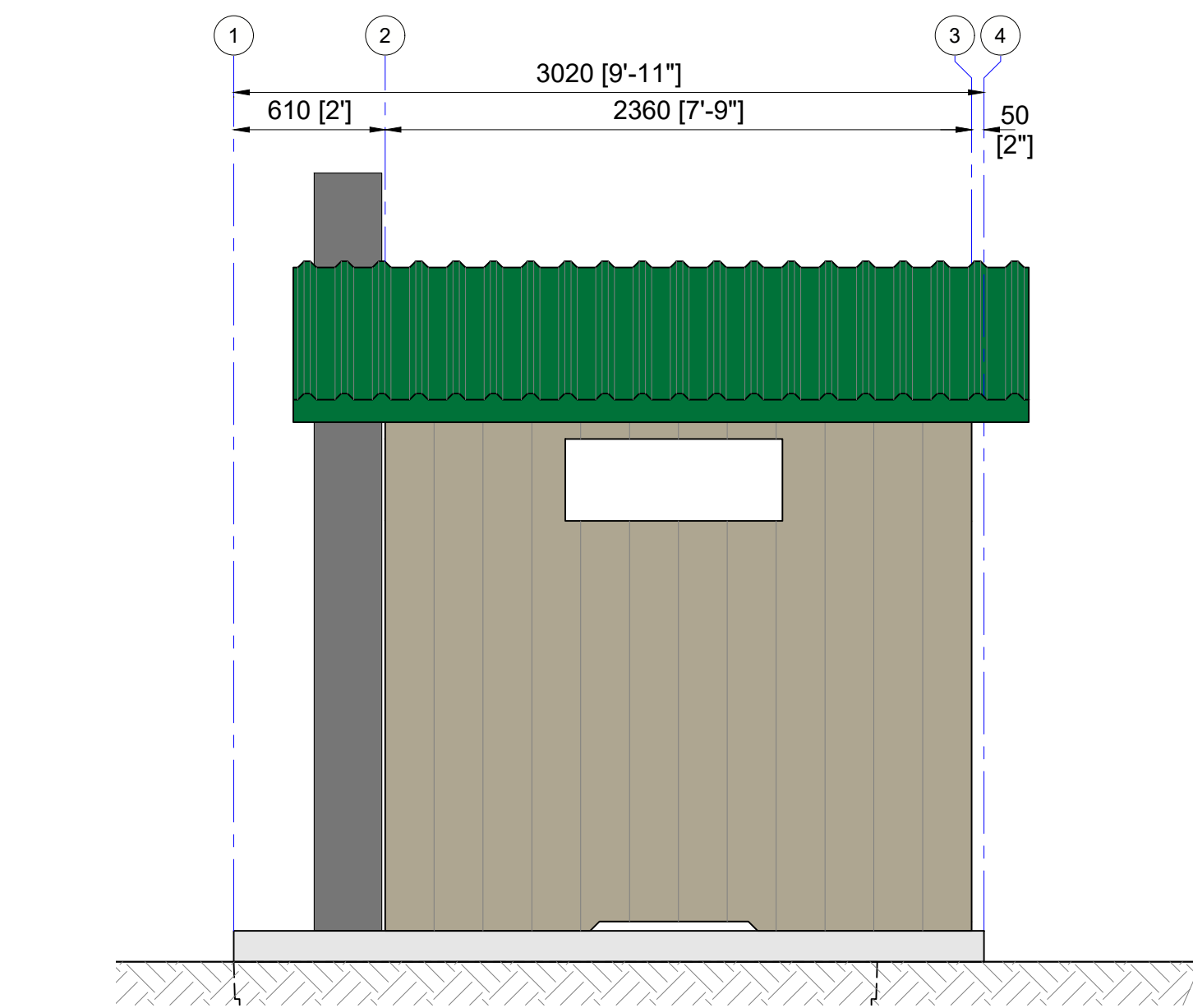
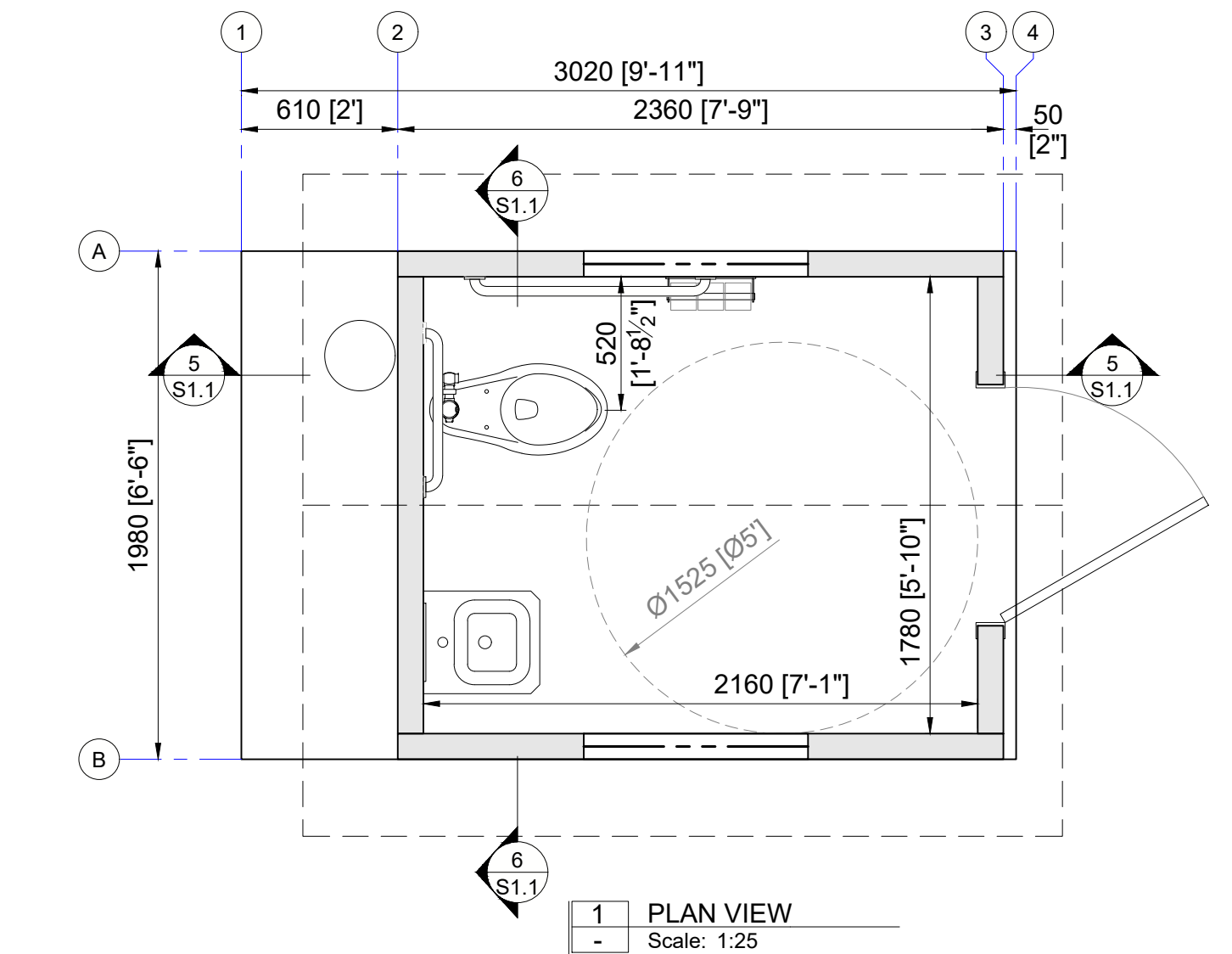
1. Rods shall be free of oil and grease.
- Clean rods should be stored indoors or in sealed containers.
- Rods shall be galvanized according to ASTM B633, including cut ends.
- Rod ends must be coated in the same manner as the shaft.
- Spray paint rust inhibitors are not acceptable.
- Rods shall meet minimum mechanical / chemical requirements as Hilti Rods.
- SS nuts should have threads coated with wax to prevent galling (bonding between rods and nuts).

Injection of adhesives shall be performed in accordance with manufacturer's instructions that accompany the product to produce an air-void free injection. Use HILTI PROFI KIT for proper hole preparation.

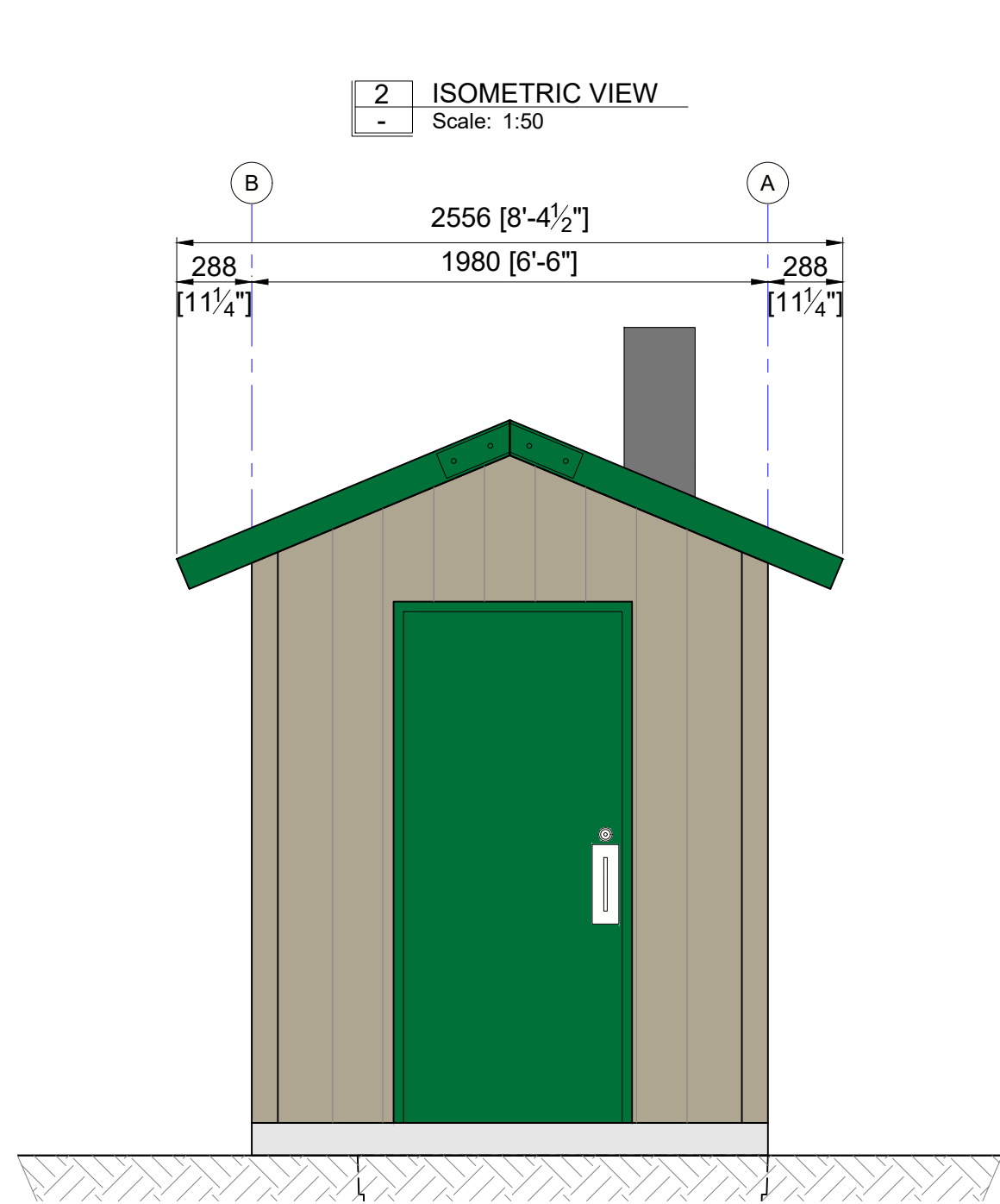
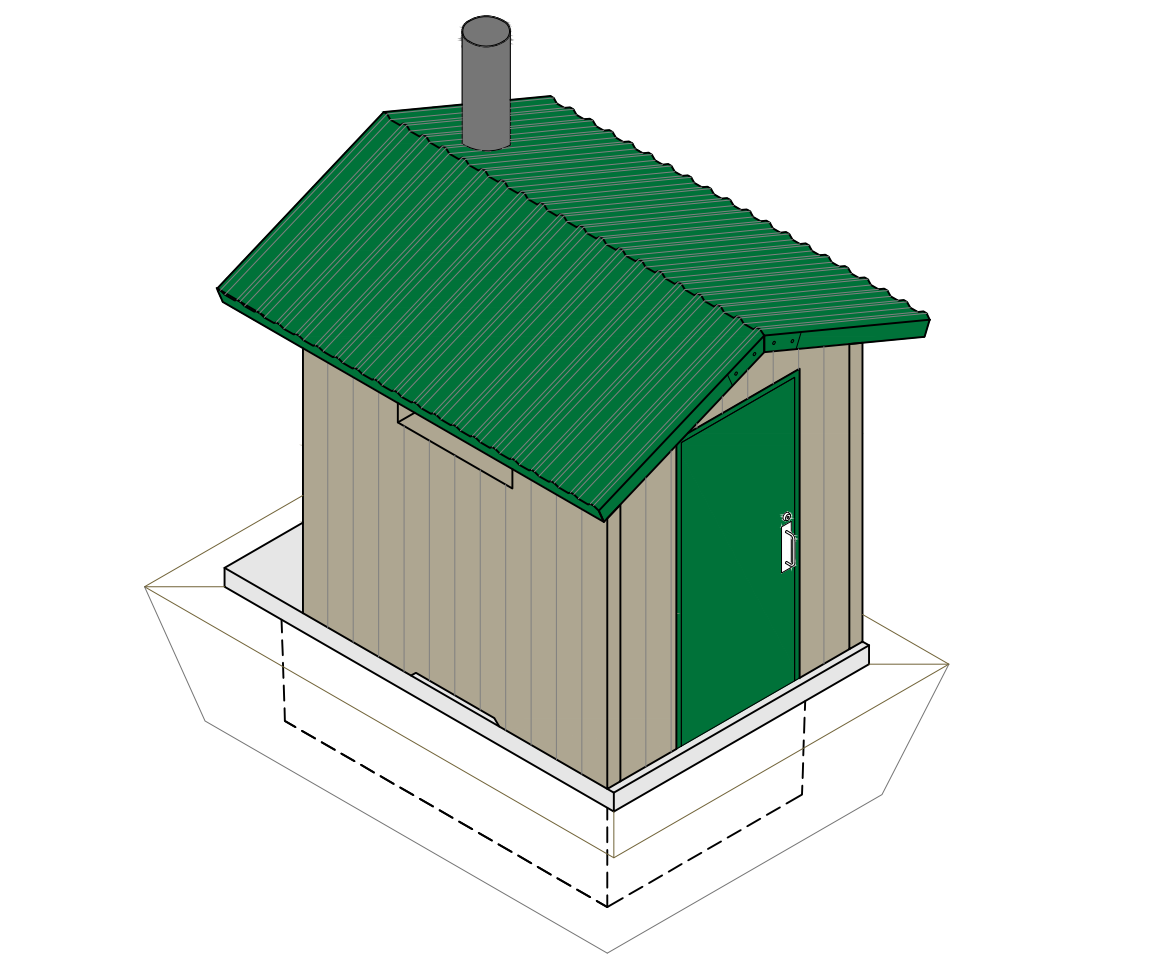
Drill shall be performed with a rotary hammer drill and carbide tipped drill bit in accordance with instructions accompanying adhesive cartridges.

Alternate drilling methods, such as diamond coring, must be approved by the Engineer of Record.

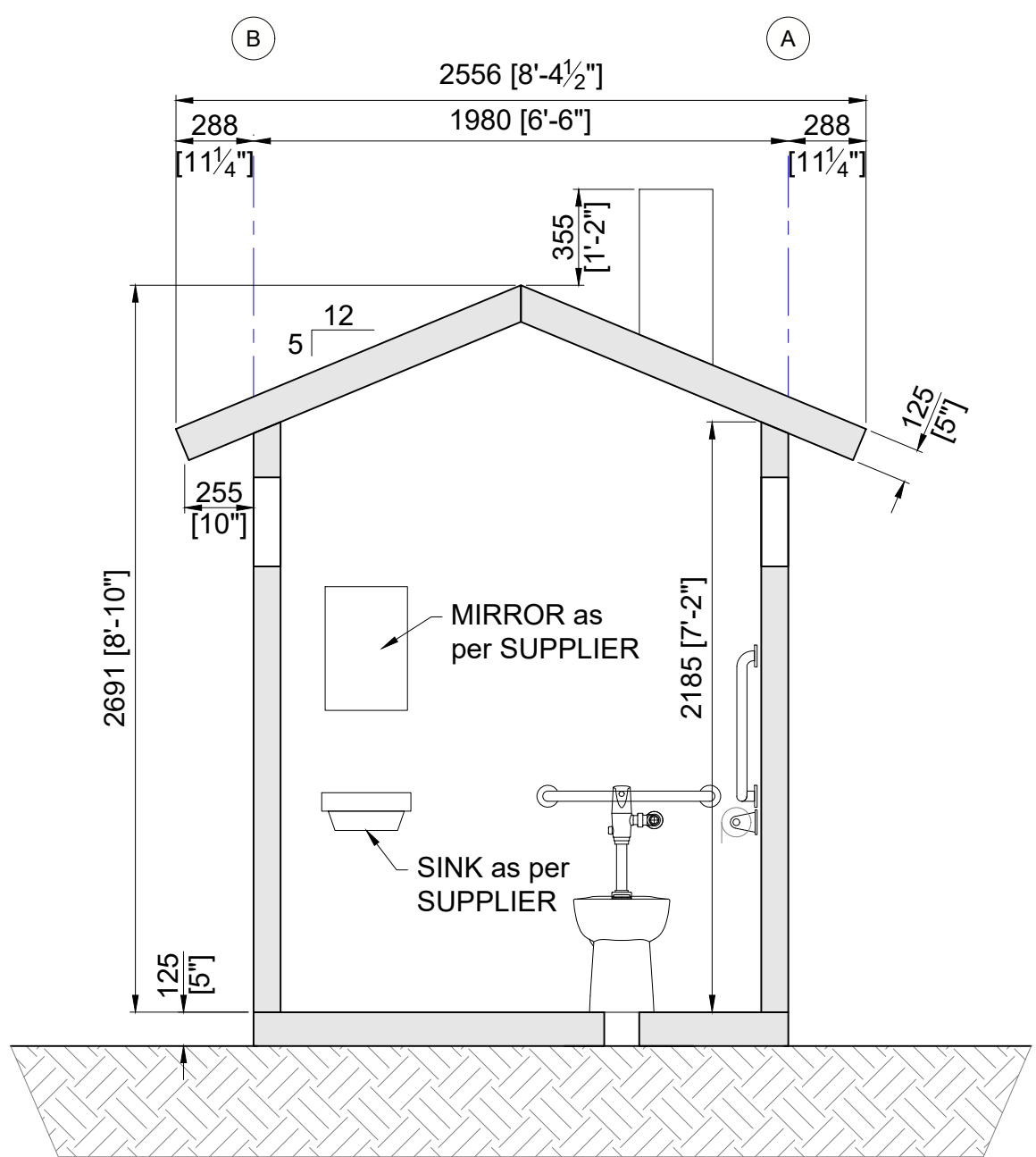
Anchor capacity used in design is based on the guidelines published by HILTI. Alternative Fastening Systems proposed by the Contractor shall be submitted to the Structural Engineer for review and approval. Manufacturer's published data, including load resistance's, in-service & installation temperature, creep testing, freeze/thaw testing and comprehensive installation instructions must be included in proposal.



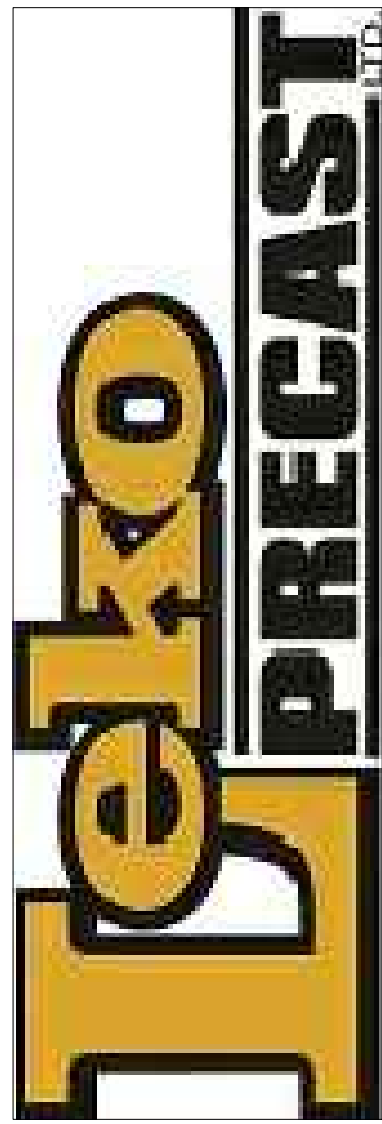
5 BUILDING SECTION
S1.1 Scale: 1:25



4 FRONT ELEVATION
S1.1 Scale: 1:25



6 BUILDING SECTION
S1.1 Scale: 1:25



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LEKO PRECAST Ltd. 2021

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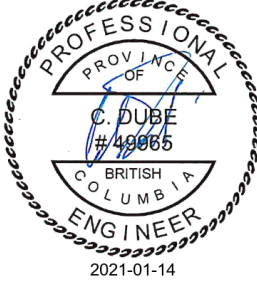
Revisions(s)	Date	Description Issued for Review
No	A	

PROJECT
WOODY TOILET - W2002
- Without vestibule
- With flush toilet / sink

DRAWING
SPECIFICATIONS &
ASSEMBLED UNIT
SIZE / LAYOUT

CONSULTANTS
b BOURCET ENGINEERING
821 Fairweather Rd.
Vernon, B.C. V1T-8T9
Tel: 250.542.0608
www.BourcetEngineering.com

SEASealed for Internal Use

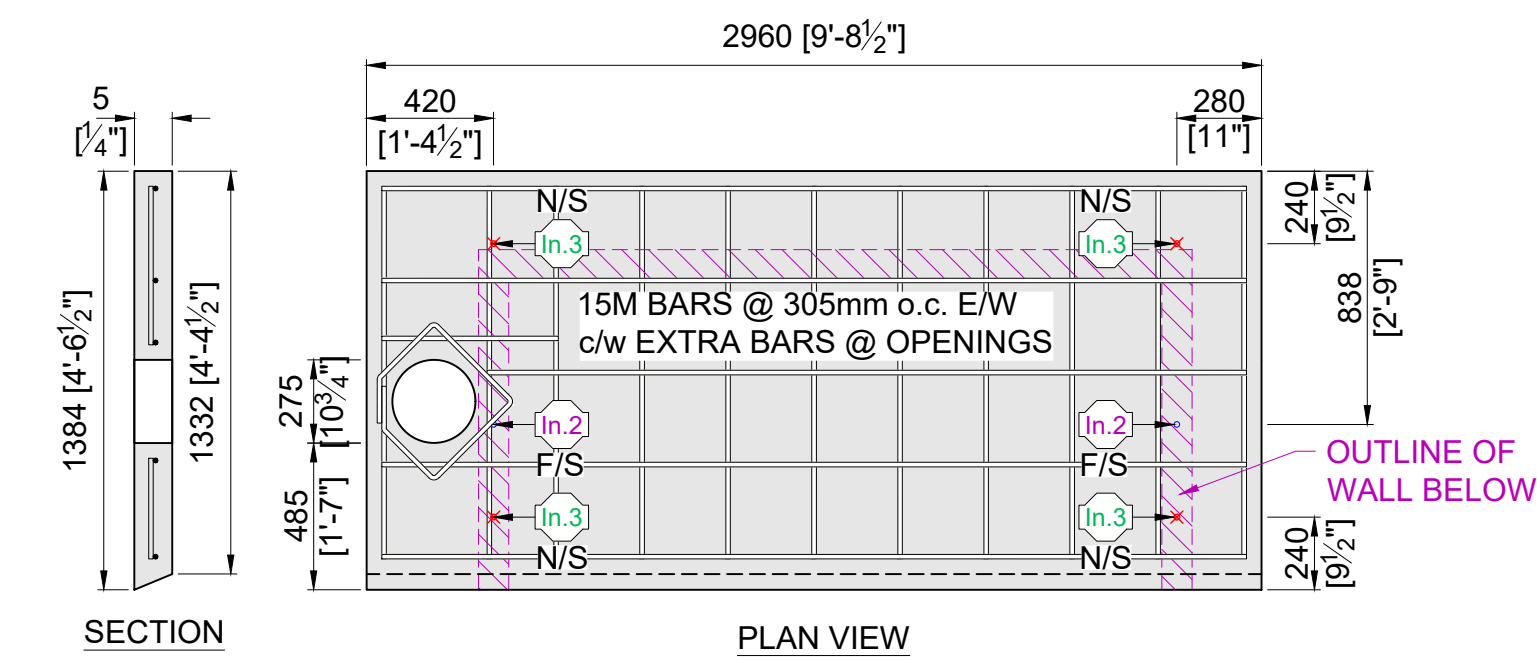


Disclaimer Notice:
Engineering is for panel design Only.
Specific information required for compliance with local codes & required inspections is the responsibility of the manufacturer and their representative(s).

FILE 19-467
DATE January 14, 2021
SCALE AS NOTED
DRFT. D.A.H.
DESIGN C.DUBÉ, P.Eng

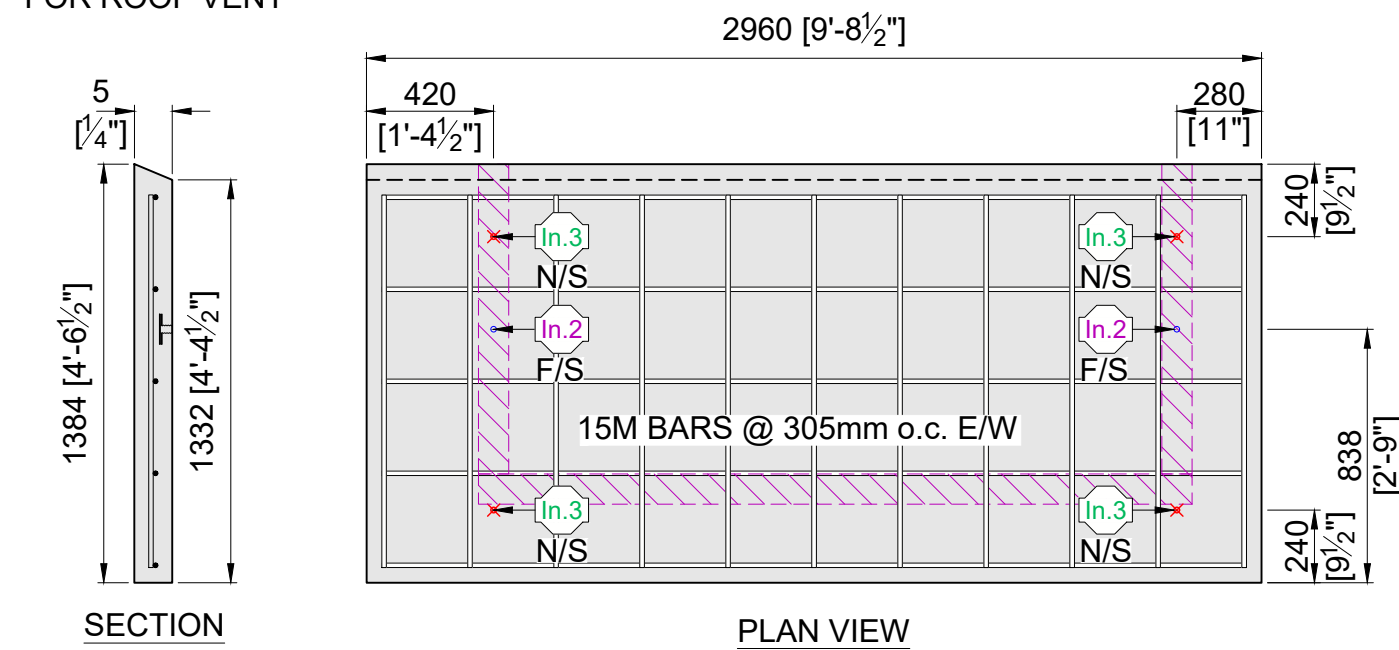
SHEET NUMBER S1.1	REV A
OF 2	

DRAWINGS TO BE PRINTED IN COLOUR AND ON 24x36 SHEET SIZE MIN. FOR PROPER REPRESENTATION

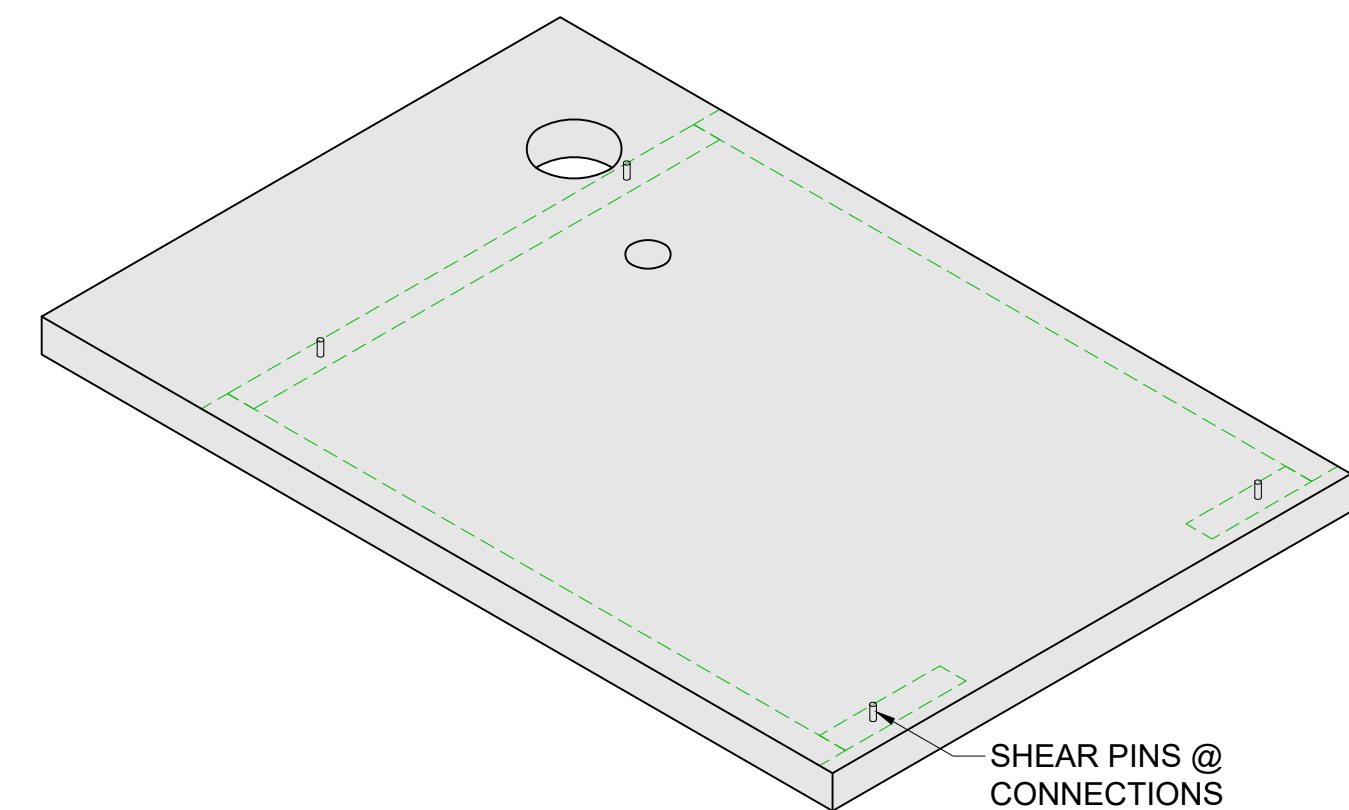


1 ROOF PANEL #1
Scale: 1:25 QTY.1

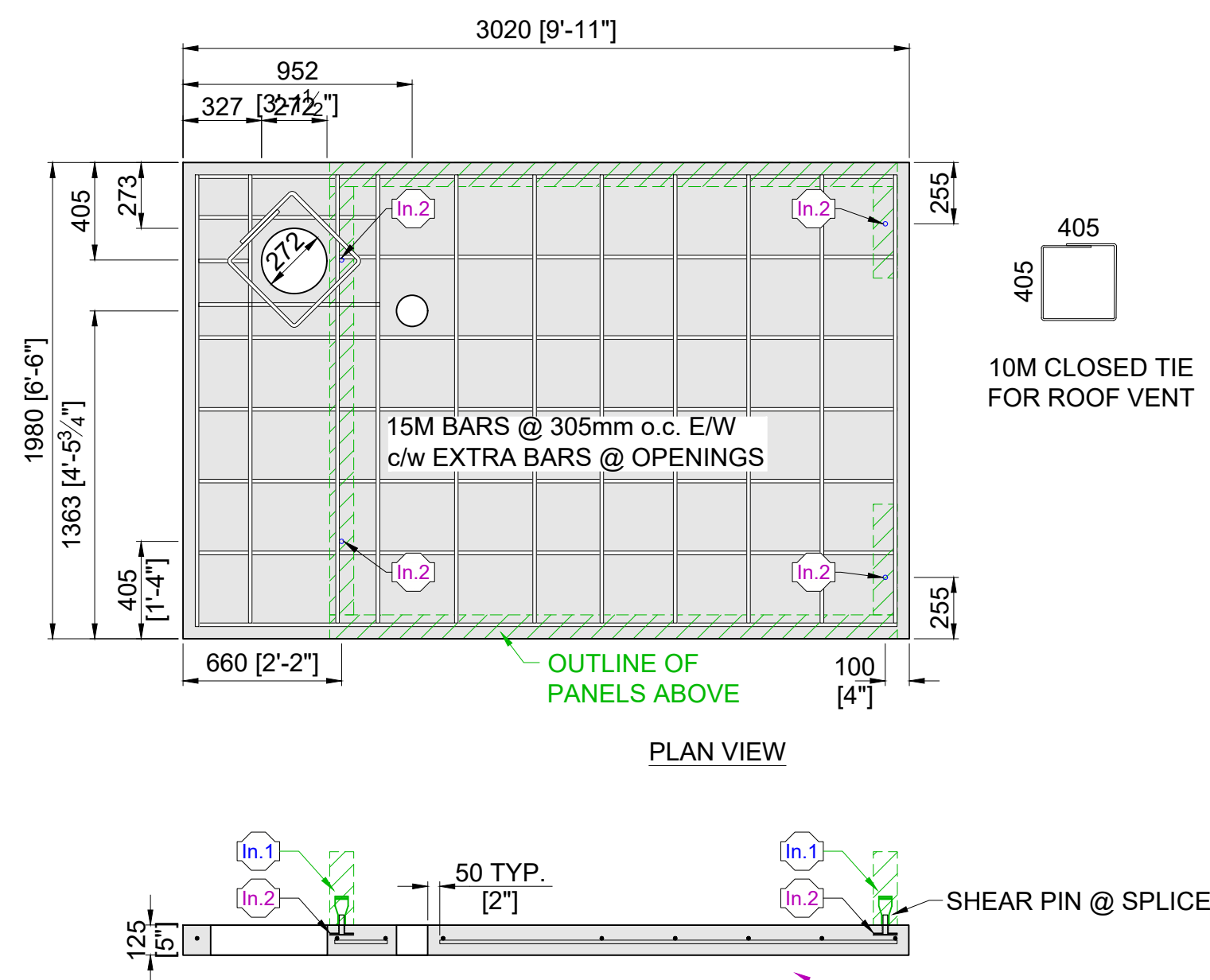
10M CLOSED TIE FOR ROOF VENT



2 ROOF PANEL #2
Scale: 1:25 QTY.1



ISOMETRIC VIEW



3 FLOOR PANEL
Scale: 1:25 QTY.1

10M CLOSED TIE FOR ROOF VENT

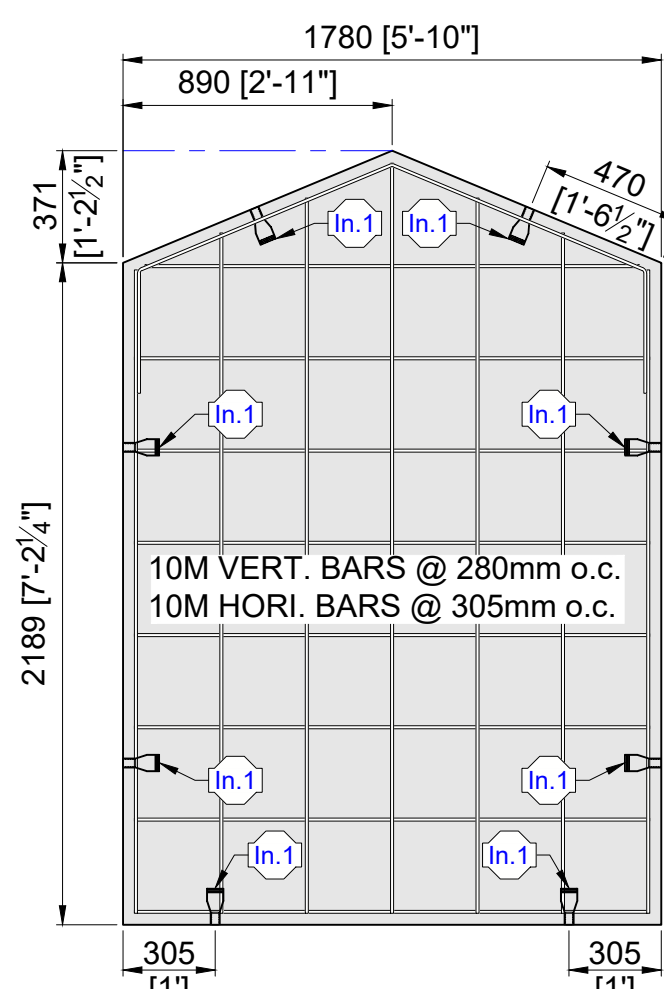
SHEAR PIN @ SPLICE

OUTLINE OF VAULT BELOW

DESIGN NOTES:

- LEKO PRECAST LTD. SHALL NOT BE RESPONSIBLE FOR ANY INSTALLATION PRACTICES FOLLOWED ON-SITE UNLESS PREFORMED BY LEKO PRECAST LTD.
- MIN. REINFORCING COVER 50mm CLEAR OF CONCRETE FACE

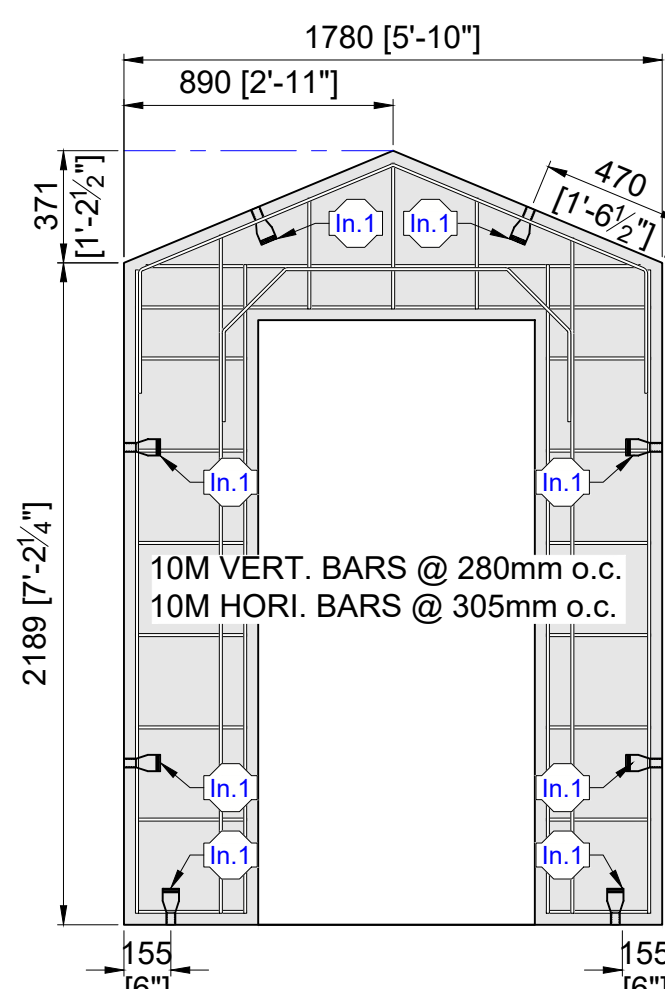
Connections				
Label	Category	Type	Size	
In.1	Ferrule Concrete Insert	ECF-2	3/4" (19mm)	
In.2	Ferrule Concrete Insert	ITSF	3/4" (19mm)	
In.3	Threaded Insert		3/4" (19mm)	
An.1	Drop-In Anchor	Ucan IPA 1258	1/2" (13mm)	
V1	Void for Grouted Connection		1 1/2" (38mm)	



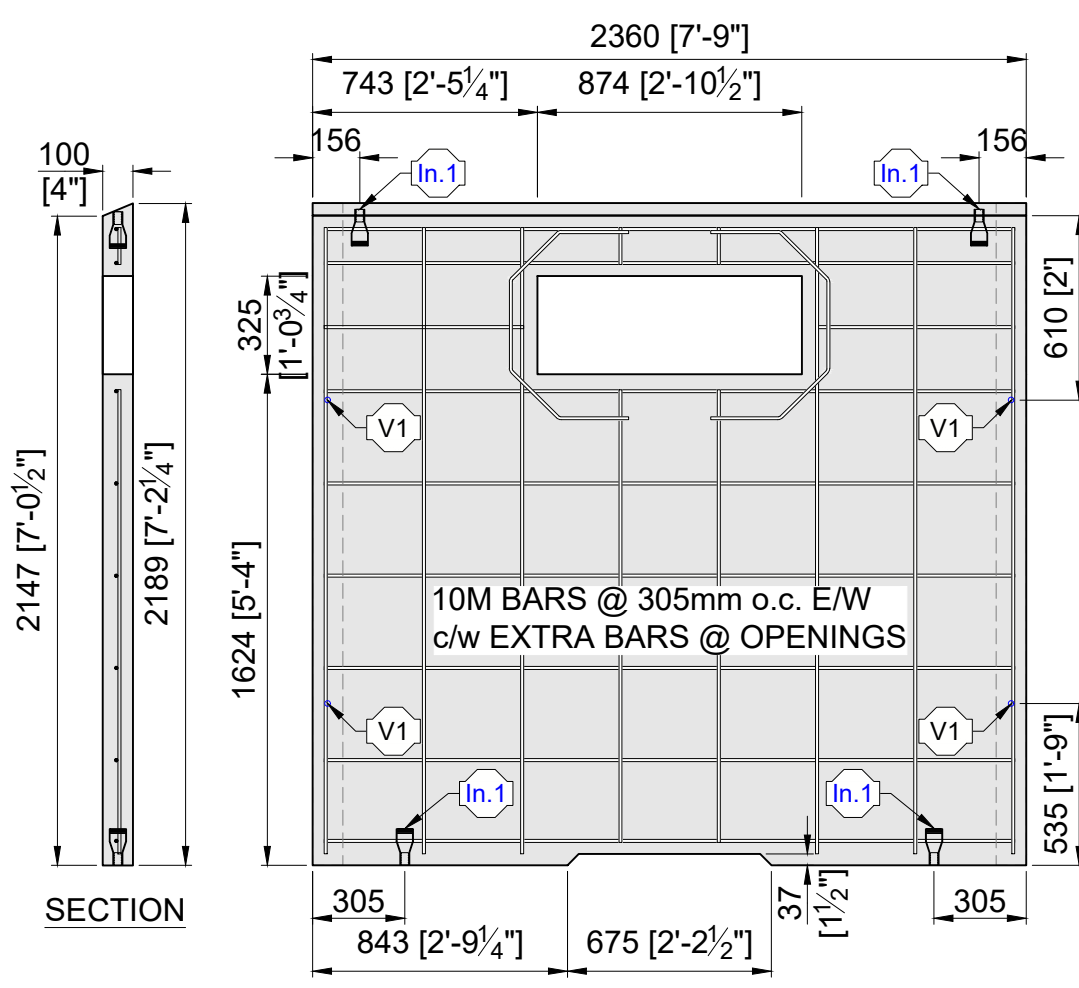
4 WALL PANEL
Scale: 1:25 QTY.1

10M TOP BAR FOR END WALL

10M CORNER BAR FOR DOOR FRAME

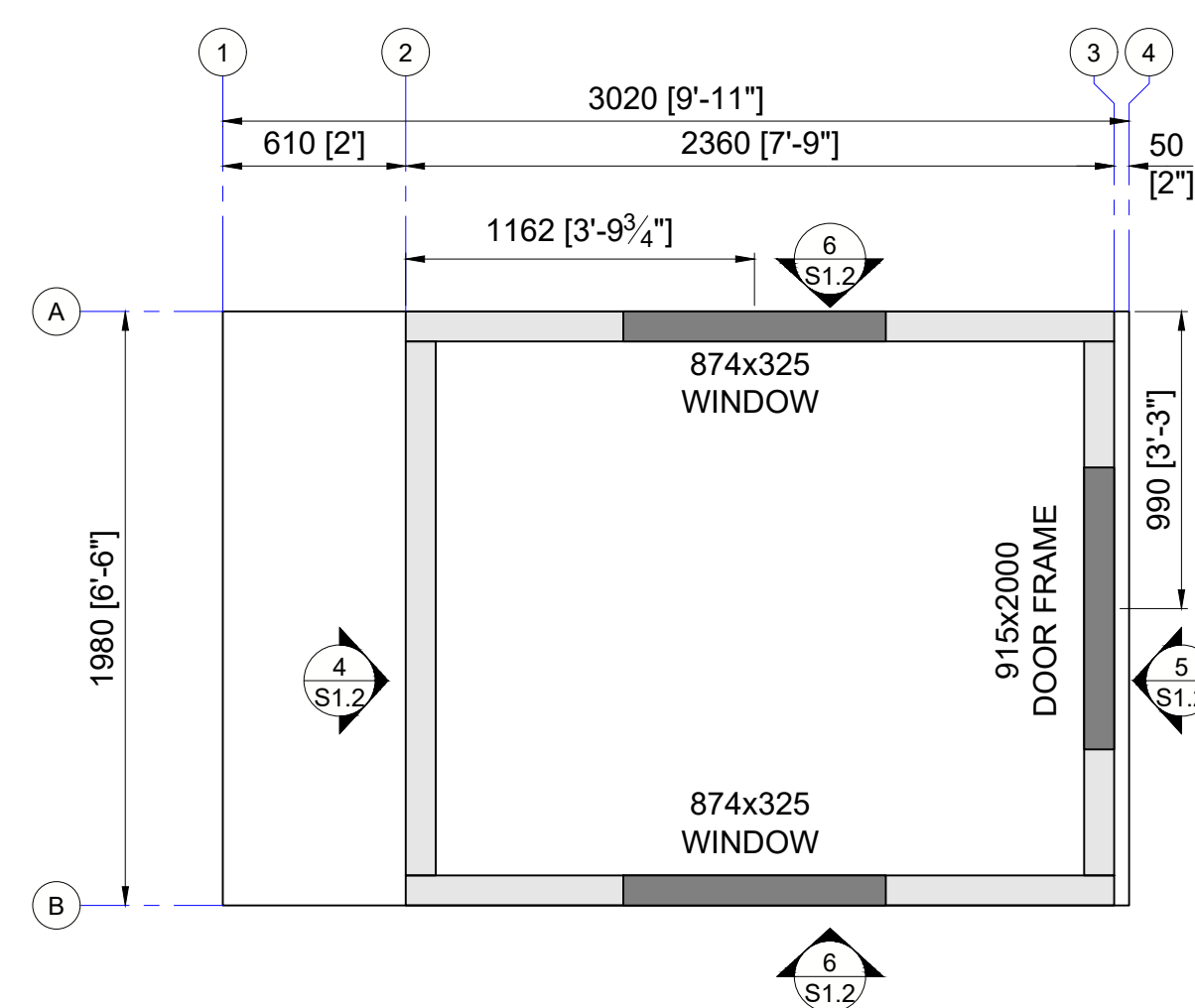


5 WALL PANEL
Scale: 1:25 QTY.1

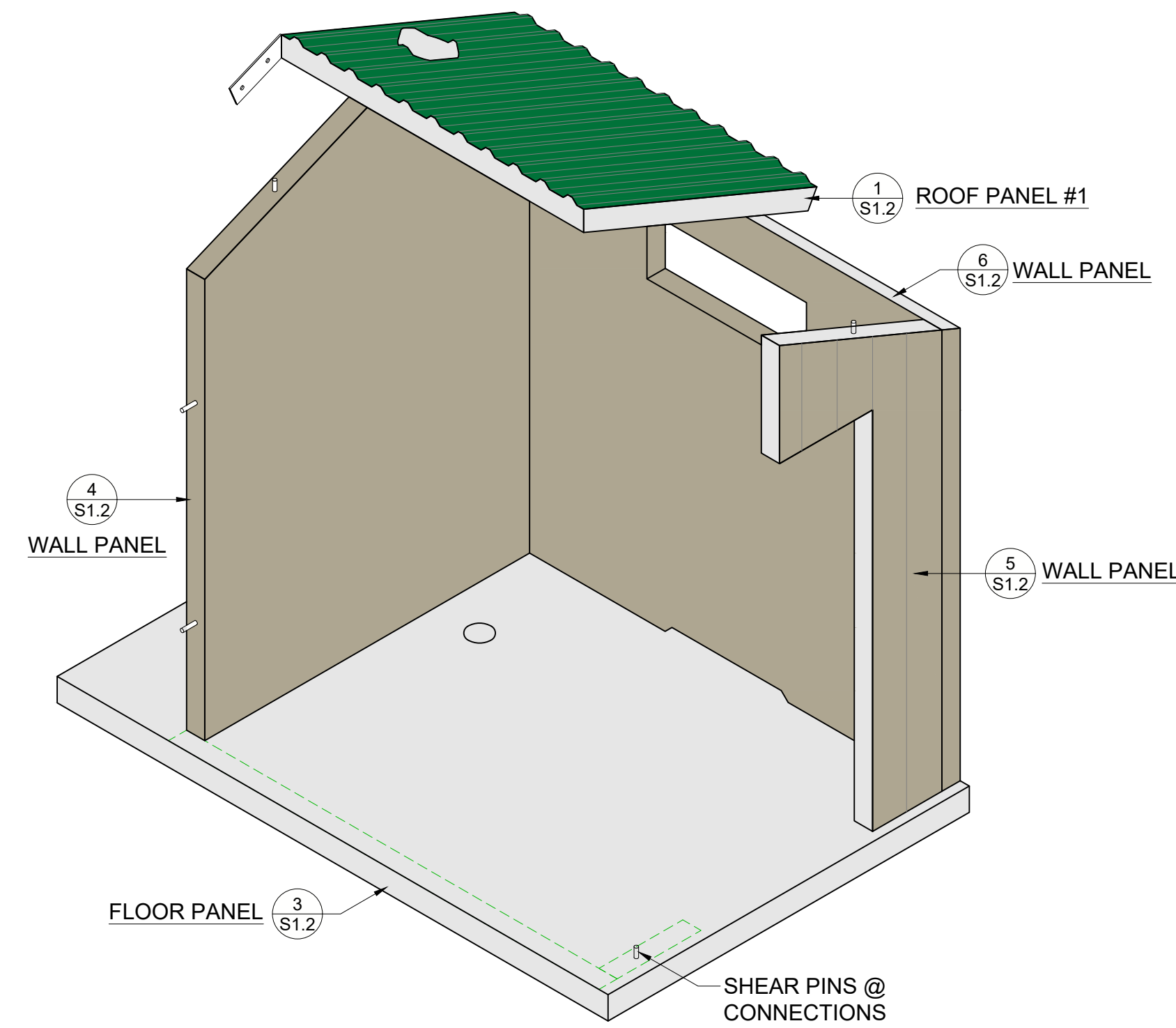


6 WALL PANEL
Scale: 1:25 QTY.2

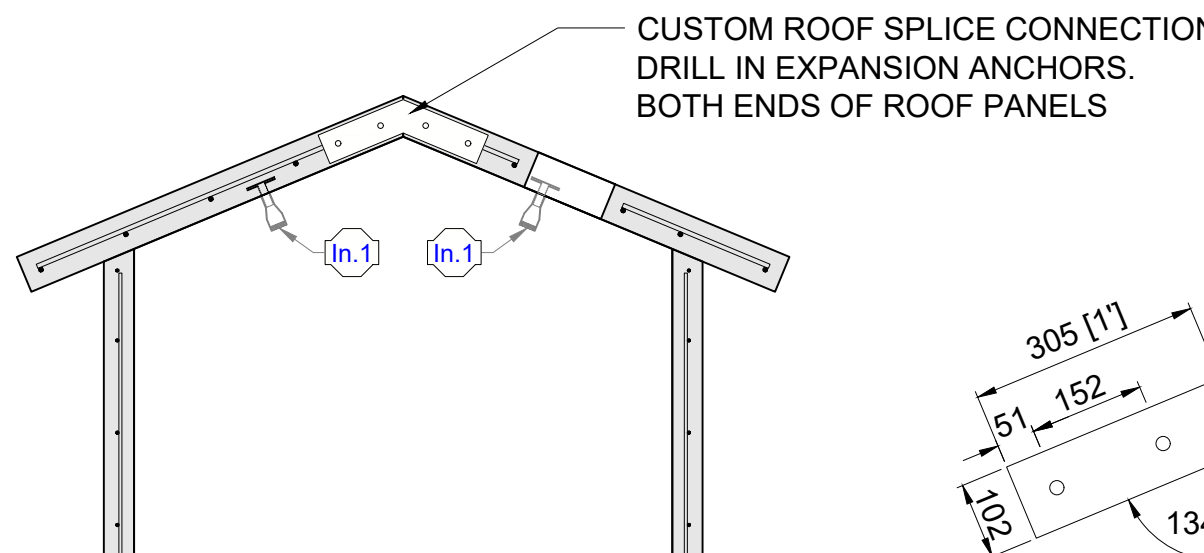
10M CORNER BAR FOR WINDOW FRAME



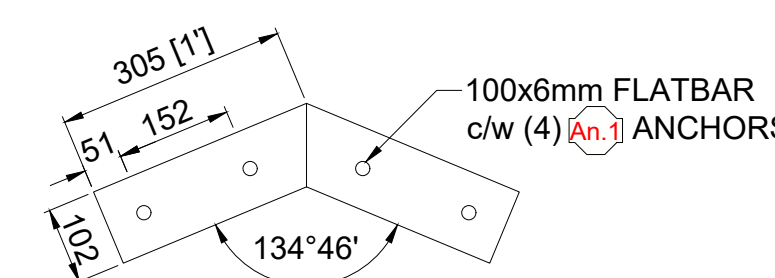
7 PANEL LAYOUT PLAN
Scale: 1:25



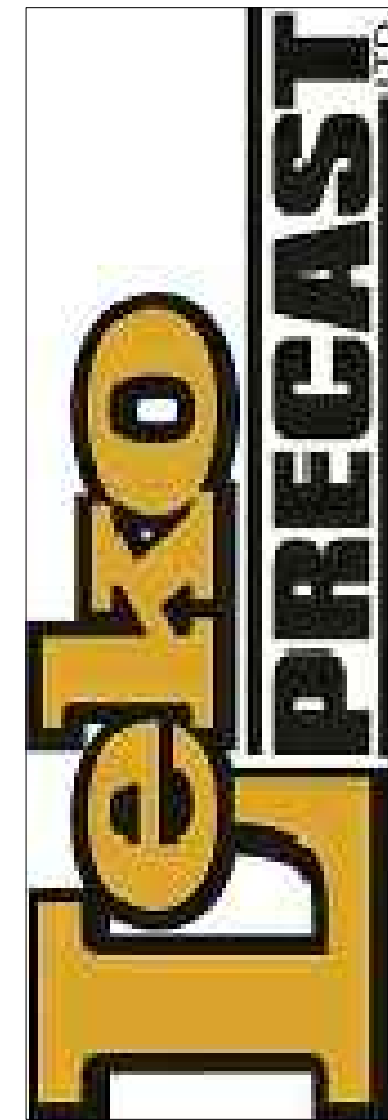
8 ASSEMBLY CUT-AWAY
Scale: 1:25



9 ROOF CONNECTION SECTION
Scale: 1:25



10 CUSTOM CONNECTION
Scale: 1:10 QTY.2



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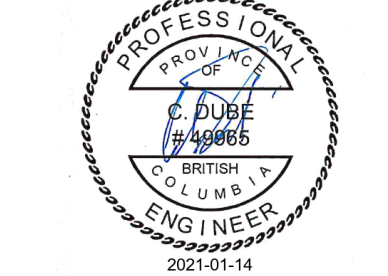
Revisions(s)	Date	Description	Issued for Review
No.	A		

PROJECT
WOODY TOILET - W2002
- Without vestibule
- With flush toilet / sink

DRAWING
PRECAST PANEL DESIGN

CONSULTANTS
BOURCET ENGINEERING
821 Fairweather Rd.
Vernon, B.C. V1T-8T9
Tel: 250.542.0608
www.BourcetEngineering.com

SEASealed for Internal Use



Disclaimer Notice:
Engineering is for panel design Only.
Specific information required for compliance with local codes & required inspections is the responsibility of the manufacturer and their representative(s).

FILE 19-467
DATE January 14, 2021
SCALE AS NOTED
DRFT. D.A.H.
DESIGN C.DUBÉ, P.Eng

SHEET NUMBER
S1.2
REV
A

OF 2



**City of Coquitlam
REQUEST FOR PROPOSALS
RFP No. 21-003**

**Construction of Washroom Buildings at Mundy Park – Chilko
Entrance**

Proposals will be received on or before 2:00 pm local time

Friday, February 12, 2021
(Closing Date and Time)

INSTRUCTIONS FOR PROPOSAL SUBMISSION

Proposal submissions are to be consolidated into one PDF file and uploaded electronically through Q-file, the City's file transfer service accessed at website: qfile.coquitlam.ca/bid

1. In the "Subject Field" enter: RFP Number and Name

2. Consolidate files into 1 .pdf file and "Send"

(Ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete and was sent to email: bid@coquitlam.ca)

Proponents are responsible to allow ample time to complete the Proposal Submission process. If assistance is required phone 604-927-3037.

PROPOSAL SUBMISSION FORM

Complete and return this section along with:

☐ **Consent of Surety**

Submitted by: _____
(Company Name)

1. PRICE**1.1. Schedule of Quantities and Prices – Construction of Washroom Buildings at Mundy Park Chilko Entrance**

All service provided is to be in accordance with all governing regulatory authorities within the City of Coquitlam. Unit price and lump sum prices are to be held firm to completion of the work.

Prices proposed are to be all inclusive; therefore, include all labour, material, tools, equipment, transportation, fuel, supervision, disposal fees, permit fees and any other items required for provision of the Services (exclude GST):

ITEM	SCHEDULE OF VALUES	QTY	UNIT	AMOUNT
1	Mobilization	1	LS	\$ -
2	Demobilization	1	LS	\$ -
3	Supply and installation of water-fountain	1	LS	\$ -
4	Supply, installation, maintenance and removal of temporary Erosion and Sediment Control facilities	1	LS	\$ -
5	Common excavation to achieve design grades of compacted native material, including disposal	1	LS	\$ -
6	Granular base and building slab preparation	1	LS	\$ -
7	Import fill	1	LS	\$ -
8	Drain rock w/ Romex ROMPOX DEKO-PRO	1	LS	\$ -
9	Concrete surfacing c/w 100mm depth of granular base	1	LS	\$ -
10	New fence as per COQ-L5A Detail	1	LS	\$ -
11	Parking lot accessibility modifications	1	LS	\$ -
12	Sanitary System including tanks (all works complete)	1	LS	\$ -
13	Waterworks (all works complete)	1	LS	\$ -
14	Growing medium supply and install	1	LS	\$ -
15	Hydro seed areas including supply & install	1	LS	\$ -
16	2x6 Pressure treated edger	1	LS	\$ -
17	Site electrical (all works complete) including kiosk wrap. Image will be provided by the City.	1	LS	\$ -
18	Coordination with LEKO precast	1	LS	\$ -
19	New Gravel Pathway	1	LS	\$ -
20	New asphalt pathway	1	LS	\$ -
21	New exterior painting of the walls & roof as per COC colors and graphics specified. Stencils will be provided by the City.	1	LS	\$ -
22	Supply and installation of all washroom fixtures	1	LS	\$
23	Interior architectural works	1	LS	\$

24	Interior plumbing works	1	LS	\$	
25	Interior electrical works	1	LS	\$	
26	24hr leak test for holding tanks	1	LS	\$	
27	Supply and install visual alarm indicator for holding tanks	1	LS	\$	
28	New bollards as per drawings	1	LS	\$	
29	Close out documentation including as-built drawings, survey (CAD)	1	LS	\$	
30	Labour and Materials Payment Bond	1	LS	\$	-
31	Performance Bond	1	LS	\$	-
OTHERS Not Listed Above					
1		1	LS	\$	-
2		1	LS	\$	-
TOTAL PRICE (exclude GST)				\$	

LS=Lump Sum

1.2. Optional Prices

The following is a list of Optional Prices and forms part of this Contract, upon the acceptance of any or all of the Optional Prices. The Optional Prices are a deduction from or addition to the Total Proposal Price and do not include GST. **DO NOT state a revised Total Proposal Price.**

ITEM	DESCRIPTION	QTY	UNIT	AMOUNT
1	Accessible path and parking Optional price 1 is an <u>extra</u> to add accessible path and parking. Refer to civil.	1	LS	\$ -
2	Asphalt restoration Optional price 2 is an <u>extra</u> to add a portion of the accessible path regrading. Refer to civil.	1	LS	\$ -
3	Concrete slab for holding tanks Optional price 3 is a <u>credit</u> to delete the concrete slab under the holding tanks. Refer to Geotechnical Memorandum in project specification.	1	LS	\$ -
OTHERS Not Listed Above:				
1		1	LS	\$ -
2		1	LS	\$ -
TOTAL PRICE (exclude GST)				\$

LS=Lump Sum

1.3. Unit Prices

The unit price is to include labour and machine time. For all storm, sanitary, and supply piping unit pricing to include trenching and backfilling as per specification.

ITEM	DESCRIPTION	UNIT	PRICES
1.	Excavation & disposal of unused cut materials	M3	\$
2.	Supply & Install Additional Imported 75mm Minus backfill material	M3	\$
3.	Supply & Install Additional Imported 19mm Minus Granular Base Course Material	M3	\$
4.	Supply & Install pedestrian asphalt paving M2	M2	\$
5.	Supply & Install vehicular asphalt paving M2	M2	\$
6.	Supply & Install imported 9mm minus crushed granite M3	M3	\$
7.	Supply & Install bollard posts	Ea.	\$
8.	Supply & Install new fence as per COQ-L5A Detail	Ea.	\$
9.	Other not listed above (specify)		\$

2. ADDITIONAL LABOUR RATES

The following are rates for qualified trades personnel that would be used for valuing additional work and services beyond the scope of this RFP on an “as needed and when requested” basis.

These rates are all inclusive without limitation, including all labour, wages, taxes and assessments, benefits payable in accordance with applicable laws, mobilization and demobilization, supervision, administration, small tool allowance including small tool rental, overhead and profit.

For the purposes of above, small tools are considered to be any tool worth \$2,000 or less in new value. All other tools should be listed as equipment in the table under item 3 below.

Item	Labour Rates	Straight Time Per Hour (exclude GST)	Overtime Per Hour (exclude GST)
1.	Project Manager	\$	\$
2.	Project Coordinator	\$	\$
3.	Site Superintendent	\$	\$
4.	Foreman	\$	\$
5.	Carpenter	\$	\$
6.	Concrete Finisher	\$	\$
7.	Landscaper	\$	\$
8.	Plumber	\$	\$
9.	Electrician	\$	\$
10.	Labourer/Helper	\$	\$
11.	Other not listed above (specify)	\$	\$
12.			
13.			

3. ADDITIONAL EQUIPMENT RATES

The rates provided below are all inclusive and include without limitation, operator, fuel, lubrication, service, maintenance, depreciation, mobilization and demobilization, overhead and profit.

Item	Equipment	Rate Per Hour (exclude GST)
1.		\$
2.		\$
3.		\$
4.		\$
5.		\$

4. CONSENT OF SURETY

ATTACH THE CONSENT OF SURETY AND SUBMIT WITH PROPOSAL SUBMISSION FORM

A copy of the original Consent of Surety must be submitted with the Proposal submission; that guarantees the City will be provided with a Performance Bond and Labour and Material Payment Bond each in the amount of 50% of the Total Proposal Price.

The original document is to be provided upon request by the City.

5. REQUESTED DEPARTURES – CONTRACT

The Proponent has reviewed the City's Contract and the [Standard Terms and Conditions - Purchase of Goods and Services](#) . I/We would be prepared to enter into that Contract, amended by the following departures (list, if any):

--

6. VALUE ADDED

Provide information on what makes your firm innovative, what is your competitive advantage, and what other services your firm provides that would assist or be of benefit to the City:

--

7. SUSTAINABLE PRACTISES AND SOCIAL RESPONSIBILITY

7.1. Sustainable Benefits

Describe all initiatives, policies, programs and product choices that illustrate your firm's efforts towards sustainable practices and environment responsibility in providing the services that would benefit the City:

7.2. Social Responsibility

- a) What policies does your organization have for hiring apprentices, indigenous peoples, recent immigrants, veterans, young people, women, and people with disabilities:

- b) What policies does your organization have for the procurement of goods and services from local small and medium sized business or social enterprises:

8. CONFLICT OF INTEREST DECLARATION

Proponents shall disclose any actual or potential conflicts of interest and existing business relationships it may have with the Cities, their elected or appointed officials or employees:

9. CORPORATE PROFILE

Proponent is to state how many years they have been in business and organizational history (e.g. mission, vision, corporate directions, years in business, etc.)

10. EXPERIENCE, CAPABILITIES AND CAPACITY

- a) Proponent is to provide a narrative as to their experience and capabilities in delivering goods and Services similar to those requested in this RFP:

- b) Proponent is to provide a narrative as to their capacity to take on this Contract with respect to manpower and other contracts that may affect their ability in delivering the goods and Services:

The following are the Proponent's senior staff proposed for this project including the specific identification of the project superintendent. The Contractor is to have a dedicated experienced **project superintendent full time onsite.**

Item	Name	Position	Years with company/ Years total experience	Qualifications
1.				
2.				
3.				
4.				
5.				

The following Sub-Contractors will be utilized in provision of the services and will comply with all the terms and conditions of this RFP and resulting Contract.

Sub-Contractor	Services Performed	Background and Experience

Indicate schedule with bar chart with construction durations but not limited to. Contractor to add activities with durations as required.

[illegible]

Prior to the start of construction, the Contractor will be required to provide a detailed **CONSTRUCTION SCHEDULE** 'Gantt Chart' Schedule in a MS Project format. Subsequently, the Contractor is to provide an updated construction schedule with each progress claim.

MUNDY PARK CHILKO ENTRANCE SITE:

Commence Construction Onsite.....**March 4 2021 or earlier**

Substantial completion date.....**September 3, 2021 or earlier**

Total completion date.....**October 29, 2021 or earlier**

Proposed Disposal Site: _____

14. COMPLETION DATE

The Proponent states that they are available and ready to start this work and confirms the work shall be completed on or before **September 3, 2021**. This date will be an important consideration in the evaluation.

YES ☐ NO ☐

If Proponent has stated NO, please state date and explanation as to proposed completion date:

--

15. EQUIPMENT AND VEHICLES

Equipment, vehicles and power tools used at the work site must be clearly identified. Please list Proponent's vehicles and equipment which is owned or leased and would be used in providing the services. Demonstration of the equipment, vehicles and tools offered may be required and must comply in all respects with all applicable standards, requirements and governing regulations of CSA and the BC Motor Vehicle Act.

Equipment (including power tools to be used)	Make / Model	Year

16. **METHODOLOGY**

Summarize the key features of your Proposal and the Technical Approach to be used. Provide a brief description the various components required for successful completion of the work.

Delivery, set-up and execution of the work - Proposals should address the plan for the delivery, set up and execution of the work; as well as the disposal, recycle or reuse for the surplus materials.

Quality Assurance - Provide the measures the Project Superintendent will use to maintain quality control at the worksite to completion of the project.

Risk Factors - Describe the risk factors anticipated and how the Proponent intends to mitigate these.

Safety – Proposal is to provide how the Proponent will address safety on the work site.

Delivery, set-up and execution
Quality Assurance
Risk Factors
Safety

17. **EXPERIENCE AND REFERENCES**

Provide references and contact information from recent relevant successful projects completed within the last 5 years.

Contracts indicated below should be related to operations similar in size, scope and complexity. By submitting a proposal, Proponents consent to the City to check and verify information provided. Information obtained from references will not be disclosed or discussed with any Proponents.

Year Started	
Year Completed	
Description of Contract or Project	
Company	
Contact Person	
Telephone and Email	
Contract Value	

Year Started	
Year Completed	

Description of Contract or Project	
Company	
Contact Person	
Telephone and Email	
Contract Value	

Year Started	
Year Completed	
Description of Contract or Project	
Company	
Contact Person	
Telephone and Email	
Contract Value	

18. HEALTH AND SAFETY PROGRAM

- a) Confirm the Proponent has a written safety program in place that meets the requirements of WorkSafeBC?
YES ☐ NO ☐
- b) Is your company COR (Certificate of Recognition) certified with respect to WorkSafeBC?
YES ☐ NO ☐
- c) Proponent is to state how they would address site safety requirements on this project with respect to COVID-19:

--

19. ADDENDA

We acknowledge receipt of the following Addenda(s) related to this Request for Proposal and have incorporated the information received in preparing this Proposal:

Addendum No.	Date Issued

20. **AUTHORIZATION**

We hereby submit our Proposal for the services as specified and undertake to carry out the work in strict accordance with all referenced Terms & Conditions, Regulations and Codes, applicable to this RFP.

We agree to the rules of participation outlined in the [Instructions to Proponents](#) and should our Proposal be selected, will accept the City's Contract: [Standard Terms and Conditions - Purchase of Goods and Services](#)

The signature is an authorized person of the organization and declares the statements made in their submission are true and accurate.

For the purpose of this RFP submission, electronic signatures will be accepted.

Company Name:	
Address:	
Phone:	
GST Registration No.:	
Project Contact: Name and Title of Individual <i>for communication related to this RFP</i> (please print)	
Contact Email:	
Name & Title of Authorized Signatory: (please print)	
Signature:	
Date:	