City of Courtenay

Request for Proposal R20-03 Riverside Trail Construction

August 26, 2020

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SUMMARY OF KEY INFORMATION

RFP Reference	RFP R20-03
MIT Reference	Riverside Trail Construction
Overview of the	The purpose of this RFP is to invite proposals from qualified contractors for the
Opportunity	construction of the Riverway Trail Extension.
Questions?	Questions are to be submitted in writing quoting the RFP number and name, send to email purchasing@courtenay.ca
Addenda	Proponents are to check the BC Bid and City websites for any updated information and addenda issued, before the Closing Date at the following
	websites www.bcbid.gov.bc.ca and/or www.courtenay.ca/bids
Closing Date and	2:00 pm Pacific Standard Time
Time	Wednesday, August 26, 2020
	Submissions are to be consolidated into one PDF file and sent electronically to
Instructions for	purchasing@courtenay.ca
Submission	1. In the subject field enter: RFP Number and Name
	2. Phone 250-338-1766 Ext. 7646 should assistance be required
Participation	The guidelines for participation that will apply to this RFP are included in the this RFP.
Obtaining RFP	RFP documents are available for download from these websites
Documents	www.bcbid.gov.bc.ca and/or www.courtenay.ca/bids

1.0 INTENT

The City of Courtenay (the "City") invites proposals from qualified contractors for the construction of the Riverway Trail Extension.

2.0 DOCUMENT AVAILABILITY AND RESPONSIBILITY

This RFP is being issued electronically through the BC Bid website and the City of Courtenay website where interested firms may download the RFP documents directly. No registration, tracking or other recording of RFP documents will be performed by the City. All addenda, ammendments or further information will be published on www.bcbid.gov.bc.ca and www.courtenay.ca. It is the sole responsibility of the Proponent to monitor the websites regularily to check for updates.

3.0 **DEFINITIONS**

"City" or "Owner" means the City of Courtenay;

"Contract" means the written agreement or purchase order resulting from this RFP awarded to and/or executed by the City and the successful Proponent;

"Contract Documents" means the Request for Proposal documents, that part of the Proposal which is accepted by the City, the purchase order and executed agreement, if any, an all applicable specifications and drawings including those issued by the City to the Proponent and those submitted by the Proponent during the performance of the work and accepted by the City, whether produced before or after the date of award of the Contract as the same may be modified, amended, substituted or replaced in accordance with the provisions of the Contract from time to time;

"Council" means the City of Courtenay Council;

"must", "mandatory", "required", "shall", means a requirement that must be met in order for a Proposal to receive consideration;

"Proponent" means a party, a company or an individual that has obtained a copy of this Request for Proposal and submits, or intends to submit, a Proposal in response to this "Request for Proposal";

"Proposal" means the documents of the Proponent delivered to the City offering to perform the work as required under this RFP;

"RFP" means Request for Proposal;

"should" or "desirable" means a requirement having a significant degree of importance to the objectives of the RFP;

4.0 CODES & REGULATIONS

The work shall be completed in compliance with:

- Canadian Landscape Standard
- International Society of Arboriculture
- BC Landscape and Nursery Association
- Master Municipal Construction Documents
- City of Courtenay Engineering Specifications

5.0 SCOPE OF WORK

Refer to Schedule B – Riverway Trail Extension: Phase 1 Design, by Urban Systems, for the complete scope of work, specificiations and drawings.

6.0 MANDATORY SITE TOUR

A mandatory site tour is scheduled for August 18th, 2020 at 1pm, starting at the Trail Location, in order to review the sites, access, storage and existing elevator equipment.

This meeting is mandatory and only proposals from proponents attending this meeting and signing the Mandatory Site Meeting sign-in form will be considered in the evaluation for the contract.

This meeting will be dependent on the current COVID-19 situation.

Please RSVP to <u>purchasing@courtenay.ca</u> if you plan on attending.

7.0 HEALTH & SAFETY

The Proponent must submit a copy of a company WorkSafe BC compliant COVID-19 Exposure Control Plan that is directly related to the work outlined in this RFP with their submission.

The successful Contractor shall be designated the Prime Contractor in the immediate work area and will be required to sign and submit the attached Prime Contractor Designation form.

The Proponent must submit a copy of the company Safety Manual that is directly related to the work outlined in this RFP with their submission.

8.0 SUBMISSION FORMAT

8.1 Title Page

Showing RFP title and number, closing date, company name of the Proponent, address, contact name, email address and phone number.

8.2 **Company Profile**

This section to include, but not limited to, the following:

- Legal business name and names of any national or international affiliations;
- Company's history;
- Number of staff employed;
- Other goods or services provided by your company;
- Current projects/contracts of similar scope;
- Provide a statement confirming the company doesn't have any foreseable financial difficulties that could potentially inhibit the company from providing the obligations of the contract.

8.3 Qualifications & Experience

Proponents shall have a minimum 5 years experience in providing goods and/or services of similar scope and nature. Include a detailed description of the experience of the Proponent and the proposed project team that will be assigned to this project, demonstrating their experience to undertake the work outlined in this RFP. Include a list of at least 3 relevant completed projects with client references and telephone number/email contact information for each project. By submitting a Proposal the Proponent consents to the City contacting these references at its discretion, and consents to the City also contacting any other organizations for the purposes of evaluating the Proposal.

8.4 **Key Personnel**

Identify and provide resumes/certifications for the key personnel in the Proponent's proposed team and outline what their roles will be in implementing this project.

8.5 **Pricing**

Include a detailed pricing schedule outlining each area of the RFP.

8.6 **Equipment List**

Include a list of all proposed equipment that will be needed to complete the scope of work and identify if any of those proposed equipment will need to be rented.

8.7 **Schedule**

Include a detailed schedule of the scope of work.

8.8 Environmental & Social Initiatives

Include any Environmental or Social Procurement initiatives being used. Examples include:

- Environmental
 - o Reduction of paper, cardboard and plastic use
 - o Vehicle non-idling policy
 - Recycle programs
 - Use of Green Energy
 - Measurement of Goals
- Social

- o Hires person with barriers to employment for on-call, casual or permanent paid employment
- o Utilizes new entrepreneurs/start-up businesses to support their business
- Locally owned and operated business

8.9 Schedule A – Form of Submission

The Schedule A – Form of Submission must be submitted with the Proponent's proposal. The Form of Submission must be signed by an authorized representative of the company.

9.0 INSTRUCTIONS TO PROPONENTS

9.1 An electronic submission of the proposal in .pdf format must be submitted to:

<u>"purchasing@courtenay.ca"</u> no later than 2:00pm PST, Wednesday, August 26, 2020, the RFP closing date. The email subject line shall read "R20-03 Riverside Trail Construction".

It is the sole responsibility of the Proponent to ensure that their proposal is received by the City within the proper time allocation. Late responses will be rejected by the City of Courtenay. All proposals, including Form of Submission, must be signed by an authorized Proponent representative.

Submission of a proposal indicates acceptance by the Proponent of the conditions contained in this RFP, unless clearly and specifically noted in the proposal submitted.

9.2 Questions are to be submitted in writing up to 2 business days prior to the RFP Closing Date quoting the RFP name, number and contact person below, and sent to email purchasing@courtenay.ca.

Graham Peterson
Procurement Specialist, City of Courtenay
purchasing@courtenay.ca

Any verbal communications will be considered unofficial and non-binding to the City. Proponents should rely only on written statements issued by the contact person listed above.

9.3 Notwithstanding any custom or trade practice to the contrary, the City reserves the right to, at its sole discretion and according to its own judgement of its best interest to waive any technical or formal defect in a proposal and accept that proposal.

10.0 EVALUATION CRITERIA

10.1 **General**

a) An evaluation committee made up of City staff will be reviewing proposal submissions. The City reserves the right to accept any or none of the proposals submitted and will evaluate proposals based on best value and not necessarily the lowest cost.

10.2 Evaluation Criteria & Weighting

The City reserves the right to accept any or none of the proposals submitted and will evaluate proposal submissions based on "best value" using the following criteria:

Proposal Evaluation Criteria Description	Criteria Weight
Financial Cost to the City	35 points
References and Related Experience	20 points
Proposed Equipment	15 points
Project Schedule	20 points
Sustainability – Social and Environmental Initiatives	10 points

11.0 GENERAL TERMS & CONDITIONS

11.1 Not a Tender Call

This RFP is not a tender call, and the submission of any response to this RFP does not create a tender process. This RFP is not an invitation for an offer to contract, and it is not an offer to contract made by the City. Proposals will not be opened in public.

11.2 No Obligation to Proceed

- a) Though the City fully intends at this time to proceed through the RFP process in order to select the goods or services, the City is under no obligation to proceed to the purchase, or any other stage. The receipt by the City of any information (including any submissions, ideas, plans, drawings, models or other materials communicated or exhibited by any intended Proponent, or on its behalf) shall not impose any obligations on the City. There is no guarantee by the City, its officers, employees or agents, that the process initiated by the issuance of this RFP will continue, or that this RFP process or any RFP process will result in a contract with the City for the purchase of the product, service or project.
- b) The City reserves the right to accept or reject all or part of the proposal, however the City is not precluded from negotiating with the successful Proponent to modify its proposal to best suit the needs of the City.
- c) The City reserves the right to reject, at the City's sole discretion, any or all proposals if the proposal is either incomplete, obscure, irregular or unrealistic.
- d) Further, a proposal may be rejected on the basis of the Proponents past performance, financial capabilities, completion schedule and non-compliance with federal, provincial and municipal legislation.
- e) The City reserves the right to accept or reject a proposal where only one proposal is received.
- f) Notwithstanding any custom or trade practice to the contrary, the City reserves the right to, at its sole discretion and according to its own judgement of its best interest to waive any technical or formal defect in a proposal and accept that proposal.
- g) The City reserves the right to award the contract to other than the lowest cost Proponent.
- h) Award of any contract resulting from this RFP may be subject to City of Courtenay Council approval, and budget considerations.
- i) The City reserves the right to cancel this RFP at any time.

11.3 **Cost of Preparation**

Any cost incurred by the Proponent in the preparation of the proposal will be solely at the expense of the Proponent.

11.4 Confidentiality and Freedom of Information and Protection of Privacy Act

The proposal should clearly identify any information that is considered to be confidential or proprietary information (the "Confidential Information"). However, the City is subject to the Freedom of Information and Protection of Privacy Act. As a result, while the Act offers some protection for third party business interests, the City can't guarantee that any Confidential Information provided to the City can be held in confidence if a request for access is made under the Freedom of Information and Protection of Privacy Act.

11.5 Irrevocability of Proposals

By submission of a written request, the Proponent may amend or withdraw its proposal prior to the closing date and time. Upon closing time, all proposals become irrevocable and are valid for a minimum of **60** days. By submission of a proposal the Proponent agrees should the proposal be successful, the Proponent will enter into a contract with the City. Prices will be firm for the entire contract period, unless otherwise agreed to by both parties.

11.6 Pricing

Prices are to be quoted in Canadian funds with the Goods and Services Tax (GST) shown as a separate line item, if requested. Prices must be quoted <u>inclusive</u> of all shipping, duty and other applicable costs F.O.B. the location indicated in the RFP.

11.7 **Sub-Contracting**

Under no circumstances may the provision of goods or services, or any part thereof be subcontracted, transferred, or assigned to another company, person, or other without the prior written approval of the City of Courtenay.

11.8 Accuracy of Information

The City makes no representation or warranty, either express or implied, with respect to the accuracy or completeness of any information contained or referred to in this RFP.

11.9 **Default**

- a) The City may, by notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor fails to make delivery of the Services within the time specified, or to perform any other provisions of this Contract.
- b) In the event the City terminates this Contract in whole or in part as provided in clause 15(a), the City may procure goods or services similar to those so terminated, and the Contractor shall be liable to the City for any excess costs for such similar goods or services.
- c) The Contractor shall not be liable for any excess costs under clause 15(a) or 15(b) if failure to perform the Contract arises by reason of Force Majeure or acts of the City.

11.10 Misrepresentation or Solicitation

If any director, officer or employee or agent of a Proponent makes any representation or solicitation to any Councillor, officer, employee or agent of the City of Courtenay with respect to the RFP, whether before or after the submission of the proposal, the City shall be entitled to reject or not accept the proposal.

11.11 Applicable Laws and Agreements

- a) The laws of the Province of B.C. shall govern this request for proposal and any subsequent Contract resulting.
- b) This RFP is subject to the terms and conditions of the Canadian Free Trade Agreement and the New West Partnership Agreement.

11.12 Ownership of Materials and Copyright

- a) Any drawings, audio-visual materials, plans, models, designs, specifications, software, reports and other similar documents or products produced by the Contractor for the benefit of the City as a result of the provision of the Services (the "Material") may be used by the City as part of its operations associated with the Materials provided.
- b) All Material shall be transferred and delivered by the Contractor to the City following the expiration or sooner termination of this Agreement, provided that the City may, at any time or times prior to the expiration or sooner termination of this Agreement, give written notice to the Contractor requesting delivery by the Contractor to the City of all or any part of the Material in which event the Contractor shall forthwith comply with such request. All materials created electronically must be provided in electronic format, in a format and in a medium acceptable to the City.
- c) The Contractor agrees that the City will own all of the Material and the Contractor irrevocably assigns to the City all of the Contractor's title in the Material. The Contractor retains ownership of the "Embedded IP". The Material does not include intellectual property or confidential information that is proprietary to the Contractor and (a) used by the Contractor to prepare, produce or supply the Material, or (b) that is otherwise embedded within the Material ("Embedded IP").
- d) The Contractor hereby represents and warrants that any portion of the Material produced by the Contractor will not infringe any patent or copyright or any other industrial or intellectual property rights including trade secrets.

11.13 Corporate Climate Action Strategy Requirements

Vehicle Idling

In the interest of reducing negative impacts on the environment, all Contractors and Consultants working directly or indirectly for the City on City owned property must ensure that when vehicles or equipment are not required to be running for operational purposes every effort is made to reduce or eliminate engine idling.

11.14 Payment Terms

The successful Proponent shall invoice the City in an acceptable format and will be paid as per the City's standard payment terms, net 30 days from date of invoice. The City of Courtenay shall not pre-pay for any goods, or services for any period, unless agreed to in writing by the City.

All invoices must be emailed to finance@courtenay.ca, please do not mail invoices in addition to emailing.

11.15 Business License and Permits

Contractors are required to acquire and maintain a City of Courtenay Business License or a Central Vancouver Island Inter-municipal Business License prior to the commencement of the work and for the term of the Contract.

11.16 Insurance

As a minimum, the successful Proponent shall procure and maintain through the term of the contract, at its own expense and cost, the following insurance policies:

- a) Commercial General Liability Insurance in an inclusive amount of not less than \$2,000,000 per occurrence. Minimum coverage must include Personal Injury, Contractual Liability, Non-Owned Automobile Liability, Products/Completed Operations, Contingent Employers Liability, Cross Liability and Severability of Interest, and a 30 day written notice of insurance cancellation clause.
- b) **Motor Vehicle Insurance ICBC APV47 form** Bodily Injury and Property damage in an amount no less than \$2,000,000 per accident per licensed motor vehicle used to carry out the Work
- c) The successful Proponent shall be responsible for WorkSafe BC assessments relating to its work on behalf of the City and the work of its sub-contractors. It shall remain in good standing with WorkSafe BC and comply with all Workers' Compensation Board legislation in the province of British Columbia.

11.17 Agreement

The successful Proponent will be required to enter into a formal agreement with the City prior to the Contract commencement, template attached for reference.

12.0 ATTACHMENTS

- a) Schedule A Form of Submission
- b) Schedule B Riverway Trail Extension Phase 1 Design
- b) Schedule C Standard Contractor Agreement
- c) Schedule D Prime Contractor Designation Form

SCHEDULE A

FORM OF SUBMISSION

The Proponent offers to supply to the City of Courtenay the goods and services for the prices not including GST as follows:

1.	Total Price to Complete the Riverway Trail Extension	\$		
2.	Pricing Breakdown Included	Yes	or No	0
3.	Safety Manual Included	Yes	or No	0
4.	Company WorkSafe BC Compliant COVID-19 Exposure Control Plan	Yes	or No)
5.	References & Related Experience Included	Yes	or No	0
6.	Equipment List Included	Yes	or No)
7.	Project Schedule Included	Yes	or No)
inci Ack	e above prices include and cover all duties, handling and transportation idental to and forming part of this proposal. Knowledgement is hereby made of receipt and inclusion of the following dendum(s) No Dated: No. Of Page	g addenda to	o the c	locuments:
	gal Name:			
Ado	dress:			
Pho	one: Email:	_		
rev	Ve the undersigned duly authorized representatives of the Proponent, holiewed the RFP, submit this proposal in response to the RFP. This proposes day of, 20	_		•
 Sigi	nature of Authorized Signatory Print Name and Position	on of Signato		

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SUPPLEMENTARY SPECIFICATIONS

MASTER MUNICIPAL SPECIFICATIONS

SUPPLEMENTARY SPECIFICATIONS R20-03 RIVERWAY TRAIL CONSTRUCTION

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Supplementary Specifications

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The following Supplementary Specifications included in this section of the *Contract Documents* are project-specific modifications or additions to the Specifications in the Master Municipal Construction Document Volume II (Platinum Edition). The City of Courtenay Supplementary Specifications to the Master Municipal Construction Documents (February 2018) are provided separately. The following specifications are to be read in conjunction with both aforementioned documents:

SS 01 42 00 Reference Specifications

1.2 Referenced Specifications

Add Referenced Specification:

1.2.25 CLS Canadian Landscape Standard (current edition)

SS 01 55 00 Traffic Control, Vehicle Access and Parking

1.0 General

Add section 1.0.7 as follows:

.7 Provide weekly written notices of planned construction activities and schedule to the Contract Administrator.

1.4 Traffic Control

Add sections 1.4.14 as follows:

.14 Maintain access for emergency vehicles through and around the Site.

SS 01 57 01 Environmental Protection

1.2 Temporary Erosion and Sedimentation Controls

Delete section 1.2.2.2 and replace with the following: ‡

.2 Do not operate construction equipment in watercourses.

1.4 Environmental Protection

Add section 1.4.4 and 1.4.5 and 1.4.6 as follows:

.4 If construction activities are to be undertaken between March 1 and August 31 an active nest survey must be completed by a qualified professional. Survey to be in accordance with the protocol identified by the Canadian Wildlife service and must be completed prior to any construction activities including clearing and grubbing. Abide by the recommendations of that survey.

.5 Best Management Practices:

- .1 Conduct vegetation clearing outside the bird nest window (March 1 to August 31) to avoid the disturbance of bird nests and to maintain compliance with federal regulations if at all possible. Vegetation clearing should be kept to a minimum and retain as much natural vegetation and course woody debris on and around the project site, as possible. If land clearing activities are to be undertaken during of the bird nest window, a qualified environmental professional should be on site prior to land clearing activities to conduct an active nest survey:
- .2 Stockpile topsoil and re-use to encourage growth of native vegetation.

 Restrict the operation of heavy machinery to designated areas to minimize impact on surrounding area;
- .3 Deleterious substances are not to be permitted to enter drainage channels and implement erosion controls such as silt fencing.
- .4 Establish a staging area for re-fueling of equipment and machinery which should be located a minimum of 30 m away from the Comox Harbour natural boundary or drainage channels. Ensure all equipment is clean, leak-free and in good operating condition. All machinery should be supplied with spill kits and operators should be knowledgeable in their use.
- .5 Provide an environmental mitigation plan to the Contract Administrator.

.6 Excluded Work:

- .1 The following activities are being completed by the Owner and are not included in the Contractor's scope. The Contractor shall coordinate with the Owner as required to ensure these activities are completed prior to initiating construction:
 - .1 Bird nesting survey
 - .2 Environmental monitoring and reporting during construction
 - .3 ISA Certified Arborist review

SS 03 30 20 Concrete Walks, Curbs and Gutters

1.4 Measurement and Payment

Delete section 1.4.7 and replace with the following:

.7 Measurement for Gravel Path will be made separately for each width specified in the Contract Documents and at the unit rate indicated. Payment for Gravel Path includes the granular base similar to that required for concrete infill strip together with the Path Chip placement and compaction as specified in the Contract Documents. Payment for excavation will be made under Section 31 24 13 Roadway Excavation, Embankment and Compaction. Payment for the Geotextile is Optional Work and will be made at the unit rate indicated under Section 31 32 19 and only as directed by the Contract Administrator.

SS 31 11 01 Clearing and Grubbing

1.2 Definitions

Add section 1.2.5 as follows:

.5 Sod stripping and disposal consists of cutting sod grass using a sod cutter or equivalent equipment to remove only the surficial organic grass and rootlet mass, and disposing of the material.

1.3 Protection of Existing Features

Add section 1.3.3 as follows:

.3 Coordinate clearing and grubbing activities with the Contract Administrator and the City Arborist to protect existing adjacent trees. In some cases, close cut clearing or root pruning prior to grubbing may be preferred.

1.4 Measurement and Payment

Add section 1.4.3 as follows:

.3 Measurement for stripping and disposal of sod grass will be made at the unit rate indicated. Payment shall be full compensation for the removal with specialized equipment and disposal of the sod and root mass including all labour, materials and other incidental work for locations shown on Contract Documents or as otherwise directed by the Contract Administrator.

Add Section 1.5 as follows:

1.5 Excluded Work

- .1 Excluded Work:
 - .1 The following activities are being completed by the Owner and are not included in the Contractor's scope. The Contractor shall coordinate with the Owner as required to ensure these activities are completed prior to initiating construction:
 - .1 Isolated Tree and stump removal outside of the vegetation clearing and grubbing areas shown on the Contract Drawings.
 - .2 Cedar Hedge at the north end of the project, identified on the Contract Drawings.

SS 31 11 41 Shrub and Tree Preservation

1.3 Measurement and Payment

Add section 1.3.2 as follows:

.2 Measurement for Tree Protection Fencing will be made at the unit rate indicated. Payment shall be full compensation for the supply and installation of tree protection fence including all labour, materials, and other work incidental to

installation as described and at locations shown on Contract Documents or as otherwise directed by the Contract Administrator.

2.0 Materials

Add sections 3.1.7 through 3.1.9 as follows:

- .7 Burlap: 10 ounce, untreated, woven, natural jute based burlap.
- .8 Type 1 Fill: Approved premixed growing medium for lawn as indicated in the Contract Documents.

3.0 Execution

Delete section 3.1.1 and replace with the following:

.1 Inspect with the Contract Administrator and City Arborist and clearly identify on site all existing shrubs and trees shown on Contract Drawings or designated by Contract Administrator to be preserved. Establish Tree Protection Fencing around such shrubs and trees. The Contractor Administrator shall approve the installed Tree Protection Fencing prior to any demolition or construction activities occurring on-site.

Delete section 3.3 and replace with the following:

3.3 Excavation Around Existing Trees

- .1 When excavation is required within one metre of a tree protection fence, roots shall first be exposed along the tree protection fence edge of excavation using hydrovac or by hand using narrow tine spading forks to probe and comb soil to expose roots.
- .2 Roots encountered immediately adjacent to the location of new construction that are not readily manoeuvered to beyond the excavation area shall be cut 150 mm (6") back from new construction.
- .3 Roots shall be pruned using clean sharp tools. Do not rip, crush, or shatter roots.
- .5 Protection of Exposed Roots: Do not allow exposed roots to dry out prior to placement of permanent cover. Provide one of the following temporary remedial measures:
 - .1 Provide temporary earth cover using Type 1 fill.
 - .2 Pack with four layers of wet, untreated burlap. Maintain dampness.
- .6 Temporarily support and protect exposed roots from damage until permanently relocated and covered with backfill. Water backfill around roots to eliminate voids and air pockets.
- .7 Trees and shrubs to remain are to be thoroughly watered as required to maintain a healthy condition throughout the construction period.

Delete section 3.4.1 and replace with the following:

.1 Do not prune any tree branches without prior written approval from the Contract Administrator. Refer to Contract Drawings for additional notes.

SS 31 22 01 Site Grading

1.4 Measurement and Payment

Add section 1.4.9 as follows:

.9 Measurement for topsoil stripping including stockpiling for re-use will be made from area stripped to depth as indicated in the Contract Documents. Payment shall be full compensation for the stripping to depth as indicated in the Contract Documents and stockpiling of the material for re-use. Offsite disposal of surplus material to be paid under Section 31 24 13 Roadway Excavation, Embankment, and Compaction.

Clause 3.3.1 ‡

Delete Table 1 and replace with the following:

		WHERE GROWING MEDIUM				
(TOPSOIL) TO BE PLACED OVER SUBGRADE						
Conditions	Intended Growing Medium Depth	Tolerance				
Within 3 m from fixed	0 – 150 mm	± 25 mm				
elevations (e.g., paving	151 – 300 mm	± 25 mm				
edges, curbs, etc.)	301 – 600 mm	± 50 mm				
Other areas	0 – 150 mm	± 25 mm				
	151 – 300 mm	± 50 mm				
	301 – 600 mm	± 50 mm				

SS 31 22 16 Reshaping Granular Roadbeds

1.4 Measurement and Payment

Add section 1.4.5 as follows:

.5 Measurement for Driveway Restoration will be made at the unit rate indicated. Payment shall be full compensation for the removal of surface organic material, spreading and grading of materials and supply of added materials including Path Chip surface, adjustment of moisture content, compaction, and disposal of excess material.

3.4 Finished Tolerances

Add section 3.4.4 as follows:

.4 Driveway roadbed shall be graded to allow Path Chip placement to full extent of existing driveway surface and to depths and grades as shown on the Contract Drawings.

SS 31 24 13 Roadway Excavation, Embankment and Compaction

1.0 GENERAL

Delete section 1.1 and replace with the following:

.1 Section 31 24 13 refers to all portions of the work that incorporate cut to fill grading. This section includes all pathway and landscape excavation, embankment, compaction and subgrade preparation except where specifically stated otherwise. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the works described herein.

1.8 Measurement and Payment

Delete section 1.8.2 and replace with the following:

.2 Payment for sod stripping will be made under pay item in Section 31 11 01 – Clearing and Grubbing - 1.4.3. Payment for topsoil stripping and stockpiling will be made under 31 22 01 Site Grading – 1.4.9. Offsite disposal of surplus topsoil material to be paid under this Section.

Delete section 1.8.5 and replace with the following:

.5 Payment for common excavation includes all cut and fill excavation and embankment to achieve design subgrade elevations and finished grades as shown on Contract Drawings. Compaction of re-used materials and subgrade preparation including compaction, decompaction and scarification to specified tolerances will be incidental to payment.

Measurement for common excavation is as follows:

- .1 Affected areas shall be surveyed by Contractor immediately following the stripping of sod and topsoil; and after other work performed under Section 31 11 01 Clearing and Grubbing as outlined in Section 01 33 01.
- .2 The volume for common excavation will be based on design drawings and will be calculated using AutoCAD Civil 3D 2019 Software. No additional compensation will be awarded for any excavation beyond the limits of the design grades as shown on the Contract Drawings.
- .3 Payment for on-site re-use includes compaction of the re-used materials.

Delete section 1.8.9 and replace with the following:

.9 Payment for subgrade preparation will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.

Add section 1.8.14 as follows:

.14 Payment for subgrade preparation as Optional Work will be made at the unit rate indicated and only as directed by the Contract Administrator.

Subgrade preparation as Optional Work will only apply to areas to which removal of asphalt, concrete, or structural granular material has been undertaken by the Contractor and the retained material or subgrade does not meet the compaction tolerances or scarification requirements of the specifications.

SS 32 91 21 Topsoil and Finish Grading

1.4 Measurement and Payment

Delete section 1.4.1 and replace with the following:

.1 Payment for growing medium, imported topsoil, and stockpiled topsoil will be made separately for each type of growing medium and topsoil specified, and includes supply of materials, on-site handling, placement to thickness specified, application of fertilizers and finish grading. Payment for growing medium and topsoil will be by actual area placed.

Limit of payment will be to extents of areas affected by site grading. Payment for restoration of any areas damaged outside of the landscape extents shown on the Contract Drawings will be incidental.

SS 32 92 19 Hydraulic Seeding

3.3 Equipment

Delete section 3.3.1 and replace with the following: ‡

.1 All hydraulic seeding/mulching equipment adjustment to reflect Rates of Application determined for the project.

3.5 Application for Hydraulic Seeding

Delete section 3.5.4 and replace with the following: ‡

.4 If required, add legume seed to grass mixture at time of seeding. Inoculate legume seed with standard product humus culture before mixing with grass seed. Protect inoculated seed from exposure to sunlight for periods of over one-half hour. Use seed within eight hours from inoculation; otherwise, seed to be reinoculated.

SUPPLEMENTARY SPECIFICATIONS R20-03 RIVERWAY TRAIL CONSTRUCTION

PAGE 10 OF 10 2020

SS 33 44 01 Manholes and Catchbasins

1.5 Measurement and Payment

Delete section 1.5.7 add section as follows:

.7 Measurement for Low Point Rock Underdrain will be made at unit rate indicated. Payment shall be full compensation for the delivery, supply, and installation of the Low Point Rock Underdrain as described in the Contract Drawings.



RIVERWAY TRAIL EXTENSION: PHASE 1 DESIGN

Municipal Address: 830 CLIFFE AVE, COURTENAY, BC V9N 2J7 Legal Description: PART OF DISTRICT LOT 169 (DD 19977A)





	SHEET LIST TABLE					
SHEET NUMBER	SHEET TITLE					
C00	COVER					
C01	NOTES					
TO 1	TREE MANAGEMENT AND SITE PREP PLAN					
T02	TREE MANAGEMENT AND SITE PREP PLAN					
T03	TREE MANAGEMENT AND SITE PREP PLAN					
T04	TREE MANAGEMENT AND SITE PREP PLAN					
C02	PLAN					
C03	PLAN					
C04	PLAN					
C05	PLAN					
C06	DETAILS					
C07	SECTIONS					
C08	SECTIONS					
C09	SECTIONS					



A. GENERAL

- 1. ALL WORK, INCLUDING INSTALLATION AND MAINTENANCE, SHALL BE EXECUTED IN ACCORDANCE THE CANADIAN LANDSCAPE STANDARD (CLS), INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) BEST MANAGEMENT PRACTICES, AND INDUSTRY REQUIREMENTS, NATIONAL STANDARDS, CODES AND REGULATIONS RECOGNIZED AS ACCEPTABLE BY THE BCLNA, WHERE APPLICABLE AND APPROPRIATE.
- 2. ALL CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF COURTENAY ENGINEERING SPECIFICATIONS, MMCD PLATINUM EDITION 2009 SPECIFICATIONS AND DETAILS, AND THESE DRAWINGS.
- 2. ALL PRODUCTS TO BE IN ACCORDANCE WITH CITY OF COURTENAY APPROVED PRODUCT LIST WHERE NOT SPECIFICALLY IDENTIFIED.
- 3. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATION OF THE VARIOUS PARTS OF THE WORK
- 4. CONTRACTOR TO COORDINATE AND BEAR ALL COSTS FOR MATERIAL TESTING, SUCH AS CONCRETE COMPRESSION STRENGTH, GRANULAR COMPACTION, AND ASPHALT DENSITY TESTS. RESULTS TO BE PROVIDED TO CONTRACT ADMINISTRATOR FOR QA/QC.
- 5. LOCATIONS OF EXISTING UTILITIES AND SERVICES SHOWN ON THESE DRAWINGS ARE DERIVED FROM CITY OF COURTENAY BASE DRAWING, AGENCY AS-BUILTS, AND SURVEY INFORMATION. NO GUARANTEE IS MADE AS TO THEIR ACCURACY. CONTRACTOR TO CONFIRM LOCATION OF ALL EXISTING UTILITIES AND SERVICES IN THE FIELD PRIOR TO CONSTRUCTION.
- 6. ALL ROADS AND JOB SITE TO BE KEPT CLEAN OF DEBRIS AND CONSTRUCTION MATERIAL ON A REGULAR BASIS.
- 7. CAREFULLY RELOCATE EXISTING STREET FURNITURE, TRAFFIC SIGNS AND SITE FEATURES TO ACCOMMODATE CONSTRUCTION WORK. ALL EXISTING WORKS TO BE RETURNED TO AS FOUND OR BETTER CONDITION.
- 8. CONTACT BC ONE CALL (1-800-474-6886) BC HYDRO, TELUS, SHAW CABLE, FORTIS GAS AND CITY OF COURTENAY FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
- 9. MAINTAIN PEDESTRIAN ACCESS TO ALL BUILDINGS AND BUSINESSES AT ALL TIMES. SCHEDULE WORK TO MINIMIZE DISRUPTION TO VEHICULAR TRAFFIC.
- 10. DIG WITH EXTREME CARE AND CAUTION AROUND FIBRE OPTIC DUCTS AND SERVICES.
- 11. ALL SURFACE RESTORATION WORK TO MATCH EXISTING SURFACE TREATMENTS UNLESS OTHERWISE NOTED.
- 12. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE WRITTEN SPECIFICATIONS, DRAWINGS, AND OTHER DETAILS AS ISSUED FOR THIS PROJECT.
- 13. THE CONTRACTOR SHALL VISIT THE SITE TO CONFIRM SITE CONDITIONS PRIOR TO SUBMITTING BIDS. ANY DISCREPANCIES BETWEEN THE EXISTING SITE AND THE DRAWINGS ARE TO BE REPORTED TO THE CONTRACT ADMINISTRATOR FOR CLARIFICATION PRIOR TO BIDDING.
- 14. THE LIMITS OF THE WORK ARE TO BE CLEARLY UNDERSTOOD BY THE CONTRACTOR PRIOR TO ANY WORK TAKING PLACE ON SITE. THE CONTRACTOR IS TO CONTACT THE CONTRACT ADMINISTRATOR FOR CLARIFICATION IF REQUIRED.
- 15. ALL ANCILLARY WORK NORMALLY ASSOCIATED WITH THE TYPE OF CONSTRUCTION INDICATED ON THE CONTRACT DRAWINGS AND DOCUMENTS SHALL BE DEEMED TO BE PART OF THE CONTRACT.
- 16. ANY AMBIGUITY IN THIS DRAWING OR ACCOMPANYING DETAILS IS TO BE REPORTED TO THE CONTRACT ADMINISTRATOR. THE CONTRACTOR SHALL NOT PROCEED WITHOUT A CLEAR UNDERSTANDING OF THE WORK.
- 17. THE CONTRACTOR IS RESPONSIBLE FOR THE HOARDING AND PROTECTION OF ALL RETAINED ELEMENTS WITHIN THE LIMITS OF WORK; INCLUDING BUT NOT LIMITED TO: EXISTING CURBS, CONCRETE, ASPHALT, GRANULAR OR OTHER SURFACES, LANDSCAPE AMENITIES AND LIVE LANDSCAPE MATERIAL; INCLUDING TREES, SHRUBS, GRASSES AND GROUNDCOVERS WITHIN, OR ADJACENT TO, THE LIMITS OF CONSTRUCTION. WHERE SEPARATE PAYMENT HAS NOT BEEN SPECIFICALLY PROVIDED IN THE SCHEDULE OF QUANTITIES AND PRICES, HOARDING AND PROTECTION OF RETAINED ELEMENTS ON THE EXISTING SITE SHALL BE DEEMED TO BE INCIDENTAL TO ALL OTHER WORK.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR THE HAULING OF ALL EXCESS MATERIALS OFF THE SITE TO A LOCATION DESIGNATED BY THE CONTRACT ADMINISTRATOR. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL SITE CLEAN UP.
- 19. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING SITE OUTSIDE THE LIMITS OF WORK AND MUST MAKE ALL NECESSARY RESTORATIONS AND
- 20. WORK MUST BE CONTAINED WITHIN PROPERTY LINES. THE CONTRACTOR SHALL ENSURE THAT ADJACENT PRIVATE LANDS ON BOTH SIDES OF THE WORKSITE ARE NOT TRESPASSED UPON.

B. PERMITS, STANDARDS AND TESTING

- 1. THE CONTRACTOR IS TO ENSURE THAT ALL NECESSARY ARRANGEMENTS ARE MADE WITH APPROPRIATE REGULATORY AUTHORITIES CONCERNING THE MOVEMENT OF MATERIALS AND EQUIPMENT NEAR ANY RIGHTS-OF-WAY.
- 2. THE CONTRACTOR SHALL PROVIDE PRODUCT SAMPLES FOR ALL IMPORTED MATERIALS AND FINISHES UNLESS NOTED OTHERWISE (U.N.O.); INCLUDING DECORATIVE ROCK MULCH & BOULDERS, SLABS, FACING, FINISH TREATMENTS AND MULCHES. SAMPLES SHALL BE PROVIDED FOR APPROVAL FROM CONTRACT ADMINISTRATOR PRIOR TO PURCHASE AND DELIVERY TO THE SITE.
- 3. PRIOR TO TOPSOIL STOCKPILING AND PLACEMENT THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CONTRACT ADMINISTRATOR THAT THE TOPSOIL MEETS, OR CAN BE AMENDED ON-SITE TO MEET THE REQUIREMENTS FOR ITS INTENDED USE.

C. TREE MANAGEMENT

- 1. THE CONTRACTOR SHALL ADHERE TO ALL CITY OF COURTENAY BYLAWS AND REGULATIONS CONCERNING THE PROTECTION AND REMOVAL OF TREES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE APPROPRIATE PERMITS AND APPROVALS ARE IN PLACE FOR ALL ACTIVITIES IMPACTING TREES.
- 3. TREE PROTECTION FENCES, FOR ALL TREES TO BE RETAINED WITHIN THE PROJECT AREA, SHALL BE ESTABLISHED AND CONSTRUCTED WITH THE CONTRACT
- ADMINISTRATOR'S AND CITY ARBORIST'S WRITTEN APPROVAL PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES ON-SITE. 4. NO WORK, INCLUDING THE STORAGE AND PARKING OF EQUIPMENT, STOCKPILING OF MATERIAL, OR EXCAVATION SHALL BE PERMITTED WITHIN OR BEHIND TREE
- PROTECTION FENCING WITHOUT PRIOR WRITTEN APPROVAL AND DIRECT SUPERVISION FROM THE CITY ARBORIST.
- 5. THE CONTRACTOR SHALL ARRANGE TO HAVE THE CITY ARBORIST PRESENT FOR ALL ROOT CUTTING WITHIN 1.0 m OF TREE PROTECTION FENCES. 5.1. SELECTIVE ROOT PRUNING SHALL BE CARRIED OUT TO THE FULL DEPTH OF REQUIRED EXCAVATION IN ALL AREAS WHERE EXCAVATION IS REQUIRED ADJACENT
 - TO TREE PROTECTION FENCING AND/OR WHERE TREE CANOPIES OVERHANG THE EXCAVATION AREA.
- 6. TREE ROOTS GREATER THAN 50 mm DIAMETER SHALL BE REVIEWED AND CUT BY THE CITY ARBORIST
- 7. FOR ALL WORK IN AND AROUND EXISTING TREES AND TREE PROTECTION FENCES REFER TO SUPPLEMENTAL SPECIFICATIONS FOR REQUIREMENTS

- 8.1. FOR ALL WORK PERTAINING TO TREE BRANCH AND SHRUB AREA PRUNING THE CONTRACTOR SHALL CONTACT THE CONTRACT ADMINISTRATOR TO COORDINATE WITH CITY FORCES FOR PRUNING.
- 8.2. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE WITH THE CONTRACT ADMINISTRATOR AND CITY ARBORIST TO DETERMINE THE PROXIMITY OF OVERHANGING BRANCHES WITHIN THE WORK ZONE.
- 8.3. IF THERE ARE CONCERNS REGARDING THE EXISTING TREE CANOPY AND THE REQUIRED CONSTRUCTION CLEARANCES, THE CONTRACTOR SHALL COORDINATE
- WITH THE CONTRACT ADMINISTRATOR TO COORDINATE WITH CITY FORCES FOR PRUNING. 8.4. VERTICAL CLEARANCE ABOVE THE PATH FINISHED GRADE SHALL BE MINIMUM 2.5 m.

D. TOPSOIL STRIPPING

1. TOPSOIL WITHIN THE LIMITS OF EARTHWORKS, HAVING POTENTIAL TO MEET THE SPECIFICATIONS FOR GROWING MEDIUM, SHALL BE REVIEWED BY THE CONTRACT ADMINISTRATOR WHO MAY DIRECT THE CONTRACTOR TO STOCKPILE THE TOPSOIL MATERIAL FOR REUSE.

E. LAYOUT

1. ALL MEASUREMENTS ARE IN METRES U.N.O.

SURVEY INFORMATION

Compilation Date: 2020-04-17

Prepared by: BASETT LAND SURVEYING

- 2. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR FOR FURTHER DIRECTION OR CLARIFICATION. 3. THE CONTRACTOR SHALL CONFIRM ON-SITE LAYOUT REQUIREMENTS OF LANDSCAPE MATERIAL AND OTHER SITE AMENITIES WITH THE CONTRACT ADMINISTRATOR
- PRIOR TO THE START OF CONSTRUCTION. 4. ANY ITEMS REQUIRING ON-SITE LAYOUT APPROVAL SHALL HAVE PROPOSED INSTALL LOCATIONS FLAGGED FOR FURTHER REVIEW BY THE CONTRACT ADMINISTRATOR PRIOR TO EXCAVATION FOR INSTALLATION.

F. MATERIALS

- 1. ANY DISCREPANCIES IN QUANTITIES FROM WHAT IS REQUIRED TO COMPLETE CONSTRUCTION, AS COMPARED TO THE ESTIMATED UNITS SHOWN ON THE SCHEDULE OF QUANTITIES, SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR IMMEDIATELY.
- 2. NO SUBSTITUTIONS OF MATERIALS, PRODUCTS, OR QUANTITIES SHALL BE PERMITTED WITHOUT PRIOR CONSENT OF THE CONTRACT ADMINISTRATOR.

G. SEEDING

- 1. ALL GRASS SEEDING SHALL BE AS SPECIFIED.
- 2. TOPSOIL/GROWING MEDIUM FOR ALL SEEDED AREAS SHALL MEET THE SPECIFICATIONS FOR TYPE 2 HIGH TRAFFIC LAWN AREAS AS SPECIFIED IN THE CANADIAN LANDSCAPE STANDARD, UNLESS OTHERWISE NOTED.
- ALL SEEDED AREAS SHALL HAVE A MINIMUM TOPSOIL/GROWING MEDIUM DEPTH OF 150 mm.
- 4. SEED MIX SHALL BE A PREMIUM GRADE FOUR WAY PERENNIAL RYEGRASS BLEND SUITABLE FOR THE COASTAL BC CLIMATE, OFFERING GOOD WEAR AND DROUGHT TOLERANCE.
- 5. CONTRACTOR SHALL SUBMIT PROPOSED SEED MIX FOR APPROVAL BY CONTRACT ADMINISTRATOR.
- 6. HYDROSEED RATES FOR SEED, MULCH, FERTILIZER, AND TACKIFIER SHALL BE AS RECOMMENDED BY THE SUPPLIER TO ACHIEVE GRASS ESTABLISHMENT AND EROSION CONTROL DURING ESTABLISHMENT. CONTRACTOR SHALL PROVIDE HYDROSEED MIX AND APPLICATION RATES TO THE CONSULTANT FOR APPROVAL PRIOR TO PROCUREMENT AND INSTALLATION.

H. TRAFFIC CONTROL AND RESIDENT ACCESS NOTES

- CONTRACTOR TO OBTAIN A ROAD CLOSURE PERMIT FROM THE CITY OF COURTENAY PRIOR TO ANY TRAFFIC DISRUPTIONS
- PROVIDE TRAFFIC CONTROL, SIGNAGE, BARRICADES AND ILLUMINATION, AND DETOUR ROUTING AS REQUIRED TO MAINTAIN TRAFFIC FLOW AND EMERGENCY VEHICLE ACCESS.
- 3. ALL FLAG PERSONS TO HAVE PROOF OF CERTIFICATION.
- 4. AT END OF DAY EXCAVATION SHALL BE WELL SIGNED AND PROTECTED.
- MAINTAIN SAFE PEDESTRIAN WALKWAYS AROUND WORK ZONE AND DELINEATE WITH TEMPORARY FENCING IF REQUIRED.
- CONTRACTOR SHALL MAINTAIN SAFE RESIDENTIAL ACCESS ACROSS PROJECT SITE SO RESIDENTS CAN ACCESS BOTH SIDES OF THEIR PRIVATE PROPERTY. SAFE ACCESS ROUTE SHALL BE CLEARLY MARKED. IF ACCESS NEEDS TO BE RESTRICTED, CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR FOR APPROVAL OF A MINIMUM OF 48 HOURS IN ADVANCE.

TREE AND SHRUB SCHEDULE - REFERENCE ONLY (N.I.C.)

<u> </u>	<u>QTY</u>	COMMON NAME	BOTANICAL NAME	SIZE	HGT. (M)
+	1	VINE MAPLE	ACER CIRCINATUM	50mm CAL.	
	4	BIG LEAF MAPLE	ACER MACROPHYLLUM	50mm CAL.	
WAT THE WAT TH	5	DOUGLAS FIR	PSEUDOTSUGA MENZIESII		2.5
	6	GARRY OAK	QUERCUS GARRYANA	50mm CAL.	
	2	BASSWOOD	TILIA AMERICANA	50mm CAL.	

CONCEPT PLANT SCHEDULE



SHRUBS	TOTAL AREA 108.9 m²	QTY	SIZE	COVERAGE
CORNUS SERICEA / R GAULTHERIA SHALLO HOLODISCUS DISCOL MAHONIA AQUIFOLIUI MAHONIA NERVOSA / PHYSOCARPUS CAPIT POLYSTICHUM MUNIT	N / SALAL OR / OCEAN-SPRAY M / OREGON GRAPE DULL OREGON GRAPE FATUS / PACIFIC NINEBARK FUM / WESTERN SWORD FERN FRED FLOWERING CURRANT OTKA ROSE	6 6 21 17 11 23 6 31 21 21	#1 #1 #1 #1 #1 #1 #1	5% @ 1.00m oc 5% @ 1.00m oc 10% @ 0.75m oc 15% @ 1.00m oc 5% @ 0.75m oc 5% @ 0.50m oc 5% @ 0.75m oc 15% @ 0.75m oc 10% @ 0.75m oc 10% @ 0.75m oc

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CITY OF COURTENAY | Scale

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M.KELDER

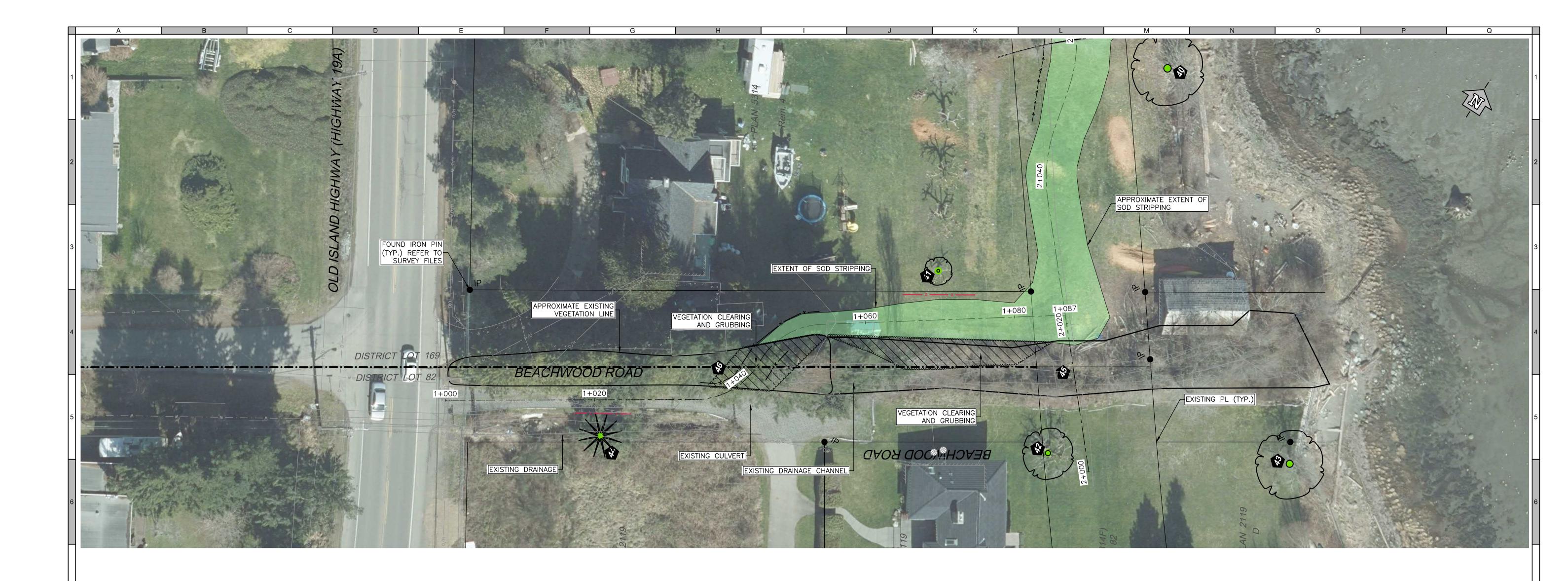
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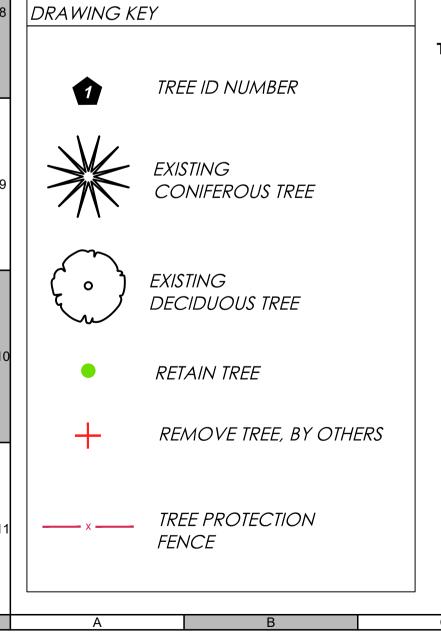
Designed by

Drawn by

RIVERWAY TRAIL EXTENSION: | PHASE 1 DESIGN NOTES

2 of 14 **Project Number** Drawing Number Revision 3222.0063.01 C01





Tree Inventory		DBH		RPA Radius (m)					
Tree I	D #	Tree Species	Common Name	(cm)	Crown Diameter (m)	` '		Recommendatio	n Notes (health, height, condition)
	40 Ac	er macrophyllum	big leaf maple	35	10	4.2	private	Protect	four trees/stems
	41		fruit tree	30	4	3.6	private	Protect	
	42 Qı	iercus sp.	oak	45	9	5.4	private	Protect	
	43		fruit tree	40	7	4.8	shared	Protect	requires further investigation to determine ownership
	44 Ps	eudotsuga menziesii	Douglas-fir	35	6	4.2	shared	Protect	requires further investigation to determine ownership
	45					0		Selective Removal	young, scrubby cottonwoods and alder
	46 Th	uja plicata				0		Selective Removal	row of tightly spaced trees growing along drainage channel, healthy

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	MV	100% DESIGN SUBMISSION	2020-06-19	2
	MS	100% DESIGN SUBMISSION	2020-07-28	3
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V 0.25m	Ö	0.25	0.5	0.75	

M.VORHIES M.VORHIES M.SAVAGE

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RIVERWAY PATH TREE MANAGEMENT TREE MANAGEMENT AND
SITE PREP PLAN

Sheet Number		3 of 14
Project Number	Drawing Number	Revision
3222.0063.01	T01	1

DRAWING KI	EY
•	TREE ID NUMBER
	EXISTING CONIFEROUS TREE
	EXISTING DECIDUOUS TREE
•	RETAIN TREE
+	REMOVE TREE, BY OTHERS

TREE PROTECTION

Tree Inventory		DBH		RPA Radius (m)					
Tree	ID#	Tree Species	Common Name	(cm)	Grown	` '		Recommendati	on Notes (health, height, condition)
	34 <i>Pic</i>	ea sitchensis	sitka spruce	160	14	19.2	shared	Protect	large and mature, historic crown raising branch pruning on bottom half, crown dieback, stressed, requires further investigation to determine ownership
	35 Ace	er macrophyllum	big leaf maple	99	12	11.88	private	Protect	splits into two stems @ 130 cm, crown die back, stressed
	36 <i>Mal</i>	lus sp.	apple	15	5	1.8	city	Remove	branches into three stems at base of trunk, wood plank anchored between stems
	37 Ps	eudotsuga menziesii	Douglas-fir	80	8	9.6	city	Remove	deformed trunk, historic pruning scars, topped multiple times
	38 <i>Ps</i> 6	eudotsuga menziesii	Douglas-fir	160	18	19.2	shared	Protect	trunk splits into co-dominant stems
	39 <i>Ps</i> e	eudotsuga menziesii	Douglas-fir	160	20	19.2	shared	Protect	trunk splits into co-dominant stems
	40 Ace	er macrophyllum	big leaf maple	35	10	4.2	private	Protect	four trees/stems
	41		fruit tree	30	4	3.6	private	Protect	
	42 Que	ercus sp.	oak	45	9	5.4	private	Protect	
	43		fruit tree	40	7	4.8	shared	Protect	requires further investigation to determine ownership

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RIVERWAY TRAIL EXTENSION:
PHASE 1 DESIGN
THE MANAGEMENT AND TREE MANAGEMENT AND

Sheet Number		4 of 14
Project Number	Drawing Number	Revision
3222.0063.01	T02	1



DRAWING K	EY
Û	TREE ID NUMBER
	EXISTING CONIFEROUS TREE
	EXISTING DECIDUOUS TREE
•	RETAIN TREE
+	REMOVE TREE, BY OTHERS
x	TREE PROTECTION FENCE

10 Acer sp.	maple	100	15	12	city	Remove	two trees, one tree branches into four sten within 1.5 m height, one small stem appea dead, trunk injuries, appears stressed, ear leaf drop, manage along with Tree #9
11 Acer sp.	maple	35		4.2	city	Remove	truпk splits about 0.6 m from ground, опе trunk cut-off at about 1m height
12 Populus trichocarpa	black cottonwood	60	15	7.2	city	Remove	large and mature
13 Populus trichocarpa	black cottonwood	160	15	19.2	city	Remove	four stems, one isolated and leaning to the east, three stems fused at base, large and mature
14 Populus trichocarpa	black cottonwood	80	12	9.6	private	Protect	two trees, mature, large
15 Acer sp.	maple	25	5	3	city	Protect	willlow?
16 Acer sp.	maple	200	7	24	shared	Protect	
17 Acer macrophyllum	big leaf maple	70	10	8.4	private	Protect	significant dead crown (no bark), natural retrenchment appears to be occuring
18	unknown	5		0.6	city	Remove	
19	unknown	5		0.6	private	Protect	
20	fruit tree	5		0.6	private	Protect	recently planted and staked
21	fruit tree	5		0.6	city	Remove	recently planted and staked
22	fruit tree	5		0.6	city	Remove	recently planted and staked
23	fruit tree	5		0.6	private	Protect	recently planted and staked

Tree ID	# Tree Species	Common Name	DBH (cm)	Crown Diameter (m)	RPA Radius (m) @ 12x DBH (Ownership	Recommendation	Notes (health, height, condition)
	24	fruit tree	5		0.6	city	Remove	recently planted and staked
	25	fruit tree	5		0.6	city	Remove	recently planted and staked
	26	fruit tree	5		0.6	city	Remove	recently planted and staked
	27 Picea sp.	spruce	32	5	3.84	city	Remove	pruning scars, trunk injury, lights mounted to trunk atypical trunk
	28 Rhamnus purshiana	cascara	16.5	6	1.98	city	Remove	stressed, lopsided crown
	29 Acer macrophyllum	big leaf maple	30	6	3.6	city	Remove	branch dieback, trunk deformities and splits, poor condition, stressed
	30 Salix sp.	willow	100	6	12	private	Protect	willow clump
	31 Acer macrophyllum	big leaf maple	200	15	24	private	Protect	dead stems, stressed, 10 stems
	32 Malus sp.	apple	48	10	5.76	city	Protect	slight bend in trunk, apple crop
	33 Prunus emarginata	bitter cherry	27		3.24	shared	Protect	clump, multiple trees

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Coordinate System: NAD83 (CSRS) 1997.0 Compilation Date: 2020-04-17

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	MV	100% DESIGN SUBMISSION	2020-06-19	2
	MS	100% DESIGN SUBMISSION	2020-07-28	3
CI				

CITY OF COURTENAY Scale

URBAN systems					
H 2.5m H + + + V 0.25m	0	2.5 0.25	5 0.5	7.5 0.75	

M.VORHIES

M.VORHIES M.SAVAGE

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RIVERWAY TRAIL EXTENSION:
PHASE 1 DESIGN
TREE MANAGEMENT AND

Sheet Number 5 of 14

- 1				IL
	Sheet Number		5 of 14	L
	Project Number	Drawing Number	Revision	ا'
	3222.0063.01	T03	1	
				-

DRAWING KEY						
	TREE ID NUMBER					
	EXISTING CONIFEROUS TREE					
	EXISTING DECIDUOUS TREE					
•	RETAIN TREE					
+	REMOVE TREE, BY OTHERS					

TREE PROTECTION

FENCE

Tree ID	# Tree Species	Common Name	DBH (cm)	Crown Diameter (m)	RPA Radius (m)	Ownership	Recommendation	Notes (health, height, condition)
	1 Prunus sp.	cherry	35	5	4.2	city	Remove	small tree
	2 Labumum anagyroides	golden rain tree	50	5	6	city	Remove	poor branch structure, some evidence of rot
	3	shrub			0	city	Remove	200 cm wide
	4	fruit tree	40	5	4.8	city	Remove	appears stressed, early leaf drop, tent caterpillars present
	5 Prunus sp.	cherry	60	8	7.2	private	Protect	five stems branch about 0.6 m above the ground
	6 Pseudotsuga menziesii	Douglas-fir	140	12	16.8	shared	Protect	some branch dieback, very close to house, stockpiled materials around base and leaning on trunk
	7 Pícea sitchensis	sitka spruce	35	5	4.2	city	Protect	truпk splits @ 0.5m, some branch dieback
	8 Picea sitchensis	sitka spruce	50	8	6	city	Protect	ground built-up on one side of trunk, heavy cone crop
	9 Acersp.	maple	40	5	4.8	city	Remove	two trees, appears stressed, early leaf drop,

7	ATTENTION	SURVEY INFORMATION	
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N/322;	WARNING Utilities or structures shown on this drawing were compiled from information		100%
jects_VA	supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the		JULY urbans
U:\Pro	proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.		

9 Acersp.

Tree Inventory

ISSUED FOR
100% DESIGN
JULY 28, 2020
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manage along with Tree #10

Professional Seals

7	# Date	Issue / Revision	Арр	
	1 2020-05-15	60% DESIGN SUBMISSION	MV	
7	2 2020-06-19	100% DESIGN SUBMISSION	MV	
	3 2020-07-28	100% DESIGN SUBMISSION	MS	
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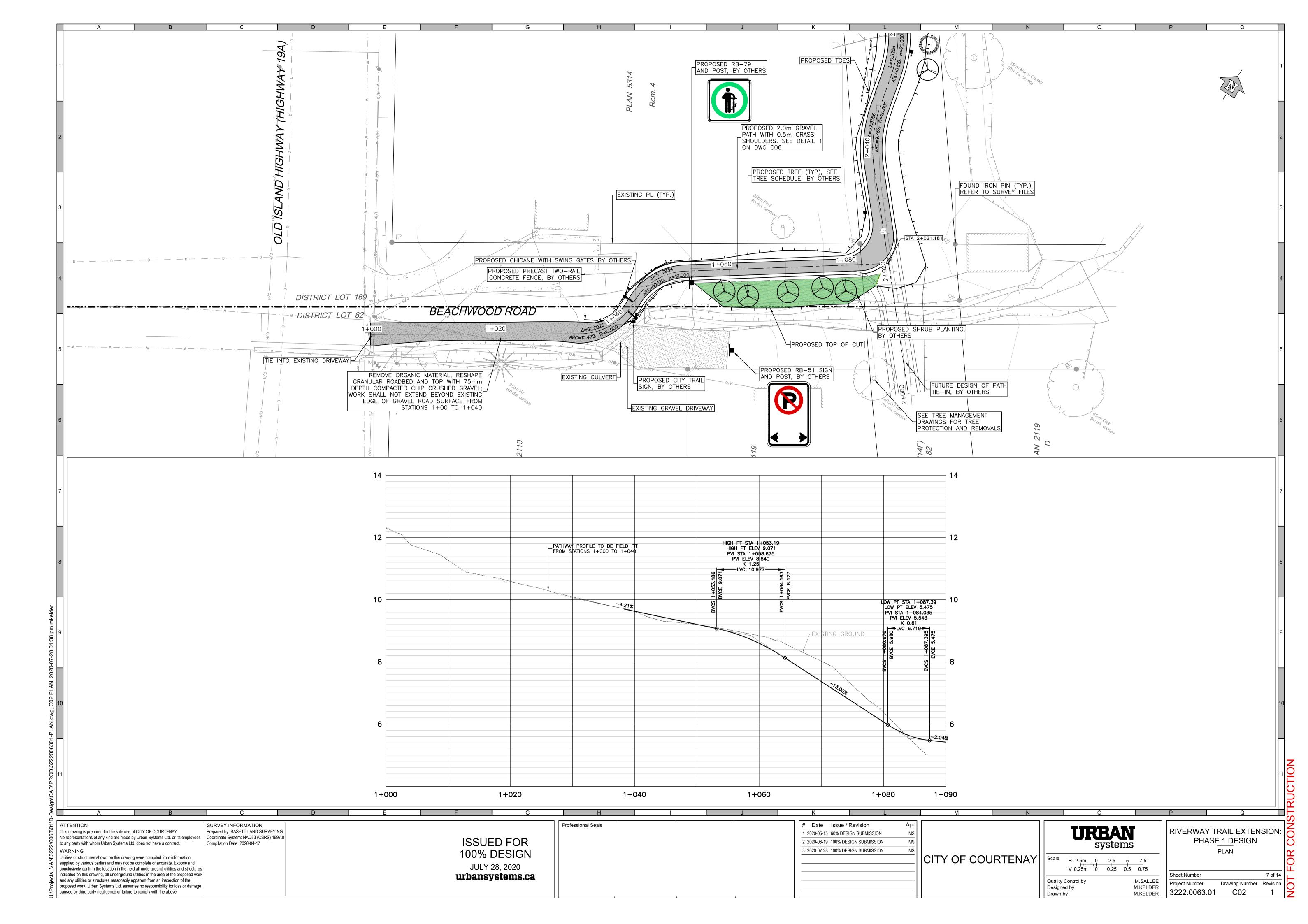
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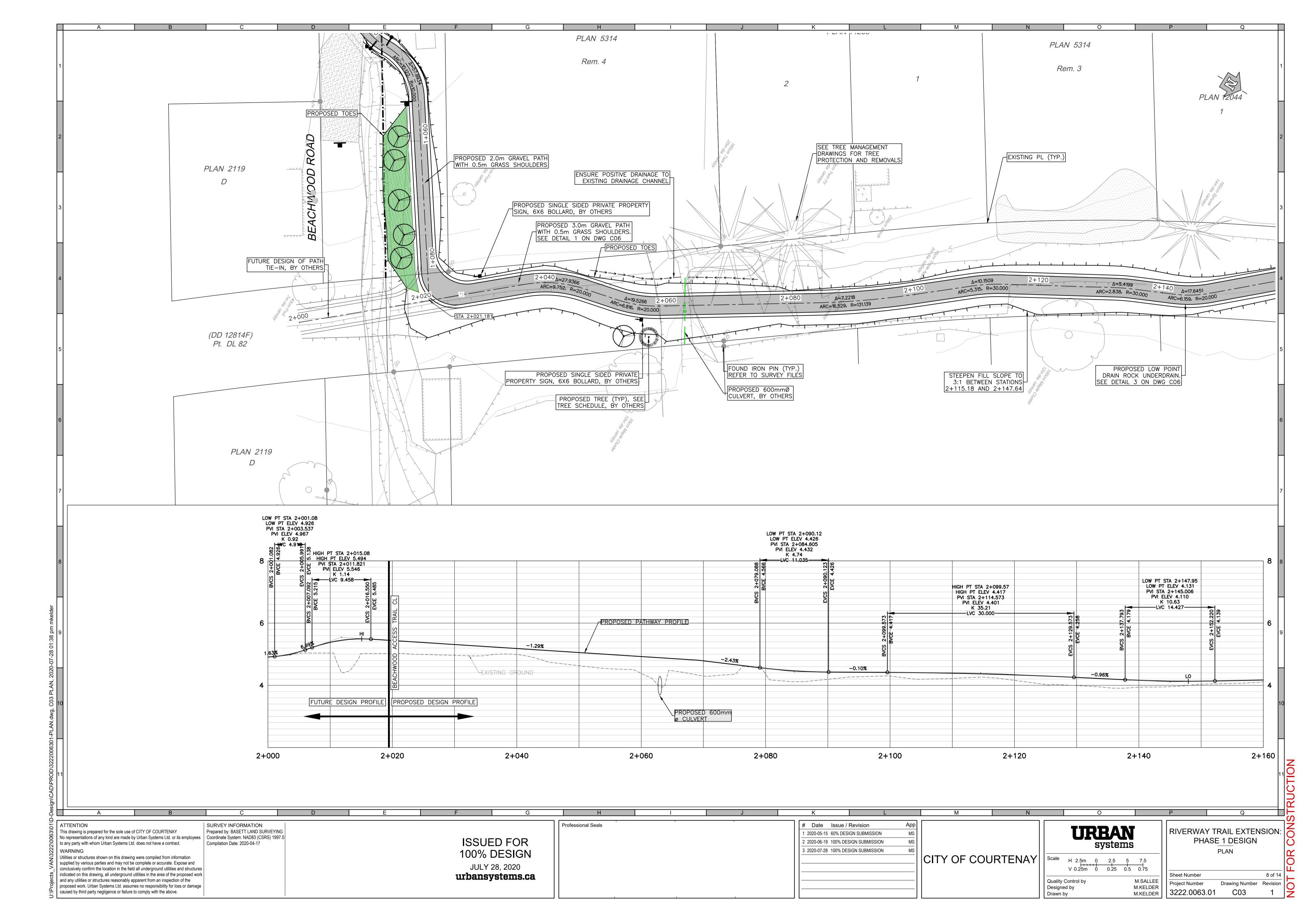
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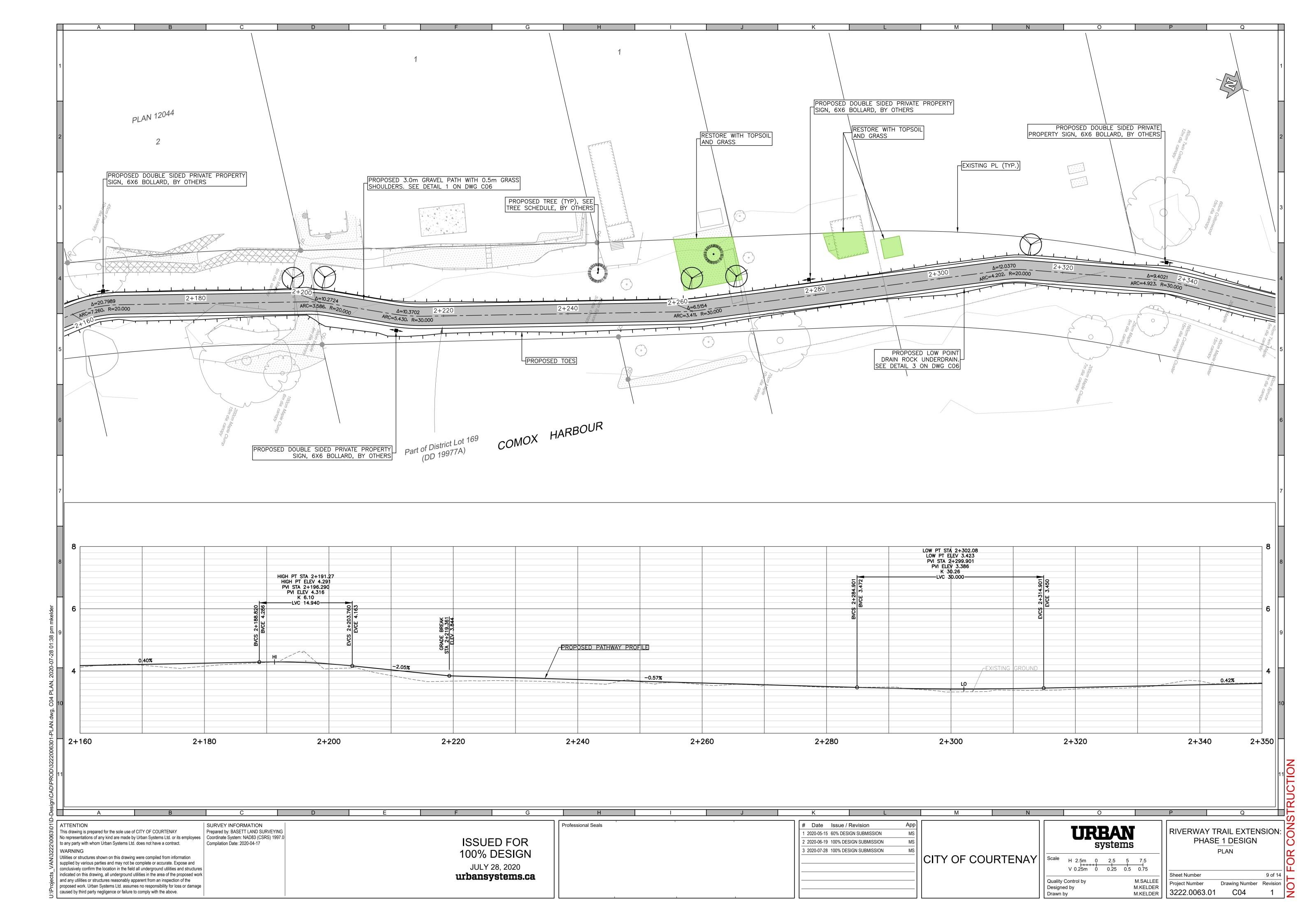
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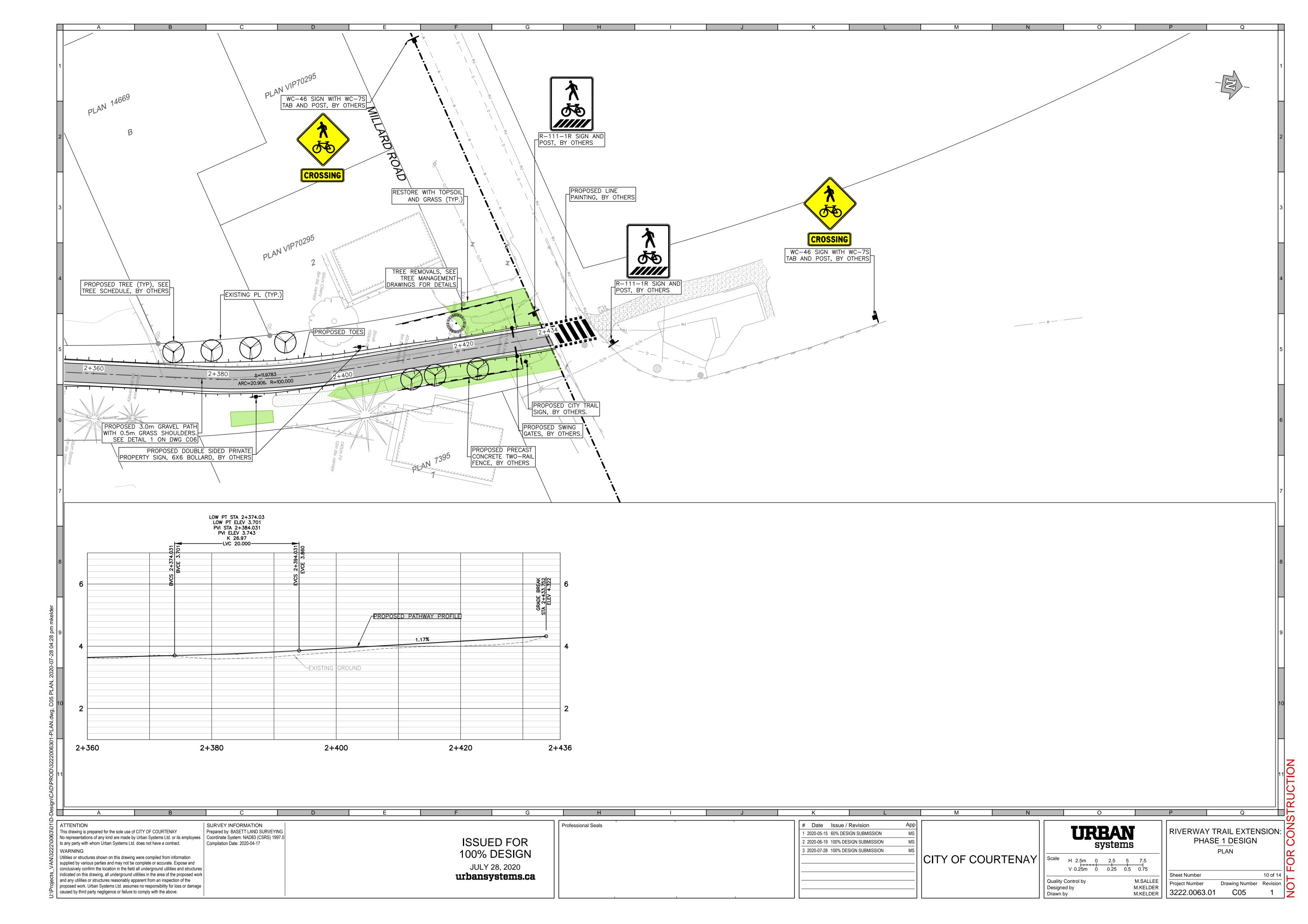
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PHA	Y TRAIL EXTENSION ASE 1 DESIGN MANAGEMENT AND	FOR CONS

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Sheet Number		6 of 14	
Project Number	Drawing Number	Revision	
3222.0063.01	T04	1	ž









3. MATERIALS AND CONSTRUCTION TO MEET CURRENT CITY OF COURTENAY SPECIFICATIONS. 4. CONTRACTOR RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AS REQUIRED TO COMPLETE THE WORK.

5. ALL MATERIALS TO BE SUPPLIED & CONSTRUCTED AS PER THE MOST RECENT VERSION OF THE MASTER MUNICIPAL CONTRACT DOCUMENTS (MMCD)

GRAVEL PATH SCALE NTS

DETAIL-FILE

GRAVEL TRAIL, REFER TO OTHER DETAIL AND PLAN DRAWING FOR DIMENSIONS MIN. 150mm TOPSOIL AND SEED - - 300mm _DRAIN ROCK WRAPPED IN FILTER FABRIC, 200mm DEPTH x 1000mm WIDTH _EXISTING GROUND FINISHED GROUND

1. REFER PLAN FOR LOCATIONS, FIELD FIT AS REQUIRED 2. DRAIN ROCK TO BE CRUSHED COARSE DRAIN ROCK. OVERLAP GEOTEXTILE FILTER FABRIC MIN. 300mm. DAYLIGHT EITHER SIDE, GRADE TOPSOIL FLUSH TO DRAIN ROCK.

LOW POINT ROCK UNDERDRAIN

BARRIER PROTECTION SIGN, AS SPECIFIED PLASTIC SNOW FENCE, AS SPECIFIED 2x4 POST SECURELY DRIVEN INTO GROUND _2x4 FRAMING INCLUDING GROUND LEVEL TOP AND BOTTOM RAILS

1. REFER TO CITY OF COURTNEY TREE PROTECTION AND MANAGEMENT BYLAW NO. 2850, 2016

TREE PROTECTION FENCE SCALE N.T.S.

DETAIL-FILE

ISSUED FOR 100% DESIGN JULY 28, 2020 urbansystems.ca

App # Date Issue / Revision 1 2020-05-15 60% DESIGN SUBMISSION MV 2 2020-06-19 100% DESIGN SUBMISSION 3 2020-07-28 100% DESIGN SUBMISSION

CITY OF COURTENAY Scale H ###m 0 ### # ###

URBAN systems V ####m 0 #### ### #### M.VORHIES Quality Control by M.VORHIES M.SAVAGE Designed by

Drawn by

RIVERWAY TRAIL EXTENSION: PHASE 1 DESIGN **DETAILS**

14 of 14 Sheet Number Drawing Number Revision Project Number 3222.0063.01 C06

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Professional Seals

