# City of Burlington Vermont



# Department of Public Works Water Resources

GSI/CSO - Old North End Subsurface Stormwater Retrofits Project

**MAY 2022** 

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# CITY OF BURLINGTON - SUPPLEMENTARY CONDITIONS

# 1. Maintenance of Traffic

Work shall be performed in accordance with all portions of VTrans sections 104.04, excluding 104.04(b).

# 2. Hours of Work

The CONTRACTOR is limited to working 7:00 AM to 4:00 PM, Monday through Friday and 7:00 AM to 4:00 PM, Saturday unless a waiver is requested in writing and is granted by the Owner.

# 3. <u>Business/Driveway Access</u>

The CONTRACTOR shall notify property owners or residents 24 hours in advance before blocking access to any drives. Access shall be provided to all drives during non-working hours. The Contractor shall maintain pedestrian access to homes and businesses at all times.

# 4. <u>Construction Signing</u>

The CONTRACTOR shall erect and maintain adequate construction signing for protection of the public on all Project streets and adjacent streets in accordance with Sections 104.04, 107.07, 107.08, and 107.09 of the VTrans Standard Specifications.

# 5. Dust Control

Work shall be performed in accordance with all portions of Sections 105.24 and 609 of the VTrans Standard Specifications.

# 6. Temporary Barricades

The CONTRACTOR shall provide and maintain temporary barricades in all locations where any hazard to the public may occur or as ordered by the OWNER or to protect public safety as described in portions of Section 107 of the VTrans Standard Specifications.

# 7. Maintenance of Utility Services

The CONTRACTOR shall maintain all existing utility services to homes at all times except during switch-overs from existing services to new services and cooperate with utilities as described in Sections 105.07 and 107.13 of the VTrans Standard Specifications.

# 8. Utility Work

The CONTRACTOR must coordinate work and cooperate with Burlington Electric, Burlington Water, Burlington Telecom, Fairpoint, Comcast, Level 3, TelJet, and Vermont Gas, as needed. There may be an inspector from Burlington Electric Department on site, if needed.

Employees or agents of the above listed utility companies are to be allowed full and free access within the project limits with the tools, materials, and equipment necessary to install, operate, maintain, place, replace, relocate and remove their facilities. There will be no extra compensation paid to the CONTRACTOR for any inconvenience caused by working around and with the utility company. Should the CONTRACTOR desire additional adjustments of utility facilities for his or her convenience, proper arrangements shall be in conformance with subsection 105.07 and 107.13 of the VTrans Standard Specifications.

# CITY OF BURLINGTON – GENERAL SPECIAL PROVISIONS

<u>Standard Specifications</u>. The provisions of the 2018 VTrans STANDARD SPECIFICATIONS FOR CONSTRUCTION, as modified herein, shall apply to this Contract unless they conflict with previously defined terms or provisions provided by the City of Burlington. In case of conflict, the City provisions shall govern.

<u>Utilities</u>. The Contractor is advised to use caution when working around aerial or underground utilities to protect the facilities from damage.

Employees or agents of utility companies are to be allowed free and full access within the project limits with the tools, materials, and equipment necessary to install, operate, maintain, place, replace, relocate, and remove their facilities.

There will be no extra compensation paid to the Contractor for any inconvenience caused by working around and with utilities.

Act No. 86 of 1987 (30 VSA Chapter 86)("Dig Safe") requires that notice be given prior to making an excavation. It is suggested that the Permit Holder or his/her contractor telephone 1-888-344-7233 at least 48 hours before, and not more than 30 days before, beginning any excavation at any location.

Should the Contractor desire additional adjustments of the utility facilities for his/her convenience, proper arrangements shall be made in conformance with Subsection 105.07 of the Standard Specifications for Construction.

**Notice to Bidders.** All temporary construction signs shall meet the following requirements:

- A. Where sign installations are not protected by guardrail or other approved traffic barriers, all sign stands and post installations shall meet National Cooperative Highway Research Program (NCHRP) Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH). The appropriate resource shall be determined as described in the MASH publication.
- B. As a minimum, roll up sign material shall have ASTM D 4956 Type VI fluorescent orange retroreflective sheeting.
- C. All post-mounted signs and solid substrate portable signs shall have ASTM D 4956 Type VII, Type VIII, or Type IX fluorescent orange retroreflective sheeting.
- D. All retroreflective sheeting on traffic cones, barricades, and drums shall be at a minimum ASTM D 4956 Type III sheeting.
- E. All stationary signs shall be mounted on two 3 lb/ft flanged channel posts or 2 inch square steel inserted in 2-1/4" galvanized square steel anchors. No sign posts shall extend over the top edge of sign installed on said posts.
- F. Construction signs shall be installed so as to not interfere with nor obstruct the view of existing traffic control devices, stopping sight distance, and corner sight distance from drives and town highways.
- G. Speed zones, if used, should be a maximum of 10 mph below existing posted speeds. Temporary speed limit certificates must be approved by the Chief Engineer on State highways and can be approved by the City on local roads.

All retro-reflective sheeting on permanent signs (signs to remain after the project is completed) shall be at a minimum ASTM Type III sheeting, unless otherwise shown on the Plans.

<u>Construction Vehicle Parking Restrictions</u>. Only such trucks and equipment as are necessary for the construction of this project will be permitted to stop or park on the shoulders or right-of-way of City roadways. Parking or stopping on the traveled portion of the roadway will not be permitted unless authorized by the Engineer to meet field conditions.

# **SECTION 101 – DEFINITIONS**

**101.02, DEFINITIONS**, are hereby modified by deleting the existing following definitions and replacing as follows:

<u>AGENCY</u> – Wherever the word Agency appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; **City of Burlington**, except when referenced to documents or publications.

**BOARD** – Wherever the term Board or Transportation Board appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; the Transportation Board of the State of Vermont or its successor.

**CALENDAR DAY** – Any day shown on the calendar, beginning and ending at midnight.

<u>CHANGE ORDER</u> – A document recommended by the Engineer, signed by the Contractor and **City of Burlington** authorizing changes in the plans or quantities or both, establishing the basis of payment and time adjustments for the Work affected by the changes.

<u>CONSTRUCTION ENGINEER</u> – Wherever the term Construction Engineer appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; the Resident Engineer and/or Full Time City Employee in Responsible Charge.

<u>CONTRACT COMPLETION DATE</u> – The calendar date specified in the Contract and as adjusted by Change Order when applicable, by which the Contractor shall achieve Substantial Completion.

<u>CONTRACT</u> – The written agreement between **City of Burlington** and the Contractor setting forth the obligations of the parties relative to the performance of the work. The Contract includes the Contract agreement, Contract Bonds, Project permits, Project Special Provisions, Contract Plans, General Special Provisions, Standard Drawings, Supplemental Specifications, the Standard Specifications for Construction, and any Supplemental Agreements or supporting documents that are required to complete the work in an acceptable manner.

<u>CONTRACT BOND(S)</u> – The approved forms of security, signed, notarized and furnished by the Contractor and the Contractor's Surety or Sureties, guaranteeing complete performance of the Contract, compliance with the Contract, and the payment of all legal debts pertaining to the construction of the Project or work.

<u>CONTRACTOR(S)</u> – The individual, partnership, firm, corporation, any acceptable combination thereof, or a joint venture which is a party to the Contract with the City which is undertaking the performance of the work under the terms of the Contract and acting directly or through its agent(s) or employee(s). The term "Contractor" means the prime Contractor as differentiated from a Subcontractor. All Contractors must be registered with the Vermont Secretary of State. The Contractor will act in an independent capacity and not as officers or employees of the City.

**ENGINEER** – Wherever the term Engineer appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; the Resident Engineer (RE).

**GENERAL SPECIAL PROVISIONS** – Approved additions and revisions to the Standard Specifications for

Construction approved pursuant to the Specification approval process.

<u>MATERIALS MANAGER</u> – Whenever the term Materials Manager appears on the plans, in any specification, or in the Contract, it shall be read as, and shall mean; the Resident Engineer.

**PROPOSAL FORM** – Whenever the term Proposal Form appears on the plans, in any specification, or in the Contract it shall be read as, and shall mean; the BID FORM unless specifically referenced otherwise in these Special Provisions.

<u>REGIONAL CONSTRUCTION ENGINEER</u> – Whenever the term Regional Construction Engineer appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; the Resident Engineer.

<u>**RESIDENT ENGINEER**</u> – An entity employed by **City of Burlington** to perform supervisory duties including the oversight of testing services on the project.

**SECRETARY** – Wherever the term Secretary appears on the plans, in any specification, or in the contract it shall be read as, and shall mean; the **City of Burlington**.

<u>PROJECT SPECIAL PROVISIONS</u> – Additions and revisions to the Standard Specifications for Construction, Supplemental Specifications, General Special Provisions applicable to the Contract, as well as other provisions specific to the Contract. Also referred to as Special Provisions.

<u>SPECIFICATIONS</u> – The compilation of provisions and requirements for the performance of prescribed work including the Standard Specifications for Construction, Supplemental Specifications, General Special Provisions, Project Special Provisions, and other requirements included in the contract.

<u>STANDARD SPECIFICATIONS or STANDARD SPECIFICATIONS FOR CONSTRUCTION</u> – The Vermont Agency of Transportation book entitled <u>Standard Specifications For Construction</u> and the specifications included therein, as approved for general and repetitive use and application in Agency/Municipal projects.

<u>STATE</u> – Wherever the term State appears on the plans, in any specification, or in the contract, it shall be read as, and shall mean; the **City of Burlington**.

<u>SURETY</u> – An individual or legal entity acceptable to the Town executing the bond or bonds furnished by the bidder or contractor.

<u>WORK</u> – The furnishing of all labor, materials, equipment, and incidentals necessary or convenient to the successful completion of a project and the carrying out of all duties and obligations imposed by a contract.

<u>WORKING DAY</u> – Weekdays during the Construction Season during which construction operations may proceed. If the Contractor works on Saturdays, Sundays, holidays, or during the Seasonal Closure Period, those days will be considered Working Days.

ADD TO DEFINITION LIST IN 101.02, DEFINITIONS, the following definitions:

**ADDENDUM (addenda)** – Contract revisions developed after advertisement and before opening bids.

<u>ADVERTISEMENT</u> – A public announcement, inviting bids for work to be performed or materials to be furnished.

**AGREEMENT** – The written instrument which is evidence of the agreement between **City of Burlington** 

and the Contractor.

**AWARD** – The formal acceptance by **City of Burlington** of a bid.

<u>**BID**</u> – The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

**BID BOND** – A bid guarantee as outlined in the Instructions to Bidders for Contracts.

**<u>BIDDER</u>** – The individual, partnership, firm, corporation, or any combination thereof, or joint venture, submitting a Bid in accordance with the bidding requirements.

**CONTRACT TIME** – The time allowed for completion of the contract including authorized time extensions.

<u>INCIDENTAL AND INCIDENTAL ITEM</u> – These terms are used to indicate work for which no direct payment will be made. Such work is considered to be incidental to items having contract prices, and the bid prices submitted by the contractor shall be sufficient to absorb the cost of all work designated as incidental or as incidental items.

<u>INVITATION FOR BIDS</u> – An advertisement for receiving bids for all work and/or materials on which bids are invited from prospective contractors.

<u>MUNICIPAL PROJECT MANAGER</u> – A person or firm employed or appointed by **City of Burlington** to provide administrative services for the project.

**NOTICE OF AWARD** – The written notice of the acceptance of the Bid from the Owner to the successful Bidder.

### **OWNER** – City of Burlington

<u>PROPOSAL</u> – The offer of a bidder, on the prescribed form, to perform work and/or provide materials at the price quoted in the offer.

**PROPOSAL FORM** – The prescribed form on which **City of Burlington** requires the Bid be submitted.

<u>PROPOSAL GUARANTEE</u> – The security furnished with a bid to ensure that the bidder will enter into a contract if the bidder's proposal is accepted by **City of Burlington**.

**SUBCONTRACTOR** – An individual or legal entity to which the contractor sublets a part of the work included in the contract.

<u>TESTING FIRM</u> – An independent firm employed by **City of Burlington** or Resident Engineer to perform all sampling and testing of materials as specified in the Contract Documents and as defined in the VTrans Qualified Laboratory Program.

# The following sections represent modifications to the VTRANS 2018 Standard Specifications for Construction

# Section 105 - Control of the Work

<u>105.03</u>, <u>Plans and Working Drawings</u>, paragraph 1, part (b) <u>Working Drawings</u>, and subpart (3) <u>Categories of Working Drawings</u>, a. <u>Fabrication Drawings</u>, and subpart b. <u>Construction Drawings</u>; where the Agency is mentioned it shall mean the **City of Burlington**.

The address where these drawings should be sent is:

Ashley Walenty, PE
Water Resources Engineer, Department of Public Works, Water Resources
53 Lavalley Lane
Burlington, VT 05401
Telephone: 802-495-9976

Telephone: 802-493-9976

Email: awalenty@burlingtonvt.gov

# 105.09, Construction Stakes, Part (a) Initial Layout, (b) Layout of Subgrade and (c) Permanent Marking Layout delete these paragraphs in their entirety and replace with the following:

Horizontal and vertical control information for the project is shown on the project plans or shall be based on existing conditions. The information is sufficient to enable the Contractor to stake the project. The Contractor shall perform all staking requirements for the proposed work. The Contractor will be responsible for the accuracy and preservation of the staking.

<u>105.20 Claims for Adjustments</u>, (c) Claims Procedure; Delete the second, third and fourth sentence and replace with the following:

Claims must be evaluated first by the Engineer and then by the Municipal Project Manager. Should a claim be ruled in favor of the Contractor, it will be allowed, in whole or in part, and paid as provided in the Contract. Should a claim be denied in whole or in part by the Municipal Project Manager the Contractor may appeal to the Director of Public Works.

(d) Claims Documentation Requirements; In the first sentence, replace Construction Engineer with Municipal Project Manager

### Section 106 – Control of Material

**106.03 Samples and Tests,** Add the following two paragraphs to the beginning:

An independent firm employed by the **City of Burlington** or Resident Engineer to perform all sampling and testing of materials as specified in the Contract Documents and as defined in the VTrans Qualified Laboratory Program, shall be responsible for all acceptance sampling and testing of materials and completed work.

The Contractor shall be responsible for their Quality Control. The cost of their Quality Control shall be considered incidental to the payment items in the bid. Any sampling, testing, retesting, and submission of reports and certifications by the Contractor as required by the contract documents and plans shall be considered incidental to the payment items in the bid.

Change the last word in the first paragraph from Agency to **City of Burlington**.

Delete the first sentence of the second paragraph and replace with the following:

Samples will be taken and testing performed by certified personnel of the testing firm in accordance with the requirements of the latest edition of the Vermont Agency of Transportation's Quality Assurance Program and Material Sampling Manual.

Modify the last sentence of the third paragraph to read as follows:

Copies of all test results shall be forwarded directly to the Resident Engineer and the Contractor by the testing firm.

# Section 755 – Landscaping Materials

Add the following:

# 755.04 Seed

# Seed Mix: "Green Mountain Special Mix" or Approved Equal

100% perennial grasses with fine to medium texture

Catamount Grass Seed Item #s GMS050, GMS025, GMS007, and/or GMS003

Perennial grasses with fine to medium texture 100% Creeping Red Fescue 40% Kentucky Bluegrass 30% Perennial Ryegrass 30%

Application rate: Seed at 4 lbs per 1000 sq ft

### **HAZARDOUS MATERIALS**

- 1. If at any time during construction the presence of unanticipated hazardous materials at or proximate to a construction site is detected, the construction CONTRACTOR shall cease work in the affected area and perform the following immediately:
  - a. Notify the CITY verbally and in writing. The CITY is responsible for notification of the Waste Management Division of the Agency of Natural Resources.

# THE HAZARDOUS MATERIALS SPILLS AND EMERGENCY REPORTING PHONE NUMBER IS Toll Free <u>1-800-641-5005</u>.

- b. Take all action necessary and appropriate for the protection and safety of the public and persons at or about the site, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying CITYs and users of adjacent sites and utilities.
- Actions at the construction site following completion of these steps shall be at the direction of the Waste Management Division. Nothing in this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the health and welfare of workers, residents and abutters are immediately adopted.
- 3. At construction sites where the presence of contaminated or hazardous materials are suspected to exist and provisions have been made in the Contract Documents for their management, the requirements in the Contract Documents will determine the appropriate actions of the CONTRACTOR. In any event, discovery of contaminated soils require the immediate notification of the CITY. If sites other than the suspected areas previously delineated in the Contract Documents are discovered, Item 1 above shall apply.

### **HISTORIC PRESERVATION**

- 1. If at any time during construction, the presence of possible human remains are discovered at or proximate to a construction site, the CONTRACTOR shall cease work in the affected area and immediately contact the local medical examiner or law enforcement official in addition to notifying the CITY or CITY's representative. The CONTRACTOR shall take all action necessary and appropriate for the protection and safety of the public and the site.
  - a. Notify the CITY verbally and in writing. The CITY is responsible for notification of the Agency of Natural Resources and FED Construction Project City
- 2. If at any time during construction, the presence of unanticipated historic and archeological resources are detected at or proximate to a construction site, the construction CONTRACTOR shall cease work in the affected area, take all action necessary and appropriate for the protection and safety of the public and the site, and inform the following immediately:
  - a. Notify the CITY verbally and in writing. The CITY is responsible for notification of the Agency of Natural Resources.
  - b. Notify the Vermont Division of Historic Preservation at: (802) 828-3050 landline or (802) 477-2517 cell

Or (802) 828-3048 landline or (802) 310-0289 cell

3. Actions at the construction site following completion of these steps shall be at the direction of the local medical examiner, law enforcement agent or Historic Preservation Division as appropriate. Nothing in

this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the safety and welfare of the workers and the site.

### VTrans 2018 Special Provisions for: Old North End Retrofits

### SECTION 900 - SPECIAL PROVISION ITEMS

### 900.640 - INFILTRATION CHAMBER

1. <u>DESCRIPTION.</u> This work shall consist of furnishing and installing an arch-shaped subsurface infiltration chamber as defined on the Plans.

### 2. MATERIALS.

- a. Chambers shall be arch-shaped and shall be manufactured from virgin, impact-modified polypropylene or polyethylene copolymers.
- b. Chambers shall meet the requirements of ASTM F2922 (polethylene) or ASTM F2418-16A (polypropylene), "Standard Specification for Corrugated Wall Stormwater Collection Chambers"
- c. Chamber rows shall provide continuous, unobstructed internal space with no internal supports that would impede flow or limit access for inspection.
- d. The structural design of the chambers, the structural backfill, and the installation requirements shall ensure that the load factors specified in the AASHTO IRFD bridge design specifications, Section 12.12, are met for: 1) long-duration dead loads and 2) short-duration live loads, based on the AASHTO design truck with consideration for impact and multiple vehicle presences.
- e. Chambers shall be designed, tested and allowable load configurations determined in accordance with ASTM F2787, "Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers". Load configurations shall include: 1) instantaneous (<1 min) AASHTO design truck live load on minimum cover 2) maximum permanent (75-yr) cover load and 3) allowable cover with parked (1-week) AASHTO to design truck.
- f. Only chambers that are approved by the engineer will be allowed. The chamber manufacturer shall submit the following upon request to the engineer for approval before delivering chambers to the project site:
  - 1. A structural evaluation sealed by a registered professional engineer that demonstrates that the safety factors are greater than or equal to 1.95 for dead load and 1.75 for live load, the minimum required by ASTM F2787 and by AASHTO for thermoplastic pipe.
  - 2. A structural evaluation sealed by a registered professional engineer that demonstrates that the load factors specified in the AASHTO LRFD bridge design specifications, Section 12.12, are met. The 50 year creep modulus data specified in ASTM F2418 must be used as part of the AASHTO structural evaluation to verify long-term performance.
- g. Chambers and end caps shall be produced at an ISO 9001 certified manufacturing facility.
- h. Incidental geotextiles shall be as shown on the Plans or approved equal, refer to special provision below for material details.

### 3. PLACING.

- a. To maintain the width of chambers during shipping and handling, chambers shall have integral, interlocking stacking lugs.
- b. To ensure a secure joint during installation and backfill, the height of the chamber joint shall not be less than 2".
- c. To ensure the integrity of the arch shape during installation, a) the arch stiffness constant as defined in Section 6.2.8 of ASTM F2418 shall be greater than or equal to 400 lbs/in/in. And b) to resist softening during hot, sunny conditions, chambers shall be stored out of direct sunlight until installation.
- d. Install per manufacturer's recommendations.
- 4. <u>METHOD OF MEASUREMENT</u>. The quantity of Special Provision (Infiltration Chamber) to be measured for payment will be Linear Feet of chamber installed, measured within the limits shown on the Plans or as directed by the Engineer.
- 5. BASIS OF PAYMENT. The accepted quantity of Special Provision (Infiltration Chamber) will be paid for at the Contract unit price per linear foot. Payment will be full compensation for furnishing, transporting, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

900.640 Special Provision (Infiltration Chamber)

Linear Foot

# 900.675 - GEOTEXTILE

1. <u>DESCRIPTION.</u> This work shall consist of furnishing and placing geotextiles and geogrid in infiltration areas. Work shall be carried out in accordance with VTrans Specification Section 649 Geotextile Fabric, with the following exceptions.

### 2. MATERIALS.

- a. Non-woven geotextile fabric shall be AASHTO Class 2 non-woven geotextile, ADS 0601T, Mirafi 160N, or approved equal.
- b. Woven geotextile fabric shall be AASHTO M288 Class 1 woven geotextile, ADS 315T, MIRAFI 600X, or approved equal.
- c. Geogrid shall be ADS BX15GG, Mirafi BXG120, Tensar Triaxe TX5, or approved equal.

### 3. PLACING.

- a. Woven geotextile fabric placed directly under chambers shall be installed in a single, continuous roll out at each infiltration system for ease of maintenance.
- b. Place non-woven geotextile according to details. May be placed in sections with a minimum of 24" of overlap between sections
- c. Place geogrid according to details. May be placed in sections with a minimum of 24" of overlap between sections.
- 4. METHOD OF MEASUREMENT. The quantity of Geotextile of the type specified to be measured for payment will be the number of square yards placed in the complete and accepted work. Slope measurements will be used in computing the area. Measurement will not be made for material used for repairs, seams, or overlaps. Measurement will not be made for material used to replace an installation of fabric that has become damaged, destroyed, lost, washed away, or otherwise ineffective unless authorized by the Engineer.
- 5. BASIS OF PAYMENT. The accepted quantity of Geotextile of the type specified

will be paid for at the Contract Unit Price per square yard installed. Payment will be full compensation for furnishing, transporting, storing, handling, placing, repairing, and removing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work. Unless otherwise specified in the Contract, payment for the maintenance of Geotextile of the type specified will not be paid for directly, but will be considered incidental to the specific Contract Item.

Payment will be made under:

Pay Item Pay Unit

900.675 Special Provision (Geotextile)

Square Yards

# Site Plans

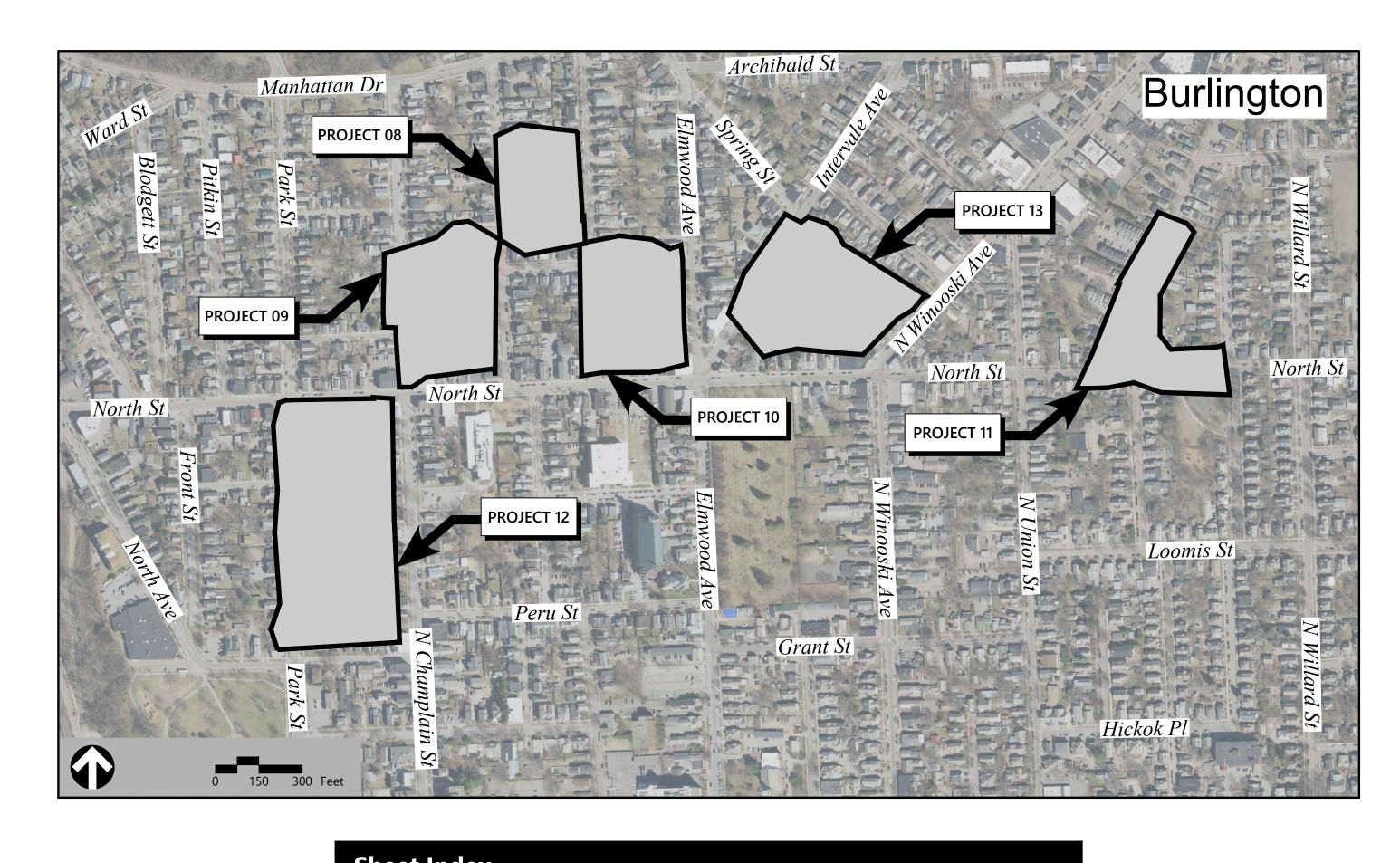
Issued for Bid Date Issued April 14, 2022 April 14, 2022 Latest Issue

# Burlington ONE Stormwater Retrofits

Burlington, VT 05401

# **Owner**

City of Burlington Department of Public Works 149 Church Street Burlington, VT 05401





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Exist.	Prop.		Exist.	Prop.	
		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE			HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
		EASEMENT			RIPRAP
		BUILDING SETBACK		////// ///////	CONSTRUCTION EXIT
40.00	1000	PARKING SETBACK	27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
10+00	10+00	BASELINE	26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
		CONSTRUCTION LAYOUT	132.75 ×	132.75 ×	SPOT ELEVATION
		ZONING LINE	45.0 TW 38.5 BW	45.0 TW 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		TOWN LINE		36.3 BW	BORING LOCATION
		LIMIT OF DISTURBANCE			TEST PIT LOCATION
<u>&amp;</u> _ · _		WETLAND LINE WITH FLAG	<b>○</b> MW	→ MW	MONITORING WELL
		FLOODPLAIN	UD	——	LINDERDRAIN
BLSF		BORDERING LAND SUBJECT TO FLOODING	12"D	12″D—►	UNDERDRAIN DRAIN
————BZ—		WETLAND BUFFER ZONE	6"RD	6″RD— <b>►</b>	ROOF DRAIN
NDZ		NO DISTURB ZONE	12"S	12 <b>"</b> S	SEWER
200′RA-		200' RIVERFRONT AREA			SEWER LATERAL AREA
		200 MVEMINONI ANEA	FM	FM	FORCE MAIN
		GRAVEL ROAD	OHW	ОНW	OVERHEAD WIRE
<u>EOP</u> BB	EOP BB	EDGE OF PAVEMENT	6"W	6"W	WATER
		BITUMINOUS BERM	4"FP	4"FP	FIRE PROTECTION
BC CC	BC CC	BITUMINOUS CURB		2"DW	DOMESTIC WATER
	CG	CONCRETE CURB	3"G	———G———	GAS
CC	ECC	CURB AND GUTTER  EXTRUDED CONCRETE CURB	——Е——	——Е—	ELECTRIC
CC	MCC	MONOLITHIC CONCRETE CURB	STM	———STM——	STEAM
CC	PCC	PRECAST CONC. CURB	———T——	——T——	TELEPHONE
SGE	SGE	SLOPED GRAN. EDGING	——FA——	——FA——	FIRE ALARM
VGC	VGC	VERT. GRAN. CURB	—— CATV——	—— CATV——	CABLE TV
		LIMIT OF CURB TYPE			CATCH BASIN CONCENTRIC
		SAWCUT			CATCH BASIN ECCENTRIC
					DOUBLE CATCH BASIN CONCENTRIC
<u> </u>	_	BUILDING	<b>=</b>	<b>=</b>	GUTTER INLET
](	EN	BUILDING ENTRANCE	(1)	•	DRAIN MANHOLE CONCENTRIC
	<b>]</b> ◀LD	LOADING DOCK	(D)		DRAIN MANHOLE ECCENTRIC
•	•	BOLLARD  DUMPSTER PAD	=TD= E		TRENCH DRAIN PLUG OR CAP
D	D	SIGN	СО	CO	CLEANOUT
<del></del>	<b>T</b>	DOUBLE SIGN	<b>&gt;</b>	<b>•</b>	FLARED END SECTION
				· ·	HEADWALL
тт		STEEL GUARDRAIL			
		WOOD GUARDRAIL	\$ \$	•	SEWER MANHOLE CONCENTRIC
					SEWER MANHOLE ECCENTRIC
· · · · · · · · · · · · · · · · · · ·		PATH	CS ⊚  WV	CS ● wv	CURB STOP & BOX
	~~~~	TREE LINE WIRE FENCE	•	₩V •	WATER VALVE & BOX
-X X	<del>*</del> *	FENCE	TSV → ▶	<b>TSV</b>	TAPPING SLEEVE, VALVE & BOX
		STOCKADE FENCE	HYD	₩ HYD <b>©</b>	FIRE DEPARTMENT CONNECTION
000000		STONE WALL	WM	WM	FIRE HYDRANT
		RETAINING WALL	PIV	PIV ●	WATER METER POST INDICATOR VALVE
		STREAM / POND / WATER COURSE	(W)	<b>®</b>	WATER WELL
		DETENTION BASIN	GG	GG •	GAS GATE
		HAY BALES	© GM ⊡	O GM ⊡	GAS METER
———×——	——×——	SILT FENCE		EMH	
· <::::::> ·	· CIIIII> ·	SILT SOCK / STRAW WATTLE	E) EM	_	ELECTRIC MANHOLE
4	<del></del>	MINOR CONTOUR	•	EM ⊡	ELECTRIC METER
— — 20 — —	20	MAJOR CONTOUR	<b>\$</b>	<b>★</b> ■™H	LIGHT POLE
(10)	10	PARKING COUNT	1	● <sup>IMIT</sup>	TELEPHONE MANHOLE
	©10	COMPACT PARKING STALLS	T	T	TRANSFORMER PAD
DYL	DYL	DOUBLE YELLOW LINE	-O-	•	UTILITY POLE
SL	SL	STOP LINE	0-	•-	GUY POLE
				Ţ	GUY WIRE & ANCHOR
		CROSSWALK  ACCESSIBLE CURB RAMP	HH ©	HH ⊡	HAND HOLE
Ł.	کلیات گ	ACCESSIBLE PARKING	PB ⊡	PB ⊡	PULL BOX
گ	گر	VAN-ACCESSIBLE PARKING			

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MATCHLINE

General		
ABAN	ABANDON	
ACR	ACCESSIBLE CURB RAMP	
ADJ	ADJUST	
APPROX	APPROXIMATE	
3IT	BITUMINOUS	
BS	BOTTOM OF SLOPE	
BWLL	BROKEN WHITE LANE LINE	
CONC	CONCRETE	
DYCL	DOUBLE YELLOW CENTER LINE	
EL	ELEVATION	
ELEV	ELEVATION	
EX	EXISTING	
FDN	FOUNDATION	
FFE	FIRST FLOOR ELEVATION	
GRAN	GRANITE	
GTD	GRADE TO DRAIN	
LA	LANDSCAPE AREA	
LOD	LIMIT OF DISTURBANCE	
MAX	MAXIMUM	
MIN	MINIMUM	
NIC	NOT IN CONTRACT	
NTS	NOT TO SCALE	
PERF	PERFORATED	
PROP	PROPOSED	
REM	REMOVE	
RET	RETAIN	
R&D	REMOVE AND DISPOSE	
R&R	REMOVE AND RESET	
SWEL	SOLID WHITE EDGE LINE	
SWLL	SOLID WHITE LANE LINE	
TS	TOP OF SLOPE	
TYP	TYPICAL	
Utility		
CB	CATCH BASIN	
СМР	CORRUGATED METAL PIPE	
CO	CLEANOUT	
DCB	DOUBLE CATCH BASIN	
DMH	DRAIN MANHOLE	
CIP	CAST IRON PIPE	
COND	CONDUIT	
DIP	DUCTILE IRON PIPE	
~ · · ·	DUCTILL INDIN FIFT	
FES	FLARED END SECTION FORCE MAIN	
FES FM	FLARED END SECTION	
FES FM F&G	FLARED END SECTION FORCE MAIN	
FES FM F&G F&C	FLARED END SECTION FORCE MAIN FRAME AND GRATE	
FES FM F&G F&C GI	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET	
FES FM F&G F&C GI GT	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP	
FES FM F&G F&C GI GT HDPE	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE	
FES FM F&G F&C GI GT HDPE	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE	
FES FM F&G F&C GI HDPE HH	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL	
FES FM F&G F&C GI HDPE HH HW	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT	
FES FM F&G F&C GI HDPE HH HW HYD	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION	
FES FM F&G F&C GI HDPE HH HW HYD INV	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION	
FES FM F&G F&C GI GT HDPE HH HW HYD INV	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY	
FES FM F&G F&C GI GT HDPE HH HW HYD NV = LP MES PIV PWW PVC	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY  POLYVINYLCHLORIDE PIPE	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW PVC RCP	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY  POLYVINYLCHLORIDE PIPE  REINFORCED CONCRETE PIPE	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW PVC RCP R=	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY  POLYVINYLCHLORIDE PIPE  REINFORCED CONCRETE PIPE  RIM ELEVATION	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW PVC RCP R= RIM=	FLARED END SECTION FORCE MAIN FRAME AND GRATE FRAME AND COVER GUTTER INLET GREASE TRAP HIGH DENSITY POLYETHYLENE PIPE HANDHOLE HEADWALL HYDRANT INVERT ELEVATION INVERT ELEVATION LIGHT POLE METAL END SECTION POST INDICATOR VALVE PAVED WATER WAY POLYVINYLCHLORIDE PIPE REINFORCED CONCRETE PIPE RIM ELEVATION RIM ELEVATION	
FES FM F&G F&C GI GT HDPE HH HW HYD NV = LP MES PIV PWW PVC RCP R= RIM= SMH	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY  POLYVINYLCHLORIDE PIPE  REINFORCED CONCRETE PIPE  RIM ELEVATION  RIM ELEVATION  SEWER MANHOLE	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW PVC RCP R= RIM= SMH TSV	FLARED END SECTION FORCE MAIN FRAME AND GRATE FRAME AND COVER GUTTER INLET GREASE TRAP HIGH DENSITY POLYETHYLENE PIPE HANDHOLE HEADWALL HYDRANT INVERT ELEVATION INVERT ELEVATION LIGHT POLE METAL END SECTION POST INDICATOR VALVE PAVED WATER WAY POLYVINYLCHLORIDE PIPE REINFORCED CONCRETE PIPE RIM ELEVATION RIM ELEVATION	
FES FM F&G F&C GI GT HDPE HH HW HYD INV I= LP MES PIV PWW PVC RCP R= RIM= SMH TSV UG	FLARED END SECTION  FORCE MAIN  FRAME AND GRATE  FRAME AND COVER  GUTTER INLET  GREASE TRAP  HIGH DENSITY POLYETHYLENE PIPE  HANDHOLE  HEADWALL  HYDRANT  INVERT ELEVATION  LIGHT POLE  METAL END SECTION  POST INDICATOR VALVE  PAVED WATER WAY  POLYVINYLCHLORIDE PIPE  REINFORCED CONCRETE PIPE  RIM ELEVATION  RIM ELEVATION  SEWER MANHOLE	

UTILITY POLE

- CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS, AND NOT MORE THAN 30 DAYS, BEFORE EXCAVATING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND
- AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE SIX (6) INCHES LOAM AND SEED.

LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

- WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, INCLUDING CITY OF BURLINGTON EPSC PERMIT, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
- TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ITS LATEST REVISIONS.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S
- IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- 10. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
- 11. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. FOR THE PROTECTION OF TREE ROOTS, CONSTRUCTION STOCKPILES SHALL NOT BE PERMITTED WITHIN THE GREEN BELT.
- 2. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
- 13. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2018, AND ITS LATEST REVISIONS, AND SUCH SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THE FINAL CONTRACT DOCUMENTS.
- 4. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. IF FULL ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE BUSINESS OR PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF TEMPORARILY CLOSING OFF THE
- 15. ANY WASTE MATERIAL SHALL BE REMOVED AND HAULED TO AN APPROVED OFF-SITE ACTIVITY AREA IN
- 16. SEE 2018 VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR ADDITIONAL INFORMATION.

ACCORDANCE WITH VTRANS CONSTRUCTION SPECIFICATIONS.

- THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS, PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
- SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS, AND NOTES, ON THE STORMWATER SYSTEM PLAN AND PROFILE DRAWINGS.
- RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
- A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
- B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
- C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
- THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ENGINEER.
- CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND SUPPORT, AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
- UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
  - A. WATER MAIN PIPES AND PRESSURE COUPLINGS SHALL BE C900 PVC PIPE. SERVICE LINE REPAIRS
  - B. SANITARY SEWER PIPES SHALL BE ASTM D-3034 SDR35 POLYVINYL CHLORIDE (PVC) SEWER PIPE.
  - C. STORM DRAINAGE PIPES SHALL BE DUAL WALL HIGH DENSITY POLYETHYLENE (HDPE).
  - D. PIPE INSTALLATION AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING CODE WHERE APPLICABLE. CONTRACTOR SHALL COORDINATE WITH LOCAL PLUMBING INSPECTOR PRIOR TO
- CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
- 10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

# **Layout and Materials**

- DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
- 2. CURB RADII, MATERIAL, AND CONSTRUCTION SHALL BE MATCHED TO EXISTING CURB WHERE THEY ARE
- 3. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
- 4. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
- 5. FOR PAVEMENT RESTORATION, ADHERE TO THE FOLLOWING CONSTRAINTS:
- PAVEMENT THICKNESS SHALL MATCH EXISTING ADJACENT PAVEMENT SECTION; PAVEMENT THICKNESS SHALL BE A MINIMUM OF 3" TOTAL WITH TOTAL WIDTH 2" TYPE II BASE, 1" TYPE IV TOP.
- EXISTING SUITABLE SUBBASE MATERIALS SHALL BE REUSED AND COMPACTED IN 6" LIFTS. THIS WORK SHALL BE INCIDENTAL TO ITEM 900.640.
- 5.3. EXCAVATION OF PAVEMENT, SUBBASE, AND NATIVE MATERIAL SHALL BE INCIDENTAL TO ITEM
- 5.4. WHERE EXISTING SUBBASE IS NOT SUITABLE, VTRANS ITEM 301.25 COARSE GRADED CRUSHED GRAVEL SHALL BE USED AT THE DIRECTION OF THE OWNER OR ONSITE INSPECTOR.
- 5.5. ALL CURBS SHALL BE PROMPTLY BACKFILLED AND PROTECTED FROM DAMAGE.

# Demolition

- 1. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
- 2. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE
- UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

# **Erosion Control**

- PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- 2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
- CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
- 4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED
- 5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
- 6. ALL DEWATERING ACTIVITIES ARE CONSIDERED INCIDENTAL TO THE PAY ITEMS APPLICABLE TO THE CONSTRUCTION OF THE SUBSURFACE INFILTRATION SYSTEMS.

# **Existing Conditions Information**

- 1. BASE PLAN: THE PROPERTY LINES SHOWN ARE BASED ON STATE PARCEL MAPPING DATA AND ARE APPROXIMATE ONLY. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB, DURING MAY 2021. NO SUBSURFACE UTILITY EXPLORATION WAS PERFORMED, AND ALL UNDERGROUND UTILITIES ARE APPROXIMATE.
- 2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAV88 BASED ON GPS OBSERVATIONS UTILIZING VT CORS.

# Document Use

- 1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
- CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.



Building 100 Suite 200 South Burlington, VT 05403 802.497.6100

# **Burlington ONE Stormwater Retrofits**

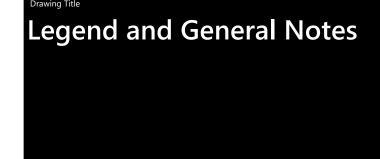
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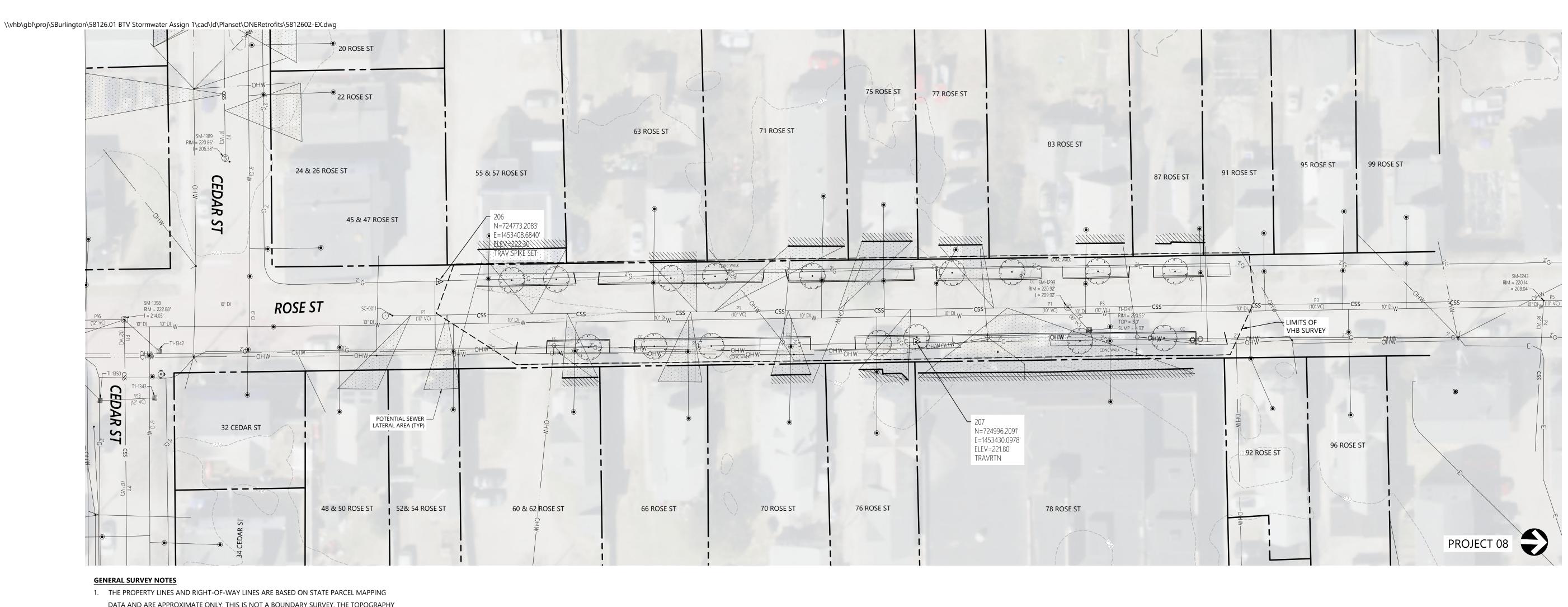
CHS/WAF

No.	Revision	Date	Appv
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April 14, 2022 Bid

Not Approved for Construction





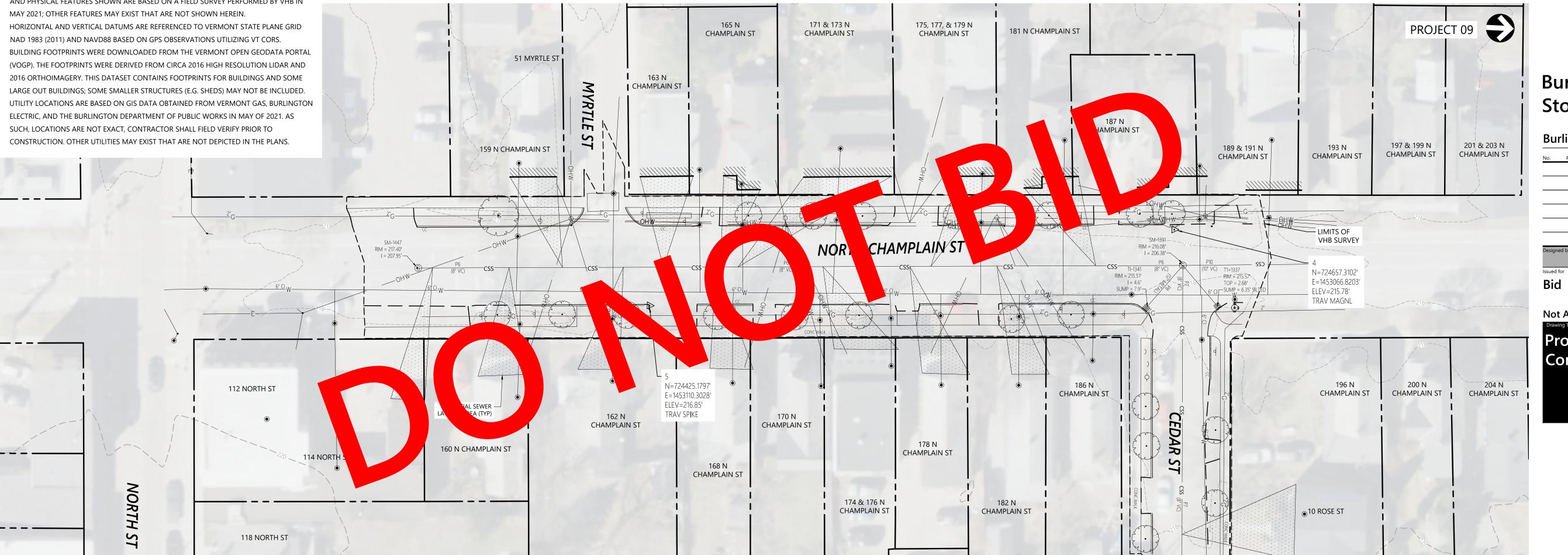


DATA AND ARE APPROXIMATE ONLY. THIS IS NOT A BOUNDARY SURVEY. THE TOPOGRAPHY AND PHYSICAL FEATURES SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY VHB IN MAY 2021; OTHER FEATURES MAY EXIST THAT ARE NOT SHOWN HEREIN.

2. HORIZONTAL AND VERTICAL DATUMS ARE REFERENCED TO VERMONT STATE PLANE GRID

3. BUILDING FOOTPRINTS WERE DOWNLOADED FROM THE VERMONT OPEN GEODATA PORTAL (VOGP). THE FOOTPRINTS WERE DERIVED FROM CIRCA 2016 HIGH RESOLUTION LIDAR AND 2016 ORTHOIMAGERY. THIS DATASET CONTAINS FOOTPRINTS FOR BUILDINGS AND SOME

SUCH, LOCATIONS ARE NOT EXACT, CONTRACTOR SHALL FIELD VERIFY PRIOR TO



# 0 12.5 25 **Burlington ONE Stormwater Retrofits**

No.	Revision	Date	Аррус
Design	ed hv	Checked by	
Design	CHS/WAF		NCH
Issued	for	Date	

**Not Approved for Construction** 

Project 08 & 09 - Existing **Conditions Plan** 

April 14, 2022

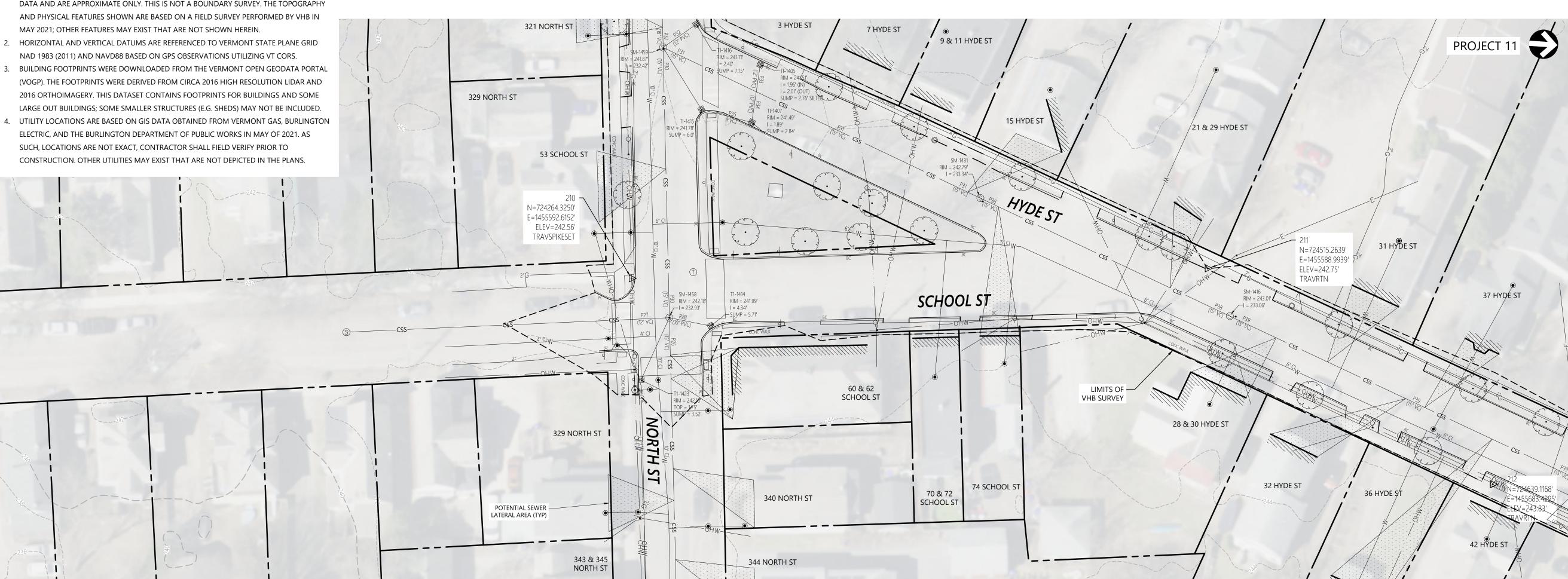


# **GENERAL SURVEY NOTES**

1. THE PROPERTY LINES AND RIGHT-OF-WAY LINES ARE BASED ON STATE PARCEL MAPPING DATA AND ARE APPROXIMATE ONLY. THIS IS NOT A BOUNDARY SURVEY. THE TOPOGRAPHY AND PHYSICAL FEATURES SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY VHB IN MAY 2021; OTHER FEATURES MAY EXIST THAT ARE NOT SHOWN HEREIN.

207 ELMWOOD AVE

- NAD 1983 (2011) AND NAVD88 BASED ON GPS OBSERVATIONS UTILIZING VT CORS.
- 3. BUILDING FOOTPRINTS WERE DOWNLOADED FROM THE VERMONT OPEN GEODATA PORTAL (VOGP). THE FOOTPRINTS WERE DERIVED FROM CIRCA 2016 HIGH RESOLUTION LIDAR AND 2016 ORTHOIMAGERY. THIS DATASET CONTAINS FOOTPRINTS FOR BUILDINGS AND SOME
- SUCH, LOCATIONS ARE NOT EXACT, CONTRACTOR SHALL FIELD VERIFY PRIOR TO



# 0 12.5 25 **Burlington ONE Stormwater Retrofits**

No.	Revision	Date	Appvo
Design		Checked by	NCH
Design	CHS/WAF		NCH
issueu		April 1	

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Project 10 & 11 - Existing **Conditions Plan** 





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SUCH, LOCATIONS ARE NOT EXACT, CONTRACTOR SHALL FIELD VERIFY PRIOR TO



# 0 12.5 25 **Burlington ONE Stormwater Retrofits**

Bu	rlington, VT 05401		
No.	Revision	Date	Appv
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Issued	for	Date	
Bic	d	April 1	4, 2022

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Project 12 & 13 - Existing **Conditions Plan** 

April 14, 2022

40 IDX Dr Building 100 Suite 200

South Burlington, VT 05403

802.497.6100

# **GENERAL DEMOLITION NOTES**

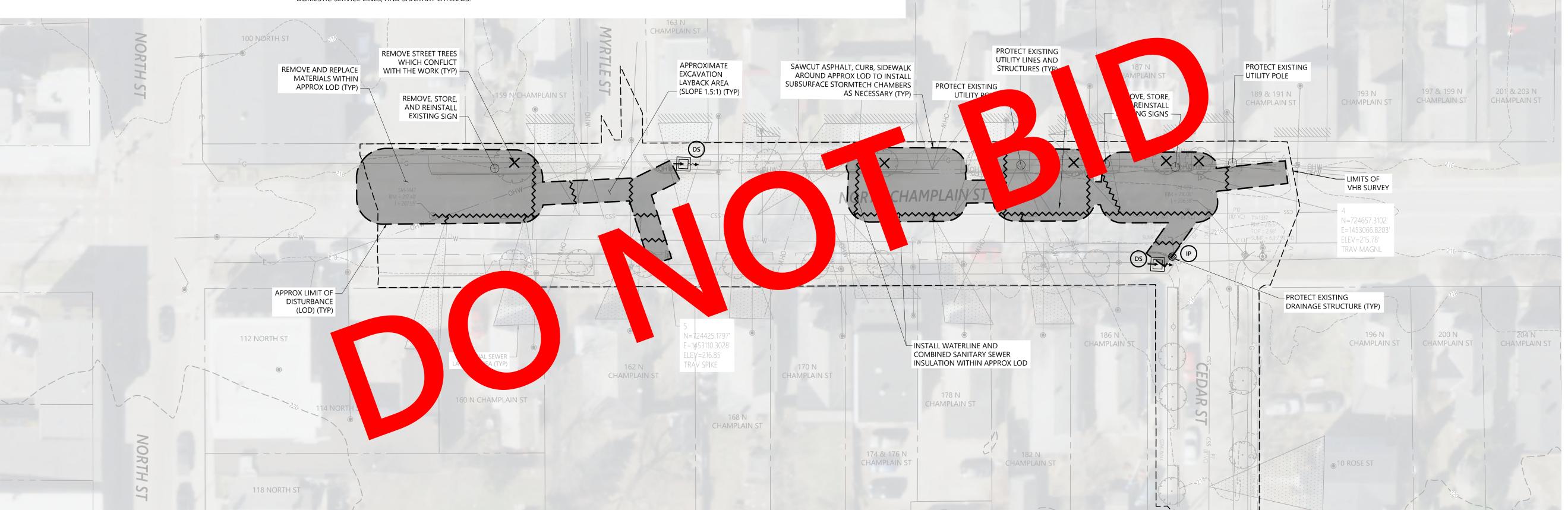
- 1. IN ADDITION TO THE NOTES BELOW, CONTRACTOR SHALL OBTAIN AND FOLLOW ALL EXCAVATION AND OBSTRUCTION PERMIT
- 2. INSTALL ALL PERIMETER AND SEDIMENT CAPTURE EROSION CONTROL DEVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES. 3. RESTORE ANY DAMAGED OR REMOVED ITEM NOT INDICATED FOR
- DEMOLITION TO PRECONSTRUCTION CONDITION OR BETTER. 4. ALL PAVEMENT SAW CUTS ARE TO BE IN CONTINUOUS STRAIGHT LINES AND/OR SMOOTH ARCS. SAWCUTS ARE TO BE UTILIZED AT
- 5. REMOVAL OF PAVEMENT INCLUDES FULL DEPTH OF PAVEMENT AND SUBBASE.

ALL PAVEMENT AND CURB REMOVAL AREAS.

- 6. ALL ASH TREE REMOVALS SHALL HAVE THEIR STUMP GROUND OR REMOVED ENTIRELY PRIOR TO RESTORATION, WHETHER THAT BE BY REPLACEMENT WITH ANOTHER TREE OR SEEDING/ RESTORATION OF THE GREEN BELT.
- 1. IN ADDITION TO THE NOTES BELOW, CONTRACTOR SHALL OBTAIN AND FOLLOW CITY OF BURLINGTON EPSC PERMIT REQUIREMENTS, FOUND ON CITY'S PERMITTING WEBSITE.
- 2. ALL CONSTRUCTION VEHICLES LEAVING THE SITE SHALL BE CLEANED OF LOOSE DIRT. NO TRACKING OF DIRT ONTO CITY OF BURLINGTON RIGHTS-OF-WAY IS PERMITTED. ANY DIRT TRACKED OFF-SITE MUST BE IMMEDIATELY SWEPT AND/OR SHOVELED UP AND RETURNED TO THE SITE.
- 3. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL 2019.
- 4. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- 5. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. IF DIRT BAG DEWATERING DEVICE IS USED, IT IS TO BE MONITORED AT ALL TIMES.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENVIRONMENTAL ENGINEERING DEPARTMENT.
- 7. REFER TO THE PIPE INSULATION DETAIL ON DRAWING C5.01 FOR RETROFIT OF INSULATION FOR WATERMAINS, DOMESTIC SERVICE LINES, AND SANITARY LATERALS.



PIPE INSULATION 175, 177, & 179 N CHAMPLAIN ST



DEWATERING STRUCTURE [DIRTBAG OR APPROVED EQUAL]

STORM DRAIN INLET PROTECTION

[TYPE II STONE & BLOCK]



PROJECT 08

PROJECT 09

Designed by	Checked by

CHS/WAF April 14, 2022

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Project 08 & 09 - Demolition and Erosion Control Plan

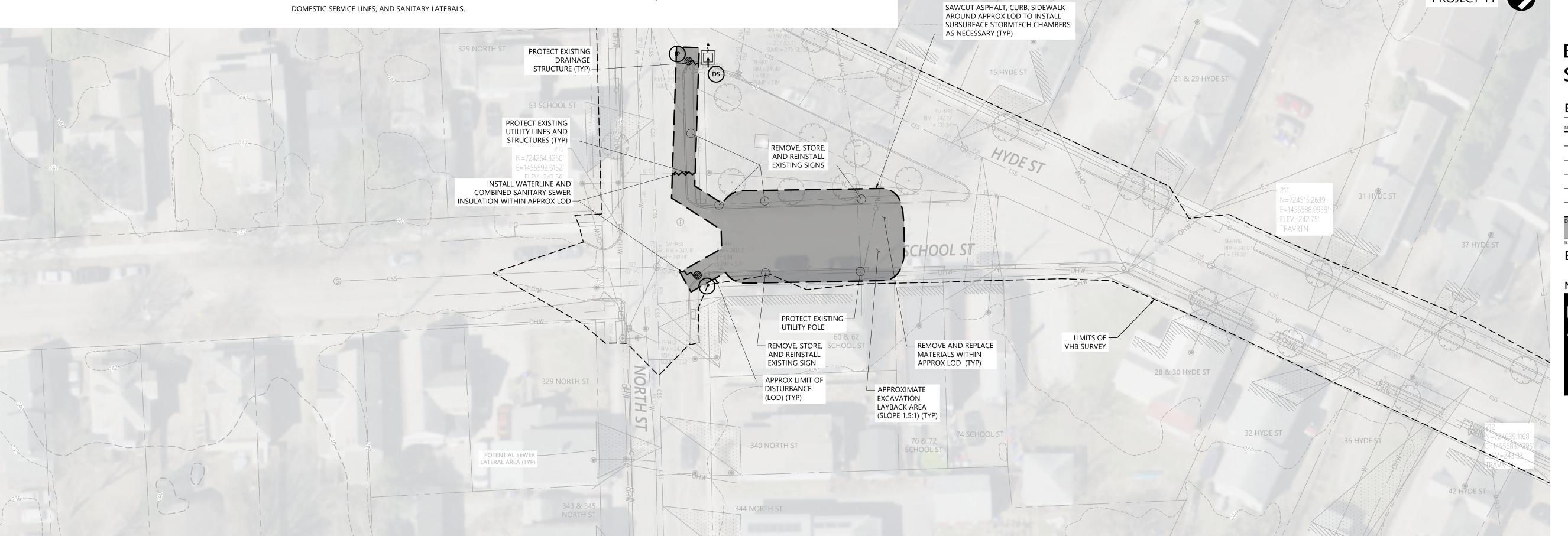
40 IDX Dr Building 100 Suite 200 South Burlington, VT 05403

802.497.6100

- CONTROL DEVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
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- 4. ALL PAVEMENT SAW CUTS ARE TO BE IN CONTINUOUS STRAIGHT LINES AND/OR SMOOTH ARCS. SAWCUTS ARE TO BE UTILIZED AT ALL PAVEMENT AND CURB REMOVAL AREAS.
- 5. REMOVAL OF PAVEMENT INCLUDES FULL DEPTH OF PAVEMENT AND SUBBASE.
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VHB SURVEY



STORM DRAIN INLET PROTECTION

[TYPE II STONE & BLOCK]

PIPE INSULATION

# 0 12.5 25 **Burlington ONE Stormwater Retrofits**

Bu	rlington, VT 05401
No.	Revision

PROJECT 10

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ssued for	Date
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Project 10 & 11 - Demolition and Erosion Control Plan

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# **GENERAL DEMOLITION NOTES**

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# **GENERAL EROSION AND SEDIMENT CONTROL NOTES**

1. IN ADDITION TO THE NOTES BELOW, CONTRACTOR SHALL OBTAIN AND FOLLOW CITY OF BURLINGTON EPSC PERMIT REQUIREMENTS, FOUND ON CITY'S PERMITTING WEBSITE.

PROTECT EXISTING -

UTILITY POLE

- 2. ALL CONSTRUCTION VEHICLES LEAVING THE SITE SHALL BE CLEANED OF LOOSE DIRT. NO TRACKING OF DIRT ONTO CITY OF BURLINGTON RIGHTS-OF-WAY IS PERMITTED. ANY DIRT TRACKED OFF-SITE MUST BE IMMEDIATELY SWEPT AND/OR SHOVELED UP AND RETURNED TO THE SITE.
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# **DEMOLITION LEGEND**

X REMOVE

REMOVE AREA

# **EROSION CONTROL LEGEND**

DEWATERING STRUCTURE [DIRTBAG OR APPROVED EQUAL] STORM DRAIN INLET PROTECTION

- PROTECT EXISTING

UTILITY LINES AND

STRUCTURES (TYP)

INSTALL WATERLINE AND

47 & 47 1/2

COMBINED SANITARY SEWER

INSULATION WITHIN APPROX LOD

PROTECT EXISTING DRAINAGE

TRUCTURE (TYP)

- SAWCUT ASPHALT, CURB, SIDEWALK

AROUND APPROX LOD TO INSTALL

AS NECESSARY (TYP)

SUBSURFACE STORMTECH CHAMBERS

[TYPE II STONE & BLOCK] PIPE INSULATION

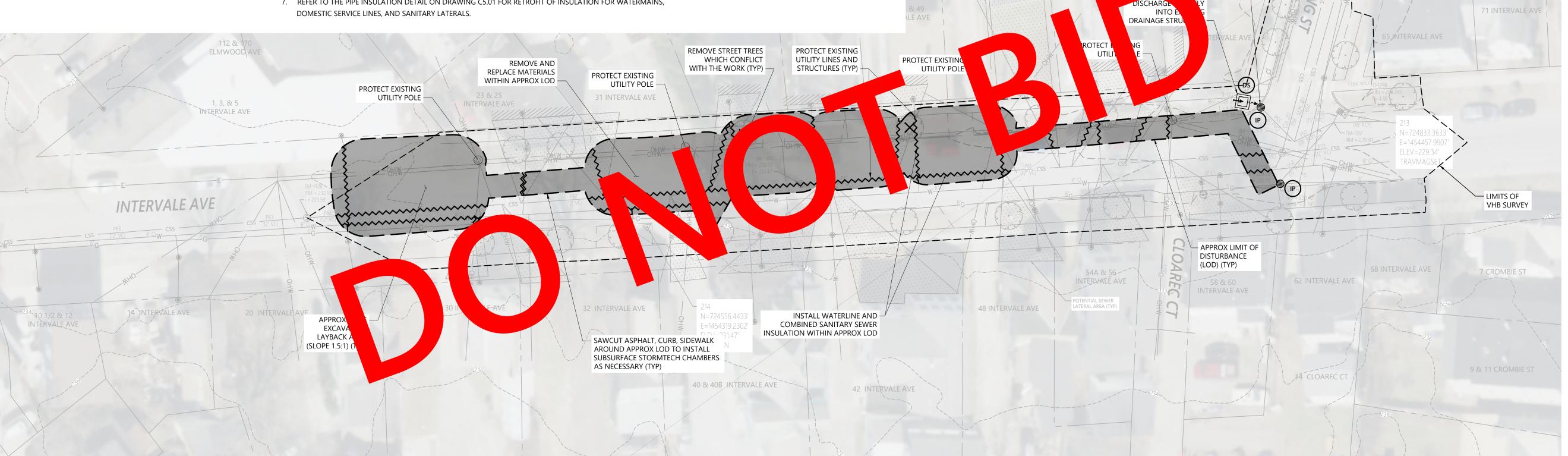


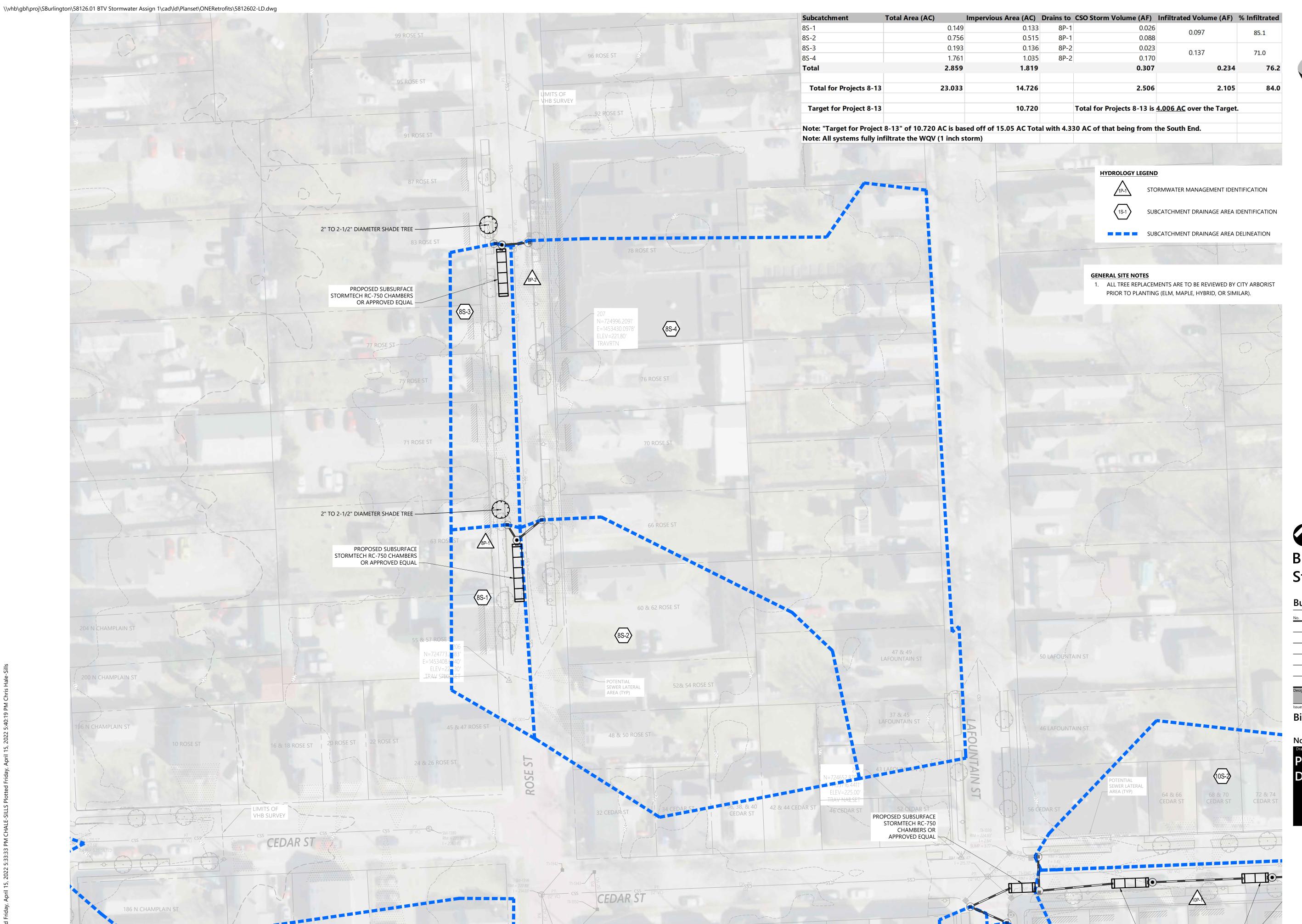
Burlington, VT 05401

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Project 12 & 13 - Demolition and Erosion Control Plan

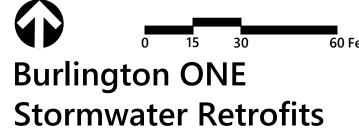






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CHS/WAF	NCH

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Project 08 - Site Layout and Drainage Plan

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**Burlington ONE Stormwater Retrofits** 

Burlington,	VT	05401

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d for <b>d</b>	April 14, 2022
CHS/WAF	NCH

Not Approved for Construction

Project 09 - Site Layout and Drainage Plan



# **Burlington ONE Stormwater Retrofits**

No.	Revision	Date	Ар
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Project 10 - Site Layout and Drainage Plan

C3.03

April 14, 2022

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South Burlington, VT 05403

Burlington ONE
Stormwater Retrofits

<b>Burlington,</b>	VT	05401
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o. Revision Date Appvd.

CHS/WAF

One of the checked by NCH

NCH

Date

April 14, 2022

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Project 11 - Site Layout and Drainage Plan

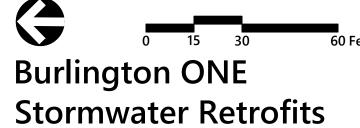
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Project 12 - Site Layout and **Drainage Plan** 

13



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Burlington ONE
Stormwater Retrofits

No. Revision Date Appvd.

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CHS/WAF

NCH

Date

April 14, 2022

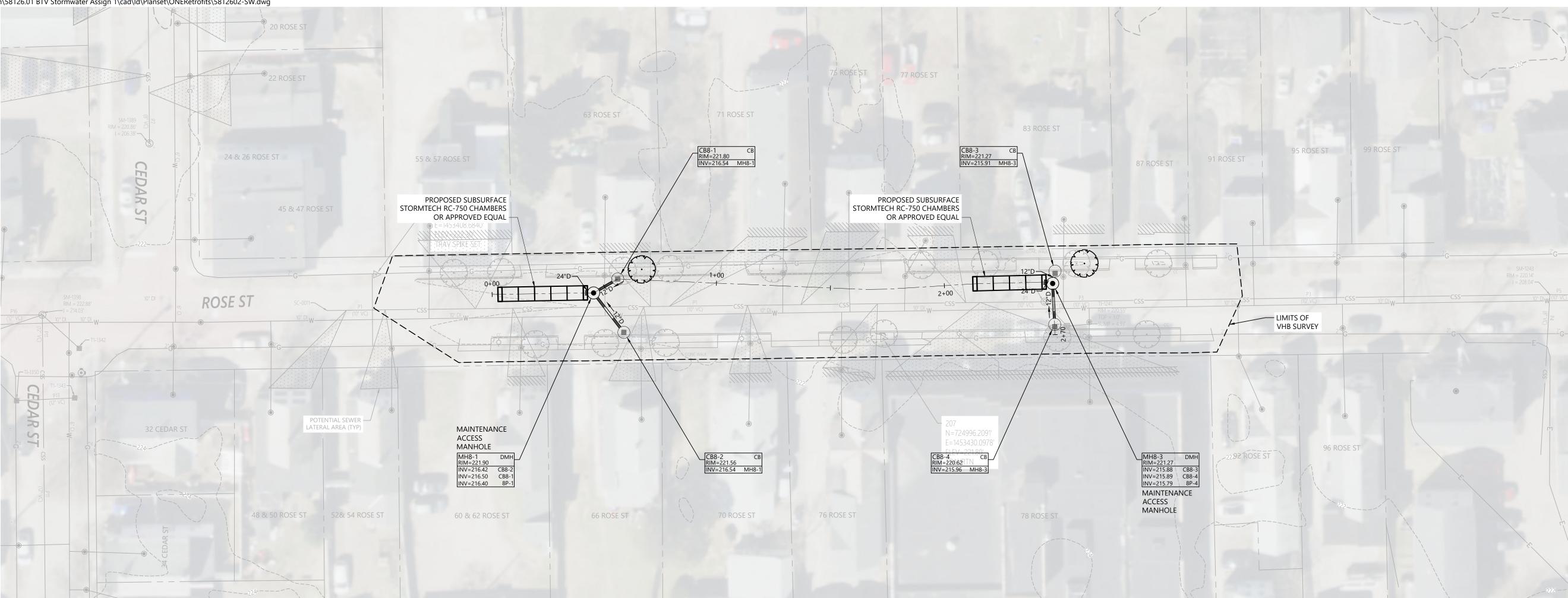
Not Approved for Construction

Project 13 - Site Layout and Drainage Plan

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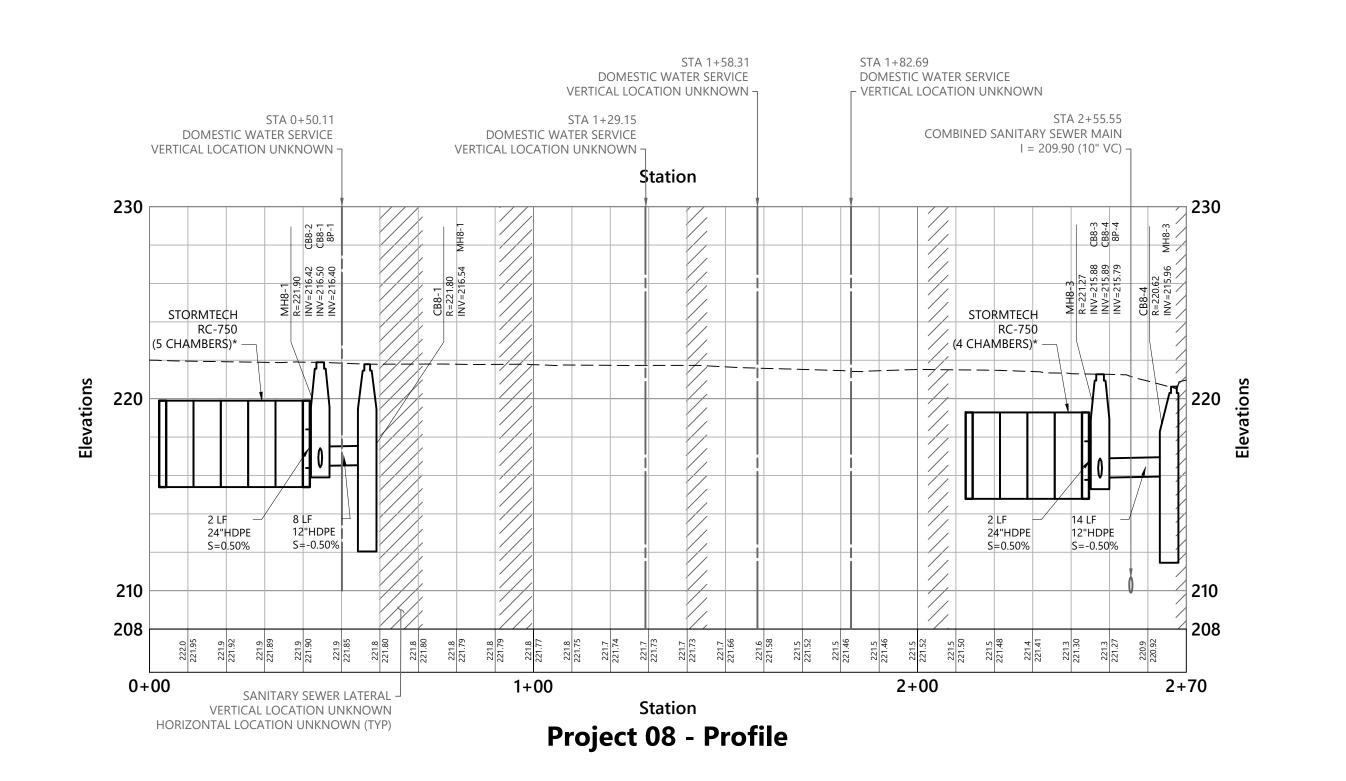
C3.06

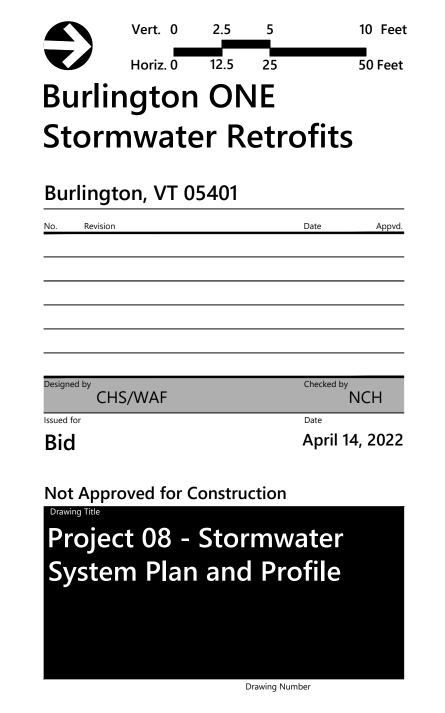
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INVERTS OF 12" HDPE PIPES MAY BE MOVED VERTICALLY TO AVOID UTILITY CONFLICTS ONLY. CONTRACTOR TO COORDINATE INVERT CHANGES WITH THE ENGINEER. WHERE POSSIBLE MAINTAIN POSITIVE DRAINAGE.

\* INSTALL SPECIFIED STORMTECH SYSTEMS OR APPROVED EQUAL.

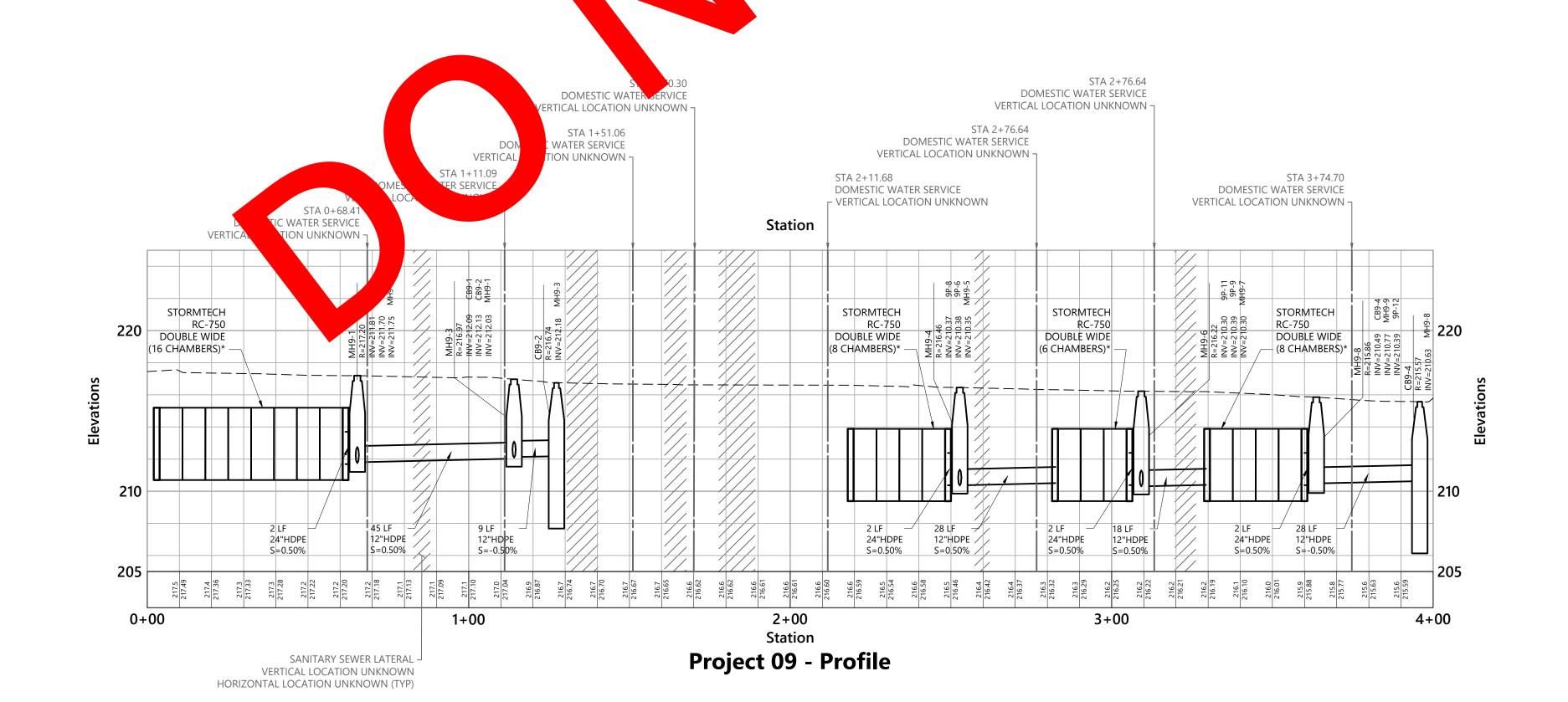


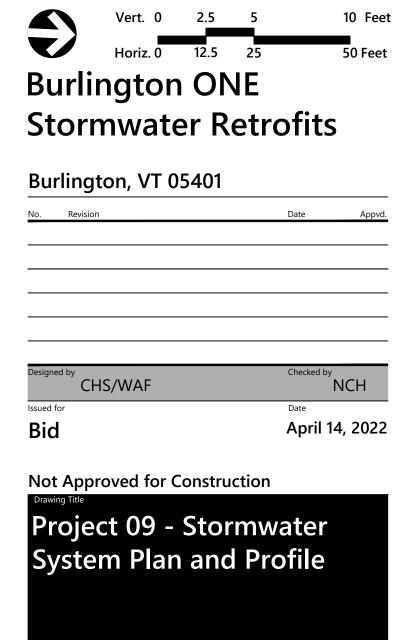


15 23

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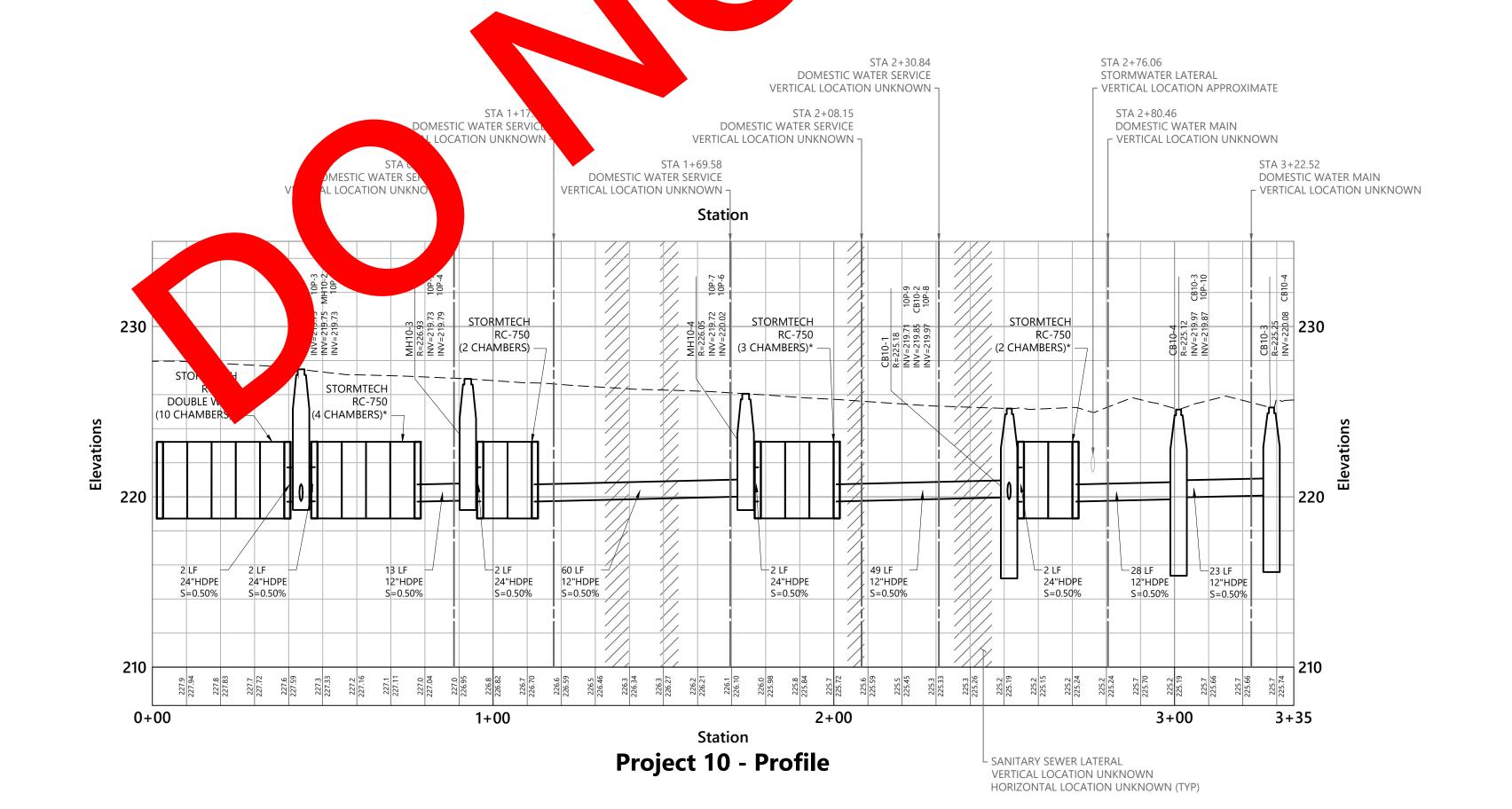


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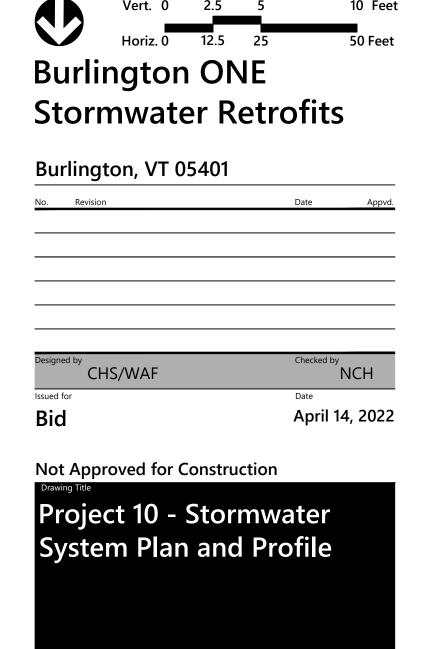
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VHB SURVEY

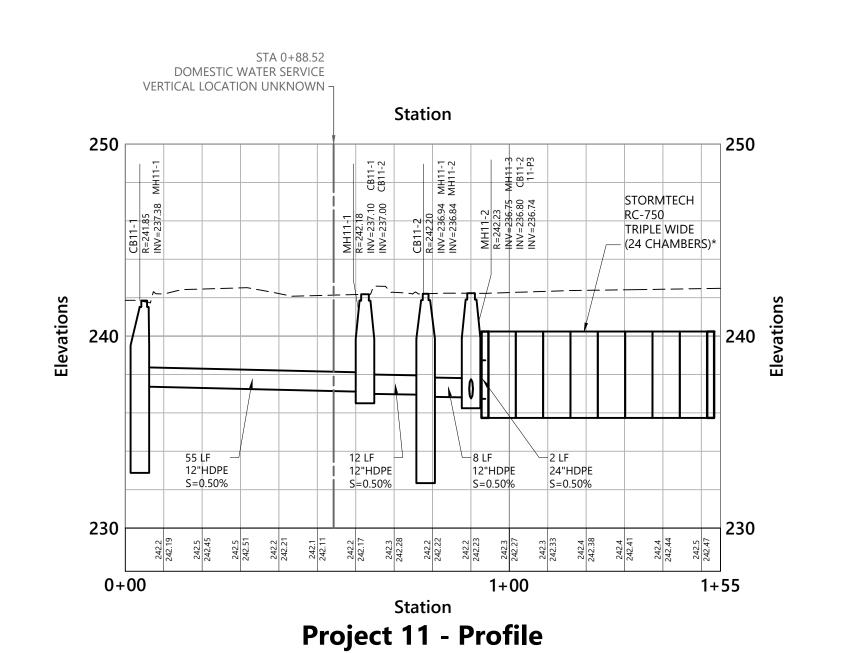


C4.03

Sheet of **17 23** 

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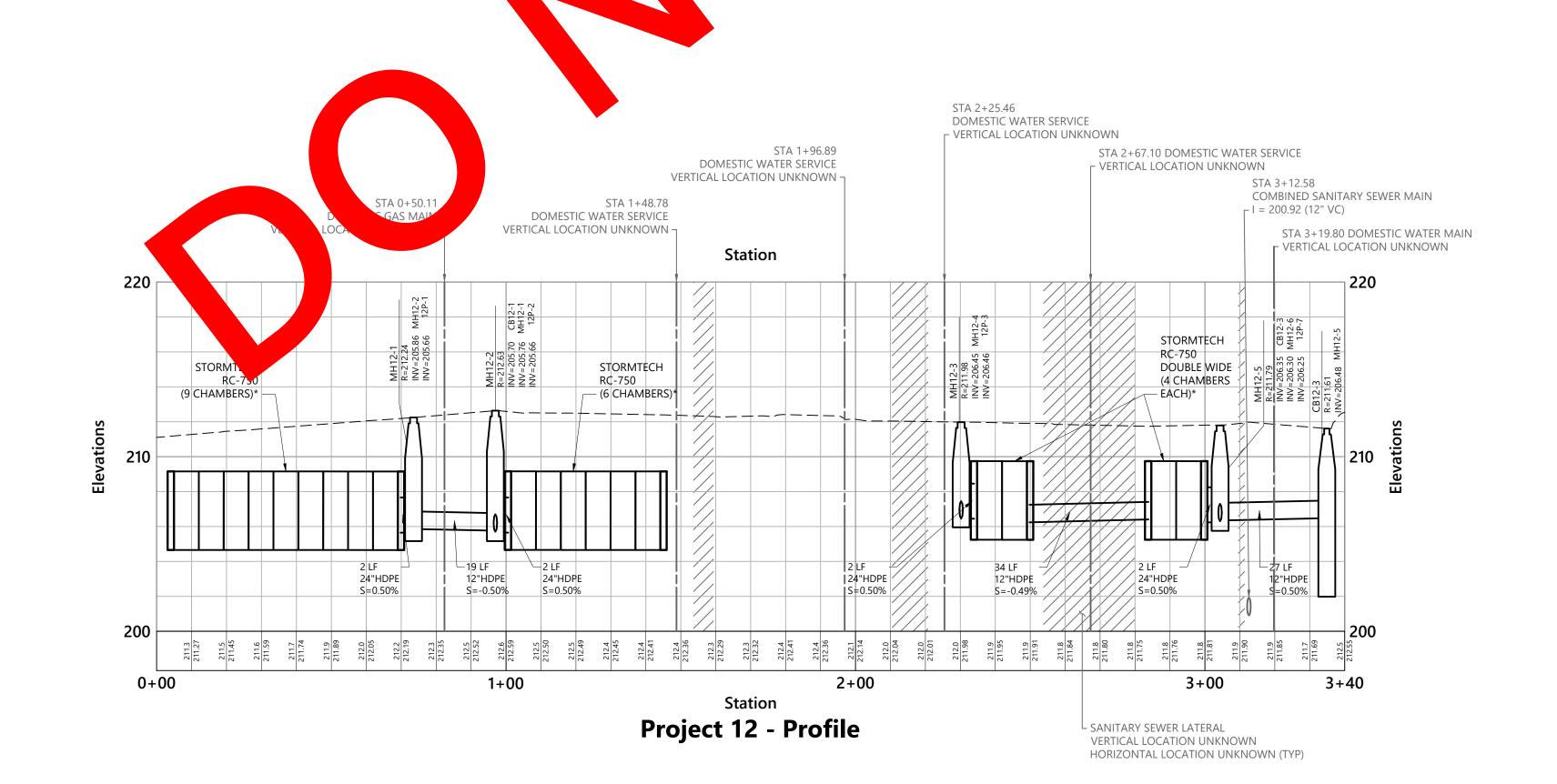
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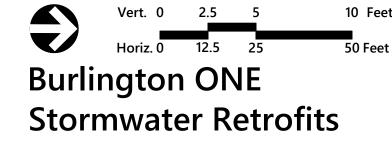


**Burlington ONE Stormwater Retrofits** Burlington, VT 05401 CHS/WAF Bid April 14, 2022 Not Approved for Construction Project 11 - Stormwater System Plan and Profile

18

\* INSTALL SPECIFIED STORMTECH SYSTEMS OR APPROVED EQUAL.





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	April 1	4, 2022
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Project 12 - Stormwater System Plan and Profile

C4.05

Sheet of 29 23

17 LF 12"HDPE S=0.50%

2 LF 24"HDPE S=0.50%

1+00

2 LF 24"HDPE

S=0.50%

0+00

12"HDPE S=0.50%

SANITARY SEWER LATERAL -

VERTICAL LOCATION UNKNOWN

HORIZONTAL LOCATION UNKNOWN (TYP)

2 LF 24"HDPE S=0.50%

2+00

Station

**Project 13 - Profile** 

12 LF 2 LF 12"HDPE 24"HDPE S=0.50% S=0.50% 24 LF 2 LF - 12"HDPE S=0.50% S=0.50%

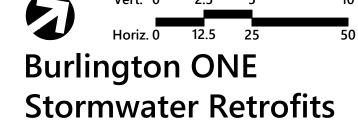
3+00

101 LF -12"HDPE S=0.50% 24 LF 12"HDPE S=0.50%

4+00

4+25





Burlington, VT 05401

No. Revision Date Appvd.

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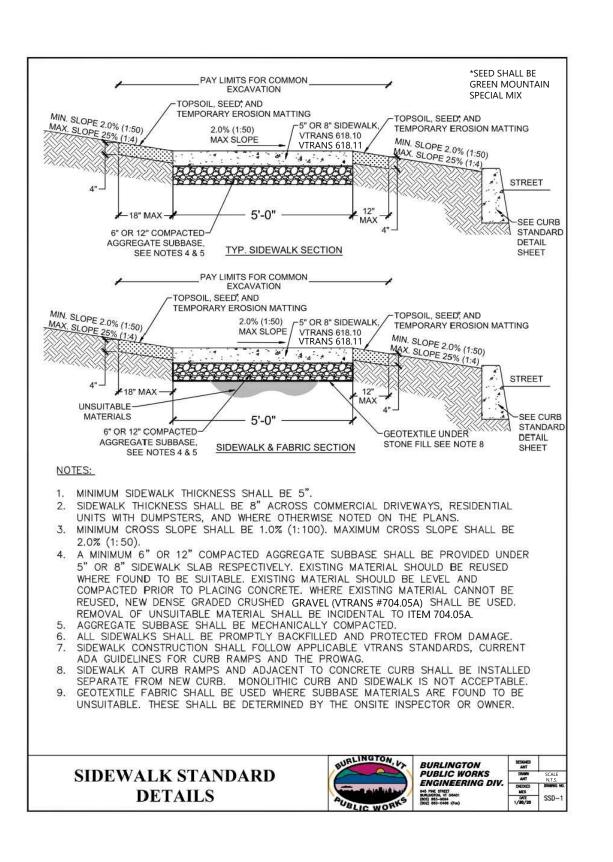
Not Approved for Construction

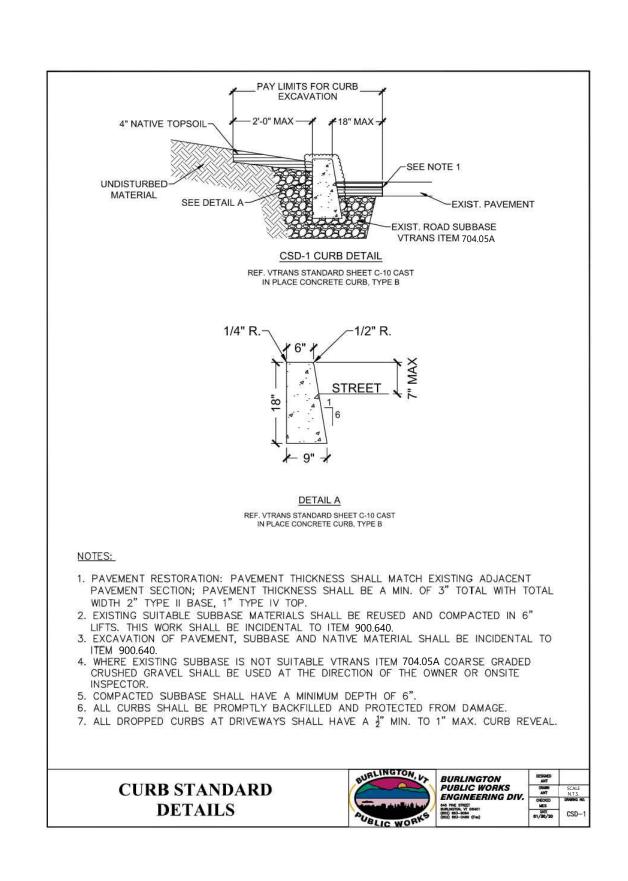
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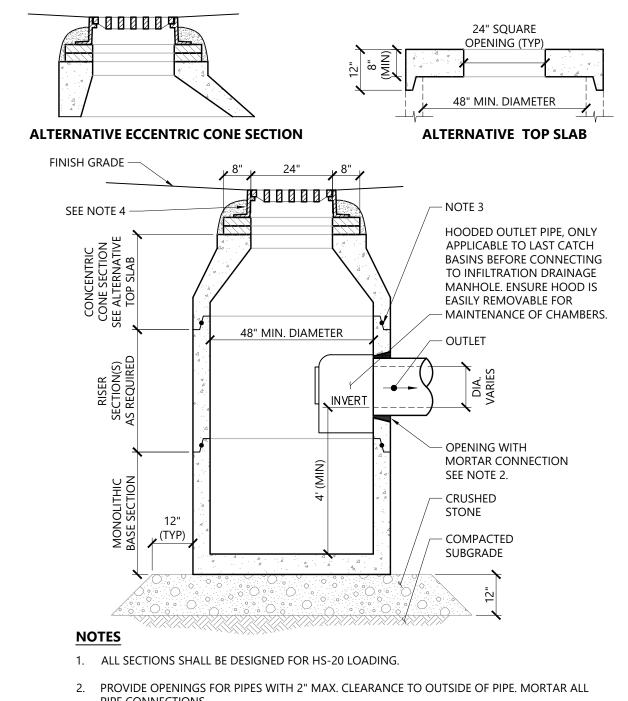
Project 13 - Stormwater System Plan and Profile

April 14, 2022

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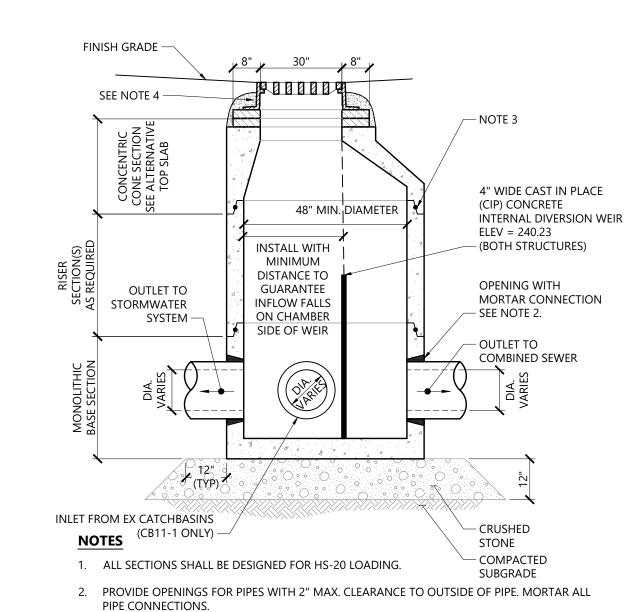


- PIPE CONNECTIONS.
- 3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.

4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB)

1/16 N.T.S. LD\_100 Source: VHB



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3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER. 4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH

GRADE

- EXISTING **BEDDING** MATERIAL

WIDE BY 4"

INSULATION

BOARD (USE

2 x 2" THICK

BOARDS).

- MIN. 2' WIDE BY 4" THICK

**INSULATION BOARD (USE** 

2 x 2" THICK BOARDS).

MASTIC AT ALL JOINTS -

Source: VHB

STORM DRAIN

PLAN VIEW

MASTIC AT

ALL JOINTS

THICK

**BACKFILL** 

MATERIAL

D+3' MIN GRADE

**BACKFILL** 

MATERIAL

WATER OR SANITARY SEWER LINE

PROFILE VIEW

**Pipe Isulation** 

N.T.S.

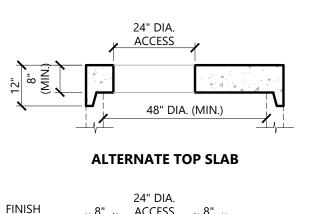
WATER OR -

SANITARY SEWER

CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

5. PROVIDE HOODED OUTLET PIPES AS DEPICTED ON CATCH BASIN DETAIL, ONLY FOR PIPES WHICH OUTLET TO EITHER A MAINTENANCE ACCESS MANHOLE OR THE COMBINED SEWER

**Catch Basin with Internal Diversion Weir** 3/22 LD\_100 Source: VHB



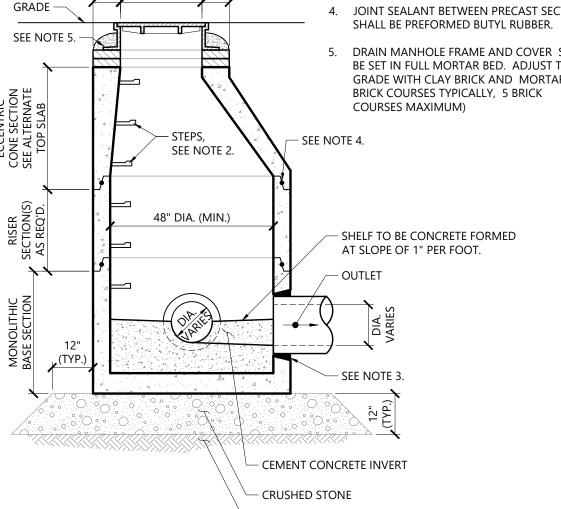
# 1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.

COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.

PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.

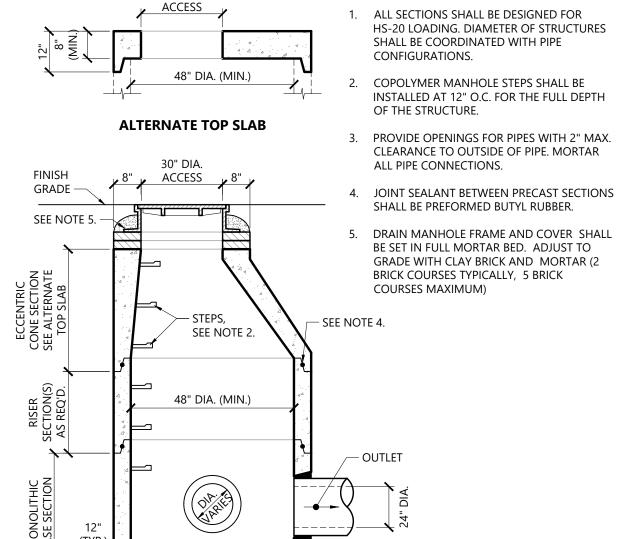
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.

DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)



Drain Manhole (DMH) 1/16 Source: VHB LD\_115

- COMPACTED SUBGRADE

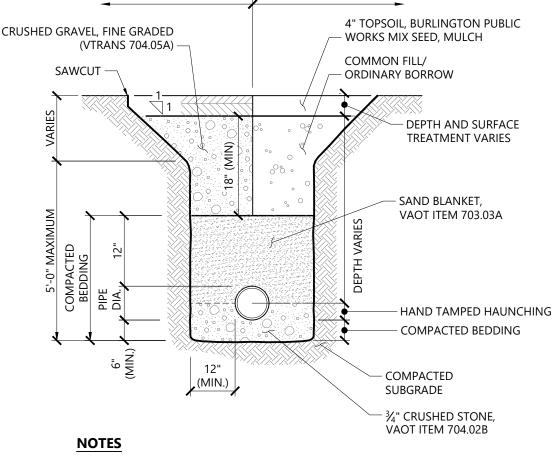


**Maintenace Access Manhole** 3/22 N.T.S. Source: VHB LD\_115

- CRUSHED STONE

- COMPACTED SUBGRADE

# \*IF EXISTING PAVEMENT IS THICKER THAN 4", NEW PAVEMENT THICKNESS SHALL MATCH THE EXISTING AT MINIMUM. **RESTORED ASPHALT SHALL BE** MINIMUM 2.5" BASE (TYPE II), LANDSCAPED AREA 1.5" TOP COURSE (TYPE VI)\* 4" TOPSOIL, BURLINGTON PUBLIC CRUSHED GRAVEL, FINE GRADED WORKS MIX SEED, MULCH



1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.

2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS, AND UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE.

3. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER THE PIPE TO ENSURE PIPE IS NOT DAMAGED.

4. REFER TO PAVEMENT REPLACEMENT NOTES ON DRAWING CO.01.

**Storm Drain Trench** 1/16 N.T.S. Source: VHB LD

1. INSULATION BOARD PER VTRANS 622.10

BACKFILL MATERIAL AROUND INSULATION MUST BE FREE FROM ROOTS, ORGANIC MATTER, AND OTHER INJURIOUS MATERIALS.

OVERLAP ALL INSULATION BOARD

PROVIDE INSULATION WHEN DEPTH OF COVER IS LESS THAN 6 FEET AND WHERE SHOWN ON PLANS. PROVIDE INSULATION WHEN WATER OR SANITARY SEWER MAIN CROSSES

ABOVE OR BELOW STORM DRAIN.

03/22

LD\_

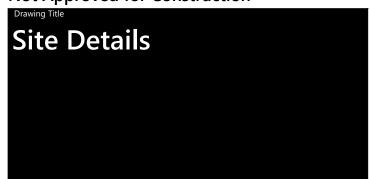
CHS/WAF Issued for Bid April 14, 2022

**Not Approved for Construction** 

**Burlington ONE** 

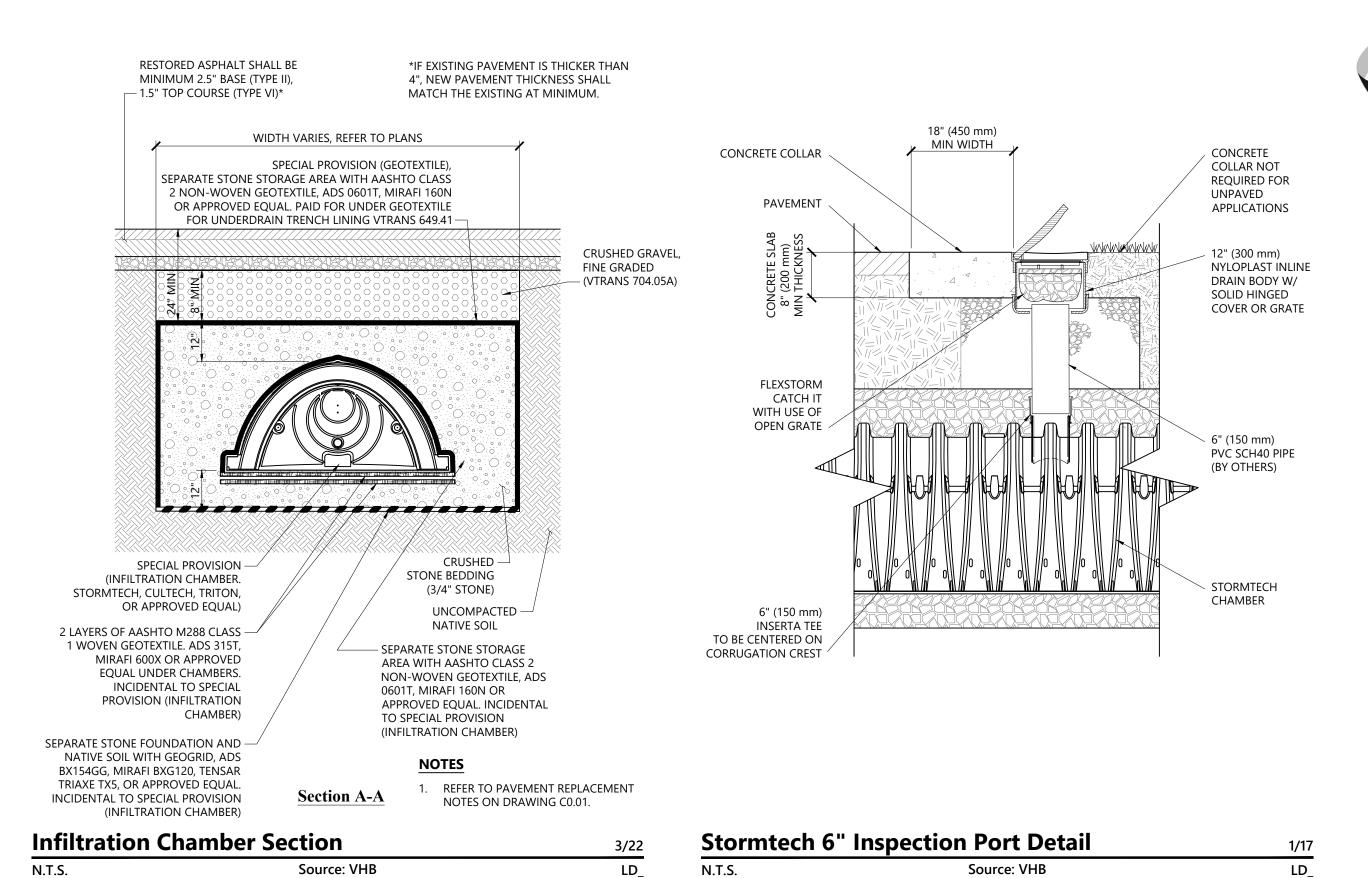
Burlington, VT 05401

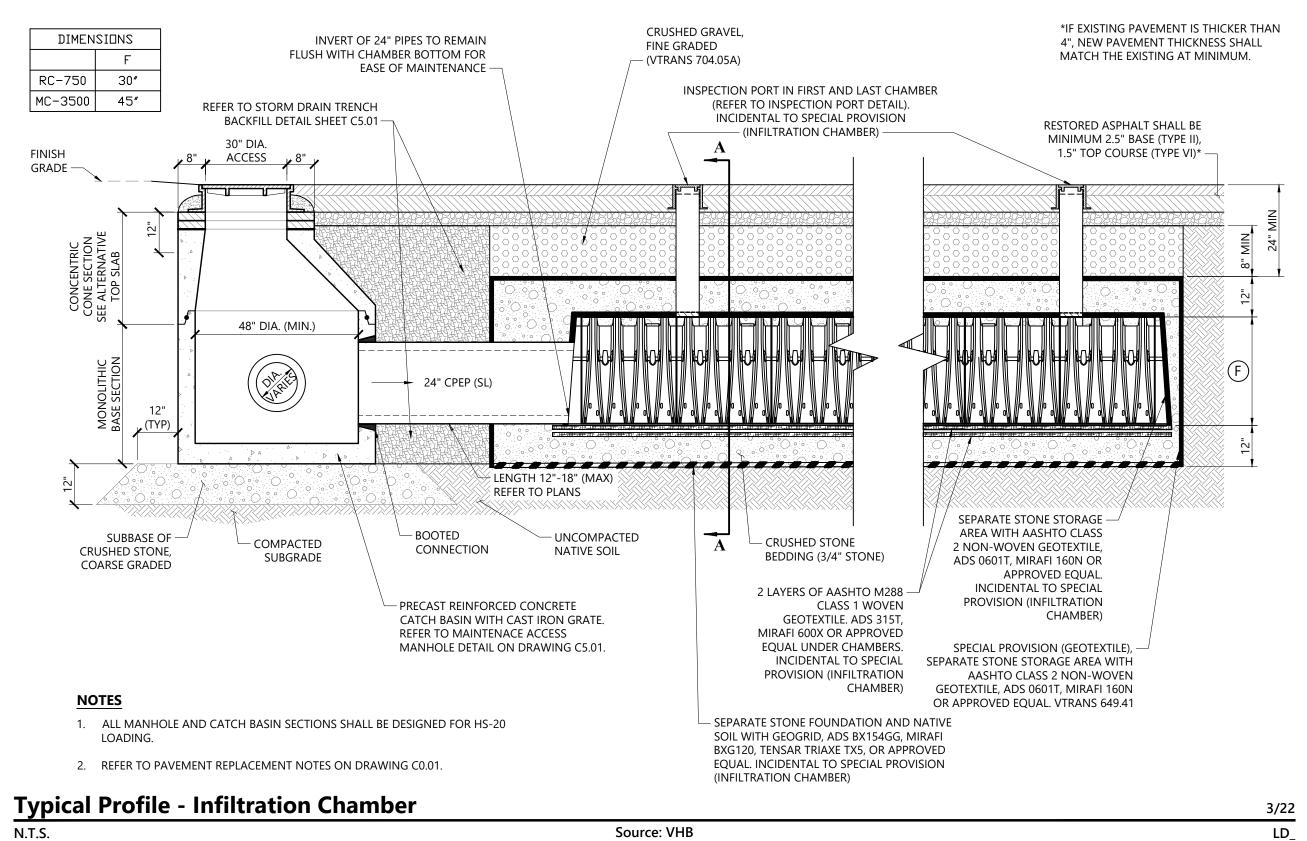
**Stormwater Retrofits** 



23 21

Tree Planting (For Trees Under 4" Caliper)3/22N.T.S.Source: VHBREVLD\_602



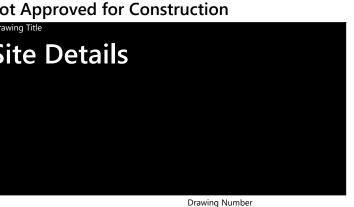




# Burlington ONE Stormwater Retrofits

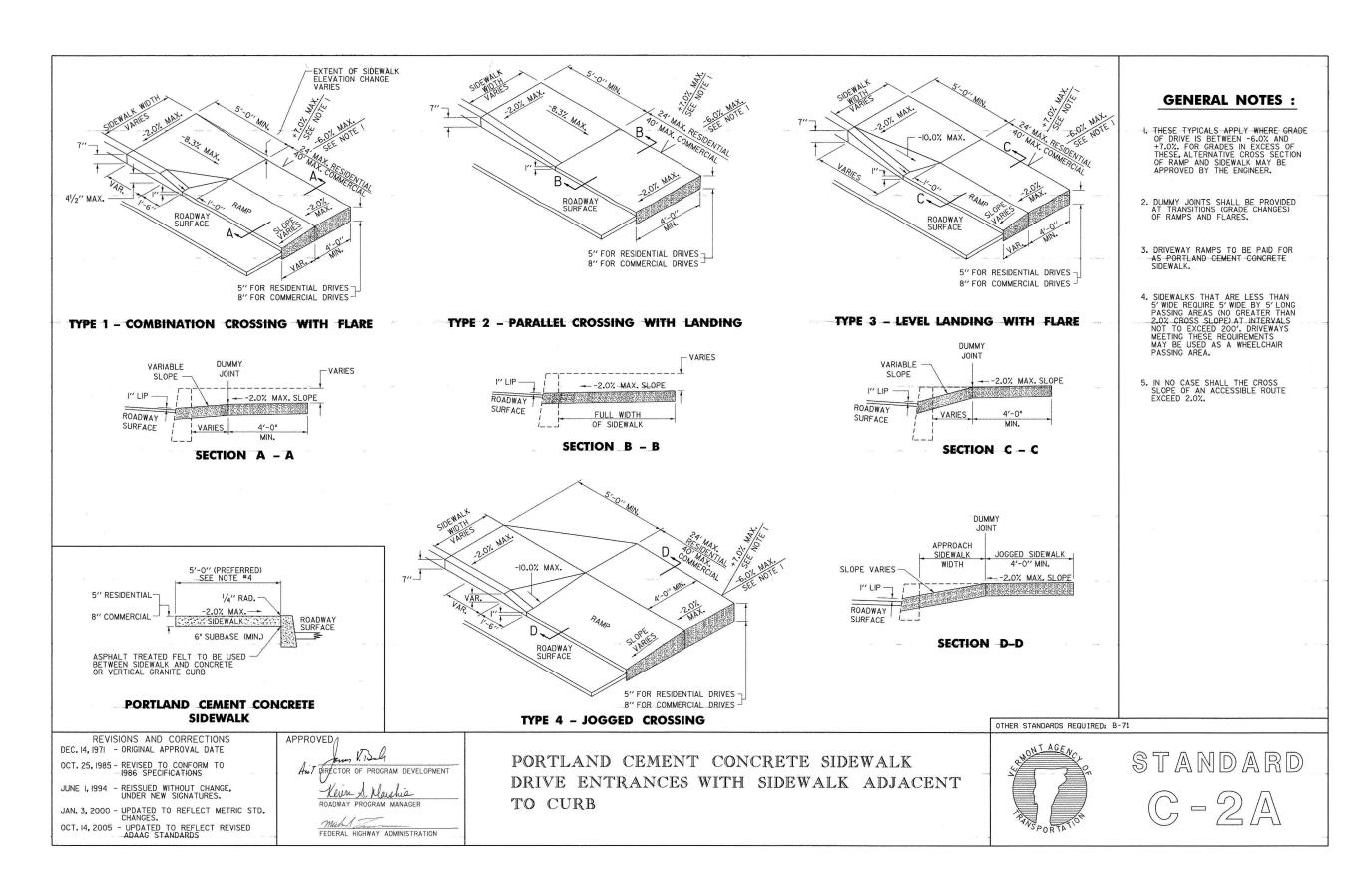
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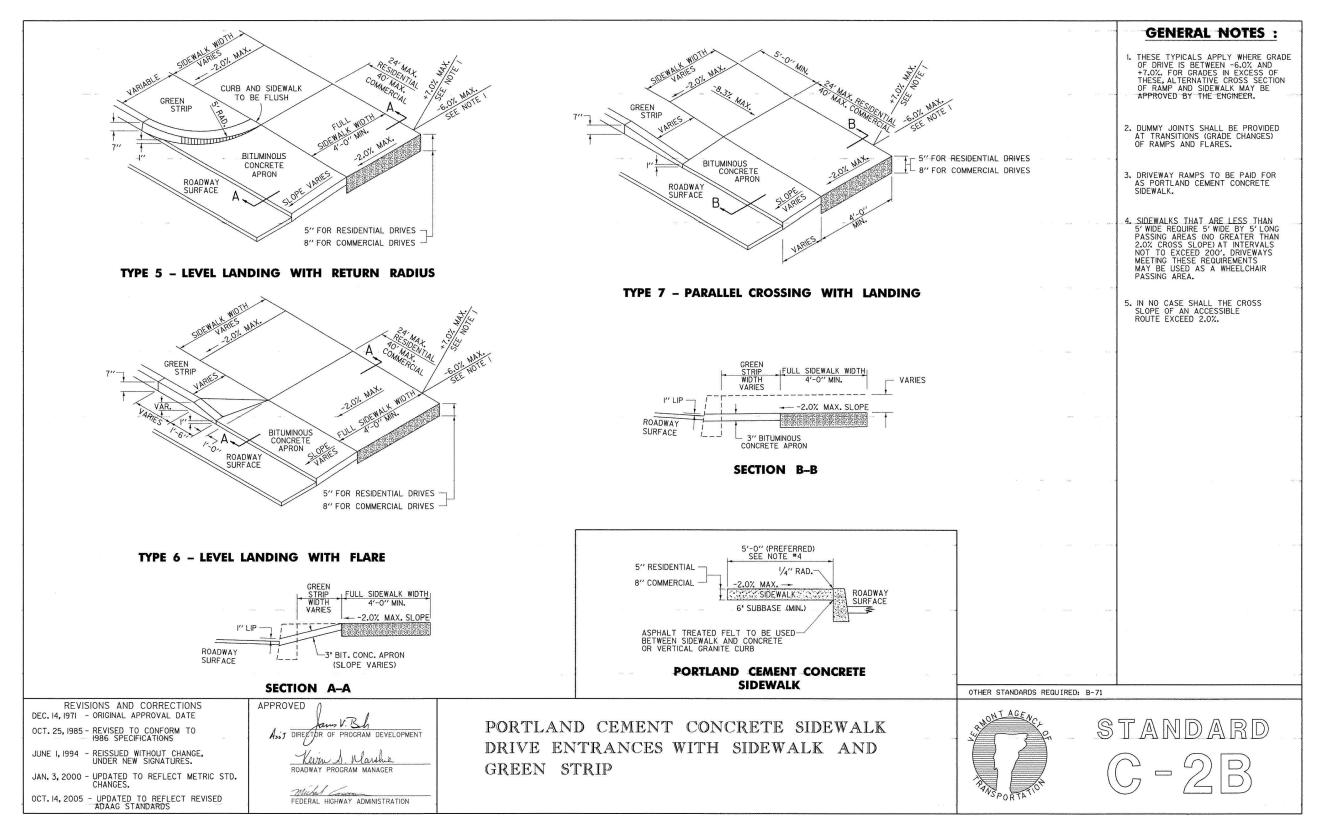
Revision	Date	Appvo
CHS/WAF	Checked by	NCH
or	Date	
	April 1	4, 2022
•	•	
Approved for Constr	uction	
	ed by CHS/WAF	Checked by CHS/WAF  Or Date  April 1

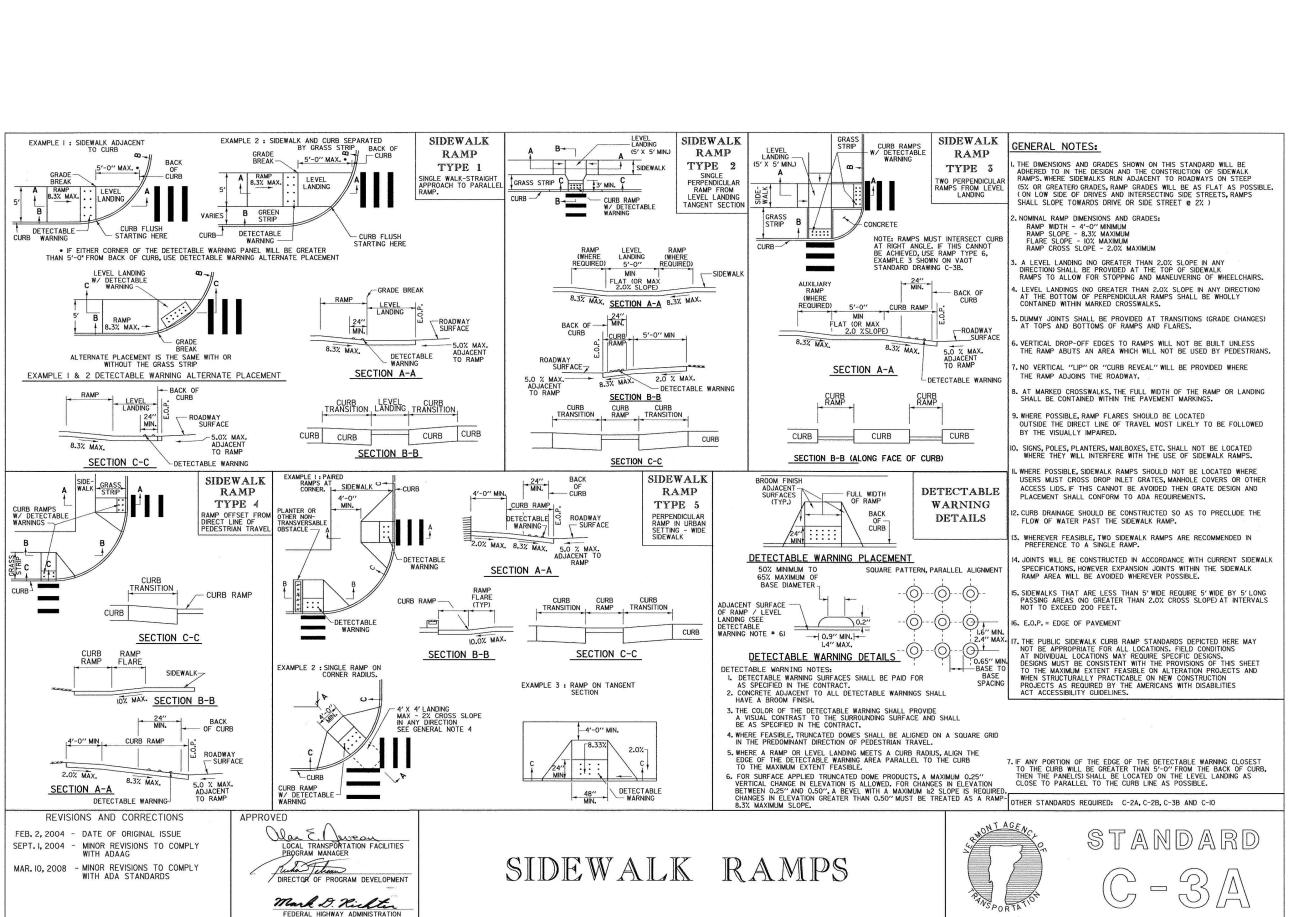


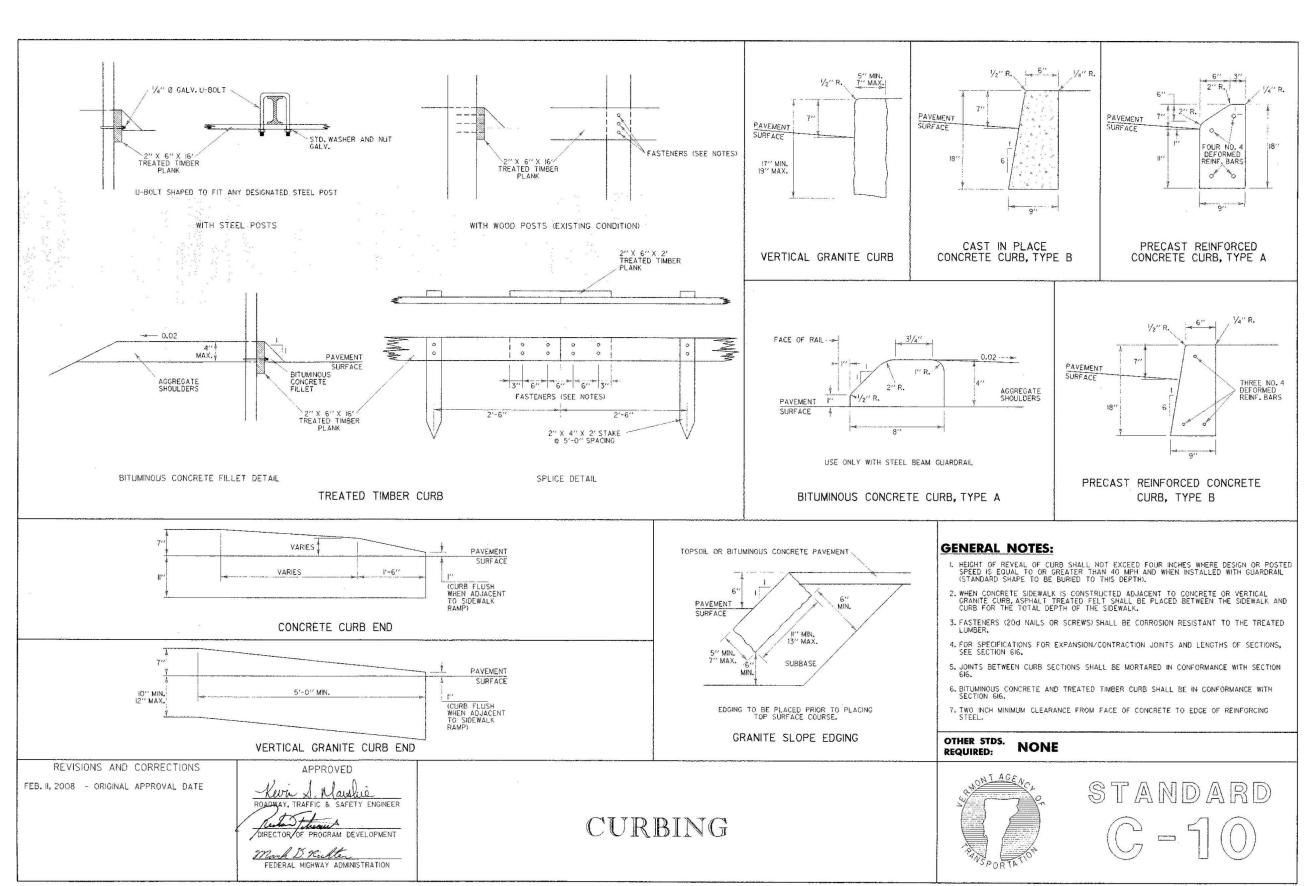
C5.02

Sheet of **22 23** 





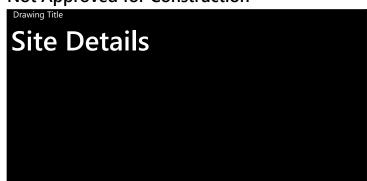




# **Burlington ONE Stormwater Retrofits**

No.	Revision	Date	Appvd
Design	CHS/WAF	Checked by	NCH
Issued	for	Date	
Bio	d	April 1	4, 2022

**Not Approved for Construction** 



23 23