

**MassCentral Rail Trail (MCRT) – Wayside Section
Stormwater Management System
Operation and Maintenance Plan (O&M)
and
Long Term Pollution Prevention Plan (LTPPP)**

June 2020

This Stormwater Management System Operation and Maintenance Plan provides for the inspection and maintenance of structural Best Management Practices (BMPs) and for measures to prevent pollution associated with the Stormwater Management System on the MassCentral Rail Trail Wayside Section (in Hudson, Stow and Sudbury).

This document has been prepared in accordance with the requirements of the Stormwater Regulations included in the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.05(6)(k)).

Figure of stormwater management features is attached.

Responsible Party

Department of Conservation and Recreation (DCR) office will be responsible for the maintenance of the shared-use facility and associated stormwater management features, in accordance with DCR standards. The facility will be maintained by DCR maintenance staff from:

DCR's Maintenance Facility
Hopkinton Complex
164 Cedar St,
Hopkinton MA 01748
Jeff Cate
Field Operation Team Leader
(508) 435-4303

Maintenance Measures

The stormwater management system covered by this Operation and Maintenance Plan consists of the following components:

- Swales – Dry with check dams
- Areas of increased infiltration
- Drainage structures
 - Hudson
 - Sta. 119+25 LT – Catch basin (Str 3)
 - Sta. 119+25 RT – Headwall (Str 4)
 - Sta. 119+25 – 18" RCP - New crossing drainage pipe
 - Sta. 119+45 - 6' by 6' Conc. Box - Cattle Crossing

- Sta. 126+70 RT – Catch basin (Str 5)
- Sta. 126+70 LT – Headwall (Str 6)
- Sta. 126+70 – 24" DIP – New crossing drainage pipe
- Sta. 182+55 RT – Catch basin (Str 8)

Sudbury

- Sta. 368+84 - 2' by 2.5' Stone Box (Drainage Structure 129A)
- Sta. 410+25 - 2' by 2' Stone Box (Drainage Structure 127J)
- Sta. 517+96 - 1' by 2' Stone Box (Drainage Structure 127I)
- Sta. 521+64 - 1.5' by 3' Stone Box (Drainage Structure 127H)
- Sta. 527+30 - 2' by 2' Stone Box (Drainage Structure 127G)
- Sta. 530+80 RT – Catch basin (Str 9)
- Sta. 533+46 RT – Flared End Section (Str 10)
- Sta. 713+63 LT – Headwall (Str 12)
- Sta. 713+63 RT – Headwall (Str 13)
- Sta. 577+31 - 1' by 2' Stone Box (Drainage Structure 127D)
- Sta. 704+56 - 24" Cast Iron (Drainage Pipe 127B)
- Sta. 713+63 - 24" Cast Iron (Drainage Pipe 127A)
- Sta. 738+77 - 18" Cast Iron (Drainage Pipe 126D)
- Sta. 752+17 - 12" Corrugated Metal (Drainage Pipe 126A)

DCR Operations to maintain swales and the drainage pipes.

DCR Engineering to maintain listed catch basins, flared end section, headwalls, drainage pipes. Engineering can assist with blocked culverts if major blockage or structural concern.

Maintenance of these components will be conducted biannually at a minimum in accordance with DCR standard maintenance practices, as noted in the attached Operation and Maintenance table summarizing the pertinent inspection and maintenance activities.

DCR Operations will also inspect and clear culverts conveying streams as needed. Inspection will identify any deterioration of headwalls, culverts, bridge structures, abutments and erosion. Any identified issues will be immediately brought to the attention of DCR Engineering.

- Stream culverts/bridges

Hudson

- Sta. 107+92 – 2' by 3' stone box (Culvert 132A)
- Sta. 148+81 – Fort Meadow Brook Bridge (Bridge 132)
- Sta. 206+10 – 24" Clay Culvert (Culvert 129C)

Sudbury

- Sta. 400+31 – Hop Brook Bridge (Bridge 132)
- Sta. 539+40 – Twin 36" Corrugated Metal – Dudley Brook (Culverts 127F)
- Sta. 560+82 - 3'x2' Concrete Box (Culvert 127E)
- Sta. 593+18 - 2'x2' Stone Box (Culvert 127C)
- Sta. 747+39 - 2.5'x2' Stone Box (Culvert 126B)
- Sta. 764+60 - 12" Reinforced Concrete (Culvert 125B)
- Sta. 725+31 – Hop Brook Bridge (Bridge 130)

If inspection indicates the need for major repairs of structural components, the inspector should contact the DCR maintenance supervisor to initiate procedures to effect repairs in accordance with DCR standard construction practices.

Practices for Long Term Pollution Prevention

In general, long term pollution prevention and related maintenance activities will be conducted consistent with DCR's NPDES Stormwater MS4 Permit(s), and the measures outlined in the Stormwater Management Plans (SWMP). Information about the DCR permit and the SWMP are available at the following website:

<http://www.mass.gov/eea/agencies/dcr/conservation/stormwater-mgmt/>

For the facilities covered by this Operation and Maintenance Plan, long term pollution prevention includes the following measures:

Litter Pick-up

DCR will conduct litter pick-up from the stormwater management facilities in conjunction with routine maintenance activities.

Routine Inspection and Maintenance of Stormwater BMPs

DCR will conduct inspection and maintenance of the stormwater management practices in accordance with the guidelines discussed above.

Spill Prevention and Response

DCR will implement its standard response procedures in the unlikely event of releases of significant materials such as fuels, oils, or chemical materials onto the ground or other areas that could reasonably be expected to discharge to surface or groundwater.

- Reportable quantities will immediately be reported to the applicable Federal, State, and local agencies as required by law. The applicable DCR office should also be notified.
- Applicable containment and cleanup procedures will be performed immediately. Impacted material collected during the response must be removed promptly and disposed of in accordance with Federal, State, and local requirements. A licensed emergency response contractor may be required to assist in cleanup of releases depending on the amount of the release and the ability of the responsible party to perform the required response.
- Reportable quantities of chemical, fuels, or oils are established under the Massachusetts Contingency Plan (MCP) and enforced through MassDEP.

Maintenance of Landscaped Areas

DCR will mow and/or weed whack the shoulders adjacent to the rail trail bi-weekly or as needed between Memorial Day and Columbus Day. Outside of the 2-foot shoulders, DCR will mow the 5-foot herbaceous area over the duct bank no more than once annually. Outside of the 19-foot maintained area (paved rail trail, 2-foot shoulders on either side and 5-foot area over the duct bank) woody vegetation will be allowed to naturally revegetate and DCR will not implement vegetation management unless it poses a risk to MCRT users. The limit of work, outside of the

19-foot maintained area, will be restored with loam and seed to provide a vegetated surface, but will not be maintained. The vegetated shoulders/slopes outside the maintained area will help to disperse and infiltrate disconnected drainage although no stormwater management benefit is identified. The swales and areas of increased infiltration outside of the 19-foot area will be inspected and mowed as needed or biannually at a minimum to maintain proper water quality treatment function.

Eversource inspection vehicles will use the paved MCRT to access the transmission line facility approximately once every three years, or as needed for maintenance of the transmission line.

Within the Priority Habitat areas, the vegetation will not be trimmed lower than 10 inches along the shoulders or over the duct bank.

Fertilizers will not be used.

If DCR finds it necessary to use chemical treatment for invasive species vegetation control, this work will be done in compliance with MDAR regulations at 333 CMR 11.00, which will limit impacts to sensitive areas such as groundwater and drinking water wells. The MCRT is part of the DCR Yearly Operational Plan regarding vegetation maintenance along their bike path and recreational corridors.

Erosion Control

Portions of the MCRT are on elevated former railroad embankment with steep side slopes. Review the MCRT alignment for any evidence of erosion on slopes, within swales, at check dams or at inlets and outlets of drainage pipes or stream culverts during the biannual inspection of the corridor and the stormwater BMPs. If erosion is observed, note on the inspection form. Include the location and extent of erosion (width and length), which side of the path or pipe/culvert, if the erosion is toward or away from the path, and if any resource areas are at risk of impact. Include photographs if possible. Note location on the attached figure as accurately as possible. Notify the Field Operations Team Leader.

Any observed erosion will be repaired, and reseeded or otherwise stabilized as needed to prevent continued erosion. Notify the local conservation commission if erosion impacts a resource area or requires reconstruction within a resource area or within 100 feet of a resource area. A regulatory filing may be required.

Snow and Ice Management

There are no plans for snow and ice removal, nor de-icing (i.e., sanding, salting) of the bike path surface during winter months.

Prohibition of Illicit Discharges

The DEP Stormwater Management Standards prohibit illicit discharges to the storm water management system. Illicit discharges are discharges that do not entirely consist of stormwater, except for certain specified non-stormwater discharges.

Discharges from the following activities are not considered illicit discharges:

firefighting	foundation drains
water line flushing	footing drains
landscape irrigation	individual resident car washing
uncontaminated groundwater	flows from riparian habitats and wetlands
potable water sources	dechlorinated water from swimming pools
water used to clean residential buildings	water used for street washing
without detergents	air conditioning condensation

There are no known or proposed illicit connections associated with this project. If a potential illicit discharge to the facilities covered by this plan is detected (e.g., dry weather flows at any pipe outlet, evidence of contamination of surface water discharge by non-stormwater sources), the DCR shall be notified for assistance in determining the nature and source of the discharge, and for resolution through DCR's IDDE program.

Public Access

The MCRT Wayside Section is a public access facility. The facility is typically open dawn to dusk every day. Members of the Sudbury Planning Board or Conservation Commission are free to access the rail trail at any time the facility is open. Periodically the facility may be closed for maintenance construction (repairs, resurfacing, etc.) and for the safety of the public, access to the rail trail will be restricted.

Easements

The DCR holds an easement for construction and operation of the MCRT over the Massachusetts Department of Transportation – MBTA rail corridor. Within the rail corridor there are the following existing easements or license agreements by others:

- NSTAR Electric Company d/b/a Eversource Energy ("Eversource") to construct and operate the transmission powerline;
- Sudbury Lumber for access and storage of materials (off Union Avenue);
- Tennessee Gas Transmission Company to install and operate an underground natural gas transmission pipeline (east of Marlborough/Hudson town line);
- Town of Sudbury (east of Route 20 – building license);
- Douglas P. Webb lease for South Sudbury Station (off Union Avenue)

Appendix: Best Management Practices: Operation & Maintenance Measures Schedule

Best Management Practice*	Sweep	Mow	Inspect	Clean	Repair
Swales*	NA	Mow swales as needed or biannually (minimum)	Biannually at a minimum	As needed	As needed
Check Dams	NA	String trim as needed (Not to be mowed) or biannually (minimum)	After every significant rainfall event	As needed	As needed
Areas of increased infiltration*	NA	Mow as needed or biannually (minimum)	Biannually at a minimum	As needed	As needed
Drainage structures	NA	NA	Biannually at a minimum	As needed	As needed

*If mowing occurs between April 1 and November 1, then areas within mapped habitat for state-listed turtles will require “turtle sweeps” by trained individuals ahead of the mower and mower deck heights shall be set lower than 10 inches above the ground or string trimmers can be used.

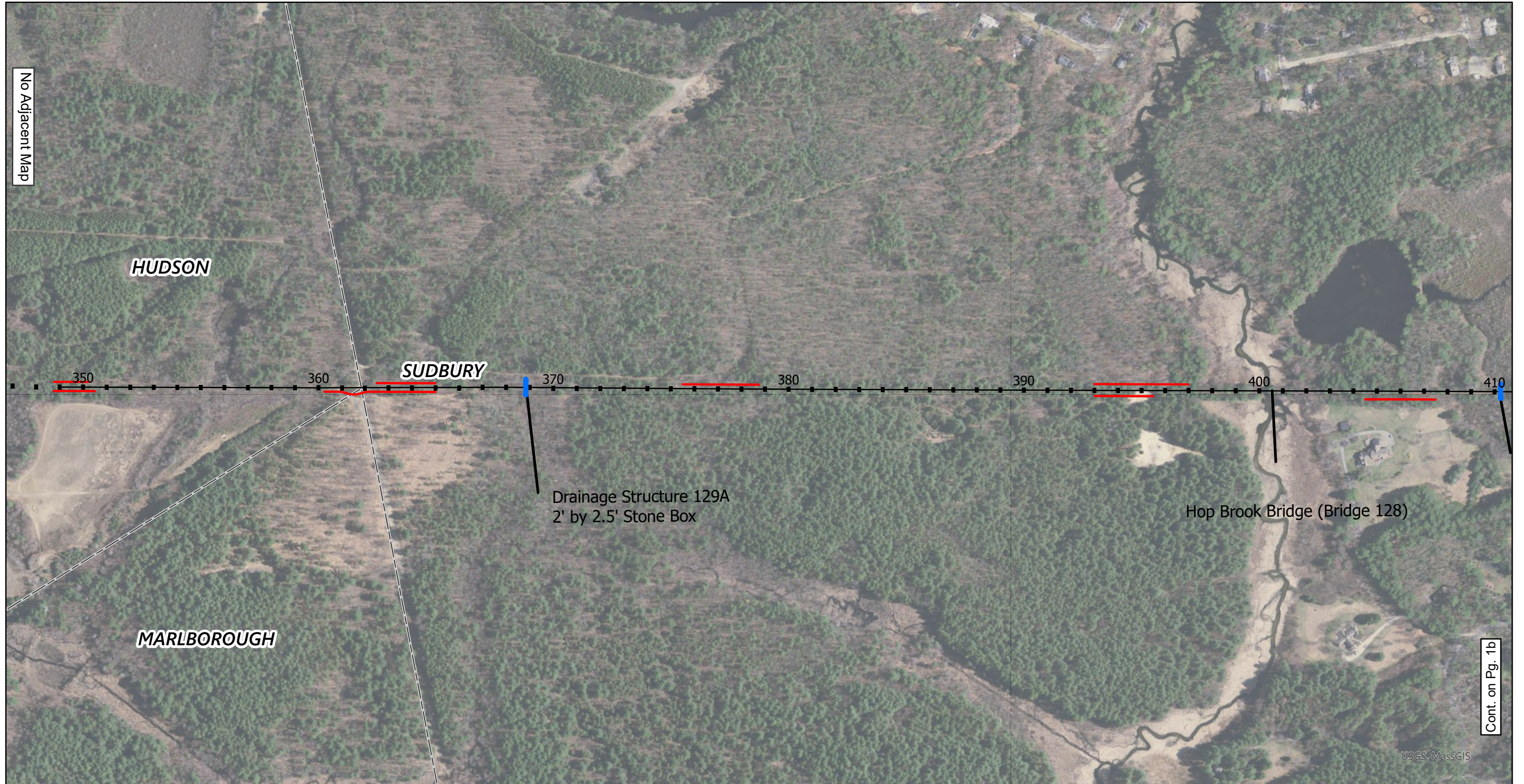
Best Management Practices – Inspection and Maintenance/ Evaluation Checklist

Best Management Practice	Inspection Frequency	Date Inspected	Inspector	Minimum Maintenance and Key Items to Check	Cleaning/Repair Needed	Date of Cleaning/Repair	Performed by
Swales	Biannually at a minimum			<ul style="list-style-type: none"> Accumulated sand and sediment Accumulated debris Erosion of swale Mow biannually (minimum)	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no		
Check Dams	After significant rain fall events			<ul style="list-style-type: none"> Accumulated sand and sediment Accumulated debris Erosion of surface Cut grass biannually (minimum) (string trimmer) 	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no		
Areas of increased infiltration	Biannually at a minimum			<ul style="list-style-type: none"> Accumulated sand and sediment Mow as needed or biannually (minimum) 	<input type="checkbox"/> yes <input type="checkbox"/> no		
Drainage structures, drainage pipes and stream culverts	Biannually at a minimum			<ul style="list-style-type: none"> Accumulated sand and sediment Floatables Inlets free of debris 	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no		
Erosion (Provide location and detailed description in notes below. Include photographs)	Biannually at a minimum			<ul style="list-style-type: none"> Slope erosion observed Erosion within a swale or at check dam Erosion/Siltation onto the path surface Erosion/Siltation away from the path surface Erosion at a drainage pipe or stream culvert 	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no		

Notes on Stormwater / Drainage / Erosion Issues:

Stormwater Control Manager _____

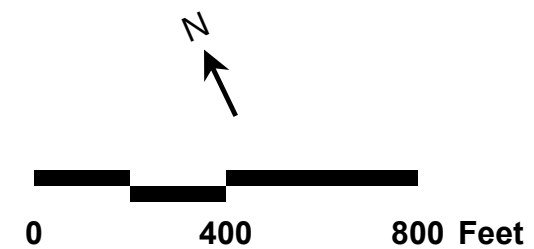
Figure of Stormwater BMPs Attached



No Adjacent Map

Cont. on Pg. 1b

- Project Stationing
- ▭ Massachusetts Municipalities
- Culverts
- Area of Increased Infiltration or Swale



EVERSOURCE
ENERGY

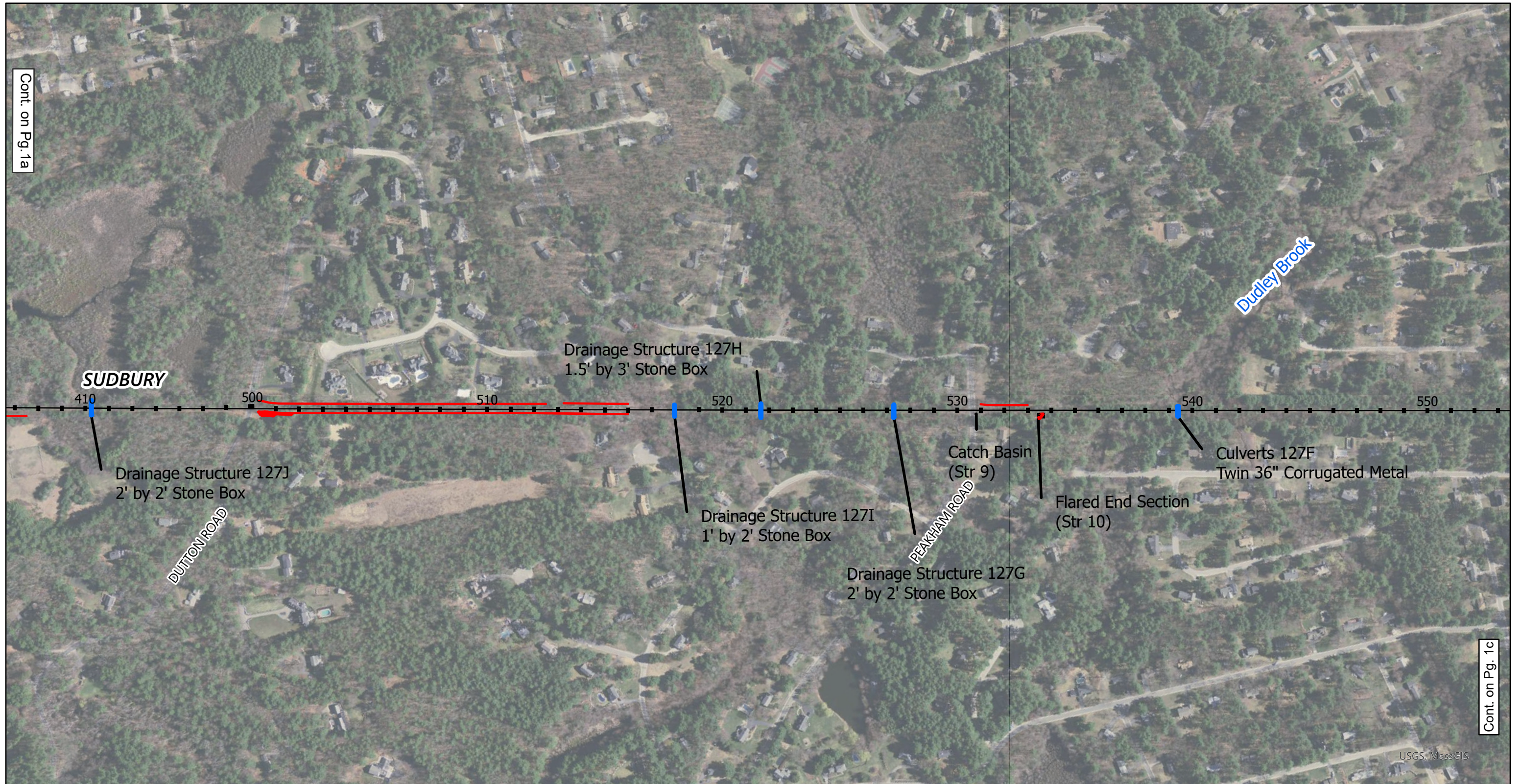
Sudbury-Hudson Transmission Reliability Project

Figure 1a : Maintenance Features

Date: 10/16/2020

Source:
MassGIS, VHB

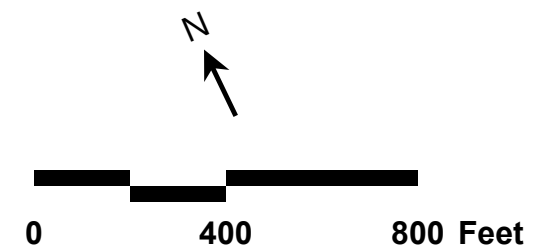




Cont. on Pg. 1a

Cont. on Pg. 1c

- Project Stationing
- Culverts
- ▭ Massachusetts Municipalities
- Area of Increased Infiltration or Swale



EVERSOURCE
ENERGY

Sudbury-Hudson Transmission Reliability Project

Figure 1b : Maintenance Features

Date: 10/16/2020

Source: MassGIS, VHB



Cont. on Pg. 1b

Cont. on Pg. 1d

- Project Stationing
- ▭ Massachusetts Municipalities
- Culverts
- Area of Increased Infiltration or Swale



EVERSOURCE
ENERGY

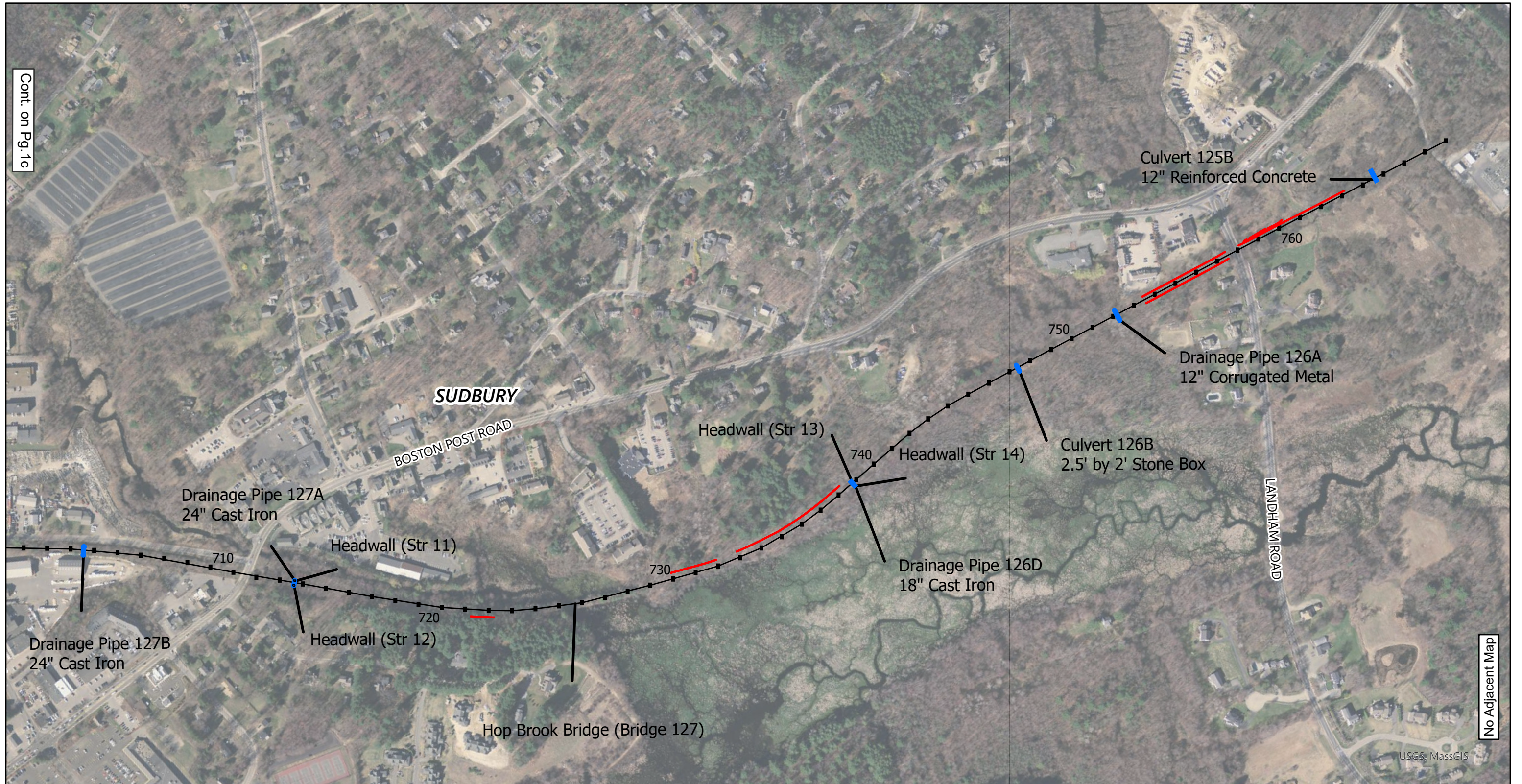
Sudbury-Hudson Transmission Reliability Project

Figure 1c : Maintenance Features

Date: 10/16/2020

Source:
MassGIS, VHB





Cont. on Pg. 1c

No Adjacent Map

USGS, MassGIS

- Project Stationing
- ▭ Massachusetts Municipalities
- Culverts
- Area of Increased Infiltration or Swale



EVERSOURCE
ENERGY

Sudbury-Hudson Transmission Reliability Project

Figure 1d : Maintenance Features

Date: 10/16/2020

Source:
MassGIS, VHB

