

Environmental Monitor Construction Site Inspection Report
MassDOT Project #608164 Construction Contract # 119678
EM Report #3

Project Description: Bruce Freeman Rail Trail Right-of-Way
 Permit Description(s): Order of Conditions (MGL Chapter 131, Section 40 and 310 CMR 10.00, Mass DEP File No. 301-1362); 2022 EPA NPDES General Permit for Discharges from Construction Areas; U.S. Army Corps of Engineers Permit No NAE-2021-01975.

I. General Project Information

Project Name: Bruce Freeman Rail Trail - Phase 2d - Sudbury
 Date of Inspections: 5/21/2024
 Bi Weekly/ Monthly Period Covered: May Weekly Inspection #3
 Inspector's Name(s): Douglas Beach
 Inspectors' Contact Information: dbeach@beta-inc.com

II. Weather Information

WeatherUnderground	Inspection #1	Inspection #2	Inspection #3	Inspection #4
	Inspector: Douglas Beach	Inspector: Douglas Beach	Inspector: Douglas Beach	Inspector:
Type of Inspection (i.e. non-storm event, pre-storm event, during-storm event or post-storm event):	During-storm event	During-storm event	Non-storm event	
Number of days since last rain event greater than .25"	0	0	0	
Has there been a storm event since the last inspection?	No	Yes	Yes	
If yes, please provide storm start date, storm duration, and approx amount of precipitation:	5/8/2024	5/15/2024		
Storm 1:	May 8th (9 hours - 0.98")	May 15th- May 16th (24 hours - 0.62")	May 18th (15 hours - 0.08") May 19th (11 hours - 0.05")	
Storm 2:				
Storm 3:				
Storm 4:				
Weather at the time of inspection (i.e. clear, overcast, cloudy, rain, sleet, fog, snow, windy):	Cloudy, rain	Cloudy, rain	Sunny, clear sky	
Temperature:	55-60	60-64	54-87	
Unusual Conditions (drought, severe storm):	No	No	No	
Have any discharges occurred since the last inspection report?	No	Yes	No	
If yes, please describe:		Recently installed compost filter tubes along the stream near the parking area between Stations 216+00 and 218+00 are being undermined, resulting in sediment-laden stormwater being discharged to a stream.		

Note: Inspections should only be conducted on days during work hours while RE or ARE is onsite. The EM should contact the RE to address any immediate corrective actions.

III. General Description of Construction Status (Note: Only filled out for Monthly Report)

5/08/2024 - During this inspection, BETA observed heavy equipment operating in the vicinity of Stations 101+00 and 102+00, and loam was being spread near Stations 256+00 and 262+50.

5/16/2024 - During this inspection, BETA observed that the parking lot between Stations 216+00 and 218+00 off of Morse Road has been graded and additional erosion controls have been installed around its perimeter. In addition, new loam has been spread between Stations 256+00 and 290+00, grading has occurred along the Pantry Brook crossings, and some construction debris has been removed.

5/21/2024 - During this inspection, BETA observed that grading and planting has occurred within/along the parking lot between Stations 216+00 and 218+00 off of Morse Road, and masonry work was completed at the rest area at Station 217+00. Hydroseed as been applied to areas along the trail near Station 259+00 to 265+00 and Station 265+00 to 280+50, and loam has been placed along the western side of the trail from Station 292+00 to 299+50.

IV. Status of Existing BMPs

Control Measure (These are examples; list measures specific to the project)	Cleaning or Repair Needed (yes no n/a)	Comments/Recommendations from the EM
Perimeter Controls	Yes	Perimeter erosion and sedimentation control measures were installed at the commencement of the Project and are in varying conditions across the Site; however, they were generally observed to be degraded. While areas upgradient of degraded controls are temporarily stabilized in some instances, several discharges of sediment beyond the limits of work were observed including at Stations 155+00 to 162+50, Stations 201+50 to 204+00, in the perimeter of Station 221+50, Stations 222+00 to 241+00, Station 247+00, Stations 252+00 to 253+00, Stations 255+50 to 256+00, Stations 292+00 to 294+50, and Stations 313+00 to 316+00. It is recommended that the contractor repair erosion and sedimentation control measures where breaches are occurring and where stabilization has not been achieved. Perimeter controls were generally in degraded condition along culverts, streams, and cattle crossings. New erosion controls have been added at Stations 263+50 to 265+50.
Inlet Protection Measures	No	
Stabilized Construction Entrances	No	
Stockpile Protections	No	
Dust Control	No	
Street Sweeping	No	
Dewatering Controls	No	
Construction Equipment and Material Storage	No	
Construction and Domestic Waste Storage and Collection	Yes	Construction debris including trash and concrete piles were observed in several locations along the Project and require disposal, including at Stations 101+00, 125+50, 126+00, 143+50, 163+00, 181+50, 185+00, and 334+50.
Location of Sanitary Waste Facilities	No	
Washout Areas	No	
Fertilizers, Herbicides, and Landscape Material	N/A	
Stabilization of Exposed Soil	Yes	Varying degrees of stabilization are present within areas that were constructed/graded as part of the Project. While germination of seed and temporary stabilization have been achieved in several areas such as Stations 107+00 to 117+00, stabilization efforts are required at Stations 155+00 to 162+50, Stations 201+50 to 204+00, Station 221+50, Stations 236+00 to 241+00, Station 247+00, Stations 252+00 to 253+00, Stations 255+50 to 294+50, and Stations 313+00 to 316+00. Generally, stabilization of these areas will require the establishment of herbaceous vegetation as depicted on the Project plans, and interim measures including but not limited to straw and jute netting could be used to promote germination.
Overall Adherence to Environmental Permits	No	

Note: Use station numbers, wetland ID or other means to determine locations of BMP's that need repairs.

V. Compliance Table - Compliance Action Items

V. 1. Compliance Action Items Observed During the One Month Reporting Period Ending [May 31, 2024].

Current Open and Closed Compliance Action Items Observed During the Reporting Period Ending [May 31, 2024]. For those items within the most current two week period, color the Item in blue, as shown on lines 48-50 as an example. RED text indicates that the item is outstanding. Once item is resolved, place resolution date in 'Recommended Resolution/Resolution Date' column, convert to BLACK text, and move to the bottom of the Action Item list. Place resolution date on TOP of resolution action. Each Compliance Action Item is assigned a unique number only to be used to reference that item for the duration of the project. Separate but related Action Items will be labeled in an "Item Number-1 and Item Number-2" manner or similar. Completed action items can be removed once they have appeared in the Bi-Weekly Report to MassDEP

"Urgent" - Needs to be completed immediately, **"High"** - Needs to be completed in < 7 days due to site conditions, proximity to resource areas, anticipated weather, etc., **"Medium"** - Needs to be completed within 7 days and has short-term potential to impact resource areas, **"Low"** - Needs to be completed within 7 days with minimal potential to impact resource areas

Item	Location/ Description	Observation Date	Resolution Due Date	Recommended Resolution / Resolution Date	Comments/Updates
33	Sediment is eroding downhill and offsite at Station 222+00 through Station 236+00 Priority: High	5/21/2024	5/28/2024	Remove rill erosion and remove over washed material from outside limit of work.	
32	Soil and organic debris has been placed within the wetland between wetland flagging WF#23-119 and WF#23-118 at Station 224+00 Priority: High	5/21/2024	5/28/2024	Remove all material and provide stabilization of the area with the approved wetland seed mixture. Straw should also be placed for interim stabilization.	
31	Stabilize loam recently placed between Stations 256+00 and 292+00 Priority: High	5/16/2024	5/23/2024	Apply seed and straw for stabilization.	5/21/2024 - Exposed soils have been partially stabilized with hydroseed. This Action Item will be resolved once additional hydroseed is applied.
30	Concrete pile improperly disposed of at Station 101+00 Priority: Low	5/16/2024	5/23/2024	Remove concrete pile from the area.	5/21/2024 - Observation remains.
29	Trash has been left on the rest area pad at Station 101+00 Priority: Low	5/16/2024	5/23/2024	Remove the trash in a proper manner.	5/21/2024 - Observation remains.
1	Trash and concrete improperly disposed of around Stations 125+50 through 126+00 Priority: Low	5/8/2024	5/15/2024	Pick up loose trash and remove concrete pile from the area in accordance with the SWPPP.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
2	Concrete pile requiring disposal at Station 143+50 Priority: Low	5/8/2024	5/15/2024	Remove concrete pile from the area.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
3	Sediment washout over the slope and existing erosion controls at Stations 155+00 to 162+50 Priority: Low	5/8/2024	5/15/2024	Replace decomposed and damaged compost filter tubes in the areas necessary to contain sediment washout until stabilization measures are completed.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
4	Concrete pile improperly disposed of at Station 163+00 Priority: Low	5/8/2024	5/15/2024	Remove concrete pile from the area.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.

5	Turbid water in swale at Stations 167+00 through 172+00 Priority: High	5/8/2024	5/15/2024	Stabilize all contributing areas to the swale and implement stabilization measures over exposed soils within the swale itself once water recedes. It is recommended that the contractor coordinate with MassDOT on stabilization within the swale, which may require jute netting and seed.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
6	Exposed sediment slope at Station 172+00 to 175+00 Priority: High	5/8/2024	5/15/2024	Install temporary sediment controls along the slope such as jute netting and/or straw following the application of seed.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
7	Concrete pile improperly disposed of at Station 181+50 Priority: Low	5/8/2024	5/15/2024	Remove concrete pile from the area.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
9	Rill erosion resulting in offsite sediment migration at Station 1003+00 Priority: Low	5/8/2024	5/15/2024	Fill in rills and apply seed to stabilize the area. Temporary stabilization measures such as straw and/or jute netting may be required.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
11	Concrete pile improperly disposed of at Station 185+00 Priority: Low	5/8/2024	5/15/2024	Remove concrete pile from the area.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
13	Rill erosion is occurring along the west side of the trail at Stations 201+50 to 204+00 Priority: Low	5/8/2024	5/15/2024	Fill in rills and apply seed to stabilize the area. Temporary stabilization measures such as straw and/or jute netting may be required.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
14	Sediment-laden runoff is being discharged into a stream from the new parking lot at Station 216+50 Priority: High	5/8/2024	5/15/2024	Replace compost filter tubes around the stream and develop a method of redirecting runoff from the parking lot at the source.	5/16/2024 - New compost filter tubes have been installed but were observed to be undermined. In addition, a new earthen slope was observed to be constructed in this area and requires stabilization. 5/21/2024 - No turbidity was observed due to no rain preceding this inspection. However, additional erosion controls should be explored at this location to prevent future discharges.
15	Sediment migration off of the trail and into wetlands at Station 221+50 Priority: High	5/8/2024	5/15/2024	Replace damaged compost filter tubes and remove accumulated sediment from areas beyond the limits of work. Once any grading work is completed, apply seed to the slope and stabilize it with jute netting, straw, etc.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
16	Sediment migration beyond the limits of work at Stations 231+00 to 232+00 Priority: Medium	5/8/2024	5/15/2024	Remove accumulated sediment from areas beyond the limits of work and replace compost filter tubes. Once any grading work is completed, apply seed to the slope and stabilize it with jute netting, straw, etc.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.

17	Sediment migration beyond the limits of work at Stations 236+00 to 238+00 Priority: High	5/8/2024	5/15/2024	Remove accumulated sediment from areas beyond the limits of work and replace compost filter tubes. Once any grading work is completed, apply seed to the slope and stabilize it with jute netting, straw, etc.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
18	Sediment migration beyond the limits of work at Stations 238+00 to 241+00 Priority: Medium	5/8/2024	5/15/2024	Stabilize steep slopes with jute netting or compost filter tubes to prevent additional land movement and erosion.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
19	Sediment migration into the stream at Station 247+00 Priority: High	5/8/2024	5/15/2024	Install compost filter tubes to prevent further sedimentation of the stream. If dry conditions are present, evaluate whether sediment removal is feasible.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
20	Rill erosion moving offsite on the West side of the trail at Stations 252+00 to 253+00 Priority: Low	5/8/2024	5/15/2024	Add or replace compost filter tubes or straw wattles to stabilize the immediate area until grass grows in.	5/16/2024 - Observation remains. 5/21/2024 - Rills have been raked over; however, the downgradient erosion and sediment controls require maintenance and the area requires stabilization.
21	Washout and erosion issues on the east side of trail at Stations 255+50 to 256+00 Priority: Low	5/8/2024	5/15/2024	Remove material that has eroded offsite and add additional erosion control such as straw wattles, jute netting, or compost filter tubes.	5/16/2024 - Observation remains. 5/21/2024 - All rill erosion locations have been raked over eliminating channels, but eroded material must be removed from overwashed erosion controls and location must be stabilized.
23	Sediment has accumulated within the cattle crossing at Station 258+00 and is migrating towards adjacent wetlands Priority: High	5/8/2024	5/15/2024	Remove all accumulated sediment and address the sediment release at the source through additional erosion controls and stabilization measures.	5/16/2024 - Observation remains. 5/21/2024 - Partial sediment removal has been completed. It appears that this accumulation of sediment may be occurring due to offsite inputs and may require coordination with MassDOT.
26	Erosion and migration of gravel into a stream observed along the east side of the trail at Stations 292+00 to 294+50 Priority: High	5/8/2024	5/15/2024	Add or replace erosion controls and remove the gravel eroding into wetland streams. Replace gravel and/or supplement with larger stone.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains. Recently placed loam should be stabilized to prevent sediment-laden runoff from discharging to the stream.
27	Material washout was observed along the west side of the trail from Stations 313+00 to 316+00 Priority: High	5/8/2024	5/15/2024	Provide supplemental erosion controls and stabilize the slope.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
28	Concrete pile improperly disposed of at Station 334+50 Priority: Low	5/8/2024	5/15/2024	Remove concrete pile from the area.	5/16/2024 - Observation remains. 5/21/2024 - Observation remains.
8	Concrete pile improperly disposed of at Station 184+50 Priority: Low	5/8/2024	5/15/2024	Resolved 5/16/2024 Remove concrete pile from the area.	5/16/2024 - Concrete has been removed from this area and properly disposed of.
10	Concrete pile improperly disposed of at Station 1001+00 Priority: Low	5/8/2024	5/15/2024	Resolved 5/16/2024 Remove concrete pile from the area.	5/16/2024 - Concrete has been removed from this area and properly disposed of.
12	Concrete pile improperly disposed of and rill erosion behind concrete pad at Station 201+50 Priority: Low	5/8/2024	5/15/2024	Resolved 5/16/2024 Remove concrete and fill in rills/stabilize area with seed. Temporary stabilization measures such as straw and/or jute netting may be required.	5/16/2024 - Concrete has been removed from this area and properly disposed of. Rill erosion has not been fully addressed; however, this is referenced under open Action Item 13.

24	Concrete pile improperly disposed of at Station 285+00 Priority: Low	5/8/2024	5/15/2024	Resolved 5/16/2024 Remove concrete pile from the area.	5/16/2024 - Concrete has been removed from this area and properly disposed of, and loam has been spread.
25	Concrete washout improperly disposed of at Station 285+44 Priority: Low	5/8/2024	5/15/2024	Resolved 5/16/2024 Remove the concrete washout and top layer of impacted material.	5/16/2024 - Concrete washout has been removed from this area and properly disposed of, and loam has been spread.
22	Sand and silt accumulation observed at and beyond the stone for pipe ends at Station 257+00 Priority: High	5/8/2024	5/15/2024	Resolved 5/21/2024 Remove accumulated sand and silt within and beyond the stone for pipe ends. Consider expanding stone apron if required to accommodate flows.	5/16/2024 - Observation remains. 5/21/2024 - Silt and sand has been removed from the stone. This area will be monitored to confirm efficacy of the stone to prevent sediment from migrating into downgradient areas.

V.2. On Going (Longer-Term) Compliance Items

Typically, these items require coordination with MassDEP. If so, remove once approval is obtained from MassDEP

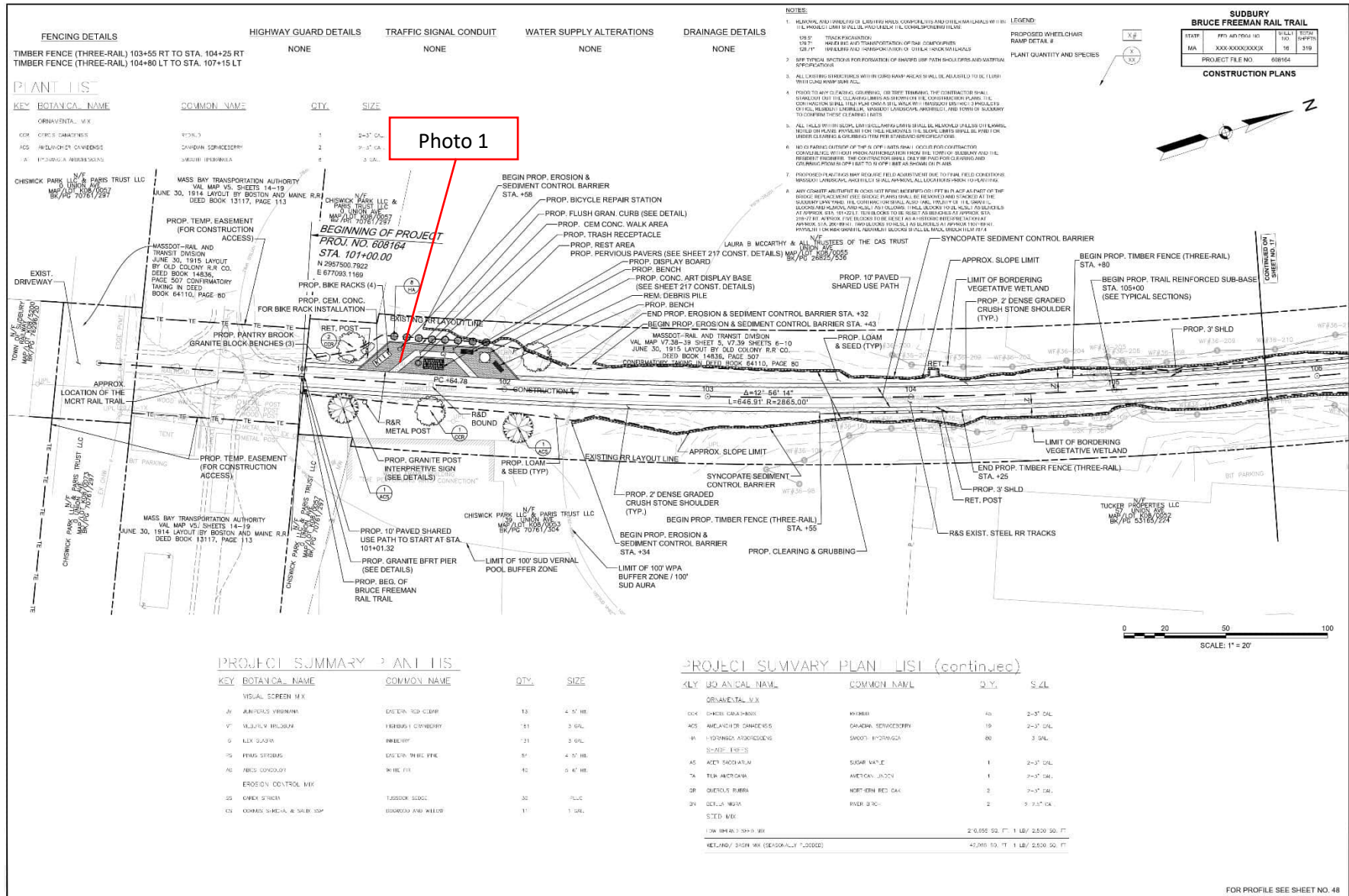
Item	Location/ Description	Observation Date	Resolution Due Date	Recommended/Discussed Resolution	Comments/Updates

VI. Agency Submittals (Note: only filled out for monthly report)

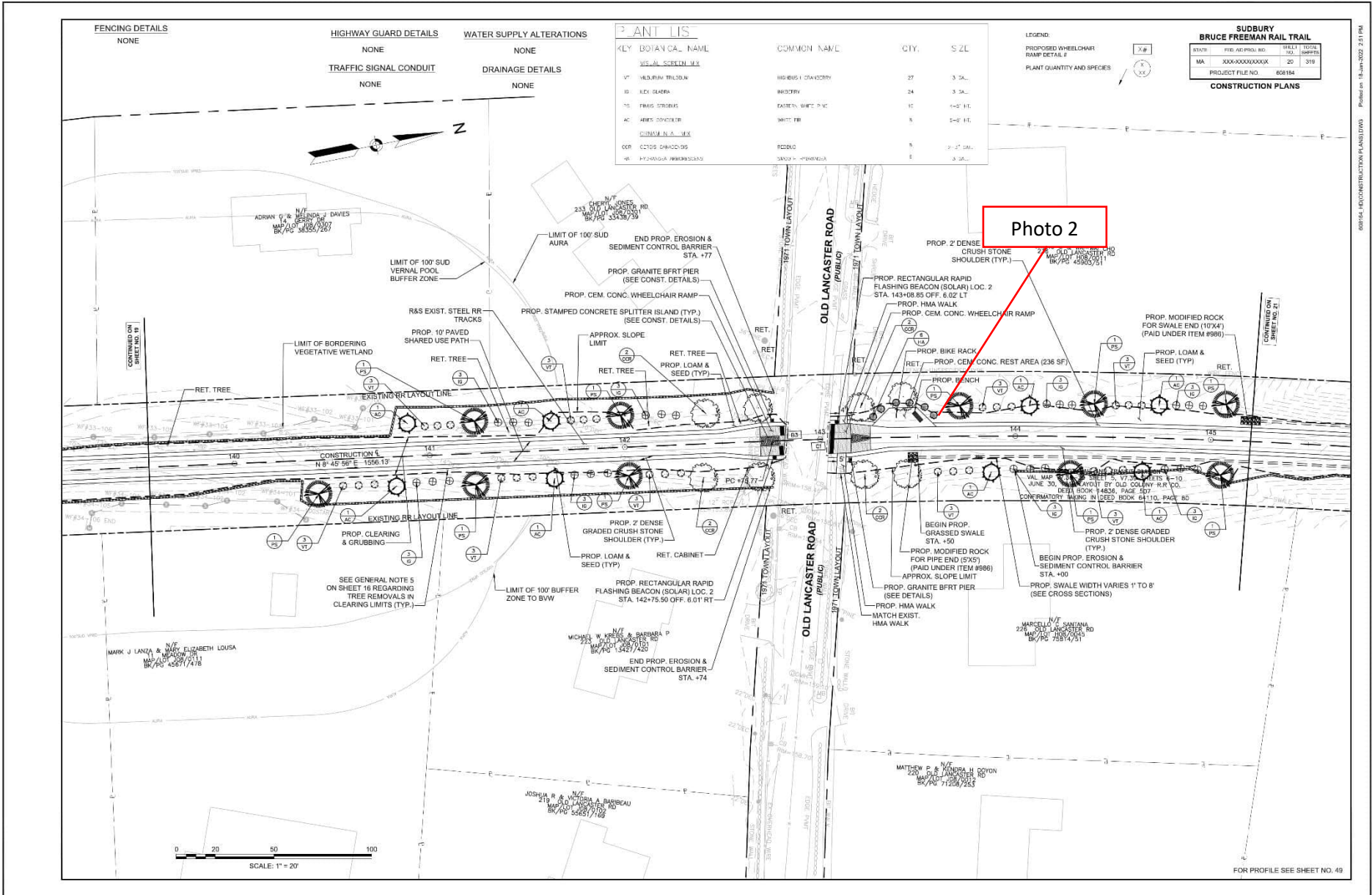
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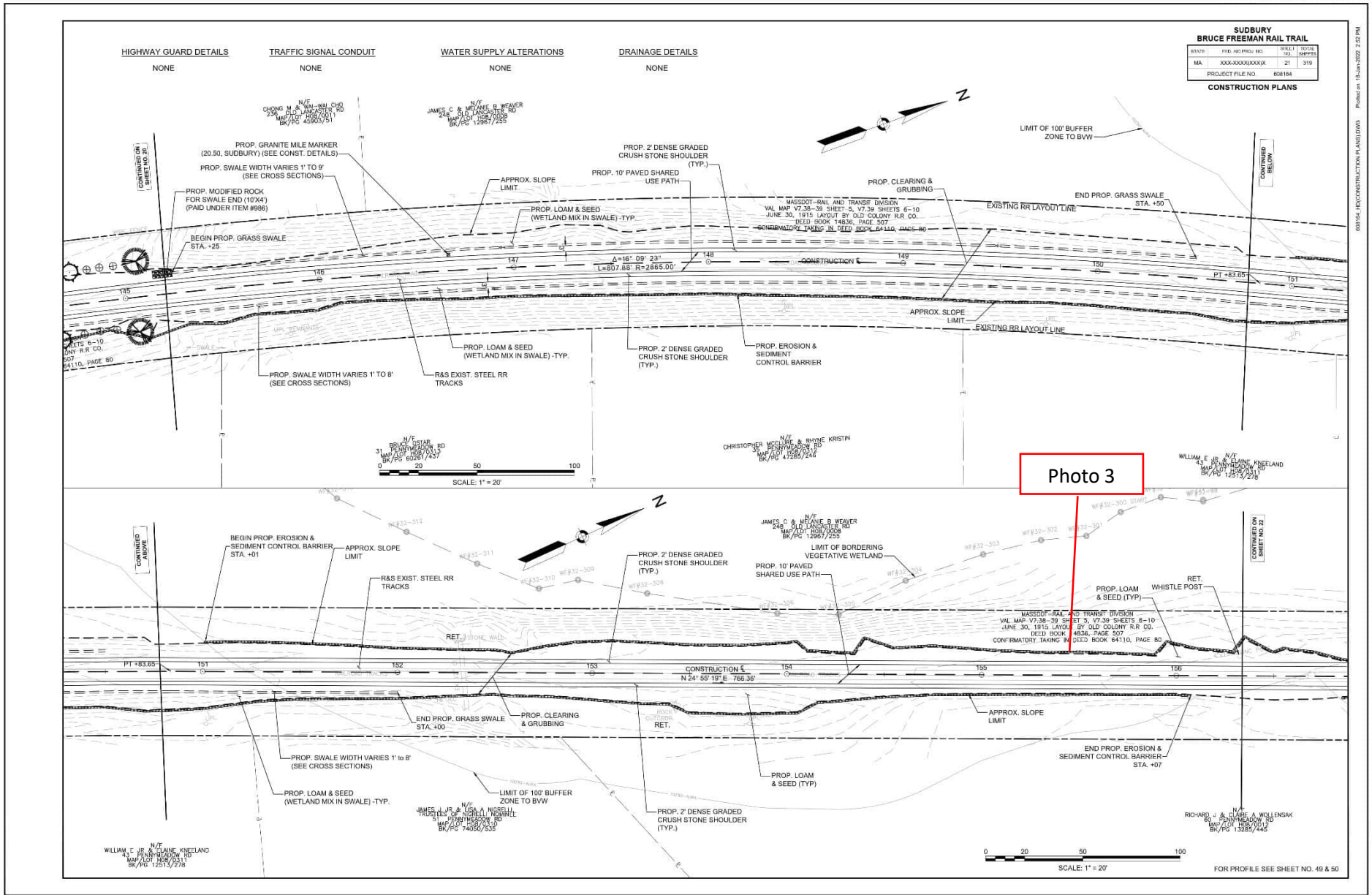
VII. Attachments (#3 only attached with monthly report)

1. Field Sketch
2. Photographic Documentation
3. 3 Week Look ahead schedule

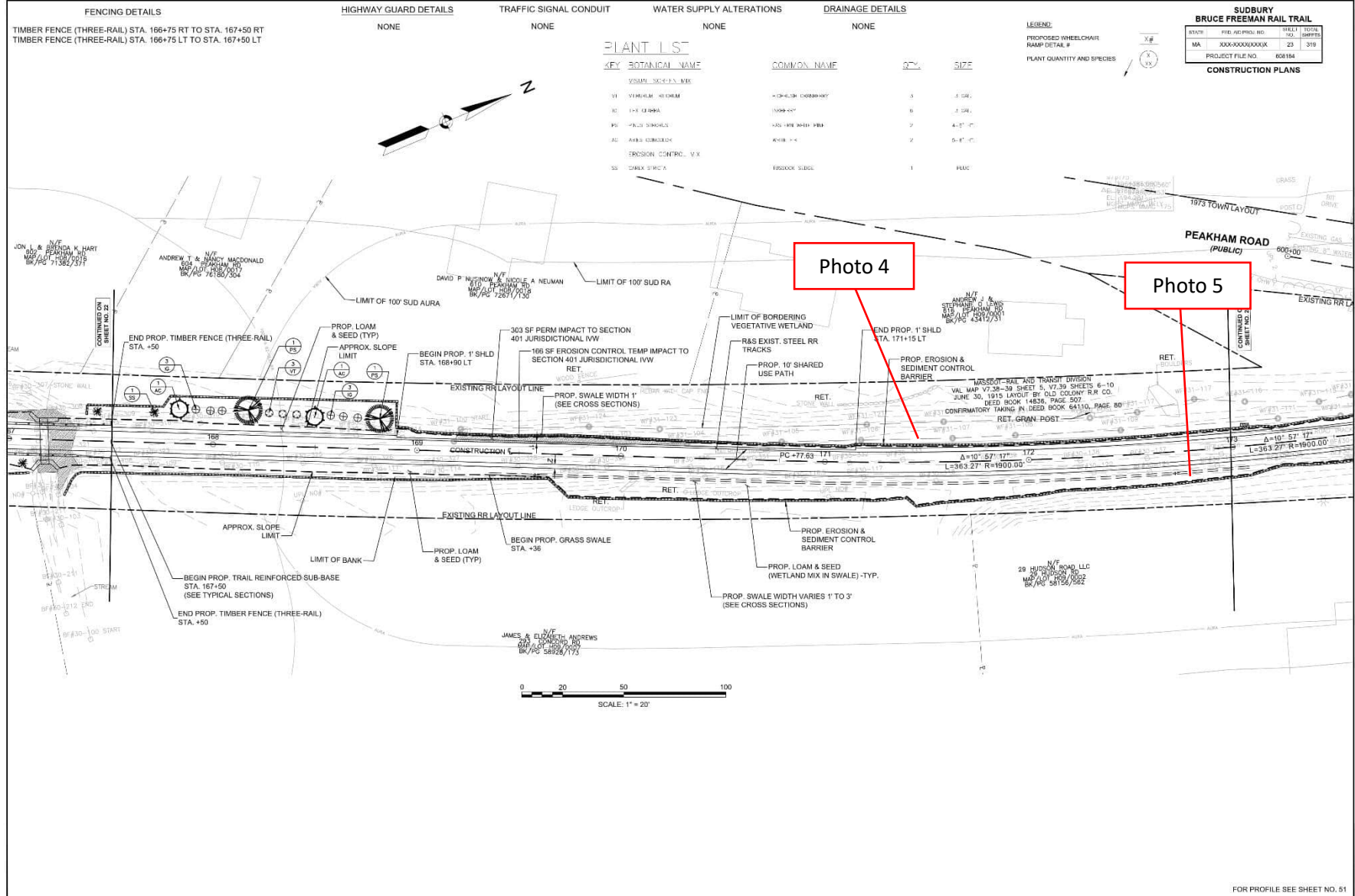


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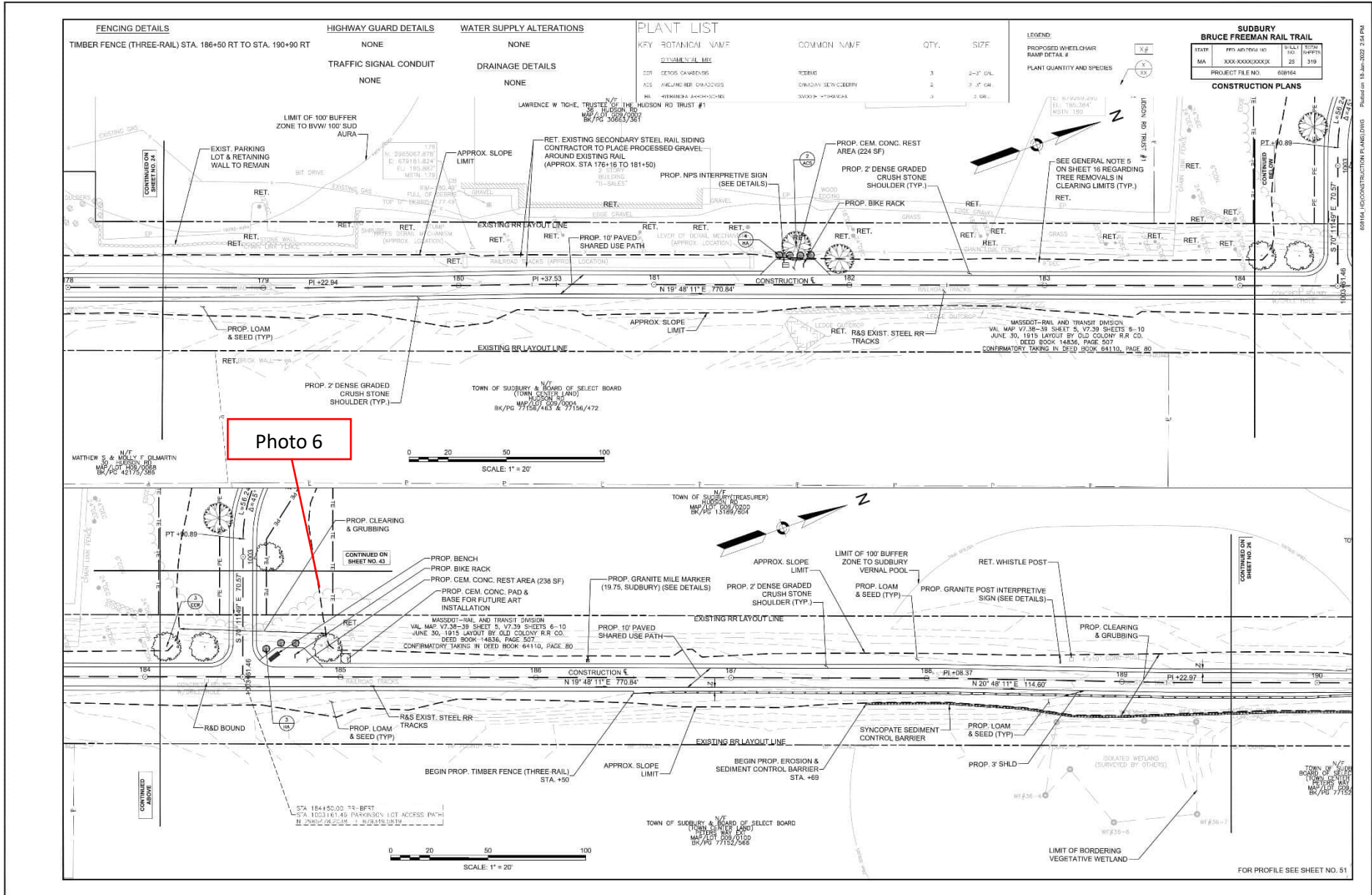




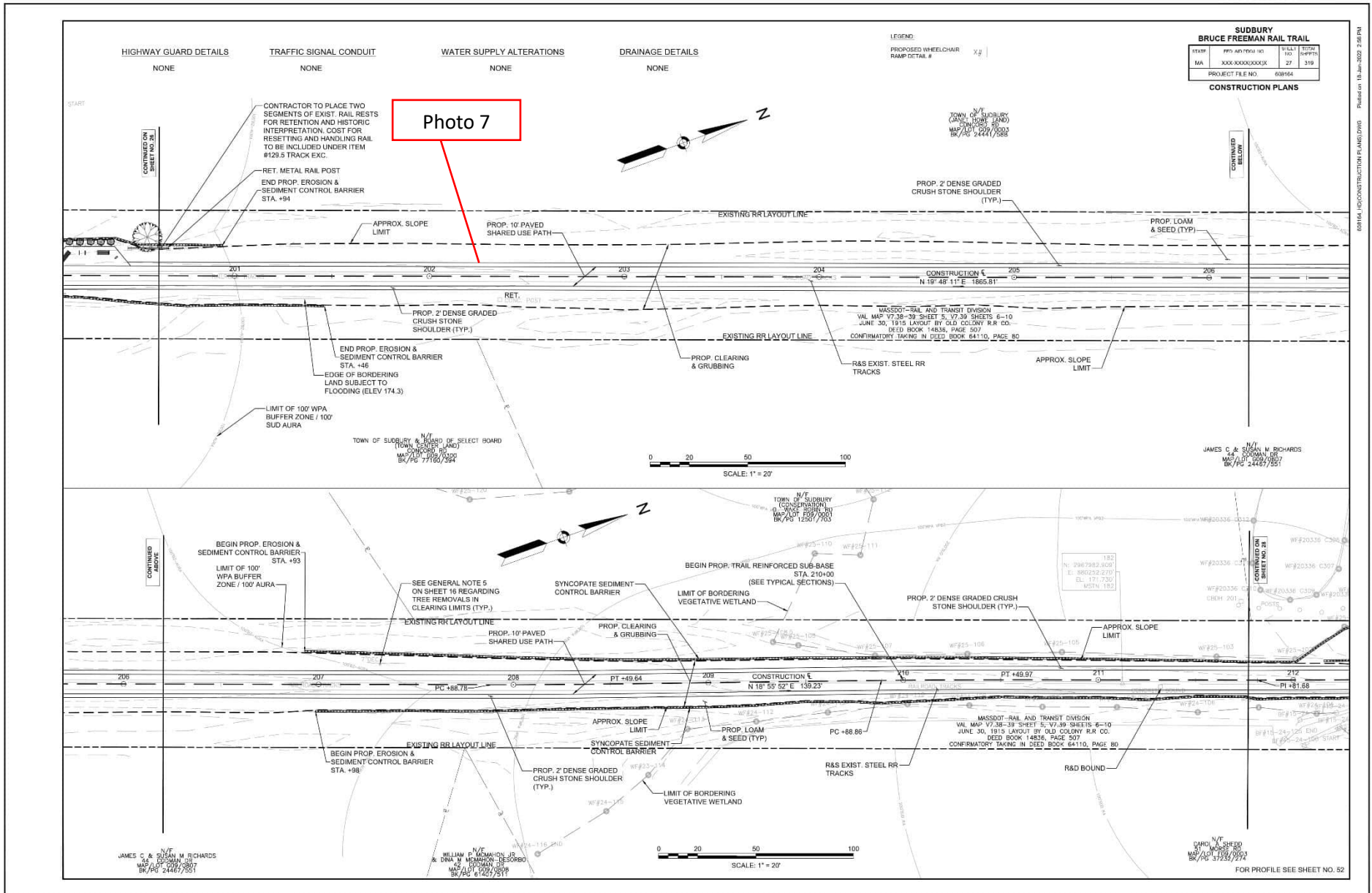
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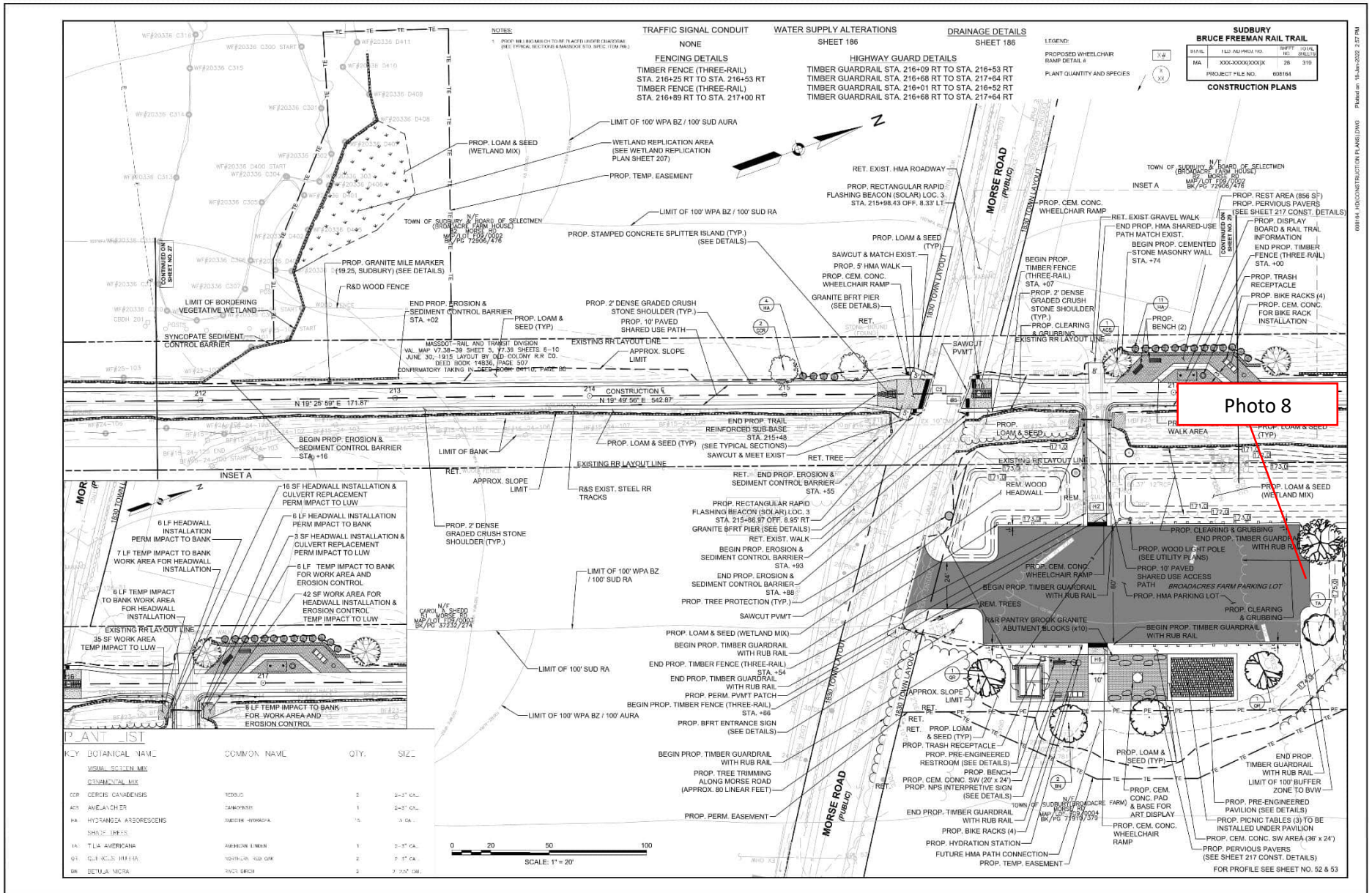
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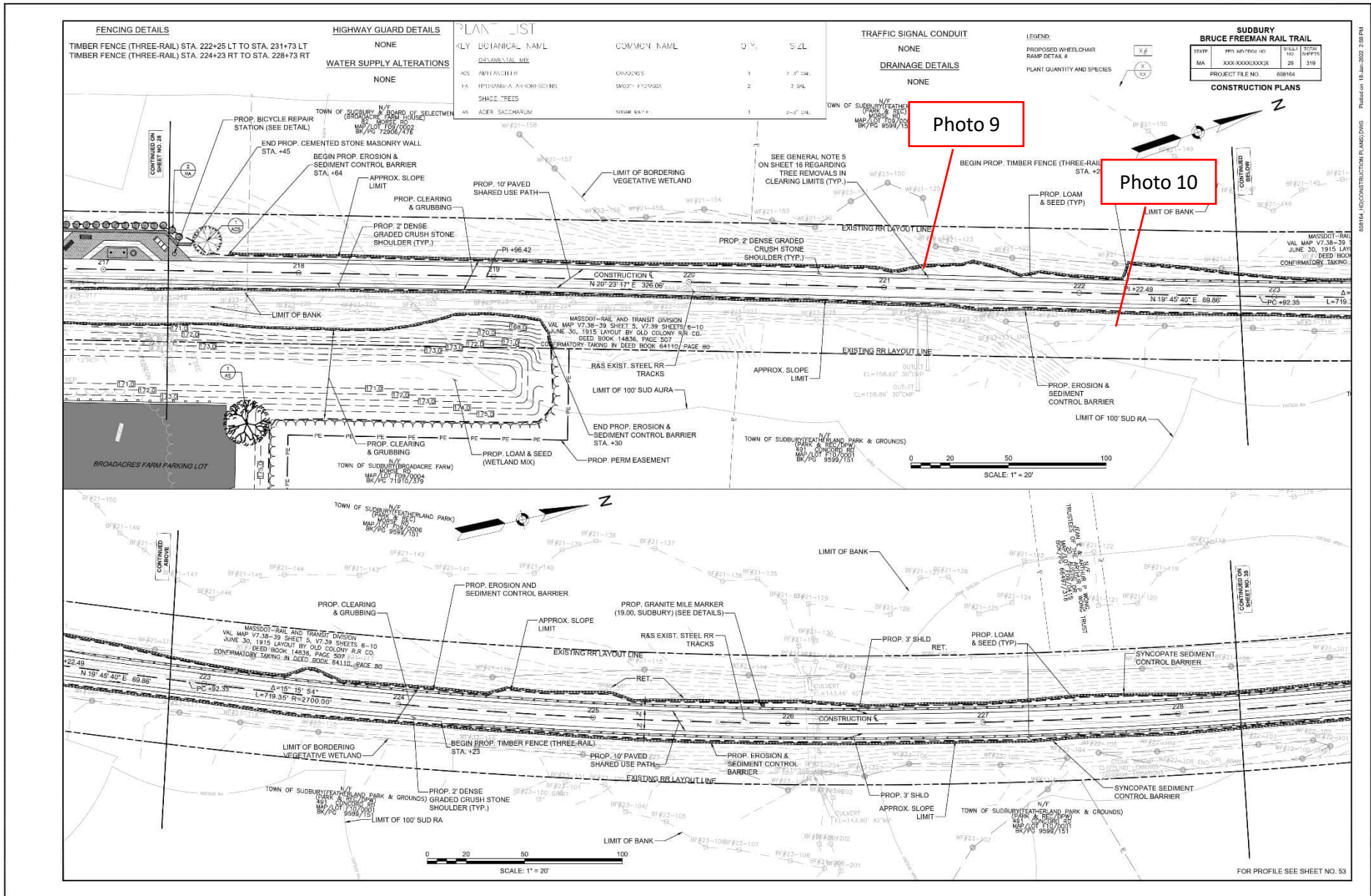


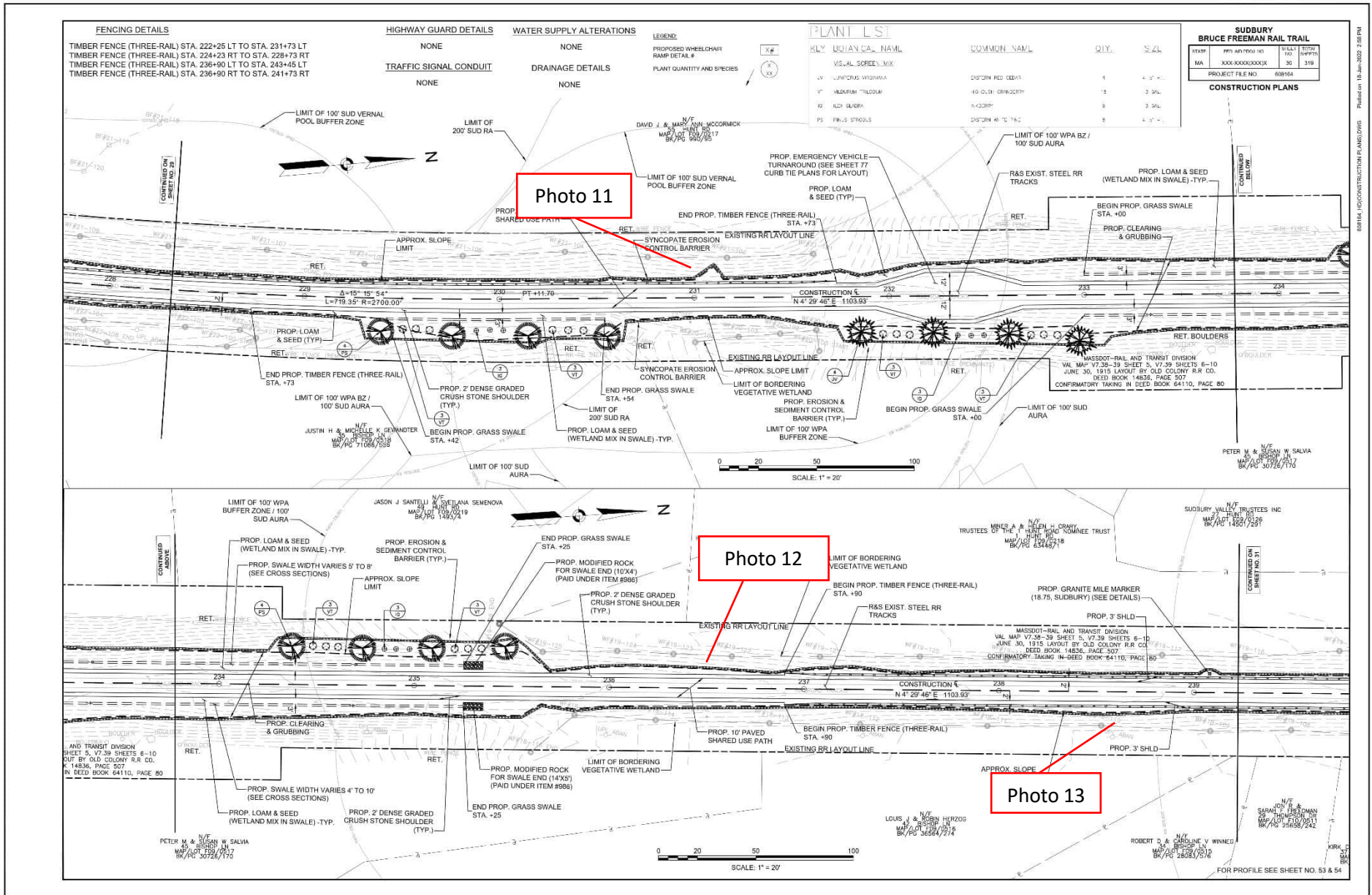
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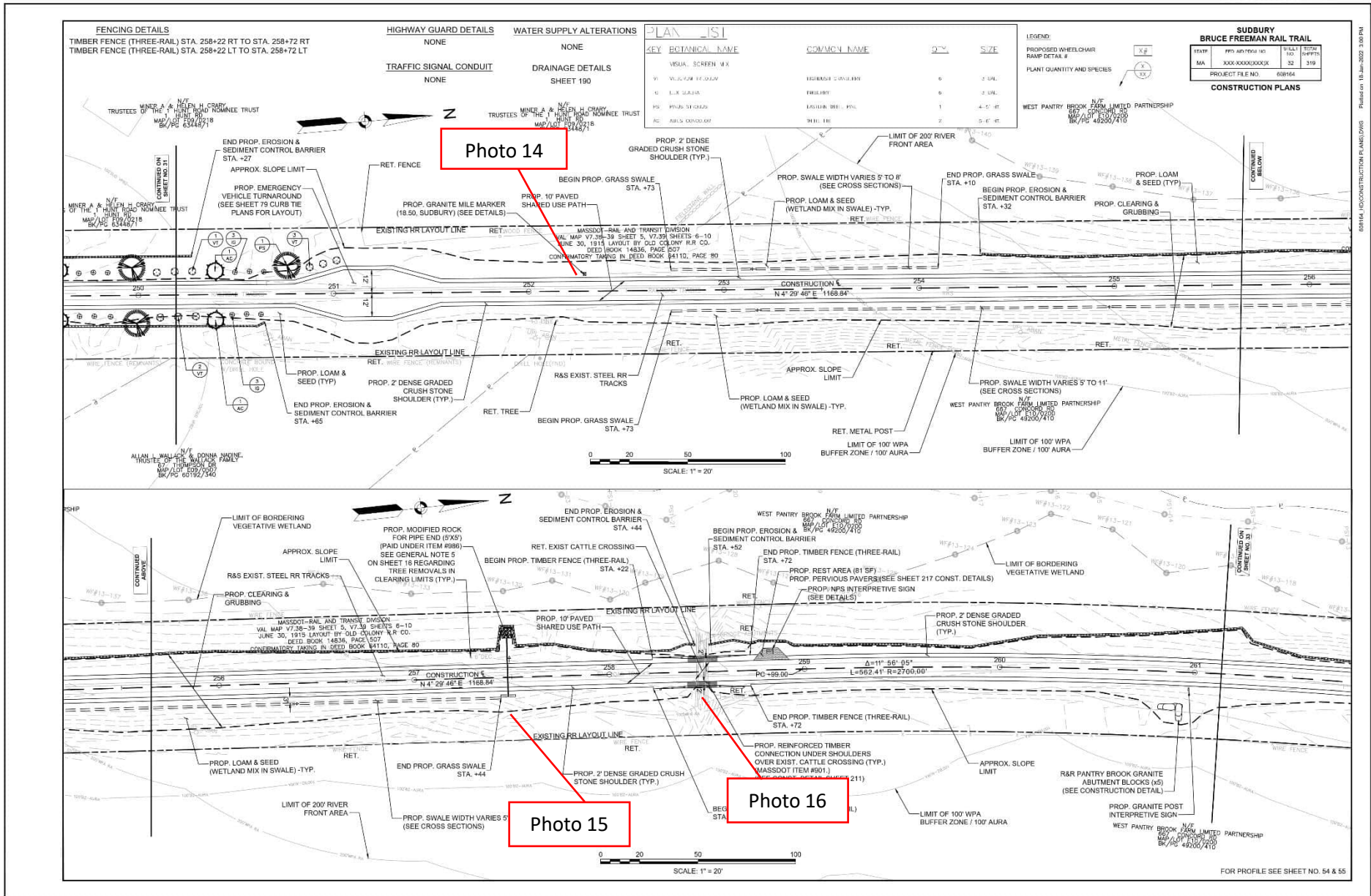
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Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 1 **Date:**
5/21/2024

Direction Photo Taken:

Toward the Northwest

Description:

View of trash at the rest area near Station 101+00 per Compliance Action Item 29.



Photo No. 2 **Date:**
5/21/2024

Direction Photo Taken:

Toward the Northwest

Description:

Typical view of dried concrete and cement washout at Station 143+50 per Compliance Action Items 1, 2, 4, 7, 11, 28, and 30.



Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 3	Date: 5/21/2024
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Direction Photo Taken: Toward the West
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Description: Typical view of washout between Stations 155+00 through 162+00 per Compliance Action Item 3.



Photo No. 4	Date: 5/21/2024
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Direction Photo Taken: Toward the Northeast

Description: View of turbid water within a channel near Stations 167+00 through 172+00 per Compliance Action Item 5.
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Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 5 **Date:**
5/21/2024

Direction Photo Taken:

Toward the North

Description:

View of exposed soils requiring stabilization along the east side of trail near Stations 172+00 through to 175+00 per Compliance Action Item 6.



Photo No. 6 **Date:**
5/21/2024

Direction Photo Taken:

Toward the Northwest

Description:

View of rill erosion along a slope at the intersection of Stations 184+50 and 1003+00 per Compliance Action Item 9.



Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 7	Date: 5/21/2024	
Direction Photo Taken: Toward the West		
Description: View of typical rill erosion and sediment runoff along the west side of the trail from Station 201+00 through 204+00 per Compliance Action Item 13.		

Photo No. 8	Date: 5/21/2024	
Direction Photo Taken: Toward the East		
Description: View of exposed soils along a newly graded slope near the parking lot at Station 216+50 per Compliance Action Item 14.		

Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 9	Date: 5/21/2024	
Direction Photo Taken: Toward the West		
Description: View of washout overtopping compost filter tubes at Station 221+50 per Compliance Action Item 15.		

Photo No. 10	Date: 5/21/2024	
Direction Photo Taken: Toward the West		
Description: View of soil and organic debris placed within the wetland between flags WF#23-119 and WF#23-118 at Station 222+00 per Compliance Action Item 32.		

Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 11	Date: 5/21/2024
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Direction Photo Taken: Toward the West
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Description: View of washout overtopping compost filter tubes at Station 231+00 per Compliance Action Item 16.
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Photo No. 12	Date: 5/21/2024
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Direction Photo Taken: Toward the East
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Description: View of washout overtopping compost filter tubes resulting in sediment/soil accumulation within the wetland along the east side of the trail between Stations 236+00 and 238+00 per Compliance Action Item 17.



Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 13	Date: 5/21/2024
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Direction Photo Taken: Toward the West
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Description: View of washout overtopping compost filter tubes near Stations 238+00 and 241+00 per Compliance Action Item 18.
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Photo No. 14	Date: 5/21/2024
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Direction Photo Taken: Toward the West
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Description: View of loam that has been raked over to eliminate rill erosion at Station 252+00 per Compliance Action Item 20.



Site Location Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 15	Date: 5/21/2024	
Direction Photo Taken: Toward the East		
Description: View of the stone for pipe ends at Station 257+00 following removal of accumulated sediment per Compliance Action Item 22.		

Photo No. 16	Date: 5/21/2024	
Direction Photo Taken: Toward the East		
Description: View of the cattle crossing near Station 258+00 following partial sediment/sand removal per Compliance Action Item 23. Note that sediment/sand is still present.		

Site Location	Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
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Photo No. 17	Date: 5/21/2024	
Direction Photo Taken:		
Toward the West		
Description:		<p>Typical view of recently placed loam and partially completed hydroseeding from Stations 256+00 through 292+00 per Compliance Action Item 31.</p>

Photo No. 18	Date: 5/21/2024	
Direction Photo Taken:		
Toward the West		
Description:		<p>Typical view of areas where gravel and sand material is eroding and resulting in discharges to the stream between Stations 292+00 and 294+50 per Compliance Action Item 26.</p>