Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit Registration Form for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective 10/1/13 (electronic form)

Prior to completing this form, you **must** read the instructions for the subject general permit at **DEEP-WPED-INST-015**.
This form must be filled out electronically before being printed.
You must submit the registration fee along with this form.

The status of your registration can be checked on the DEEP's ezFile. Portal. Please note that DEEP will no longer mail certificates of registration.

CPPU USE ONLY

App #: _____

Doc #: _____

Check #: _____

Program: **Stormwater**

Part I: Registration Type

Select the appropriate boxes identifying the registration type and registration deadline.

	Registration Type		Registration Timeline	
☐	**Re-registration** **Existing Permit No. GSN** _____		**On or before February 1, 2014*** *Note: Failure to renew a permit by this date will require submission of new registration. Re-registrants must only complete Parts I, II, III, IV - Question 1, VII and submit Attachment A.	
☑	**New Registration** (Refer to Section 2 of the permit for definitions of Locally Exempt and Locally Approvable Projects)	☑ **Locally Approvable** **Size of soil disturbance:** 13.65	**New registration - Sixty (60) days prior to the initiation of the construction activity for:** For sites with a total soil disturbance area of 5 or more acres	
		☐ **Locally Exempt** **Size of soil disturbance:** _____	☐	**New registration - Sixty (60) days prior to the initiation of the construction activity for:** Sites with a total disturbance area of one (1) to twenty (20) acres except those with discharges to impaired waters or tidal wetlands
			☐	**New registration - Ninety (90) days prior to the initiation of the construction activity for:** (i) Sites with a total soil disturbance area greater than twenty (20) acres, or (ii) Sites discharging to a tidal wetland (that is not fresh-tidal and is located within 500 feet), or (iii) Sites discharging to the impaired water listed in the "Impaired Waters Table for Construction Stormwater Discharges"

Part II: Fee Information

1. New Registrations

   a. Locally approvable projects (registration only):

☑ $625

   b. Locally exempt projects (registration and Plan):

☐ $3,000 total soil disturbance area ≥ one (1) and < twenty (20) acres.

☐ $4,000 total soil disturbance ≥ twenty (20) acres and < fifty (50) acres.

☐ $5,000 total soil disturbance ≥ fifty (50) acres.

2. Re-Registrations

☐ $625 (sites previously registered prior to September 1, 2012)

☐ $0 (sites previously registered between to September 1, 2012 and effective date of this permit)

Total Fee: $625.00

The fees for municipalities shall be half of those indicated in subsections (a), (b) and (c) above pursuant to Section 22a-6(b) of the Connecticut General Statutes. State and Federal agencies shall pay the full fees specified in this subsection. The registration will not be processed without the fee. The fee shall be non-refundable and shall be paid by certified check or money order payable to the Department of Energy and Environmental Protection.

Part III: Registrant Information

- If a registrant is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of the State. If applicable, the registrant's name shall be stated **exactly** as it is registered with the Secretary of the State. This information can be accessed at **CONCORD**
- If a registrant is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.).

1. Registrant /Client Name: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

   Registrant Type: State Agency

   Secretary of the State business ID #:

   Mailing Address: 1107 CROMWELL AVE

   City/Town: ROCKY HILL State: CT Zip Code: 06067

   Business Phone: (203) 258-4601 ext.:

   Example:(xxx) xxx-xxxx

   Contact Person: Donald Ward Title : District Engineer

   E-Mail: Donald.Ward@ct.gov

2. List billing contact:

   Name: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

   Mailing Address: 1107 CROMWELL AVE

   City/Town: ROCKY HILL State: CT Zip Code: 06067

   Business Phone: (203) 258-4601 ext.:

   Contact Person: Donald Ward Title : District Engineer

3. List primary contact for departmental correspondence and inquiries:
   Name: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
   Mailing Address: 1107 CROMWELL AVE
   City/Town: ROCKY HILL State: CT Zip Code: 06067
   Business Phone: (203) 258-4601 ext.
   Contact Person: Donald Ward Title: District Engineer

4. List owner of the property on which the activity will take place:
   Name: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
   Mailing Address: 1107 CROMWELL AVE
   City/Town: ROCKY HILL State: CT Zip Code: 06067
   Business Phone: (203) 258-4601 ext.
   Contact Person: Donald Ward
5. List preparer:
   Name: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
   Mailing Address: 2800 BERLIN TPKE
   City/Town: NEWINGTON State: CT Zip Code: 06111
   Business Phone: (860)594-2591 ext.
   Contact Person: Stephen D. Hall Title: Project Manager
6. List design professional:
   Name: BL COMPANIES, INC.
   Mailing Address: 100 CONSTITUTION PLZ, 10TH FL
   City/Town: HARTFORD State: CT Zip Code: 06103
   Business Phone: (860) 249-2200 ext.
   Contact Person: David Cicia Title: Principal Engineer
7. List Reviewing Qualified Professional (for locally approvable projects only):
   Name: BL COMPANIES, INC.
   Mailing Address: 100 CONSTITUTION PLZ, 10TH FL
   City/Town: HARTFORD State: CT Zip Code: 06103
   Business Phone: (860) 249-2200 ext.
   Contact Person: Michael Fisher, PE Title: Senior Project Manager

Part IV: Site Information

1. Site Name: Project 0082-0316
   Street Address or Description of Location: CT-9 N
   City/Town: Middletown State: CT Zip Code: 06457
   Brief Description of construction activity:
   Extend Rt 17 Ramp to Rt9 NB; Replace/Widen Bridge 00638
   Project Start Date: 27 Feb 2023 Anticipated Completion Date: 18 Sep 2026
   Normal working hours: 9 PM to 5 AM

2. **MINING** : Is the activity on the site in question part of mining operations (i.e. sand and gravel)? ☐Yes ☑No

If yes, mining is not authorized by this general permit. You must submit the Registration Form for the General Permit for the Discharge of Stormwater Associated with Industrial Activity.

3. **COMBINED OR SANITARY SEWER:** Does all of the stormwater from the proposed activity discharge to a combined or sanitary sewer (i.e. a sewage treatment plant)? ☐ Yes ☑No

If yes, this activity is not regulated by this permit. Contact the Water Permitting & Enforcement Division at 860-424-3018.

4. **INDIAN LANDS:** Is or will the facility be located on federally recognized Indian lands? ☐ Yes ☑No

5. **COASTAL BOUNDARY:** Is the activity which is the subject of this registration located within the coastal boundary as delineated on DEEP approved coastal boundary maps? ☐ Yes ☑No

The coastal boundaries fall within the following towns: Branford, Bridgeport, Chester, Clinton, Darien, Deep River, East Haven, East Lyme, Essex, Fairfield, Greenwich, Groton (City and Town), Old Lyme, Guilford, Hamden, Ledyard, Lyme, Madison, Milford, Montville, New London, New Haven, North Haven, Norwalk, Norwich, Old Saybrook, Orange, Preston, Shelton, Stamford, Stonington (Borough and Town), Stratford, Waterford, West Haven, Westbrook and Westport.

If "yes", and this registration is for a new authorization or a modification of an existing authorization where the physical footprint of the subject activity is modified, you must provide documentation to the DEEP Office of Long Island Sound Programs or the local governing authority has issued a coastal site plan approval or determined the project is exempt from coastal site plan review. Provide this documentation with your registration as Attachment B. See guidance in Appendix D of the general permit. Information on the coastal boundary is available at the local town hall or on the **Connecticut Coastal Resources Map** . Additional DEEP Maps and Publications are available by contacting DEEP Staff at 860-424-3555.

6. **ENDANGERED OR THREATENED SPECIES:**

In order to be eligible to register for this General permit, each registrant must either perform a self-assessment, obtain a limited one-year determination, or obtain a safe-harbor determination regarding threatened and endangered species. This may include the need to develop and implement a mitigation plan. While each alternative has different limitations, the alternatives are not mutually exclusive; a registrant may register for this General Permit using more than one alternative, See Appendix A of the general Permit. Each registrant must complete this AND Attachment C to this Registration form and a registrant who does not or cannot do so is not eligible to register under this General Permit.

Each registration must perform a review of the Department's Natural Diversity Database maps to determine if the site of the construction activity is located within or in proximity (within ¼ mile) to a shaded area.

a. Provide the date of the NDDB maps were reviewed: 3 Oct 2022 (Print a copy of the NDDB map you viewed since it must be submitted with this registration as part of Attachment C.)

b. For a registrant using a limited one-year determination or safe harbor determination to register for this General Permit, provide the Department's Wildlife Division NDDB identification number for any such determination:

_____ (The number is on the determination issued by the Department's Wildlife Division).

For more information on threatened and endangered species requirements, refer to Appendix A and section 3(b)(2) of this General Permit, Visit the DEEP website at **Natural Diversity Data Base** or call the NDDB at 860-424-3011.

c. I verify that I have completed Attachment C to this Registration Form. ☐ Yes

7. **WILD AND SCENIC RIVERS:** Is the proposed project within the watershed of a designated Wild and Scenic River? (See Appendix H for guidance) ☐ Yes ☑ No

8. **AQUIFER PROTECTION AREAS:** Is the site located within a mapped **Aquifer Protection Area** , as defined in Section 22a-354h of the CT General Statutes? (For additional guidance, please refer to Appendix C of the General Permit) ☐ Yes ☑ No

9. **Connecticut Guidelines for Soil Erosion and Sediment Control Guidelines:** Is the activity in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control Guidelines and local erosion & sediment control ordinances, where applicable? ☑ Yes ☐ No

10. **HISTORIC AND/OR ARCHAEOLOGICAL RESOURCES:**

Has the site of the proposed activity been reviewed (using the process outlined in Appendix G of this permit) for historic and/or archaeological resources? ☑ Yes ☐ No

a. The review indicates the proposed site does not have the potential for historic/ archaeological resources, OR ☑ Yes ☐ No

b. The review indicated historic and/ or archaeological resource potential exists and the proposed activity is being or has been reviewed by the Offices of Culture and Tourism, OR ☐ NA ☐ Yes ☑ No

c. The proposed activity has been reviewed and authorized under an Army Corps of Engineers Section 404 wetland permit. ☐ NA ☐ Yes ☑ No

11. **CONSERVATION OR PRESERVATION RESTRICTION:**

Is the property subject to a conservation or preservation restriction? ☐ Yes ☑ No

If Yes, proof of written notice of this registration to the holder of such restriction or a letter from the holder of such restriction verifying this registration is in compliance with the terms of the restriction, must be submitted as Attachment D.

Part V: Stormwater Discharge Information

Table 1

Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: CT ECO. A decimal format is required here. Directions on how to use CT ECO to find lat. /long. and conversions can be found in in Part V, section d of the DEEP-WPED-INST-015.		e) What method was used to obtain your latitude/longitude information?
				Longitude *(Format: -xx.xxxxx)*	Latitude *(Format: xx.xxxxx)*	
EO #1	Pipe	Concrete	36"	-72.646331	41.562093	ezFile Portal Map
EO #2	Pipe	Concrete	her (Please fill in belo 30"	-72.645105	41.560683	ezFile Portal Map
EO #3	Pipe	Other (Please fill in below) Brick Combo	her (Please fill in belo 32"	-72.643950	41.559701	ezFile Portal Map
EO #4	Pipe	Concrete	15"	-72.643614	41.558674	ezFile Portal Map
EO #5	Pipe	Concrete	60"	-72.643753	41.558240	ezFile Portal Map

Part V: Stormwater Discharge Information Continued

Table 2

2. Provide the following information about the receiving water(s)/wetland(s) that receive stormwater runoff from your site, either directly or through the storm sewer system:							
Outfall #	Dates when this outfall will be active:	a) To what system or receiving water does your stormwater runoff discharge? either "storm sewer or wetlands" or "waterbody" (If you select storm sewer or wetlands, columns c.1&2 of this table are not required to be completed)	b) What is your watershed ID (freshwater) or 305b ID (estuary)? (Section 3.b, of the DEP-GP-INST-015 explains how to find this information)	c.1) Is your receiving water identified as an impaired water in the "Impaired Waters Table for Construction Stormwater Discharges"?	*If you answered yes to question c.1, then answer the question below* c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?	For the drainage area associated with each outfall: Effective Impervious Area Before Construction (sq ft)	For the drainage area associated with each outfall: Effective Impervious Area After Construction (sq ft)
EO #1	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☐ N ☑ NA	☐ Y ☐ N ☑ NA	52455	52455
EO #2	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☐ N ☑ NA	☐ Y ☐ N ☑ NA	71928	56657
EO #3	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☐ N ☑ NA	☐ Y ☐ N ☑ NA	47410	32013
EO #4	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	12790	50185
EO #5	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	72236	72236
Provide the total effective impervious area for the entire site(sq ft):						610441	627667

Part V: Stormwater Discharge Information

Table 1

Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: CT ECO. A decimal format is required here. Directions on how to use CT ECO to find lat. /long. and conversions can be found in in Part V, section d of the DEEP-WPED-INST-015.		e) What method was used to obtain your latitude/longitude information?
				Longitude *(Format: -xx.xxxxx)*	Latitude *(Format: xx.xxxxx)*	
EO #6	Pipe	Concrete	15"	-72.644611	41.560079	ezFile Portal Map
EO #9	Pipe	Concrete	36"	-72.645046	41.560633	ezFile Portal Map
EO # 10	Pipe	Concrete	15"	-72.642294	41.556511	ezFile Portal Map
EO #11	Pipe	Metal	15"	-72.643362	41.556667	ezFile Portal Map
EO#12	Pipe	Concrete	18"	-72.645894	41.554475	ezFile Portal Map

Part V: Stormwater Discharge Information Continued

Table 2

2. Provide the following information about the receiving water(s)/wetland(s) that receive stormwater runoff from your site, either directly or through the storm sewer system:							
Outfall #	**Dates when this outfall will be active:**	**a) To what system or receiving water does your stormwater runoff discharge? either "storm sewer or wetlands" or "waterbody" (If you select storm sewer or wetlands, columns c.1&2 of this table are not required to be completed)**	**b) What is your watershed ID (freshwater) or 305b ID (estuary)? (Section 3.b, of the DEP-GP-INST-015 explains how to find this information)**	**c.1) Is your receiving water identified as an impaired water in the "Impaired Waters Table for Construction Stormwater Discharges"?**	***If you answered yes to question c.1, then answer the question below*** **c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?**	**For the drainage area associated with each outfall: Effective Impervious Area Before Construction (sq ft)**	**For the drainage area associated with each outfall: Effective Impervious Area After Construction (sq ft)**
EO #6	Start: 27 Feb 2023 End:	Waterbody		☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	36116	40109
EO #9	Start: 27 Feb 2023 End:	Waterbody	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	12010	12010
EO # 10	Start: 27 Feb 2023 End:	Waterbody	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	53141	55872
EO #11	Start: 27 Feb 2023 End:	Storm Sewer or Wetlands	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	16641	5886
EO#12	Start: 27 Feb 2023 End:	Storm Sewer or Wetlands	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	152458	153567
Provide the total effective impervious area for the entire site(sq ft):						610441	627667

Part V: Stormwater Discharge Information

Table 1

Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: CT ECO. A decimal format is required here. Directions on how to use CT ECO to find lat. /long. and conversions can be found in in Part V, section d of the DEEP-WPED-INST-015.		e) What method was used to obtain your latitude/longitude information?
				Longitude *(Format: -xx.xxxxx)*	Latitude *(Format: xx.xxxxx)*	
EO #13	Pipe	Concrete	24"	-72.645556	41.555201	ezFile Portal Map
EO #14	Pipe	Concrete	15"	-72.642415	41.556556	ezFile Portal Map
EO #7	Pipe	Metal	15"	-72.642734	41.642734	ezFile Portal Map
EO #8	Pipe	Concrete	15"	-72.643144	41.557516	ezFile Portal Map

Part V: Stormwater Discharge Information Continued

Table 2

2. Provide the following information about the receiving water(s)/wetland(s) that receive stormwater runoff from your site, either directly or through the storm sewer system:							
Outfall #	**Dates when this outfall will be active:**	**a) To what system or receiving water does your stormwater runoff discharge? either "storm sewer or wetlands" or "waterbody" (If you select storm sewer or wetlands, columns c.1&2 of this table are not required to be completed)**	**b) What is your watershed ID (freshwater) or 305b ID (estuary)? (Section 3.b, of the DEP-GP-INST-015 explains how to find this information)**	**c.1) Is your receiving water identified as an impaired water in the "Impaired Waters Table for Construction Stormwater Discharges"?**	***If you answered yes to question c.1, then answer the question below*** **c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?**	**For the drainage area associated with each outfall: Effective Impervious Area Before Construction (sq ft)**	**For the drainage area associated with each outfall: Effective Impervious Area After Construction (sq ft)**
EO #13	Start: 27 Feb 2023 End:	Waterbody	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	58737	59455
EO #14	Start: 27 Feb 2023 End:	Waterbody	412	☐ Y ☑ N ☐ NA	☐ Y ☐ N ☑ NA	4321	37222
EO #7	Start: 27 Feb 2023 End: 14 Sep 2026	Storm Sewer or Wetlands		☐ Y ☐ N ☑ NA	☐ Y ☐ N ☑ NA	14221	0
EO #8	Start: 27 Feb 2023 End: 14 Sep 2026	Storm Sewer or Wetlands		☐ Y ☐ N ☑ NA	☐ Y ☐ N ☑ NA	5977	0
	Start: End:	Select One		☐ Y ☐ N ☐ NA	☐ Y ☐ N ☐ NA		
Provide the total effective impervious area for the entire site(sq ft):						610441	627667

Part V: Stormwater Discharge Information (continued)

Impaired waters: If you answered "yes" to Table 2, question 2.c.1, **verify** that the project's Pollution Control Plan (Plan) addresses the control measures below in Question 1 or 2, as appropriate.

1. **If the impaired water does not have a TMDL,** confirm compliance by selecting 1.a. or 2.b. below:

a. No more than 3 acres is disturbed at any time; ☐ Yes

OR

b. Stormwater runoff from a 2 yr, 24 rain event is **retained.** ☐ Yes

2. **If the impaired water has a TMDL,** confirm compliance by selecting 2.a. and 2.b. below and either question 2.c.1. or 2.c.2. below:

a. The Plan documents there is sufficient remaining Waste Load Allocations (WLA) in the TMDL for the proposed discharge, ☐ Yes

AND

b. Control measures shall be implemented to assure the WLA will not be exceeded, ☐ Yes

AND

c. 1. Stormwater discharges will be monitored for the indicator pollutant identified in the TMDL, ☐ Yes

OR

2. The Plan documents specific requirements for stormwater discharges specified in the TMDL. ☐ Yes

Part VI: Pollution Control Plan Availability (check one of the following four categories)

☐ I am registering a Locally Exempt project and submitting the required electronic Plan (in Adobe™ PDF or similarly publically available format) pursuant to Section 3(c)(2)(E) of this permit.

- ☐ Plan is attached to this registration form
- ☐ Plan is available at the following Internet Address (URL):

_____

☐ I am registering a Locally Approvable project and have chosen not to submit the Plan with this registration pursuant to Section 3(c)(1) of this permit.

☑ I am registering a Locally Approvable project and have chosen to make my Plan electronically available pursuant to Section 4(c)(2)(N) of this permit.

- ☐ Plan is attached to this registration form
- ☑ Plan is available at the following Internet Address (URL):

https://ctgovexec.sharepoint.com/:b:/r/projects/0082-0316/Internal%20Documents/240_Contract_Development/0082-03:

☐ I am registering a Locally exempt project and do not have the capability to submit the Plan electronically. Therefore, I am submitting a paper copy with this registration as Attachment E.

Part VII: Registrant Certification

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered incomplete unless all required signatures are provided.

For New Registrants:

"I hereby certify that I am making this certification in connection with a registration under such general permit, submitted to the commissioner by E OF CONNECTICUT DEPARTMENT OF TRANSPORTA for an activity located at CT-9 N, Middletown, CT 06457 and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b) (8) (B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

For Re-registrants:

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by _____ for an activity located at _____ and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that all designs and plans for such activity meet the current terms and conditions of the general permit in accordance with Section 5(b)(5)(C) of such general permit and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I verify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this verification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and an other applicable law."

Signature of Registrant	
Donald Ward	District Engineer
Name of Registrant (print or type)	Title (if applicable)
Signature of Preparer and Date (if different than above)	
Stephen D. Hall	Project Manager
Name of Preparer (print or type)	Title (if applicable)

Part VIII: Professional Engineer (or Landscape Architect, where appropriate) Design Certification (for publically approvable and exempt projects)

The following certification must be signed by a Professional Engineer, or Landscape Architect where appropriate.

"I hereby certify that I am a licensed in the State of Connecticut. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION for an activity located at CT-9 N, Middletown, CT 06457. I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the general permit, and that the controls required for such Plan are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Design Professional and Date	
David Cicia	23439
Name of Professional (print or type)	License Number

Affix P.E/L.A Stamp Here

Part IX: Reviewing Qualified Professional Certification

The following certification must be signed by a) a Conservation District reviewer OR, b) a qualified soil erosion and sediment control and/ or professional engineer

☐ **Review Certification by Conservation District:**

1.) District: _____

Date of Affirmative Determination: _____

" I am making this certification in connection with a registration under General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by _____ for an activity located at _____.

I have personally examined and am familiar with the information that provides the basis for this certification, and I affirm, based on the review described in Section 3(b)(11)(C) of this general permit and on the standard of care for such projects, that the Stormwater Pollution Control Plan is adequate to assure that the activity authorized under this general permit will comply with the terms and conditions of such general permit and that all stormwater management systems: (i) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual; (ii) will function properly as designed; (iii) are adequate to ensure compliance with the terms and conditions of this general permit; and (iv) will protect the waters of the state from pollution."

_____

Signature of District Professional and Date

_____ _____

Name of District Professional License Number (if applicable)

Or

☑ **Review Certification by Qualified Professional:**

Company Name: BL COMPANIES, INC.

Name: Michael Fisher, PE

License #: 21170

Level of independency of professional:

Required for all projects disturbing over 1 acre:

1. I verify I am not an employee of the registrant. ☑ Yes

2. I verify I have no ownership interest of any kind in the project for which the registration is being submitted. ☑ Yes

Required for projects with 15 or more acres of site disturbance (in addition to questions 1&2):

3. I verify I did not engage in any activities associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant. ☐ Yes

4. I verify I am not under the same employ as any person associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant. ☐ Yes

Part IX: Reviewing Qualified Professional Certification (continued)

"I hereby certify that I am a qualified professional engineer or qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and as further specified in Sections 3(b)(11)(A) and (B) of such general permit. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by ATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATI for an activity located at CT-9 N, Middletown, CT 06457 .
I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(11)(C) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(11)(C) of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Sections 3(b)(11)(D)(i) and (ii) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172, and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Reviewing Qualified Professional

BL COMPANIES, INC. — Name of Reviewing Qualified Professional

21170 — License No.

Affix P.E./ L.A. Stamp Here

Note: Please submit the fee along with a completed, printed and signed Registration Form and all additional supporting documents to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

STORMWATER POLLUTION CONTROL PLAN

Reconfiguration of the Route 17 On-Ramp to Route 9 Northbound
Middletown, CT

State Project No.: 0082-0316
EzFile No. 89189

Connecticut Department of Transportation

August 5, 2022

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also, to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 818) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

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1. Development & Contents of Plan

- The Plan shall consist of site plan drawings and a narrative. The Plan shall be prepared in accordance with sound engineering practices, and shall be consistent with the Guidelines, the Stormwater Quality Manual (available at http://www.ct.gov/deep/stormwater) and any applicable requirements of this general permit.

2. Site Description

Site Description

This project is in the City of Middletown on Route 17 between log mile 21.65 and 22.50. Route 9 overlaps Route 17 through a portion of this project between log mile 23.46 to 23.90. Main Street Extension is a local roadway located south of downtown Main Street. Union Street, River Road and Harbor Drive are also local roadways and provide access to Harbor Park and waterfront properties.

The purpose of the project is to reduce rear-end crashes at the Route 9 northbound and Route 17 northbound interchange. This project is needed because the existing stop-controlled on-ramp from Route 17 onto Route 9 northbound has a crash rate significantly higher than similar adjacent freeway segments.

The proposed work includes providing a full-length acceleration lane for Route 17 northbound traffic to merge onto Route 9 north. A full structure replacement of State Bridge #00638 will enable widening the structure to the west as well as addressing maintenance concerns. The proposed acceleration lane will require realignment of Route 9 as well as the closure of the Harbor Drive on-ramp onto Route 9. The intersections of Route 17 and Main Street Extension is anticipated to receive increased traffic volumes as a result of the Harbor Drive on-ramp closure. Thus, those intersections will be improved under this project.

This project does not discharge into any impaired or coastal waters. There are no Aquifer Protection Areas (APA) or public water supply watershed within this project. There are no outfalls in this project that discharge into a river listed on the National Wild and Scenic Rivers System of Connecticut.

This project is within the State and Federal Listed Species area as recognized in the Natural Diversity Data Base Areas map provided by the Connecticut Department of Energy and Environmental Protection. The Northern Long-eared Bat's habitat area has been identified to be within the project site. The Connecticut Department of Energy and Environmental Protection has reviewed the project and has determined that there is no anticipation of negative impacts to any State-listed species (RCSA Sec. 26-306) resulting from the proposed activity under this project.

Stormwater infiltration/retention goals were considered when designing the project's stormwater conveyance systems. Factors that dictated attainable infiltration/retention goals include the project being in a built-up urban area, Right-of-Way, wetlands, and high-water tables due to the proximity

of the Connecticut River.

Site work includes all activities related to general roadway construction. Including, but not limited to excavation, drainage structure install, guiderail install, sidewalks, milling and paving. Work for the replacement of State Bridge #00638 will include full demolition, then installation of new: steel piles, concrete piers, concrete abutments, and steel superstructure. State Bridge #00636 will receive steel beam end repairs.

No work in this project will take place in delineated wetland areas.

Estimated Disturbed Area

The total area for this project site is 22.77 acres. With an additional area of 1.60 acres from the contaminated soil site 1.5 miles north of the main project site. This 1.60 acres is all pervious and was not included in the calculations below because it is not within the project's drainage systems. There are no changes to the flows or velocities at the contaminated soil site. Of the total area, approximately 13.65 acres will be disturbed by construction activities regardless of phasing.

Estimated Runoff Coefficient

The runoff coefficient assumed for pavement is 0.9 and for gravel roads is 0.7. For the pervious areas, a coefficient of 0.3 was assumed. The total area of impervious surface within the project limits has increased as a result of the proposed improvements.

Pre-Construction

$$\frac{(8.50 \text{ ac.} \times 0.3) + (14.02 \text{ ac.} \times 0.9) + (0.25 \text{ ac.} \times 0.7)}{8.50 \text{ ac.} + 14.02 \text{ ac.} + 0.25 \text{ ac.}} = 0.674$$

Post-Construction

$$\frac{(8.11 \text{ ac.} \times 0.3) + (14.41 \text{ ac.} \times 0.9) + (0.25 \text{ ac.} \times 0.7)}{8.11 \text{ ac.} + 14.41 \text{ ac.} + 0.25 \text{ ac.}} = 0.684$$

Receiving Waters

The name of the receiving waters are the Connecticut River and Sumner Brook, which drains to the Connecticut River.

Extent of Wetlands on Site

There are approximately 1.9 acres of wetlands present in the project's vicinity. No work is proposed in these wetlands.

A Flood Management General Certification has been granted for work proposed within the 100-year regulated floodplain. The regulated floodplain does extend onto the Route 9 and work within this limit includes: excavation, milling, paving, guiderail installation, median barrier installation, drainage structure installation, and the installation of the southern abutment and retaining wall for proposed State Bridge #00638. There is no net fill within the floodplain.

3. Construction Sequencing

The Contractor will be given approximately 1328 days for the construction of all phases of the project, which shall be revised as necessary to keep the Plan current.

The suggested sequence of construction is as follows:

1. Conduct a preconstruction meeting.
2. Conduct the plan implementation inspection.
3. Install erosion controls at the effected inlets and at limits of disturbed slopes for the Main Street Extension associated work.
4. Perform clearing and grubbing activities for the Main Street Extension associated work.
5. Apply temporary stabilization measures for disturbed areas in accordance with Temporary Stabilization Practices for the Main Street Extension associated work.
6. Begin work on Main Street Extension. Work includes realigning the intersection of Route 17 southbound and Main Street Extension, drainage structure installations, guiderail installation, sidewalks, the construction of a noise barrier wall on the Route 17 northbound ramp from Main Street Extension, and paving. This work is represented as Stages 1-3 in the Highway plans and is expected to occur in 2023.
7. Repeat steps 3,4,5 for the Route 17 and Route 9 associated work.
8. Widen the driving surface of the Route 17 northbound on-ramp to Route 9 northbound. This work is represented as Stages 4a-4b in the Highway plans and is expected to occur in 2023.
9. Widen State Bridge #00638 carrying Route 9 over Union Street and install retaining walls on Route 9 southbound. This work is represented as Stages 5a-5b in the Highway Plans and is expected to occur in 2023-2024.
10. Remove existing precast concrete median barrier on Route 9 and reconstruct roadway. This work is represented as Stage 6 in the Highway Plans and is expected to occur in 2024.
11. Replace northbound section of Stage Bridge #00638 and reconstruct roadway approaches. This work is represented as Stages 7-8 in the Highway Plans and is expected to occur in 2025.
12. Replace southbound section of State Bridge #00638 and reconstruct roadway approaches. Install final precast median barrier. This work is represented as Stage 10 in the Highway Plans and is expected to occur in 2026.
13. Permanently close the Harbor Drive on-ramp to Route 9 northbound. Complete all associated work with the closure and execute final paving.
14. Stabilize disturbed areas. Establish with appropriate seeding mixture per the Highway Construction Plans and the Landscape Plans on all remaining disturbed areas. Add landscaping as depicted in the Landscape Plans.
15. Remove erosion controls when it is determined that disturbed areas have been stabilized. (This determination will be made by the Qualified Inspector).
16. All post-construction stormwater structures shall be cleaned of construction sediment and any remaining SCS shall be removed prior to the filing of the “Notice of Termination Form”.
17. Perform project cleanup. Ensure project area is free of debris and catch basins have been cleaned.

The requirement for sediment traps or basins shall not apply to flows from off-site areas and flows from areas of the site that are either undisturbed or have undergone final stabilization

If the construction sequencing activities create an area of disturbance with a contributing drainage area that contains between two to five acres of disturbed soils per drainage point, a temporary sediment trap must be provided, and the Contractor must submit to the Engineer a revised SWPCP for review and approval.

If the areas of disturbance with a contributing drainage area that contains greater than five acres of disturbed soils per discharge point, a temporary engineered sedimentation basin must be provided, and the Contractor must submit to the Engineer a revised SWPCP for review and approval. The SWPCP must include locations of the temporary engineered sedimentation basin designed and installed in accordance with the 2002 Guidelines. The Contractor shall provide an inspection and maintenance plan or the engineered sedimentation basin as part for the amended SWPCP.

4. Control Measures

Impaired Waters

In lieu of the provisions regarding "Construction Sequencing" of this general permit, no more than 3 acres may be disturbed at any one time. For those areas for which construction activity will be temporarily suspended for a period of greater than 14 days, temporary stabilization measures shall be implemented within 3 days of such suspension of activity. For all areas, permanent stabilization shall be implemented within 30 days of disturbance.

Erosion and Sedimentation Controls

The Department of Transportation (Department) will have a qualified inspector assigned to the project to oversee the Contractor's operations and to ensure compliance with the provisions of the Contract. Further Department oversight is provided by the District 1 Environmental Coordinator and the Office of Environmental Planning.

The following timelines will be followed for the proposed construction activities:

- The Contractor shall stabilize disturbed areas with temporary or permanent measures as quickly as possible after the land is disturbed. Requirements for soil stabilization are detailed in Form 818 Section 1.10.

- Areas that remain disturbed but inactive for at least 14 days shall receive temporary seeding or soil protection within seven (7) days.

- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection through the winter.

- If construction activities are completed to final grade, permanent seeding shall take place within seven (7) days.

The following note (below) appears on the project Construction Plans; Department of Transportation projects are required to have Preconstruction Meetings with the Contractor. The Contractor is required to review and understand the Contract Plans and Specifications and to develop an E&S Plan for review and approval by the Engineer. In the review of the Contractor's E&S plan at all disturbed locations for compliance with the Stormwater Permit requirements for a double row of sediment control barriers.

Double Row of Erosion and Sediment Control Barriers

- A double row of sediment control barrier shall be utilized between any disturbed area and downgradient wetland or watercourse within 50 feet, unless there would be an adverse impact to adjacent wetlands/watercourses due to installation of a double row (i.e. would result in larger wetland/watercourse impact.)
- Additional erosion control barriers (double row of SCS) may also be required within the project area. Factors to be reviewed by the Engineer include but are not limited to the contributing disturbed area, drainage area, length of slope, and flow conditions to maintain sheet flow. If determined necessary, the Engineer will direct the Contractor to install and maintain additional rows of erosion control barrier (or equivalent).

Soil Stabilization and Protection

Temporary or permanent vegetation or other ground cover shall be maintained at all times in all areas of the site, except those undergoing active disturbance.

Temporary Stabilization Practices

- Erosion Control Matting: On slopes steeper than 3:1 erosion control matting shall be used to stabilize the topsoil or as necessary and directed by the Qualified Inspector. ECM type shall be disclosed and selected from the Department's Qualified Products List, as amended

- Sedimentation Control System (SCS): SCS shall be placed at the toe of the slope or as directed by the Engineer.

- Anti-Tracking Pads: Construction entrances (gravel anti-tracking pads) shall be constructed at truck access/exit points to off-road route. Access road(s) should grade away from the main roadway or waterbody. The contractor will be required to submit details regarding anti-tracking pads as noted in the Maintenance and Protection of Traffic Special Provision. Due to this, no detail was included in this submission, but will be enforced during construction.

- Dust Control: Routine sweeping and application of dust suppression agents, including but not limited to, water and calcium chloride, over exposed subbase shall be completed for dust control. Additional measures may be necessary to minimize dust within the project limits and within staging and stockpile areas.

- Temporary Seeding: Areas that will remain disturbed but inactive for at least 14 calendar days shall receive temporary seeding or soil protection within 7 days,

Impaired Waters - For those areas for which construction activity will be temporarily suspended for a period of greater than 14 days, temporary stabilization measures shall be implemented within 3 days of such suspension of activity.

- Catch Basin Inlet Protection: Catch basin inlet protection shall be used to reduce the amount of sediment entering the storm drainage system during construction.

- Modified Riprap: Modified riprap shall be installed between Route 9 southbound mainline and the Exit 14 ramp from Route 9 southbound, as shown in DRG-01 and the cross-sections. Refer to the Highway Typical Sections for riprap details.

Stabilization practices shall be implemented after completion, as final grades are reached, within seven (7) days.

Temporary seeding shall be spread over any disturbed areas which will remain inactive for at least 14 days. Areas to remain disturbed through winter shall be protected with non-vegetative stabilization measures. The Contractor must provide an Erosion and Sedimentation Control plan for each winter season during construction operations.

The Contractor may use other controls in the project as necessary if they conform to the 2002 Erosion and Sedimentation Guidelines and are approved by the Engineer. The Contractor will be required to provide the necessary details for any erosion controls not specifically called for on the project plans.

During construction, all areas disturbed by the construction activity that have not been stabilized, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once a week and within 24 hours of the end of a storm that generates a discharge. For storms that end on a weekend, holiday, or other time in which normal working hours will not commence within 24 hours, an inspection is required within 24 hours following any storm in which 0.5 inches or greater of rain occurs. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Permanent Stabilization Practices

During construction, the following methods of permanent stabilization shall be installed:

- Topsoiling: In conjunction with permanent seeding, once final grades have been established, topsoil shall be applied to provide a suitable growth medium for vegetation.

- Permanent Seeding: Once soils have been brought to final grade; permanent seeding shall be used to stabilize the soil with a vegetative cover**.** Disturbed areas below the wetland limit shall be seeded with a wetland seed mix and / or above the wetland limit shall be seeded with a conservation seed mix. Once the site has achieved **final stabilization for at least one full growing season (April – October)** in **the year following** the end of construction, the Contractor shall have the **site inspected by a qualified inspector** to

confirm such stabilization is maintained. The Qualified Inspector shall indicate compliance with this requirement on the Notice of Termination form.

- Landscaping: Wood chip mulch shall be placed around the plants. Wood chip mulch shall NOT be placed in wetlands. Plantings (trees, shrubs etc.) may be planted along with the permanent seeding.

All new embankments disturbed by construction and unpaved areas that are graded or disturbed by construction will receive erosion control matting, topsoil and/or turf establishment. The Contractor may use other permanent stabilization practices approved by the Engineer and in conformance to the 2002 Erosion and Sedimentation Guidelines.

The Connecticut Department of Transportation's Landscape Design Unit shall be contacted if the contractor or inspector identifies any trees within the project limits that are dead, dying, in poor health, or received any damage to their roots, trunk, or canopy from construction activities. The landscape designer shall make the determination on how to handle such situations.

Structural Measures

The existing stormwater drainage system for the project site consists of catch basins with reinforced concrete and corrugated metal pipe connections to endwalls along Sumner Brook and outfalls from the bulkheads present along the Connecticut River.

The proposed stormwater drainage system consists of upgrades to the existing catch basins, cleaning or replacement of drainage pipes, the abandonment of two (2) existing outlets, installing a grass channel, and the removal of curbing along Route 9 northbound to promote overland flow.

Construction sequencing, detailed above, allows the project to be constructed with no more than two (2) acres of exposed erodible soil at any one time.

Maintenance

All construction activities and related activities shall conform to the requirements of Section 1.10 "Environmental Compliance" of the Department's Standard Specifications. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, water body, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent pollution control to prevent soil erosion and contamination on the site. Water pollution control provisions and best management practices per Section 1.10, Environmental Compliance of the Standard Specifications shall be administered during construction. Control measures shall be inspected and maintained in accordance with the 2002 Erosion and Sedimentation Guidelines and as directed by the Engineer.

5. Dewatering Wastewaters

Dewatering Guidelines

While there is no work proposed in wetland or watercourses, the existence of high-water tables from the Connecticut River bring the possibility of encountering water during some excavation operations. See Drawing No. S-03 for notes regarding the implementation of dewatering should water be encountered during construction activities. Work that could require dewatering include, but are not limited to, the installation of both retaining walls along Route 9 southbound and the construction of the new State Bridge #00638.

When dewatering is necessary, pumps used shall not be allowed to discharge directly into a wetland, watercourse, or stormwater drainage system. Prior to any dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used and must obtain the Engineer's written approval of such methods and devices, including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Engineer determines that a pumping operation is causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is submitted by the Contractor in writing to the Engineer, approved in writing by the Engineer and implemented by the Contractor.

No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water. If required, all activities are to be performed in compliance with the Department's Standard Specifications.

6. Post-Construction Stormwater Management

The following measures are being used post construction to divert flows, limit runoff, and minimize the discharge of pollutants:

- Minimal Curbing: Curbing will be removed along Route 9 and at the ramps at the Main Street Extension and Route 17 intersections to maximize overland sheet flow and encourage infiltration.

- Grass Channels: A roadside grass channel will be graded out within the gore area between Route 9 northbound and Route 17 northbound.

- Dry Water Quality Swales: A dry water quality swale will be implemented at Main Street Extension.

Post-construction Guidelines

After the project is complete, the Department will perform the following maintenance and restorative measures:

- Litter/debris and sweepings will be removed from the site regularly.
- Mowing and maintenance of the turf areas and vegetated areas will occur, as needed.
- Riprap outlet protection will be inspected and repaired annually or as needed.
- Stormwater drainage system will be cleaned of sediment/debris as directed by the District Drainage Engineer.
- Identify, inspect, and / or maintain all stormwater quality BMPs included within the project, as per the MS4 or manufacturer recommendations.

Post Construction Performance Standards

Total Post-Construction Impervious Cover:

$$Total\ Impervious\ Cover = \frac{Impervious\ Site\ Area\ (ac.)}{Total\ Site\ Area\ (ac.)} * 100$$

$$Total\ Impervious\ Cover = \frac{14.41\ ac.}{22.77\ ac.} * 100$$

$$= 63.28\%$$

Redevelopment:

This project is classified as "Linear Redevelopment" with a proposed effective impervious cover of approximately 63%. Accordingly, a goal of half the water quality volume (WQV) for the site should be retained within the site limits. The values below were calculated for the pre- and post-construction site conditions:

Effective Pre-Construction Impervious Cover:

$$Effective\ Impervious\ Cover = \frac{Effective\ Impervious\ Site\ Area\ (ac.)}{Total\ Site\ Area\ (ac.)} * 100$$

$$Effective\ Impervious\ Cover = \frac{13.80\ ac.}{22.77\ ac.} * 100$$

$$= 60.61\%$$

Effective Post-Construction Impervious Cover:

$$Effective\ Impervious\ Cover = \frac{Effective\ Impervious\ Site\ Area\ (ac.)}{Total\ Site\ Area\ (ac.)} * 100$$

$$Effective\ Impervious\ Cover = \frac{13.26\ ac.}{22.77\ ac.} * 100$$

$$= 58.24\%$$

Water Quality Volume (WQV) Calculation (Full Computation Sheets Included in Appendix B):

$$\frac{1}{2}\,WQV = \frac{1" \; x \; R \; x \; A}{12 \;\; x \; 2}$$

Where: *WQV* = *water quality volume (ac-ft)*
I = *percent impervious cover = 62.83%*
R = *volumetric runoff coefficient = 0.05 + 0.009(I) = 0.615*
A = *site area in acres = 20.66 acres*

$$\frac{1}{2}\,WQV = \frac{1" \; x \; 0.574 \; x \; 22.77}{12 \;\; x \; 2} = 0.545 \; ac - ft$$

This project is considered a "linear project" due to the Route 9 roadway realignment and the extension of the Route 17 northbound on-ramp extension to Route 9 northbound. From the existing conditions, the total impervious area of the site will increase by 0.40 acres due to the widening of both the northbound and southbound outside shoulders through the project limits and over State Bridge #00638. With the implementation of the Best Management Practices (BMPs) above, the project site's effective impervious area will decrease by 0.54 acres.

Retention of half the water quality volume will not be met due to constraints of the project being in a built-up urban area, adjacent to wetlands, steep roadside topography, Rights-of-Way, and high-water tables. These constraints limit effective construction means to treat stormwater runoff. However, the BMPs that are being implemented under this project do attain the most disconnection of impervious area that is allowable with the given constraints. It shall also be considered that much of the natural dispersion along Route 9 could not be considered in the WQV retained and WQV treated calculations due to not meeting width requirements. While these dispersion areas do not meet the requirements to be included in the MS4 calculations, they are still providing real-life partial disconnection throughout the project.

Runoff Reduction and LID Practices

The effective impervious cover will decrease from approximately 60.61% to 58.24% under this project. This equates to a decrease in the effective impervious area from 13.80 acres to 13.26 acres. The roadway realignment and widening of Route 9 account for most of the total pervious increase. Which is seeing an increase from 14.02 acres to 14.41 acres

Steep roadside slopes, Rights-of-way, land use, water tables, and adjacent wetlands limit the opportunities for runoff reduction, the use of primary stormwater treatment measures, and Low Impact Development (LID). The removal of roadside curbing where possible helps to mitigate some of the impervious area added by the widening of Route 9. Where curbing is excluded/removed, approximately 1.01 acres of impervious drainage area will be treated by overland sheet flow to a roadside swale. The extensive plantings proposed, shown on the Landscape Plans, will prove to offer LID benefits throughout the project.

Suspended Solids and Floatable Removal

A goal of 80% removal of the average annual post-construction total suspended solids loads was used for this project. However, this goal will not be met due to the impeding factors stated for Runoff Reduction and LID Practices. Standard two-foot sumps for each proposed catch basin will be provided to remove initial suspended solids.

Velocity Dissipation:

Observations obtained through inspections of the project site's outfalls yielded that there is a higher risk for sedimentation, rather than scour at the outfalls present due to the tidal fluctuations of the Connecticut River and Sumner Brook. With that said, the outfalls being utilized post-construction are not inundated with debris. Outlet protection was not deemed necessary due to these inspections. The inspections did identify two (2) outfalls to be substandard due to failure and/or excessive sedimentation, and as a result will be abandoned post-construction.

7. Other Controls

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period.

Additionally:

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain directly to the adjacent wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overfilling.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials should be confined to the designated area as approved by the engineer.

Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete shall be conducted in a designated washout area. No surface discharge of washout wastewaters from the area will be allowed. All concrete wash water will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources as determined or designated by the Department's Office of Environmental Planning or the project engineer.

Washout Area(s) will be site located by the Contractor, approved by the engineer and the SWPCP revised as appropriate. The "Concrete Washout Area" detail shows the recommended method of construction for the washout area. The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt.

Anti-tracking Pads and Dust Control

(Form 818- Sections 2.11,9.39,9.42,9.43)

Off –site vehicle tracking of sediments and the generation of dust shall be minimized. Temporary anti-tracking pads from the active work site to the existing pavement will be installed and maintained at the locations shown on the plans.

The Contractor shall:

- Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces.
- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Ensure roads adjacent to a construction site are left clean at the end of each day.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then the contractor shall either:

- Increase the length of the construction entrance,
- Modify the construction access road surface, or
- Install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

For construction activities which cause airborne particulates, wet dust suppression shall be utilized. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis. The volume of water sprayed shall be such that it suppresses dust yet also prevents the runoff of water.

Cold Water Stream Habitat

For construction activities within a Cold-Water Stream Habitat watershed, the one hundred (100) foot undisturbed buffer specified is that section must be verified post-construction and, where such buffer is located within the boundaries of the construction site, supplemented with additional plantings as necessary to maintain canopy/stream cover.

Maintaining and Storing Vehicles and Equipment- Storage of Chemicals & Petroleum Products

The Contractor shall take measures to prevent any contamination to wetlands and watercourses while maintaining and storing construction equipment on the site. All chemical and petroleum

containers stored on site shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those stored in containers of 100-gallon capacity or more, in which case double-walled tanks will suffice. Accumulation of rainwater within secondary containment must be visually inspected for sheen prior to being discharged. If any sheen is identified; the accumulated water must be removed by the Contractor to an appropriate off-site location.

8. Inspections

The Qualified Inspector will conduct site inspections once a week or after any rain event of 0.1 inches or greater during normal working hours. The Qualified Inspector conducting inspections shall fill out a Construction Site Environmental Inspection Report (CSEIR) for each inspection described below. Each report shall be retained as a part of the SWPCP and shall be submitted to DEEP electronically once a month. The report shall include a statement that, in the judgment of the Qualified Inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the Plan and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance, review Keeping Plans Current.

Plan Implementation Inspections

For each phase of construction, the site shall be inspected at least once within the first 30 days of construction activity and at least three times, with 7 or more days between inspections, within the first 90 days of construction activity to confirm compliance and proper initial implementation of all control measures.

Routine Inspections

The Permittee will maintain a rain gauge on-site to document rainfall amounts. During construction, all areas disturbed by the construction activity that have not been stabilized, all erosion and sediment control measures, structural control measures, soil stockpile areas, washout areas, and locations where vehicles enter or exit the site shall be inspected for evidence of or the potential for pollutant entering the drainage systems and impacts to the receiving waters at least every seven (7) calendar days and within 24 hours of the end of a storm that generates a discharge.

For storms that end on a weekend, holiday, or other time in which normal working hours will not commence within 24 hours, an inspection is required within 24 hours following any storm in which 0.5 inches or greater of rain occurs. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least weekly until final stabilization has been achieved.

Qualified inspectors provided by the Department's District 1 Office shall conduct inspections.

The following items shall be inspected as described below:

Item	Procedure
Sedimentation Control System (SCS)	The SCS shall be inspected to ensure that the fence line is intact with no breaks or tears. The fence shall be firmly anchored to the ground. Areas where the fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted.
Concrete Washout Area	Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The contractor shall remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent with all applicable laws, regulations and guidelines.
Catch Basin Protection	Protective measures shall be inspected to ensure that sediment is not entering the catch basins. Catch basin sumps shall be monitored for sediment deposition.
Anti-tracking Pad	Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
Dust Control	Measures shall be taken for the purpose of allaying (diminishing) dust conditions. Measures may include the use of sweeping equipment and/or the application of water or calcium chloride.
General	Construction areas and the perimeter of the site shall be inspected for any evidence of debris that may blow or wash off site or that has blown or washed off site. Construction areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters.

Post-Construction Inspection

Upon completion of construction activities and stabilization of the site, all post-construction stormwater structures, including *catch basins, endwalls, modified riprap aprons, and grass swales,* shall be cleaned of construction sediment or debris and the site inspected to confirm compliance with all post-construction stormwater management requirements. Sediment shall be properly disposed of in accordance with all applicable laws, regulations, and guidelines. Any remaining sediment control system(s) SCS shall be removed prior to acceptance of the project by the Department.

Final Stabilization Inspection

Once the site has achieved final stabilization for at least one full growing season (April – October) in the year following the end of construction, the site shall be inspected to confirm stabilization is maintained, and a Notice of Termination Form shall be submitted.

9. Keeping Plans Current

Revisions to Stormwater Pollution Control Plans

The Department shall amend the Plan if the actions required by the Plan fail to prevent pollution or otherwise comply with provisions of the General Permit. The Plan shall also be amended whenever there is a change in contractors or sub-contractors at the site, or a change in design, construction, operation, or maintenance at the site which has not otherwise been addressed in the plan.

If the results of the inspections require modifications to the Stormwater Pollution Control Plan, the plans shall be revised as soon as practicable after the inspection. Such modifications shall provide for a timely implementation of any changes to non-engineered controls on the site within 24 hours and implementation of any changes to the plan within 3 (three) calendar days following the inspection. For Engineered measures, corrective actions shall be implemented on site within 7 (seven) days and incorporated into a revised Plan within 10 (ten) days of the date of inspection

In no event shall the requirements to keep the Plan current or update a Plan, relieve the permittee and their contactor(s) of the responsibility to properly implement any actions required to protect the waters of the State and to comply with all conditions of the permit.

10. Contractors

General

This section shall identify all Contractors and Subcontractors who will perform on site actions which may reasonably be expected to cause or have the potential to cause pollution of the waters of the State.

Certification Statement

All contractors and subcontractors must sign the attached statement. All certifications will be included in the Stormwater Pollution Control Plan.

State Project No. 0082-0316

Reconfiguration of the Route 17 On-Ramp to Route 9 Northbound
Middletown, CT

"I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as Contractor on the project, I am covered by this General Permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this project."

GENERAL CONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

SUBCONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

General:

This Stormwater Pollution Control Plan (SWPCP) is prepared to comply with the requirements for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. Also, to be considered part of the SWPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 818) including supplements thereto and the 2002 Connecticut Guidelines for Erosion and Sediment Control and 2004 Stormwater Quality Manual.

List of applicable Figures / Plans:

Appendix A - Figures

Project Description	Figure A-1
Site Location Plan	Figure A-2
Soil Map	Figure A-3
Site Drainage Areas (Existing Conditions)	Figure A-4
Site Drainage Areas (Proposed Conditions)	Figure A-5

Appendix B – Drainage Calculations

Disturbed/Erodible Area Plans	Figure B-1
Water Quality Computations	Figure B-2
Outlet Flows and Velocities	Figure B-3

Appendix C – Plan Sheets

Construction Plans	Figure C-1
Drainage Plans	Figure C-2
Landscape Plans	Figure C-3
Staging Plans	Figure C-4
Bridge Plan and Associated Borings	Figure C-5
Miscellaneous Stormwater Details	Figure C-6

Appendix D- CTDOT MS4 Project Design Maximum Extent Practicable Worksheet

Appendix E – Construction Site Environmental Inspection Report (CSEIR)

Appendix F – Notice of Termination Form: Non-Solar Projects

Appendix A - Figures

Project Description	Figure A-1
Site Location Plan	Figure A-2
Soil Map	Figure A-3
Site Drainage Areas (Existing Conditions)	Figure A-4
Site Drainage Areas (Proposed Conditions)	Figure A-5

PROJECT DESCRIPTION

STATE PROJECT NUMBER: 0082-0316
FEDERAL AID PROJECT NUMBER: 000T (285)
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND
CITY OF MIDDLETOWN

PROJECT LOCATION:

This project is located in the City of Middletown on Route 17 between log mile 21.65 and 22.50. Route 9 overlaps Route 17 through a portion of this project between log mile 23.46 to 23.90. Main Street Extension is a local roadway located south of downtown Main Street. Union Street, River Road and Harbor Drive are also local roadways and provide access to Harbor Park and waterfront properties.

EXISTING CONDITIONS:

Route 17 is a north/south running roadway that connects Glastonbury to New Haven and is classified as an Urban Freeway within the project limits. The Route 17 on-ramp to Route 9 northbound is a skewed stop-controlled intersection with a short acceleration lane just before Bridge No. 00638 that carries Route 9 over Union Street and an active Providence and Worcester (P&W) rail line. The superstructure is rated 4, poor condition, based on the latest Bridge Safety Inspection Report dated March 31, 2020. The existing superstructure design prevents proper maintenance of the bridge and has therefore deteriorated. Other structures within the project limits include Bridge No. 00861 (substructure rating 5) carrying Route 17 northbound over East Main Street and Bridge No. 00636 (superstructure rating 5) carrying the Route 17 on-ramp to Route 9 northbound over Route 9.

The existing geometry of Bridge No. 00636 restricts sightlines approaching the stop controlled on-ramp and therefore hinders the driver's ability to see queued vehicles at the stop-controlled intersection with Route 9 northbound. Additionally, Route 17 intersects Route 9 at a 25-degree angle on the inside of a curve, forcing drivers to look behind them for approaching vehicles on Route 9. A common occurrence is for the second queued vehicle to accelerate into traffic before the first vehicle has accepted a gap, leading to a rear end collision at the stop sign. This can be attributed to the heavy skew of the interchange, causing the second driver to focus on the Route 9 traffic as opposed to the vehicle in front of them.

After selecting a gap in Route 9 traffic, the driver is only provided approximately 100 feet to accelerate from a full stop to 55 miles per hour. This short acceleration lane, combined with the poor sightlines and heavy congestion, lead to a driver accepting a gap that they normally would not. In turn, this contributes to the higher than expected rear-end crash rate.

Route 17 intersects Main Street Extension in an offset diamond configuration interchange, with Bridge No. 00860 (superstructure rating 5) carrying Route 17 over Main Street Extension. The on-ramp from Main Street Extension to Route 9 northbound requires the driver to navigate a 300-foot weave and lane drop prior to the split with the Route 9/17 interchange. Within the vicinity of the interchange is Hubbard Park which abuts the Route 17 southbound off-ramp to Main Street Extension. Bridge No. 00862 (superstructure rating 6) is located directly east of the offset diamond interchange and carries Route 17 southbound over East Main Street.

Union Street is an east/west running local road that provides the primary access to the waterfront from downtown Middletown and splits into a "Y" type intersection with River Road and Harbor Drive. Harbor Drive provides access to Harbor Park to the north and intersects Route 9 northbound with a short acceleration lane that is used as an alternative to the Route 17 and Route 9 northbound stop-controlled interchange.

The substandard elements above also compel drivers to avoid the interchange as a whole and opt for another entrance to Route 9. This is illustrated by the results of an origin and destination study of the downtown Middletown area. The study showed that a large number of vehicles are avoiding the stop-controlled interchange in lieu of the Harbor Drive on-ramp. This on-ramp is itself substandard, with a short acceleration lane and poor sightlines. Upon completion of this project, the Harbor Drive on-ramp will be closed, as keeping it open would create an unsafe weave condition on Route 9 due to its proximity with the Route 17 on-ramp. Due to this closure, a large number of vehicles will be redistributed to the Route 17 interchange with Route 9. In order to accommodate this increase, improvements to the Main Street Extension and Route 17 interchange will be required.

PURPOSE AND NEED:

The purpose of the project is to reduce rear-end crashes at the Route 9 northbound and Route 17 northbound interchange. This project is needed because the existing stop-controlled on-ramp from Route 17 onto Route 9 northbound has a crash rate significantly higher than similar adjacent freeway segments.

CRASH DATA:

The latest available three-year crash data throughout the project limits (January 1, 2018 to December 31, 2020) reported 340 crashes with 60 injuries. A total of 249 crashes occurred in the vicinity of the stop-controlled interchange during this time with 244 (98%) of them being rear-end crashes. This project contains six locations on the High Frequency Crash List for 2018-2020.

PROJECT IMPROVEMENTS:

The proposed work includes providing a full-length acceleration lane for Route 17 northbound traffic to merge onto Route 9 north. A full structure replacement will enable widening the structure to the west as well as addressing maintenance concerns. The proposed acceleration lane will require realignment of Route 9 as well as the closure of the Harbor Drive on-ramp onto Route 9.

The existing weave on Route 17 northbound was analyzed using VISSIM and HCS. It was determined that the congestion experienced on the weave was a result of the traffic signals on Route 9 and that a two-lane cross section has adequate capacity. This two-lane section allows us to maintain the existing sight distance through the curve.

After closure of the Harbor Drive interchange, the Main Street Extension and Route 17 interchange will serve as primary access to Route 9 for the southern section of downtown Middletown. Consequently, traffic volumes would increase at the interchange and operate at a failing level of service under the anticipated traffic volumes. The proposed improvements include reconfiguring the interchange and signalizing the northern intersection. Dedicated turn lanes will be added on Main Street Extension and the Route 17 off-ramps to increase traffic capacity. The Route 17 southbound on-ramp will be realigned with the Route 17 southbound off-ramp to create a more typical intersection configuration and will be signalized. A noise wall will be installed between the Route 17 northbound on-ramp from Main Street Extension and the residences on Flower Street as a result of a noise analysis preformed for the project.

[1] *Pursuant to Title 23 United States Code Section 409, this data is not admissible and not discoverable in any federal or state court proceeding and cannot be considered for any other purpose in any action for damages arising from an occurrence at a location addressed in this report.*

Figure A-1

The proposed work will require the removal of approximately 1000 cu. yds. of contaminated soil. Due to site constraints the soil will be relocated north of the project limits within the median between Route 9 Northbound and Southbound, outside of any regulated areas.

A sliver acquisition and temporary construction easement is proposed at 60 deKoven Drive (Klutch, LLC). The proposed acquisition area is required to maintain adequate right of way adjacent to the proposed retaining wall for maintenance activities. The construction easement will be used to store materials for the construction of Bridge 00638 and will be returned to its original condition at the completion of the project.

OVERSIGHT DETERMINATION:

This project has been designated as a Project of Division Interest (Federal oversight).

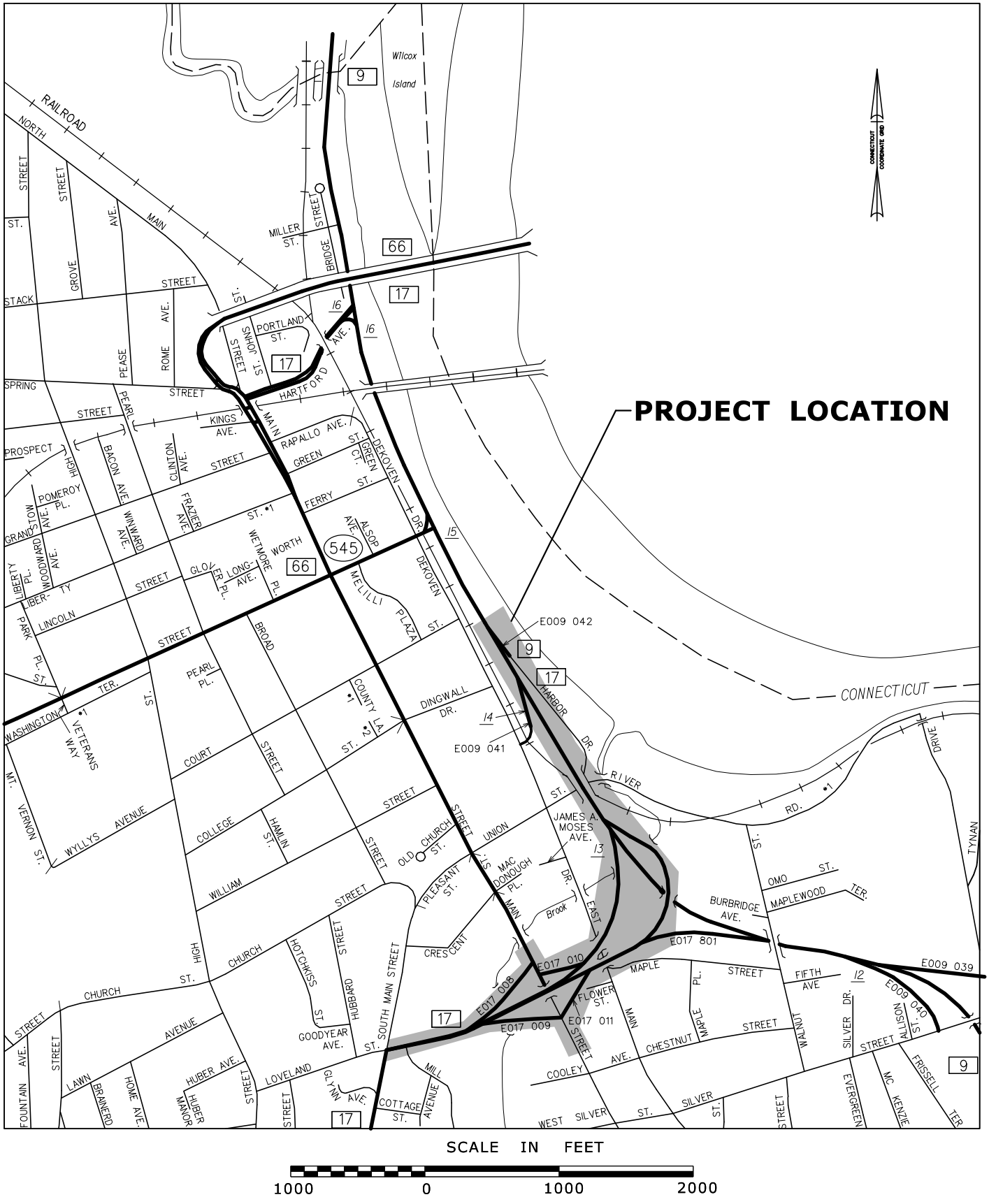
FUNDING:

Engineering: 100% State FIF
Construction: 80% Federal / 20% State NHPP

CURRENT SCHEDULE:

FDP: July 13, 2022
DCD: August 24, 2022
ADV: September 21, 2022

PROJECT CONSTRUCTION COST: $66,200,000



STATE PROJECT NO.:	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	OFFICE OF ENGINEERING	DATE:
0082-0316 CITY/TOWN: MIDDLETOWN	LOCATION PLAN RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND		WINTER 2022

82-316

Figure A-2

Custom Soil Resource Report
Soil Map (82-316 Middletown)

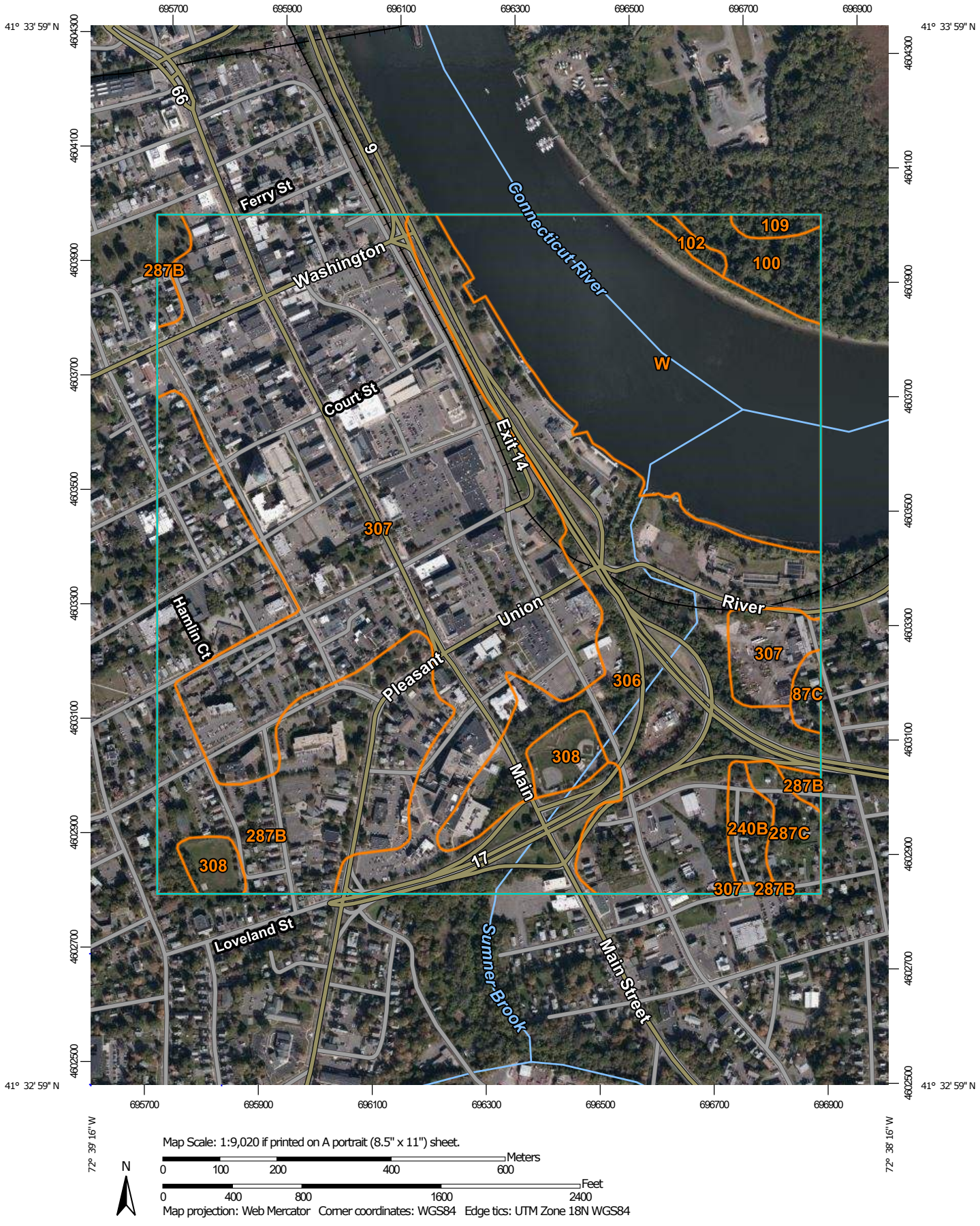


Figure A-3

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 19, Sep 13, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 30, 2019—Oct 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Figure A-3

Map Unit Legend (82-316 Middletown)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
87C	Wethersfield loam, 8 to 15 percent slopes	1.5	0.4%
100	Suncook loamy fine sand	6.0	1.8%
102	Pootatuck fine sandy loam	1.1	0.3%
109	Fluvaquents-Udifluvents complex, frequently flooded	1.4	0.4%
240B	Ludlow-Urban land complex, 0 to 8 percent slopes	3.2	0.9%
287B	Wethersfield-Urban land complex, 3 to 8 percent slopes	53.8	15.7%
287C	Wethersfield-Urban land complex, 8 to 15 percent slopes	4.4	1.3%
306	Udorthents-Urban land complex	69.4	20.2%
307	Urban land	138.0	40.3%
308	Udorthents, smoothed	5.7	1.7%
W	Water	58.3	17.0%
Totals for Area of Interest		**342.9**	**100.0%**

Figure A-3

EXISTING DRAINAGE SYSTEMS

TOTAL AREA TO OUTFLOWS (EXISTING CONDITION)							
OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	71928	1.65	37684	0.87	109612	2.52	65.62%
EO #3	47410	1.09	42262	0.97	89672	2.06	52.87%
EO #4	12790	0.29	82000	1.88	94790	2.18	13.49%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	36116	0.83	25540	0.59	61656	1.42	58.58%
EO #7	14221	0.33	0	0.00	14221	0.33	100.00%
EO #8	5977	0.14	0	0.00	5977	0.14	100.00%
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	53141	1.22	28934	0.66	82075	1.88	64.75%
EO #11	16641	0.38	0	0.00	16641	0.38	100.00%
EO #12	152458	3.50	126936	2.91	279394	6.41	54.57%
EO #13	58737	1.35	11395	0.26	70132	1.61	83.75%
EO #14	4321	0.10	0	0.00	4321	0.10	100.00%
SUM (s.f.)	**610440**	**14.02**	**381391**	**8.76**	**991831**	**22.77**	61.57%



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

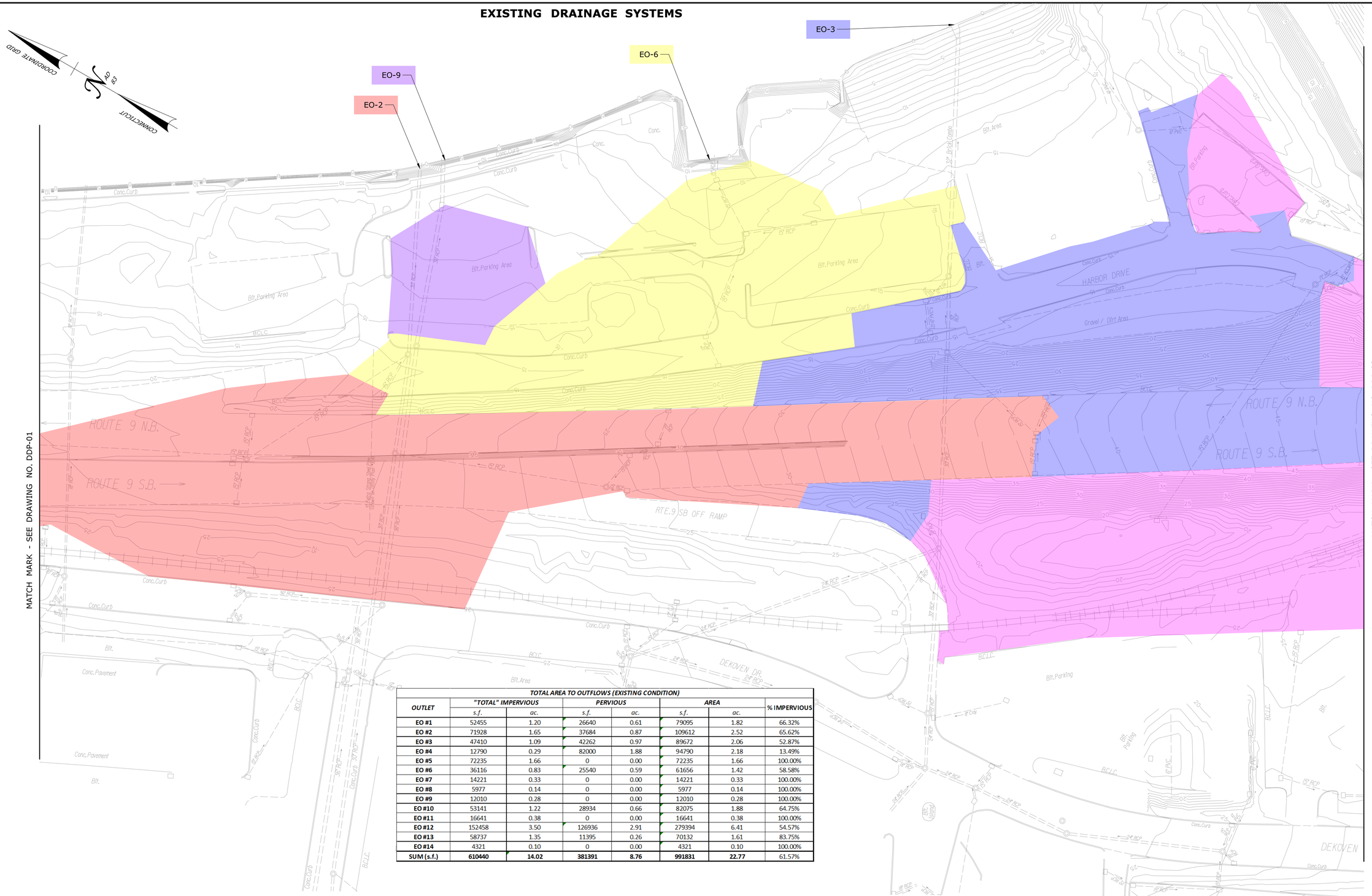
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PROJECT NO. **0082-0316**

DRAWING NO. **DDP-01**

SHEET NO.

EXISTING DRAINAGE SYSTEMS



TOTAL AREA TO OUTFLOWS (EXISTING CONDITION)							
OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
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EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	71928	1.65	37684	0.87	109612	2.52	65.62%
EO #3	47410	1.09	42262	0.97	89672	2.06	52.87%
EO #4	12790	0.29	82000	1.88	94790	2.18	13.49%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	36116	0.83	25540	0.59	61656	1.42	58.58%
EO #7	14221	0.33	0	0.00	14221	0.33	100.00%
EO #8	5977	0.14	0	0.00	5977	0.14	100.00%
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	53141	1.22	28934	0.66	82075	1.88	64.75%
EO #11	16641	0.38	0	0.00	16641	0.38	100.00%
EO #12	152458	3.50	126936	2.91	279394	6.41	54.57%
EO #13	58737	1.35	11395	0.26	70132	1.61	83.75%
EO #14	4321	0.10	0	0.00	4321	0.10	100.00%
SUM (s.f.)	**610440**	**14.02**	**381391**	**8.76**	**991831**	**22.77**	61.57%

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

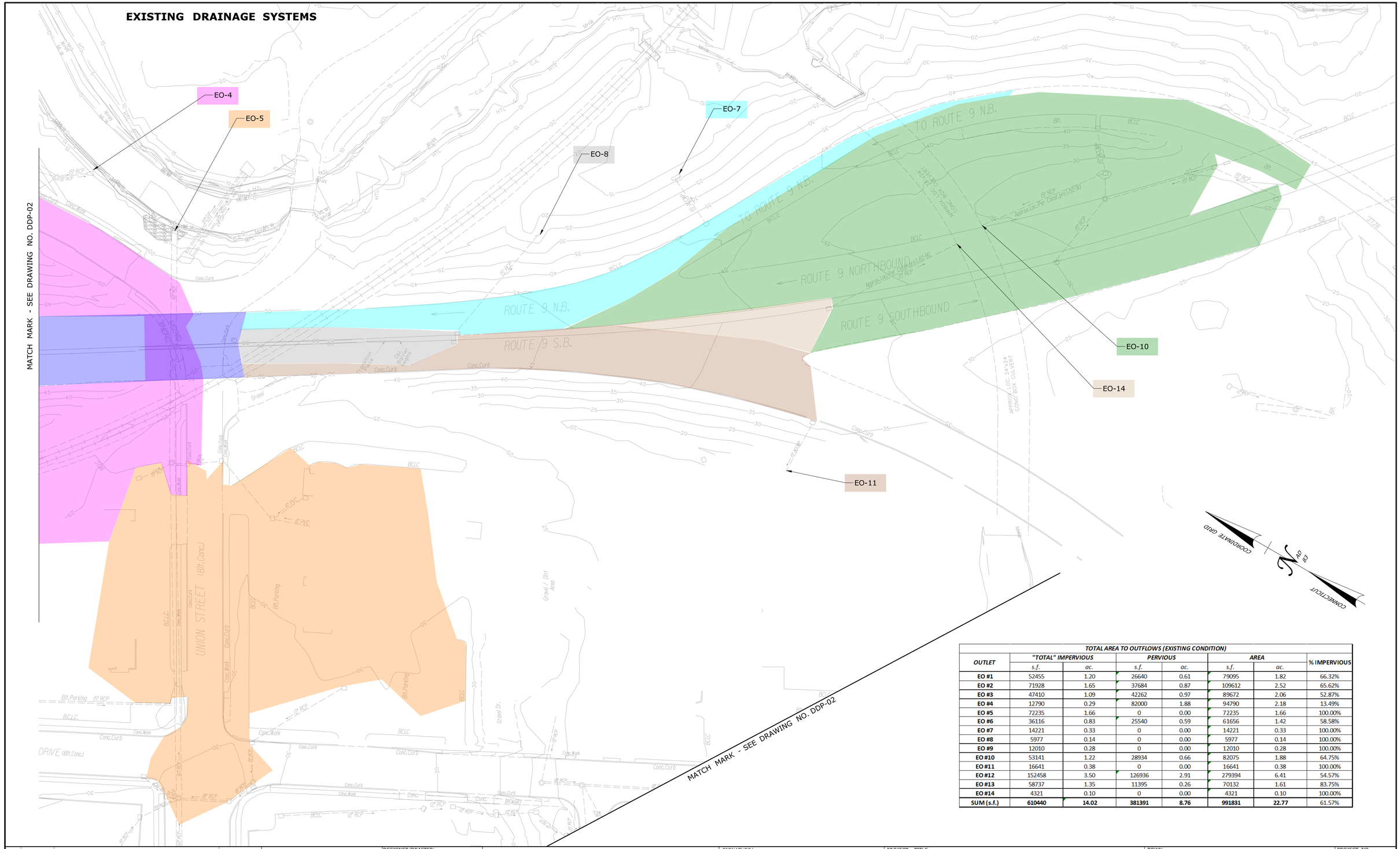
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PROJECT NO. 0082-0316

DRAWING NO. DDP-02

SHEET NO.

EXISTING DRAINAGE SYSTEMS



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EO #2	71928	1.65	37684	0.87	109612	2.52	65.62%
EO #3	47410	1.09	42262	0.97	89672	2.06	52.87%
EO #4	12790	0.29	82000	1.88	94790	2.18	13.49%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	36116	0.83	25540	0.59	61656	1.42	58.58%
EO #7	14221	0.33	0	0.00	14221	0.33	100.00%
EO #8	5977	0.14	0	0.00	5977	0.14	100.00%
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	53141	1.22	28934	0.66	82075	1.88	64.75%
EO #11	16641	0.38	0	0.00	16641	0.38	100.00%
EO #12	152458	3.50	126936	2.91	279394	6.41	54.57%
EO #13	58737	1.35	11395	0.26	70132	1.61	83.75%
EO #14	4321	0.10	0	0.00	4321	0.10	100.00%
SUM (s.f.)	610440	14.02	381391	8.76	991831	22.77	61.57%

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CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:

RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

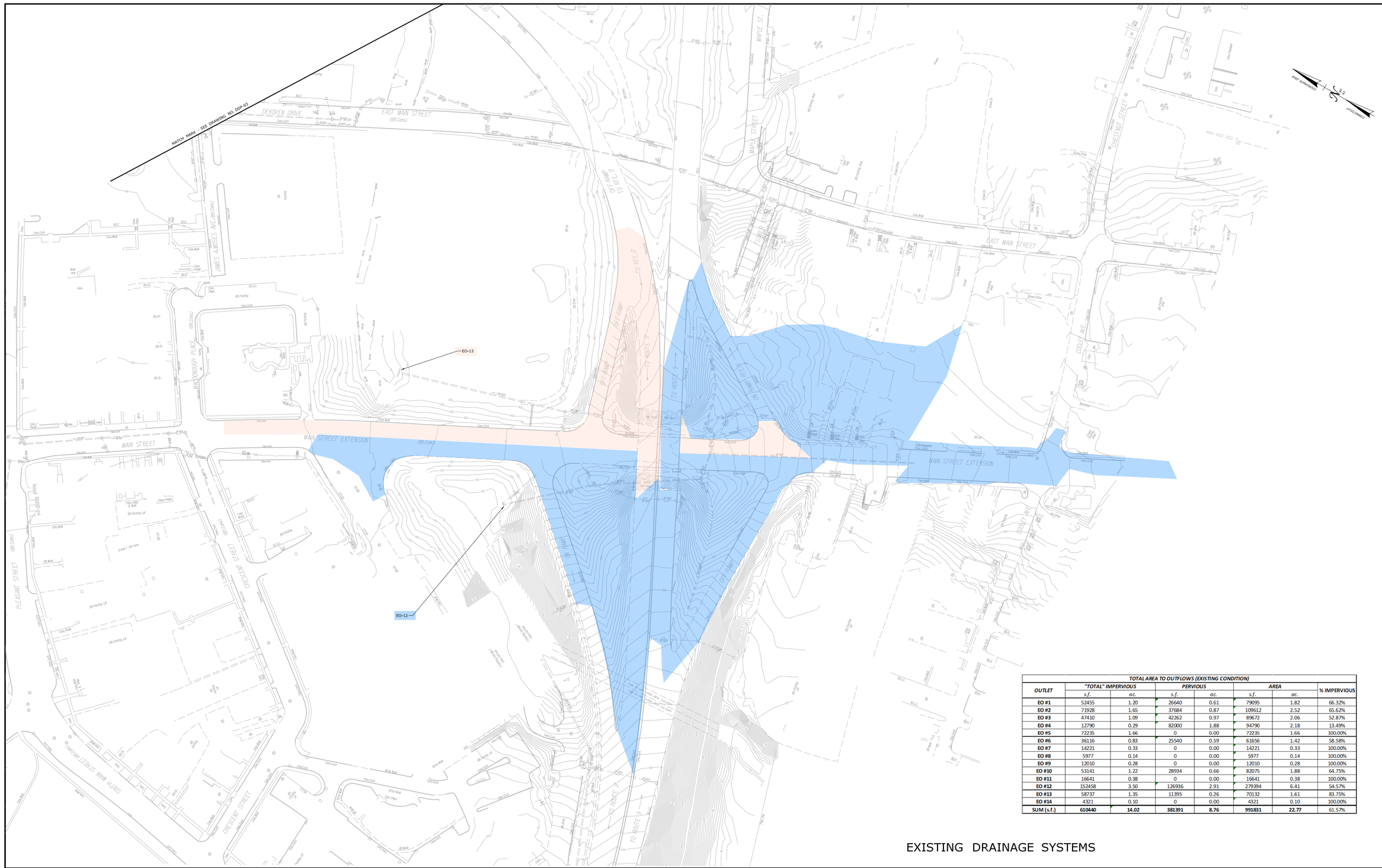
TOWN: MIDDLETOWN

DRAWING TITLE: EXISTING DRAINAGE PLAN

PROJECT NO. 0082-0316

DRAWING NO. DDP-03

SHEET NO.



TOTAL AREA TO OUTFLOWS (EXISTING CONDITION)							
OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	71928	1.65	37684	0.87	109612	2.52	65.62%
EO #3	47410	1.09	42262	0.97	89672	2.06	52.87%
EO #4	12790	0.29	82000	1.88	94790	2.18	13.49%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	36116	0.83	25540	0.59	61656	1.42	58.58%
EO #7	14221	0.33	0	0.00	14221	0.33	100.00%
EO #8	5977	0.14	0	0.00	5977	0.14	100.00%
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	53141	1.22	28934	0.66	82075	1.88	64.75%
EO #11	16641	0.38	0	0.00	16641	0.38	100.00%
EO #12	152458	3.50	126936	2.91	279394	6.41	54.57%
EO #13	58737	1.35	11395	0.26	70132	1.61	83.75%
EO #14	4321	0.10	0	0.00	4321	0.10	100.00%
SUM (s.f.)	610440	14.02	381391	8.76	991831	22.77	61.57%

EXISTING DRAINAGE SYSTEMS

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_DRAINAGE-DESIGN-PLANS.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: DRAINAGE DESIGN PLAN

PROJECT NO. 0082-0316

DRAWING NO. DDP-04

SHEET NO.

PROPOSED DRAINAGE SYSTEMS

TOTAL AREA TO OUTFLOWS (PROPOSED CONDITION)							
OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	56657	1.30	36304	0.83	92961	2.13	60.95%
EO #3	32013	0.73	33049	0.76	65062	1.49	49.20%
EO #4	50185	1.15	71859	1.65	122044	2.80	41.12%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	40109	0.92	25951	0.60	66060	1.52	60.72%
EO #7	0	0.00	0	0.00	0	0.00	N/A
EO #8	0	0.00	0	0.00	0	0.00	N/A
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	55872	1.28	31713	0.73	87585	2.01	63.79%
EO #11	5886	0.14	0	0.00	5886	0.14	100.00%
EO #12	153567	3.53	126935	2.91	280502	6.44	54.75%
EO #13	59455	1.36	11714	0.27	71169	1.63	83.54%
EO #14	37222	0.85	0	0.00	37222	0.85	100.00%
SUM (s.f.)	627666	14.41	364165	8.36	991831	22.77	63.28%



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_DRAINAGE-DESIGN-PLANS.dgn

SIGNATURE/ BLOCK: OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

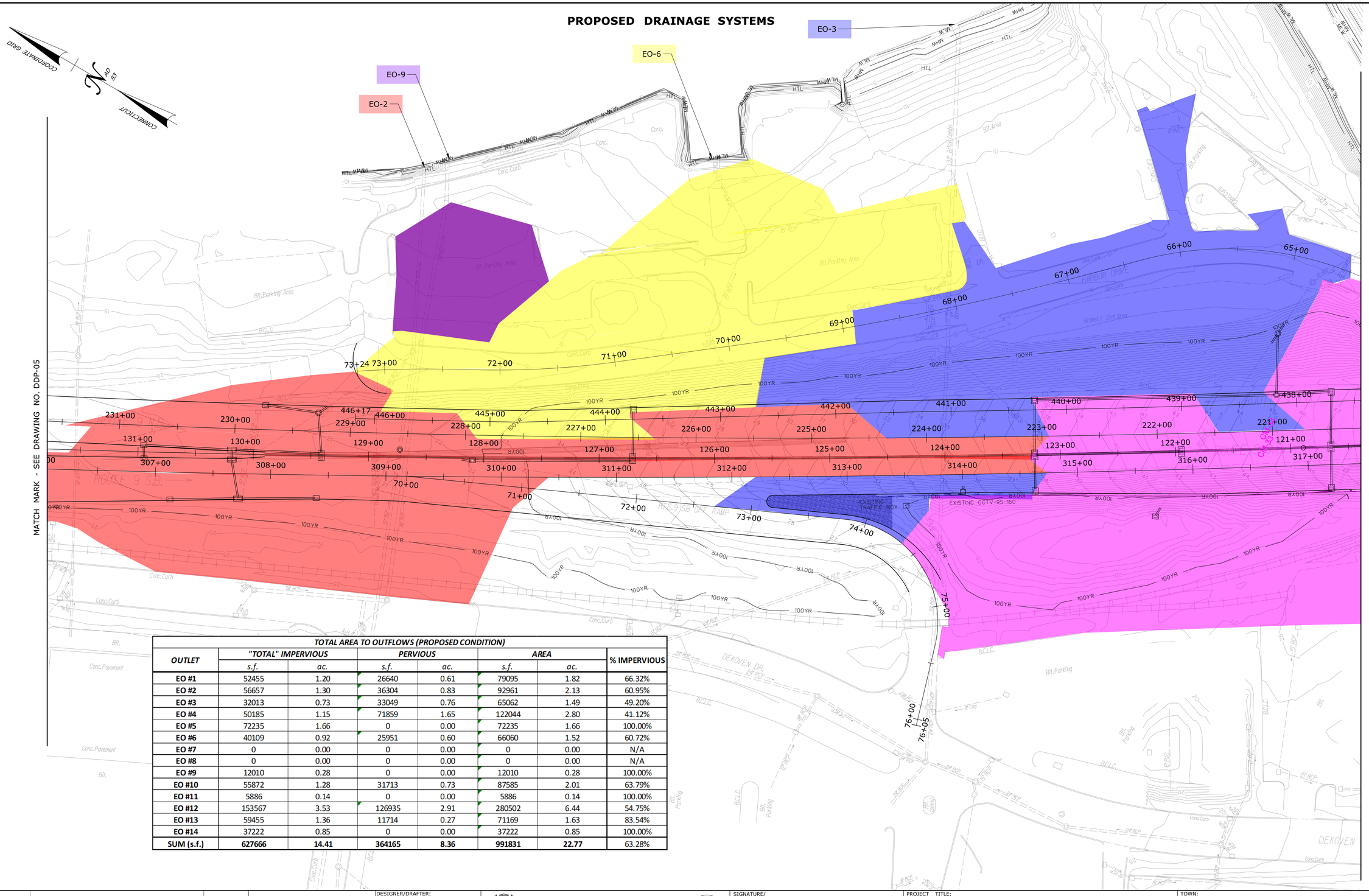
DRAWING TITLE: EXISTING DRAINAGE PLAN

PROJECT NO. 0082-0316

DRAWING NO. DDP-05

SHEET NO.

PROPOSED DRAINAGE SYSTEMS



TOTAL AREA TO OUTFLOWS (PROPOSED CONDITION)

OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	56657	1.30	36304	0.83	92961	2.13	60.95%
EO #3	32013	0.73	33049	0.76	65062	1.49	49.20%
EO #4	50185	1.15	71859	1.65	122044	2.80	41.12%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	40109	0.92	25951	0.60	66060	1.52	60.72%
EO #7	0	0.00	0	0.00	0	0.00	N/A
EO #8	0	0.00	0	0.00	0	0.00	N/A
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	55872	1.28	31713	0.73	87585	2.01	63.79%
EO #11	5886	0.14	0	0.00	5886	0.14	100.00%
EO #12	153567	3.53	126935	2.91	280502	6.44	54.75%
EO #13	59455	1.36	11714	0.27	71169	1.63	83.54%
EO #14	37222	0.85	0	0.00	37222	0.85	100.00%
SUM (s.f.)	**627666**	**14.41**	**364165**	**8.36**	**991831**	**22.77**	63.28%

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_DRAINAGE-DESIGN-PLANS.dgn

SIGNATURE/BLOCK:

OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:

RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

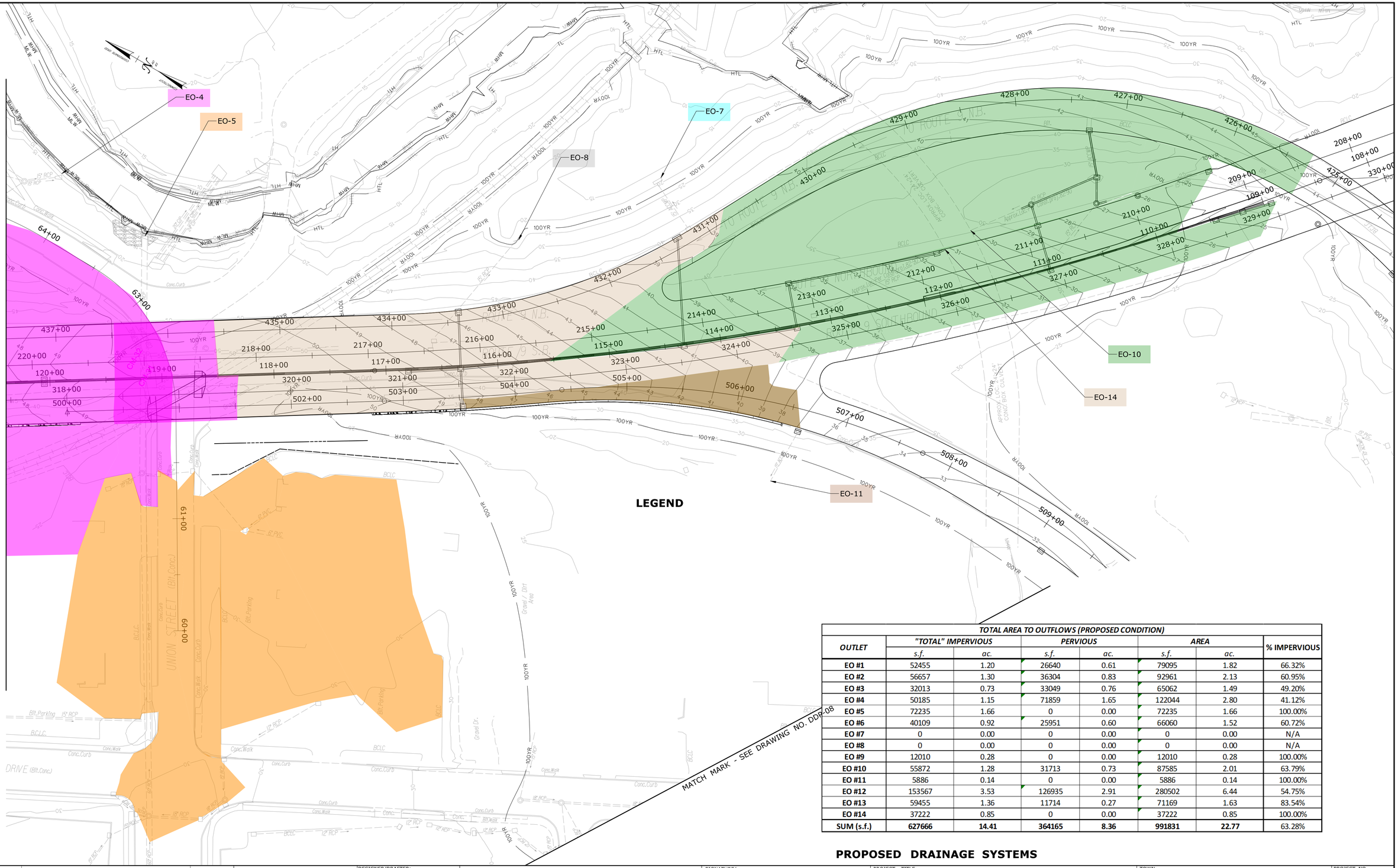
TOWN: **MIDDLETOWN**

DRAWING TITLE: **DRAINAGE DESIGN PLAN**

PROJECT NO. **0082-0316**

DRAWING NO. **DDP-06**

SHEET NO.



LEGEND

PROPOSED DRAINAGE SYSTEMS

TOTAL AREA TO OUTFLOWS (PROPOSED CONDITION)

OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	56657	1.30	36304	0.83	92961	2.13	60.95%
EO #3	32013	0.73	33049	0.76	65062	1.49	49.20%
EO #4	50185	1.15	71859	1.65	122044	2.80	41.12%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	40109	0.92	25951	0.60	66060	1.52	60.72%
EO #7	0	0.00	0	0.00	0	0.00	N/A
EO #8	0	0.00	0	0.00	0	0.00	N/A
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	55872	1.28	31713	0.73	87585	2.01	63.79%
EO #11	5886	0.14	0	0.00	5886	0.14	100.00%
EO #12	153567	3.53	126935	2.91	280502	6.44	54.75%
EO #13	59455	1.36	11714	0.27	71169	1.63	83.54%
EO #14	37222	0.85	0	0.00	37222	0.85	100.00%
SUM (s.f.)	**627666**	**14.41**	**364165**	**8.36**	**991831**	**22.77**	63.28%

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_DRAINAGE-DESIGN-PLANS.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: DRAINAGE DESIGN PLAN

PROJECT NO. 0082-0316
DRAWING NO. DDP-07
SHEET NO.

MATCH MARK - SEE DRAWING NO. DDP-07

EO-13

EO-12

TOTAL AREA TO OUTFLOWS (PROPOSED CONDITION)							
OUTLET	"TOTAL" IMPERVIOUS		PERVIOUS		AREA		% IMPERVIOUS
	s.f.	ac.	s.f.	ac.	s.f.	ac.	
EO #1	52455	1.20	26640	0.61	79095	1.82	66.32%
EO #2	56657	1.30	36304	0.83	92961	2.13	60.95%
EO #3	32013	0.73	33049	0.76	65062	1.49	49.20%
EO #4	50185	1.15	71859	1.65	122044	2.80	41.12%
EO #5	72235	1.66	0	0.00	72235	1.66	100.00%
EO #6	40109	0.92	25951	0.60	66060	1.52	60.72%
EO #7	0	0.00	0	0.00	0	0.00	N/A
EO #8	0	0.00	0	0.00	0	0.00	N/A
EO #9	12010	0.28	0	0.00	12010	0.28	100.00%
EO #10	55872	1.28	31713	0.73	87585	2.01	63.79%
EO #11	5886	0.14	0	0.00	5886	0.14	100.00%
EO #12	153567	3.53	126935	2.91	280502	6.44	54.75%
EO #13	59455	1.36	11714	0.27	71169	1.63	83.54%
EO #14	37222	0.85	0	0.00	37222	0.85	100.00%
SUM (s.f.)	627666	14.41	364165	8.36	991831	22.77	63.28%

PROPOSED DRAINAGE SYSYEMS

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

SCALE IN FEET
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SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_DRAINAGE-DESIGN-PLANS.dgn

SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:

RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: DRAINAGE DESIGN PLAN

PROJECT NO. 0082-0316

DRAWING NO. DDP-08

SHEET NO.

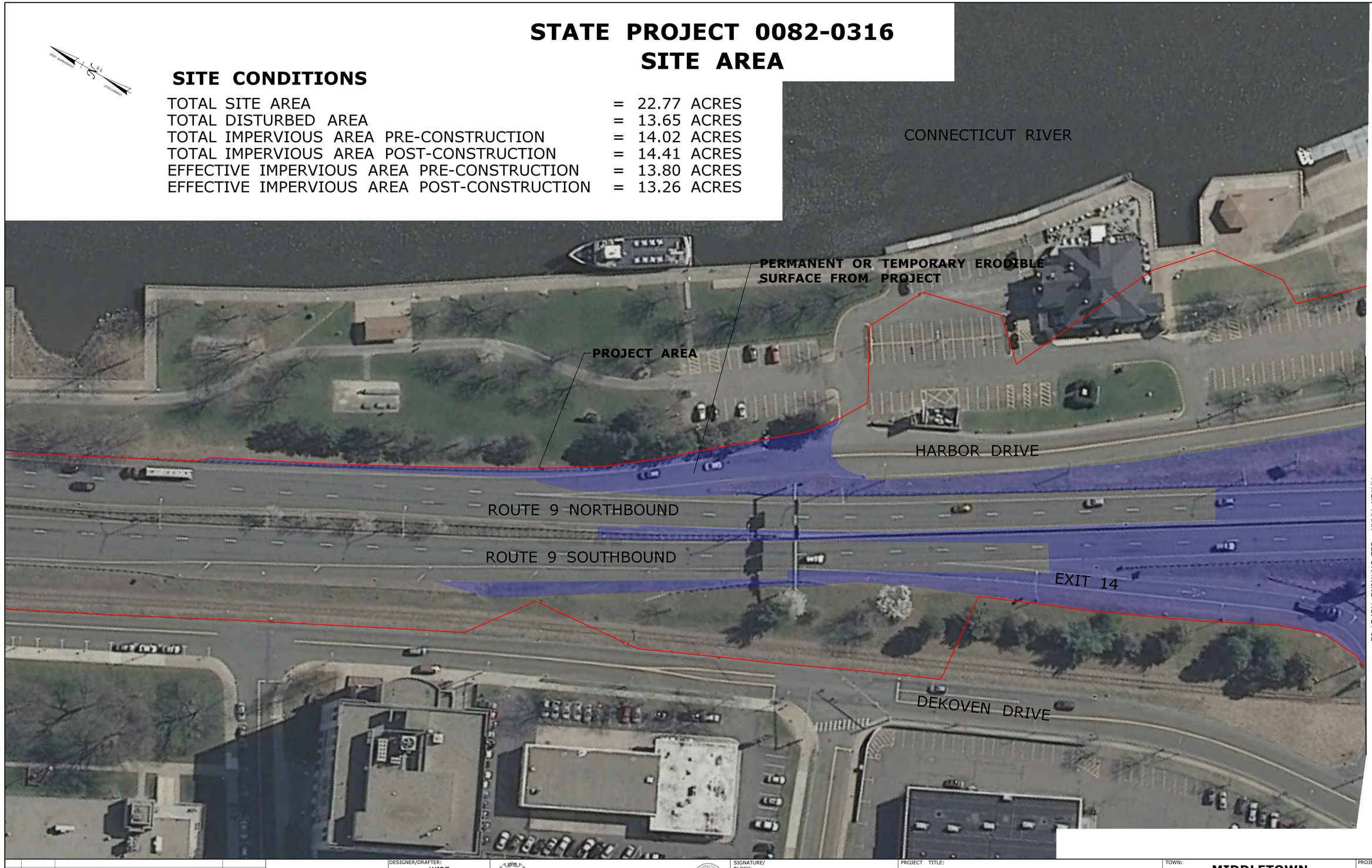
Appendix B - Drainage Calculations

Disturbed/Erodible Area Plans	Figure B-1
Water Quality Computations	Figure B-2
Outlet Flows and Velocities	Figure B-3

STATE PROJECT 0082-0316
SITE AREA

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES



MATCH MARK - SEE DRAWING NO. ST-02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

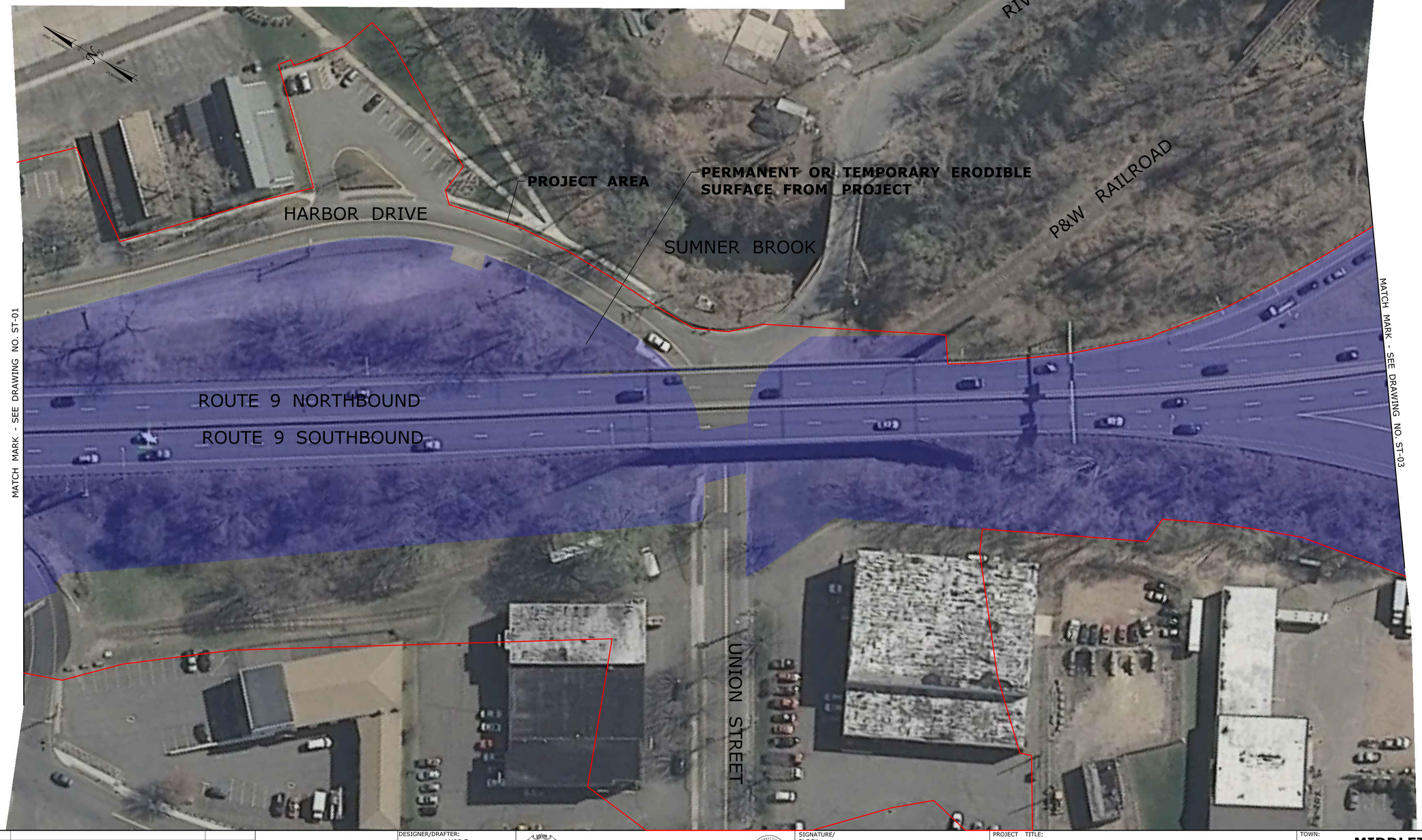
TOWN: MIDDLETOWN
DRAWING TITLE: SITE AREA DISTURBED AREA

PROJECT NO. 0082-0316
DRAWING NO. ST-01
SHEET NO.

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES

STATE PROJECT 0082-0316
SITE AREA



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

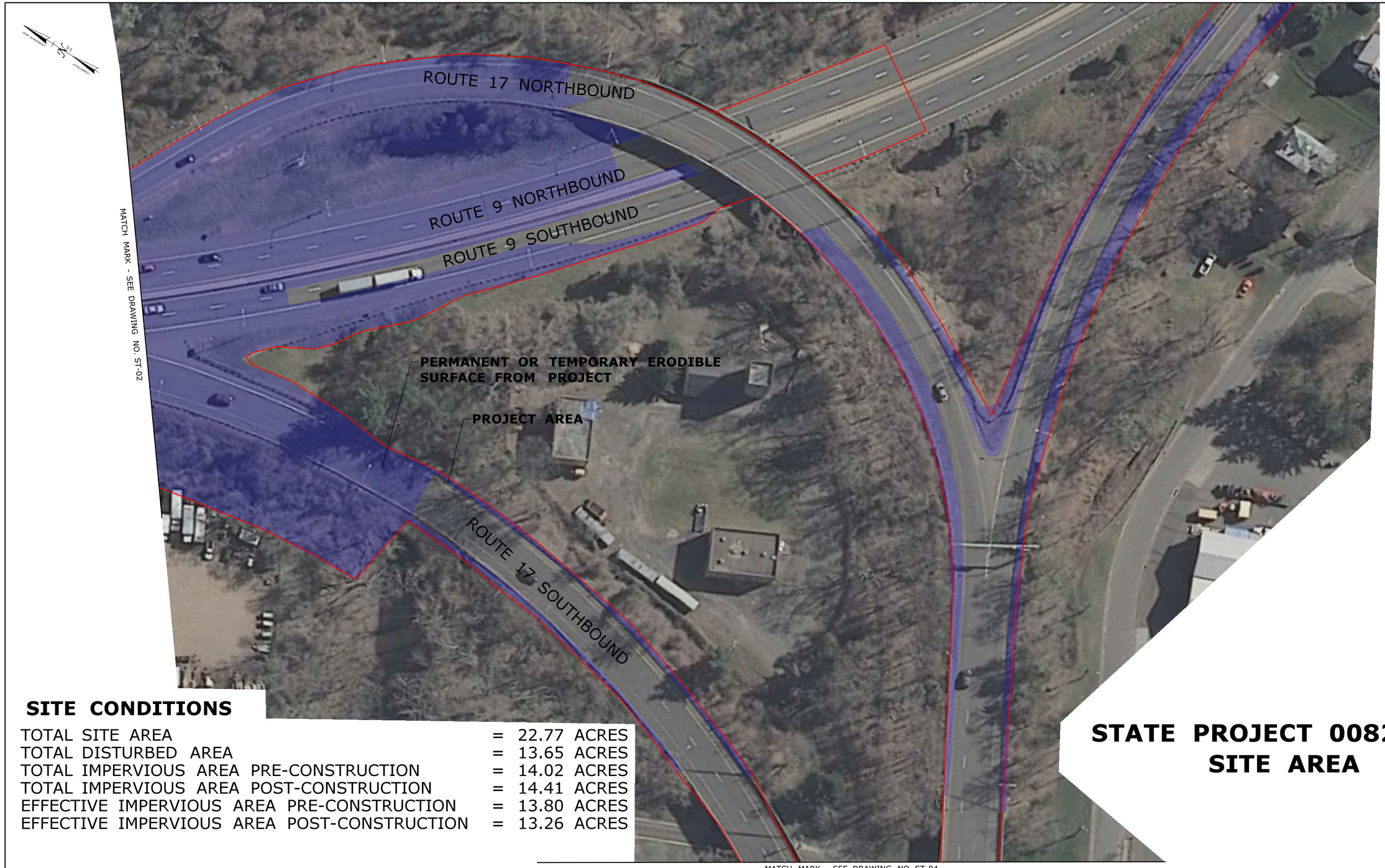
TOWN: MIDDLETOWN

DRAWING TITLE: SITE AREA

PROJECT NO. 0082-0316

DRAWING NO. ST-02

SHEET NO.



SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES

STATE PROJECT 0082-0316
SITE AREA

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: SITE AREA

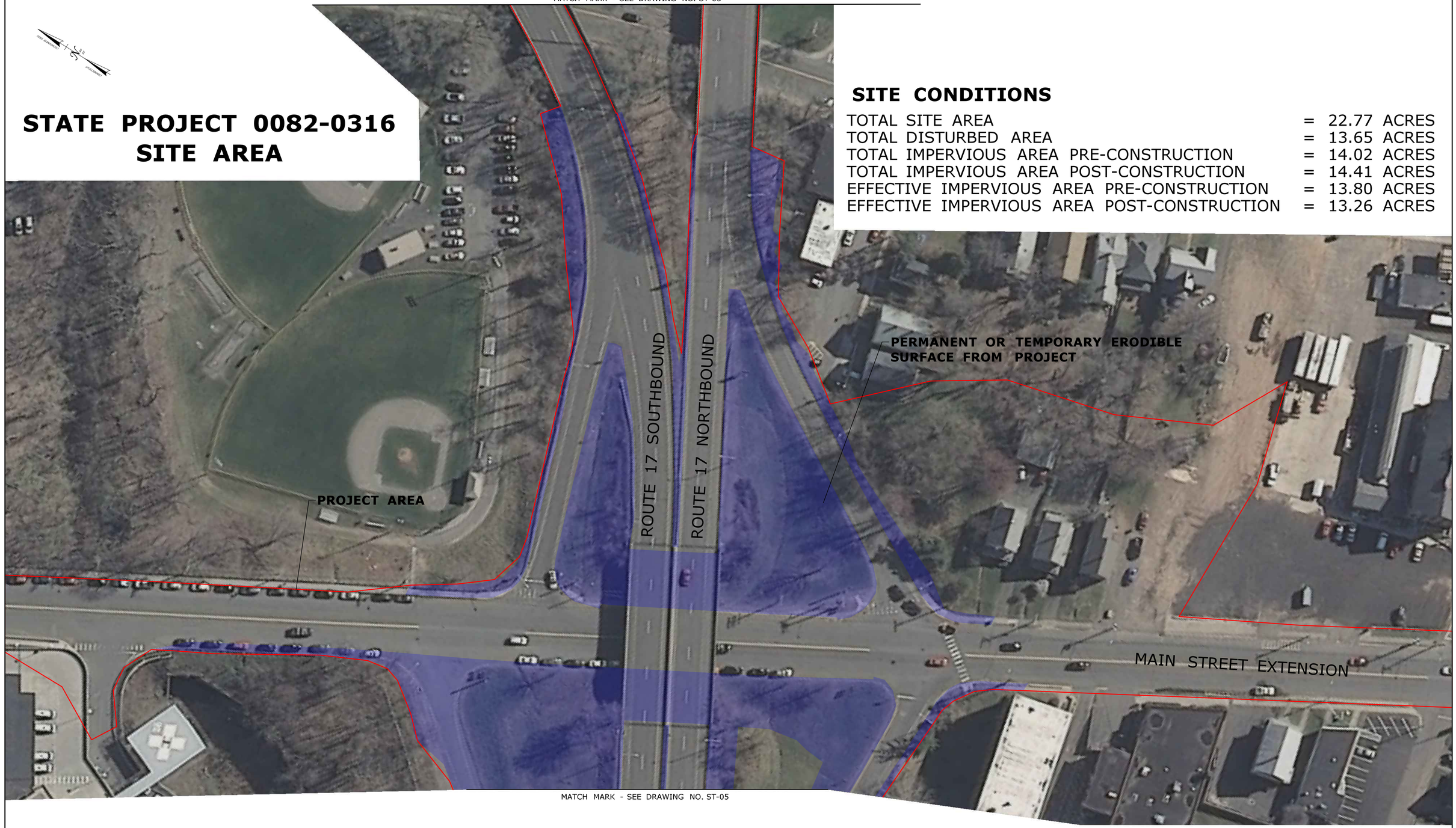
PROJECT NO. 0082-0316
DRAWING NO. ST-03
SHEET NO.

MATCH MARK - SEE DRAWING NO. ST-03

STATE PROJECT 0082-0316
SITE AREA

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES



MATCH MARK - SEE DRAWING NO. ST-05

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

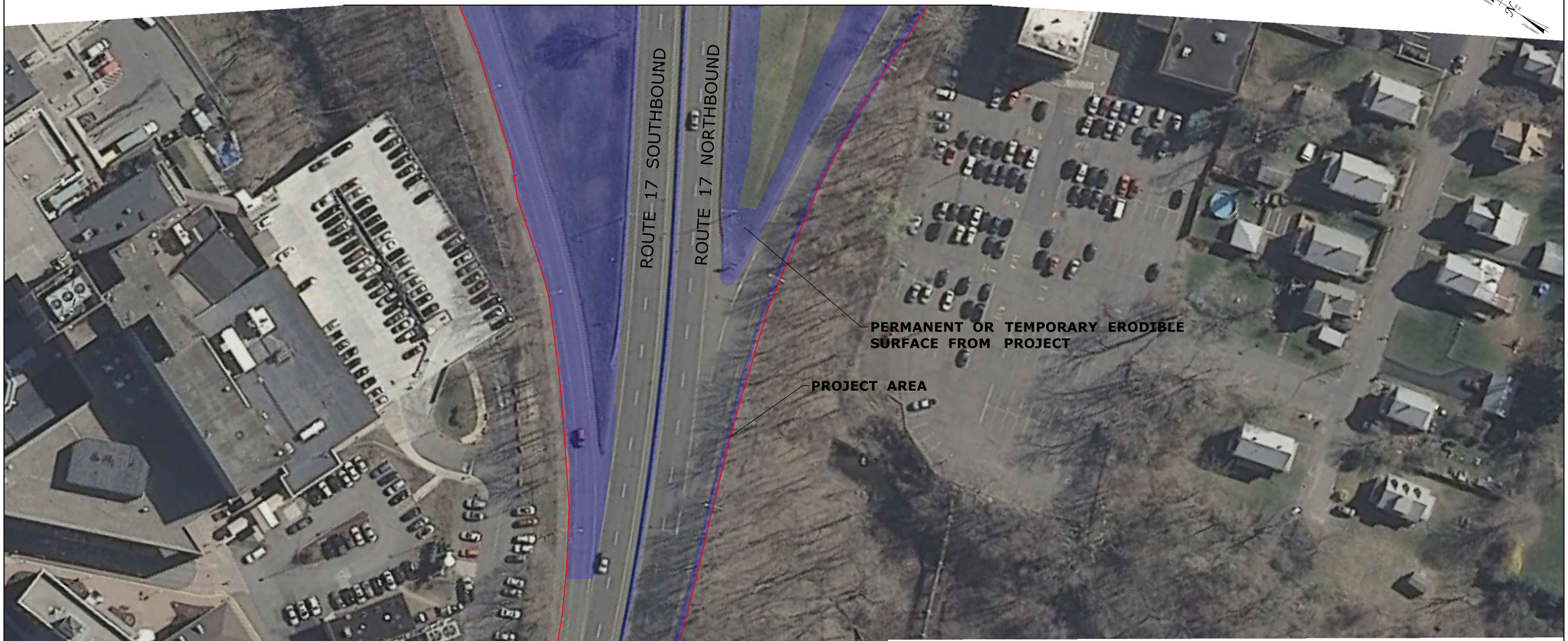
DRAWING TITLE: SITE AERA

PROJECT NO. 0082-0316

DRAWING NO. ST-04

SHEET NO.

MATCH MARK - SEE DRAWING NO. PLN-04



MATCH MARK - SEE DRAWING NO. ST-06

STATE PROJECT 0082-0316
SITE AREA

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

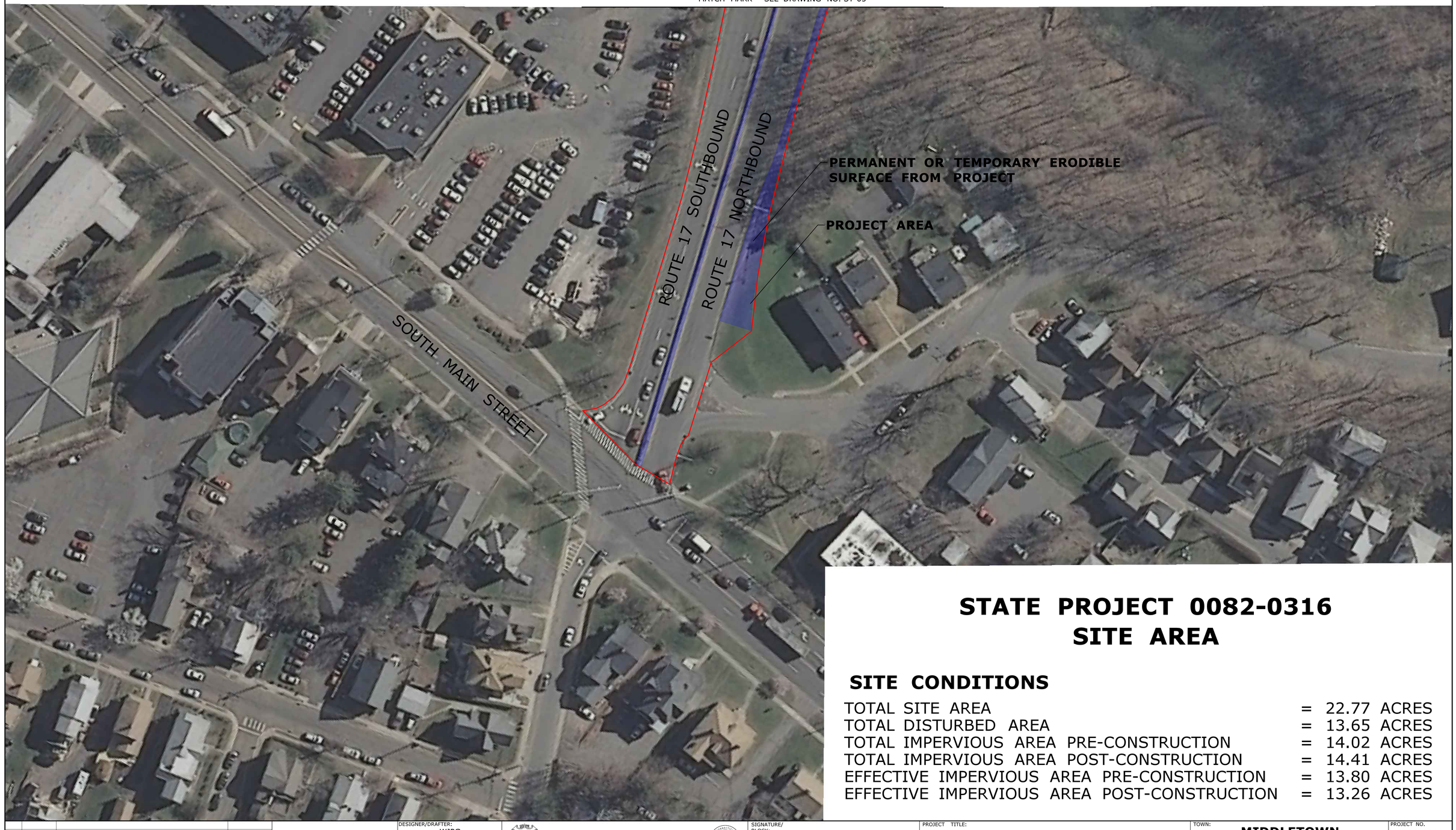
PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: SITE AREA

PROJECT NO. 0082-0316
DRAWING NO. ST-05
SHEET NO.

MATCH MARK - SEE DRAWING NO. ST-05



STATE PROJECT 0082-0316
SITE AREA

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-SITE-DISTURBED-PLAN.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: SITE AREA

PROJECT NO. 0082-0316
DRAWING NO. ST-06
SHEET NO.



STATE PROJECT 0082-0316
SITE AREA

THIS SITE IS 1.5 MILES FROM THE MAIN PROJECT SITE AND WILL ONLY SERVE AS A PERMANENT CONTAMINATED SOIL STORAGE LOCATION. DUE TO THIS DISTANCE AND NOT BEING PART OF THE PROJECT'S DRAINAGE SYSTEMS, THIS SITE WAS NOT INCLUDED IN "TOTAL SITE AREA"

SITE CONDITIONS

TOTAL SITE AREA	=	22.77 ACRES
TOTAL DISTURBED AREA	=	13.65 ACRES
TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION	=	14.02 ACRES
TOTAL IMPERVIOUS AREA POST-CONSTRUCTION	=	14.41 ACRES
EFFECTIVE IMPERVIOUS AREA PRE-CONSTRUCTION	=	13.80 ACRES
EFFECTIVE IMPERVIOUS AREA POST-CONSTRUCTION	=	13.26 ACRES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/5/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SDH
SCALE IN FEET 0 60 120
SCALE 1"=60'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\0082-0316_PLN-07-SITE-DISTURBED-PLAN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: CONSTRUCTION PLAN

PROJECT NO. 0082-0316
DRAWING NO. PLN-07
SHEET NO.

Water Quality Volume (WQV) Calculation

PROJECT	0082-0316	PREPARED BY	WJPG
DATE	7/13/2022	CHECKED BY	
SUBJECT	MS4 Calculations		
Notes:			

TOTAL SITE AREA (A) = **22.77** acres

POST-CONSTRUCTION DRAINAGE AREAS

Drainage Area	Effective Impervious Area (acres)	Effective Impervious Area (sf)
EO-01	**1.20**	52455
EO-02	**0.97**	42403
EO-03	**0.61**	26389
EO-04	**1.15**	50185
EO-05	**1.66**	72235
EO-06	**0.92**	40109
EO-07	**0.00**	0
EO-08	**0.00**	0
EO-09	**0.28**	12010
EO-10	**0.70**	30316
EO-11	**0.14**	5886
EO-12	**3.42**	149125
EO-13	**1.36**	59455
EO-14	**0.85**	37222
Total Effective Impervious	13.26	577790

WATER QUALITY VOLUME (WQV) CALCULATION

Design Precipitation (P) =	1	inch
% Impervious Cover (I) =	58	
Volumetric Runoff Coefficient (R) =	0.574	

WQV =	**1.090**	**ac-ft**
	47467	**cu-ft**

1/2 WQV=	**0.545**	**ac-ft**
=	**23733**	**cu-ft**

OUTLET VELOCITIES AND FLOWS				
OUTLET	***EXISTING***		***PROPOSED***	
	VELOCITY (fps)	*FLOW (cfs)*	*VELOCITY (fps)*	*FLOW (cfs)*
EO #1	10.7	7.41	10.7	7.41
EO #2	9.15	16.60	8.75	14.09
EO #3	7.94	8.38	7.38	6.70
EO #4	10.21	7.44	7.89	9.96 (1)
EO #5	4.4	6.53	4.4	6.53
EO #6	10.06	7.23	10.1	7.97
EO #7	8.11	2.34	0	0
EO #8	10.23	0.76	0	0
EO #9	6.06	0.94	5.39	0.94
EO #10	4.4	5.24	7.17 (2)	8.73 (2)
EO #11	4.98	1.50	4.98	0.78
EO #12	12.1	21.38	12.47	22.69
EO #13	8.84	15.09	8.81	14.88
EO #14	4.22	0.50	15.09 (3)	4.90 (3)

(1) Route 9 flow removed from EO #3 and added to EO #4 per request from the City of Middletown. EO #3 is a brick combo outlet that discharges directly within a boat launch. No scour concerns at EO #4. Velocity is reduced at EO #4 due to flowing flow at 10-year storm event. Pipe flow freeboard is well within standard for all catch basins within the system despite flowing full.

(2) EO #10 outlets into the side of a culvert under Route 9. No scour concerns.

(3) EO #14 outlets into the side of a culvert under Route 9. No scour concerns.

The contaminated soil site will have no change to the flows and velocities for any drainage system that is associated with the site.

Appendix C - Plan Sheets

Construction Plans	Figure C-1
Drainage Plans	Figure C-2
Landscape Plans	Figure C-3
Staging Plans	Figure C-4
Bridge Plan and Associated Borings	Figure C-5
Miscellaneous Stormwater Details	Figure C-6

LEGEND

- FULL-DEPTH RECONSTRUCTION OF PAVEMENT. SEE TYPICAL SECTIONS
- REMOVAL OF BITUMINOUS CONCRETE PAVEMENT (PAID FOR AS EARTH EXCAVATION). AREAS SHALL BE FURNISHED WITH TOPSOIL AND SEEDED WITH TURF ESTABLISHMENT - LAWN.
- COASTAL JURISDICTION LINE (CJL)
- HTL - HIGH TIDE LINE (HTL)
- MHW - MEAN HIGH WATER (MHW)
- MLW - MEAN LOW WATER (MLW)

GENERAL NOTES

1. A DOUBLE ROW OF SEDIMENT CONTROL BARRIER SHALL BE UTILIZED BETWEEN ANY DISTURBED AREA AND DOWNGRADIENT WETLAND OR WATERCOURSE WITHIN 50 FEET, UNLESS THERE WOULD BE AN ADVERSE IMPACT TO ADJACENT WETLANDS/WATERCOURSES DUE TO INSTALLATION OF A DOUBLE ROW (i.e. WOULD RESULT IN LARGER WETLAND/WATERCOURSE IMPACT).

   ADDITIONAL EROSION CONTROL BARRIERS (DOUBLE ROW OF SCS) MAY ALSO BE REQUIRED WITHIN THE PROJECT AREA. FACTORS TO BE REVIEWED BY THE ENGINEER INCLUDE BUT ARE NOT LIMITED TO: THE CONTRIBUTING DISTURBED AREA, DRAINAGE AREA, LENGTH OF SLOPE, AND FLOW CONDITIONS TO MAINTAIN SHEET FLOW. IF DETERMINED NECESSARY, THE ENGINEER WILL DIRECT THE CONTRACTOR TO INSTALL AND MAINTAIN ADDITIONAL ROWS OF EROSION CONTROL BARRIER (OR EQUIVALENT).

   SEDIMENTATION CONTROL SYSTEMS SHALL BE INSTALLED AT ANY CATCH BASIN THAT MAY BE IMPACTED BY SEDIMENT FROM CONSTRUCTION ACTIVITIES.

2. ALL DISTURBED EARTH TO BE SEEDED WITH TURF ESTABLISHMENT - LAWN, UNLESS OTHERWISE NOTED ON THESE PLANS.

END STATE PROJECT NUMBER 0082-0316
END NORTHBOUND MILLING
BEGIN SOUTHBOUND MILLING
ROUTE 9 BASELINE - STA. 136+00

METAL BEAM RAIL (R-B MASH) - 1044 LF
CUT CONCRETE PAVEMENT (NB & SB) - 86 LF
REMOVE METAL BEAM RAIL - 570 LF
SEDIMENTATION CONTROL SYSTEM - 1080 LF

REMOVE METAL BEAM RAIL - 580 LF
COASTAL JURISDICTION LINE (CJL)
MEAN HIGH WATER LINE (MHW)
CUT BITUMINOUS CONCRETE PAVEMENT - 60 LF
CONCRETE CURBING - 60 LF
PERMANATELY CLOSE HARBOR DRIVE ON-RAMP TO ROUTE 9 NORTHBOUND
BEGIN MEDIAN BARRIER REPLACEMENT
ROUTE 9 BASELINE - STA. 129+90

THRIE BEAM ATTACHMENT
CUT BITUMINOUS CONCRETE PAVEMENT - 445 LF
METAL BEAM RAIL (R-B MASH) - 60 LF
METAL BEAM RAIL R-B 350 TRANSITION TO METAL BEAM RAIL R-B MASH
REMOVE TREE (TYP.) 9 TOTAL ON SHEET

N 764999.02
E 1028547.94
N 764955.09
E 1028523.32

END NORTHBOUND CURB-TO-CURB
FULL-DEPTH RECONSTRUCTION
ROUTE 9 BASELINE - STA 125+66

CONNECTICUT RIVER
CUT CONCRETE PAVEMENT - 47 LF
CUT CONCRETE PAVEMENT - 517 LF
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (28" x 42") - 520 LF

END TERMINATION OF NB ON-RAMP STA 127+68

N 764620.95
E 1028616.03
N 764616.02
E 1028606.64

R-B END ANCHORAGE - TYPE I
FEMA 100-YEAR FLOOD (CALCULATED)
METAL BEAM RAIL (R-B MASH) - 315 LF
METAL BEAM RAIL R-B 350 TRANSITION TO METAL BEAM RAIL R-B MASH
METAL BEAM RAIL (R-B MASH) - 60 LF
REMOVE METAL BEAM RAIL - 185 LF
REMOVE METAL BEAM RAIL - 200 LF
BEGIN SOUTHBOUND WIDENING IN MEDIAN
END NORTHBOUND WIDENING IN MEDIAN
ROUTE 9 BASELINE - STA 130+24
THRIE BEAM ATTACHMENT - 1 EA
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (28" x 42") - 20 LF (TRANSITION PIECE FROM 1 - 42" x 42" UNIT TO 1 - 48" x 42" UNIT)
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (28" x 42") - 20 LF (TRANSITION PIECE FROM 1 - 28" x 42" UNIT TO 1 - 42" x 42" UNIT)
PROPOSED OVERHEAD SIGN STRUCTURE (SEE TRAFFIC PLANS)
VERIFY LOCATION OF CCTV CONDUITS

CUT CONCRETE PAVEMENT - 367 LF
CUT BITUMIOUS CONCRETE PAVEMENT - 156 LF
CUT CONCRETE PAVEMENT - 54 LF
BEGIN SOUTHBOUND CURB-TO-CURB
FULL-DEPTH RECONSTRUCTION
ROUTE 9 BASELINE - STA 127+17
SEDIMENTATION CONTROL SYSTEM - 230 LF
REMOVE METAL BEAM RAIL - 235 LF
IMPACT ATTENUATION SYSTEM (MEDIAN/GORE)
REMOVE METAL BEAM RAIL - 160 LF
METAL BEAM RAIL (R-B MASH) - 83 LF
BEGIN RETAINING WALL ROUTE 9 BL STA 124+60
THRIE BEAM ATTACHMENT - 1 EA
METAL BEAM RAIL (R-B MASH) - 133 LF
R-B END ANCHORAGE - TYPE I

MATCH MARK - SEE DRAWING NO. PLN-02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/27/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_PLN.dgn

SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY: Matthew Pail

PROJECT TITLE: **RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND**

TOWN: **MIDDLETOWN**
DRAWING TITLE: **CONSTRUCTION PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **PLN-01**
SHEET NO.

GENERAL NOTES

1. A DOUBLE ROW OF SEDIMENT CONTROL BARRIER SHALL BE UTILIZED BETWEEN ANY DISTURBED AREA AND DOWNGRADIENT WETLAND OR WATERCOURSE WITHIN 50 FEET, UNLESS THERE WOULD BE AN ADVERSE IMPACT TO ADJACENT WETLANDS/WATERCOURSES DUE TO INSTALLATION OF A DOUBLE ROW (i.e. WOULD RESULT IN LARGER WETLAND/WATERCOURSE IMPACT).

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   SEDIMENTATION CONTROL SYSTEMS SHALL BE INSTALLED AT ANY CATCH BASIN THAT MAY BE IMPACTED BY SEDIMENT FROM CONSTRUCTION ACTIVITIES.

2. FINAL CONDITION SEEDING FOR EXISTING 2:1 SLOPE THAT WILL BE EXPOSED DURING FOLIAGE CLEARING IS TO BE CONSERVATION SEEDING FOR SLOPES. UPON FOLIAGE CLEARING, IF FINAL SEEDING CANNOT BE INSTALLED DUE TO CONTINUING WORK, AND THE SOIL IS TO BE EXPOSED FOR OVER A WEEK, THE CONTRACTOR SHALL INSTALL TEMPORARY SEEDING UNTIL FINAL SEED MIX CAN BE INSTALLED. SEE LANDSCAPE PLANS FOR DETAILS ON WORK AT THIS LOCATION.

CONNECTICUT RIVER

CONCRETE SIDEWALK - 87 SF
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
DETECTABLE WARNING SURFACE
COASTAL JURISDICTION LINE (CJL)
HIGH TIDE LINE (HTL)
MEAN HIGH WATER (MHW)
MEAN LOW WATER (MHW)
THRIE BEAM ATTACHMENT 1EA
CONSERVATION SEEDING FOR SLOPES
SEE NOTE 2
REMOVE METAL BEAM RAIL - 440 LF
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (28" x 42") - 1060 LF
ABANDONED 10" GAS LINE
FEMA 100-YEAR FLOOD (CALCULATED)
METAL BEAM RAIL (R-B MASH) - 475 LF
SEDIMENTATION CONTROL SYSTEM - 526 LF
CUT BITUMINOUS CONCRETE PAVEMENT - 440 LF

BEGIN TERMINATION OF NB OFF-RAMP STA 124+18

HARBOR DRIVE

SUMNER BROOK

PROPOSED PIER WALL (TYP.) SEE STRUCTURE DRAWINGS
CONCRETE SIDEWALK - 188 SF
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
DETECTABLE WARNING SURFACE

REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER TO BE PAID FOR A ROCK EXCAVATION, TYP.

RIVER ROAD

COASTAL JURISDICTION LINE (CJL)
THRIE BEAM ATTACHMENT - 1 EA
SEDIMENTATION CONTROL SYSTEM - 360 LF
SEDIMENTATION CONTROL SYSTEM - 360 LF
METAL BEAM RAIL (R-B MASH) - 305 LF

PROPOSED OVERHEAD SIGN STRUCTURE SEE TRAFFIC PLANS
R-B END ANCHORAGE - TYPE I
CUT CONCRETE PAVEMENT - 105 LF
N 763738.87
E 1029292.37
REMOVE METAL BEAM RAIL - 380 LF

ROUTE 17 NB

MATCH MARK - SEE DRAWING NO. PLN-01

MATCH MARK - SEE DRAWING NO. PLN-03

ROUTE 9 NB
ROUTE 9 SB
ROUTE 9 S.B.
ROUTE 9 N.B.

N 763721.76
E 1029275.78
R 12'

EXISTING CCTV 9S-160
SEE ILLUMINATION PLANS
CCTV POLE TO BE RELOCATED

METAL BEAM RAIL (R-B MASH) - 6 LF
REMOVE METAL BEAM RAIL - 485 LF
R-B END ANCHORAGE - TYPE I
SEDIMENTATION CONTROL SYSTEM - 85 LF
CUT BITUMINOUS CONCRETE PAVEMENT - 28 LF
LIMIT OF CONSTRUCTION ROUTE 9 SB EXIT 14 STA 74+65

PROPOSED RETAINING WALL SEE STRUCTURE DRAWINGS
PROPOSED WINGWALL (TYP.) SEE STRUCTURE DRAWINGS
END PROPOSED BRIDGE #00638 APPROACH SLAB ROUTE 9 BASELINE - STA. 119+92
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
UTILITY POLE TO BE RELOCATED BY EVERSOURCE ENERGY
CONCRETE SIDEWALK - 76 SF
REMOVE TREE
PWRZ - MIDDLETOWN SUBDIVISION -- LAUREL BRANCH M.P. 0.66

UNION STREET

TAKE LINE
CONSTRUCTION EASEMENT

CTDOT BOUNDARY MARKER - (SURVEY MONUMENT)
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
CONCRETE SIDEWALK - 322 SF
TOTAL RAILROAD CROSSING WIDTH = 64'
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
DETECTABLE WARNING SURFACE
NEW ROADWAY RR CROSSING SURFACE BY G&W

REMOVE METAL BEAM RAIL - 230 LF
6" GAS MAIN TO BE RELOCATED BY EVERSOURCE GAS
PROPOSED RETAINING WALL (SEE STRUCTURE DRAWINGS)
START PROPOSED BRIDGE #00638 APPROACH SLAB ROUTE 9 BASELINE - STA. 116+95
CTDOT BOUNDARY MARKER - (SURVEY MONUMENT)

RIGHTS OF WAY LEGEND

(A) CONSTRUCTION EASEMENT REQUIRED

LEGEND

- FULL-DEPTH RECONSTRUCTION OF PAVEMENT. SEE TYPICAL SECTIONS
- REMOVAL OF BITUMINOUS CONCRETE PAVEMENT (PAID FOR AS EARTH EXCAVATION). AREAS SHALL BE FURNISHED WITH TOPSOIL AND SEEDED WITH TURF ESTABLISHMENT - LAWN.
- COASTAL JURISDICTION LINE (CJL)
- HTL - HIGH TIDE LINE (HTL)
- MHW - MEAN HIGH WATER (MHW)
- MLW - MEAN LOW WATER (MLW)

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

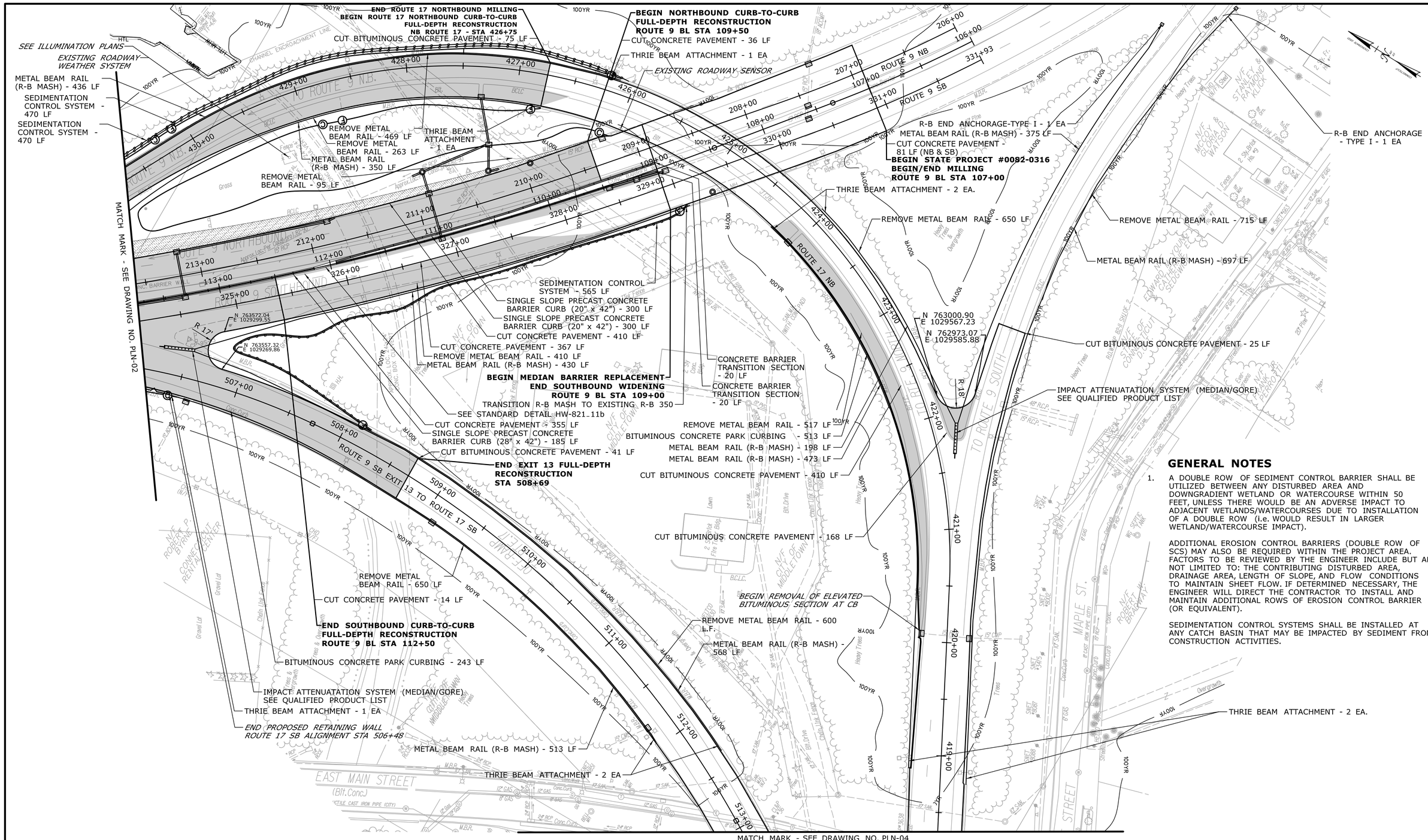
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SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY: Matthew Tait

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**
DRAWING TITLE: **CONSTRUCTION PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **PLN-02**
SHEET NO.



GENERAL NOTES

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SEDIMENTATION CONTROL SYSTEMS SHALL BE INSTALLED AT ANY CATCH BASIN THAT MAY BE IMPACTED BY SEDIMENT FROM CONSTRUCTION ACTIVITIES.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_PLN.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Pauf

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: CONSTRUCTION PLAN

PROJECT NO. 0082-0316
DRAWING NO. PLN-03
SHEET NO.

MATCH MARK - SEE DRAWING NO. PLN-03

LEGEND

FULL-DEPTH RECONSTRUCTION OF PAVEMENT. SEE TYPICAL SECTIONS

REMOVAL OF BITUMINOUS CONCRETE PAVEMENT (PAID FOR AS EARTH EXCAVATION). AREAS SHALL BE FURNISHED WITH TOPSOIL AND SEEDED.

GENERAL NOTES

1. A DOUBLE ROW OF SEDIMENT CONTROL BARRIER SHALL BE UTILIZED BETWEEN ANY DISTURBED AREA AND DOWNGRADIENT WETLAND OR WATERCOURSE WITHIN 50 FEET, UNLESS THERE WOULD BE AN ADVERSE IMPACT TO ADJACENT WETLANDS/WATERCOURSES DUE TO INSTALLATION OF A DOUBLE ROW (i.e. WOULD RESULT IN LARGER WETLAND/WATERCOURSE IMPACT).

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   SEDIMENTATION CONTROL SYSTEMS SHALL BE INSTALLED AT ANY CATCH BASIN THAT MAY BE IMPACTED BY SEDIMENT FROM CONSTRUCTION ACTIVITIES.

2. THE CONTRACTOR SHALL VERIFY FIELD DIMENSIONS AND ELEVATIONS OF PROPOSED NOISE WALL. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

   ALL POSTS SHALL HAVE COVERS AND ALL PANELS SHALL HAVE CAPS SUPPLIED BY THE MANUFACTURER AND APPROXED BY THE ENGINEER.

SELECTIVE CLEARING AND TRIMMING (20' OFFSET FROM RT 17 SB EOR)
THRIE BEAM ATTACHMENT - 2 EA.
REMOVE METAL BEAM RAIL - 387 LF
METAL BEAM RAIL (R-B MASH) - 322 LF
CUT BITUMINOUS CONCRETE PAVEMENT - 280 LF
R-B END ANCHORAGE-TYPE I - 1 EA
REMOVE METAL BEAM RAIL - 459 LF
SEDIMENTATION CONTROL SYSTEM - 704 LF
ADJUST EROSION CONTROL SYSTEMS AS NEEDED FOR CLEARING
CONSERVATION SEEDING FOR SLOPES
SEE LANDSCAPE PLANS FOR INVASIVE REMOVAL
REMOVE METAL BEAM RAIL - 515 LF
METAL BEAM RAIL (R-B MASH) - 485 LF
TRANSITION METAL BEAM RAIL (MD-B MASH) TO (R-B MASH)
REMOVE METAL BEAM RAIL - 125 LF
METAL BEAM RAIL (R-B MASH) - 98 LF
BITUMINOUS CONCRETE PARK CURBING - 400 LF
THRIE BEAM ATTACHMENT- 1 EA.
CONCRETE CURBING (PRECAST - 6" REVEAL) - 260 LF
REMOVE EXISTING TRAFFIC POLE
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
CONCRETE CURBING (PRECAST - 6" REVEAL) - 28 LF
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
PROPOSED TRAFFIC SIGNAL POST (SEE TRAFFIC PLANS)
CONCRETE SIDEWALK - 531 SF
BUS STOP TO BE TEMPORARILY RELOCATED DURING CONSTRUCTION
R-B END ANCHORAGE-TYPE II - 1 EA
CONCRETE CURBING (PRECAST - 6" REVEAL) - 94 LF
CUT BITUMINOUS CONCRETE PAVEMENT - 363 LF
LIMIT OF CONSTRUCTION STA 600+88
CONCRETE SIDEWALK - 1305 S.F.
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
SEDIMENTATION CONTROL SYSTEM - 285 LF
REMOVE METAL BEAM RAIL - 245 LF
METAL BEAM RAIL (R-B MASH) - 215 LF
CONCRETE CURBING (PRECAST - 6" REVEAL) - 255 LF
BITUMINOUS CONCRETE SIDEWALK - 26 SY
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
REMOVE EXISTING TRAFFIC POLE
CONCRETE CURBING (PRECAST - 6" REVEAL) - 10 LF
R-B END ANCHORAGE-TYPE I - 1 EA
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
CONCRETE CURBING (PRECAST - 6" REVEAL) - 62 LF
SEDIMENTATION CONTROL SYSTEM - 253 LF
R-B TERMINAL SECTION
PROPOSED TRAFFIC SIGNAL POST (SEE TRAFFIC PLANS)
REMOVE CABLE GUIDE RAIL - 325 LF
THRIE BEAM ATTACHMENT
SINGLE SLOPE PRECAST CONCRETE BARRIER (28" x 42") - 80 LF
BITUMINOUS CONCRETE PARK CURBING - 90 LF
BITUMINOUS CONCRETE PARK CURBING - 70 LF
SEE LANDSCAPE PLANS FOR SLOPE WORK ADJUST S.C.S. IN AREA AS NEEDED
CONSERVATION SEEDING FOR SLOPES
THRIE BEAM ATTACHMENT - 1 EA
METAL BEAM RAIL (R-B MASH) - 31 LF
MATCH MARK SEE DRAWING NO. PLN-05
REMOVE TREE
REMOVE TREE
CUT BITUMINOUS CONCRETE PAVEMENT - 131 LF
THRIE BEAM ATTACHMENT - 1 EA
METAL BEAM RAIL (R-B MASH) - 27 LF
THRIE BEAM BRIDGE ATTACHMENT - 1 EA (SEE MDS FOR THRIE BEAM MEDIAN ATTACHMENT)
METAL BEAM RAIL (MD-B MASH) - 31 LF
METAL BEAM RAIL (MD-B MASH) - 40 LF
THRIE BEAM BRIDGE ATTACHMENT (SEE MDS FOR THRIE BEAM MEDIAN ATTACHMENT)
THRIE BEAM ATTACHMENT - 1 EA.
THRIE BEAM ATTACHMENT - 2 EA.
END NOISE WALL
REMOVE METAL BEAM RAIL - 360 LF
METAL BEAM RAIL (R-B MASH) - 290 LF
SELECTIVE CLEARING AND TRIMMING (AS NEEDED)
METAL BEAM RAIL (R-B MASH QUARTER POST SPACING) - 190 LF
REMOVE METAL BEAM RAIL - 142 LF
R-B END ANCHORAGE-TYPE I - 1 EA
CONSTRUCT ACCESS DOOR IN NOISE WALL TO HYDRANT
DOOR TO SWING AWAY FROM ROUTE 17 (AT APPROX. STA 82+40)
CUT BITUMINOUS CONCRETE PAVEMENT - 370 LF
REMOVE METAL BEAM RAIL - 200 LF
METAL BEAM RAIL (R-B MASH) - 152 LF
REMOVE CABLE GUIDE RAIL - 139 LF
CONSERVATION SEEDING FOR SLOPES
SEE LANDSCAPE PLANS FOR INVASIVE REMOVAL
METAL BEAM RAIL (R-B MASH HALF POST SPACING) - 263 LF
PROPOSED NOISE WALL - APPROX. 409' LONG x 14' HIGH, SEE NOTE 2
SEDIMENTATION CONTROL SYSTEM - 440 LF
BITUMINOUS CONCRETE PARK CURBING - 400 LF
CONCRETE CURBING (PRECAST - 6" REVEAL) - 53 LF
CONCRETE SIDEWALK - 1208 SF
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
R-B END ANCHORAGE-TYPE I - 1 EA
BEGIN NOISE WALL
CONCRETE CURBING (PRECAST - 6" REVEAL) - 33 LF
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
CONCRETE CURBING (PRECAST - 6" REVEAL) - 48 LF
CONCRETE SIDEWALK - 303 SF
LIMIT OF CONSTRUCTION STA 609+05
CUT BITUMINOUS CONCRETE PAVEMENT - 50 LF
CONCRETE CURBING (PRECAST - 6" REVEAL) - 67 LF
CONCRETE SIDEWALK - 348 SF
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
R-B END ANCHORAGE-TYPE II - 1 EA
DETECTABLE WARNING SURFACE
CONCRETE SIDEWALK RAMP (SEE MISC. DETAILS)
SEDIMENTATION CONTROL SYSTEM - 425 LF
CONCRETE CURBING (PRECAST - 6" REVEAL) - 22 LF
CONCRETE SIDEWALK - 1374 SF
CONCRETE CURBING (PRECAST - 6" REVEAL) - 145 LF
REMOVE CABLE GUIDE RAIL - 93 LF
METAL BEAM RAIL (R-B MASH) - 83 LF
CONSERVATION SEEDING FOR SLOPES
SEE LANDSCAPE PLANS FOR INVASIVE REMOVAL

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: WJPG
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SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_PLN.dgn

SIGNATURE/ BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY: Matthew Pail

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**
DRAWING TITLE: **CONSTRUCTION PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **PLN-04**
SHEET NO.

MATCH MARK - SEE DRAWING NO. PLN-04

CONSERVATION SEEDING FOR SLOPES (ON CLEARED 2:1 SLOPE)

REMOVE CABLE GUIDE RAIL - 325 LF

SEDIMENTATION CONTROL SYSTEM - 385 LF

METAL BEAM RAIL (R-B MASH) - 256 LF

BITUMINOUS CONCRETE PARK CURBING - 325 LF

BITUMINOUS CONCRETE PARK CURBING - 434 LF

METAL BEAM RAIL END ANCHORAGE - TYPE I

CUT BITUMINOUS CONCRETE PAVEMENT - 132 LF

REMOVE METAL BEAM RAIL - 675 LF

METAL BEAM RAIL (MD-B MASH) - 675 LF

REMOVE CABLE GUIDE RAIL - 710 LF

METAL BEAM RAIL (R-B MASH) - 710 LF

SEDIMENTATION CONTROL SYSTEM - 182 LF

CONSERVATION SEEDING FOR SLOPES (ON CLEARED 2:1 SLOPE)

CUT BITUMINOUS CONCRETE PAVEMENT - 280 LF

METAL BEAM RAIL (R-B MASH) - 177 LF

METAL BEAM RAIL END ANCHORAGE - TYPE I

20'MIN. OFFSET FROM EOTW TO END ANCHOR

MATCH MARK - SEE DRAWING NO. PLN-06

GENERAL NOTES

1. A DOUBLE ROW OF SEDIMENT CONTROL BARRIER SHALL BE UTILIZED BETWEEN ANY DISTURBED AREA AND DOWNGRADIENT WETLAND OR WATERCOURSE WITHIN 50 FEET, UNLESS THERE WOULD BE AN ADVERSE IMPACT TO ADJACENT WETLANDS/WATERCOURSES DUE TO INSTALLATION OF A DOUBLE ROW (i.e. WOULD RESULT IN LARGER WETLAND/WATERCOURSE IMPACT).

   ADDITIONAL EROSION CONTROL BARRIERS (DOUBLE ROW OF SCS) MAY ALSO BE REQUIRED WITHIN THE PROJECT AREA. FACTORS TO BE REVIEWED BY THE ENGINEER INCLUDE BUT ARE NOT LIMITED TO: THE CONTRIBUTING DISTURBED AREA, DRAINAGE AREA, LENGTH OF SLOPE, AND FLOW CONDITIONS TO MAINTAIN SHEET FLOW. IF DETERMINED NECESSARY, THE ENGINEER WILL DIRECT THE CONTRACTOR TO INSTALL AND MAINTAIN ADDITIONAL ROWS OF EROSION CONTROL BARRIER (OR EQUIVALENT).

   SEDIMENTATION CONTROL SYSTEMS SHALL BE INSTALLED AT ANY CATCH BASIN THAT MAY BE IMPACTED BY SEDIMENT FROM CONSTRUCTION ACTIVITIES.

LEGEND

FULL-DEPTH RECONSTRUCTION OF PAVEMENT. SEE TYPICAL SECTIONS

REMOVAL OF BITUMINOUS CONCRETE PAVEMENT (PAID FOR UNDER EARTH EXCAVATION). AREAS SHALL BE FURNISHED WITH TOPSOIL AND SEEDED.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_PLN.dgn

SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING

APPROVED BY:

Matthew Pond

PROJECT TITLE:

RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **CONSTRUCTION PLAN**

PROJECT NO. **0082-0316**

DRAWING NO. **PLN-05**

SHEET NO.

MATCH MARK - SEE DRAWING NO. PLN-05

REMOVE TREE (TYP.)
3 TOTAL ON SHEET

ATTACH METAL BEAM RAIL (MD-B MASH) TO IMPACT ATTENUATOR

REMOVE EXISTING ATTENUATOR AND CONCRETE SLAB
SEE MISC. DETAILS FOR PAVEMENT STRUCTURE

REMOVE CABLE GUIDE RAIL - 250 LF

METAL BEAM RAIL (R-B MASH) - 263 LF

REMOVE METAL BEAM RAIL - 384 LF

METAL BEAM RAIL (MD-B MASH) - 384 LF

R-B END ANCHORAGE-TYPE I - 1 EA

20' FROM E.O.T.W.

IMPACT ATTENUATION SYSTEM (MEDIAN/GORE)

CUT BITUMINOUS CONCRETE PAVEMENT - 92 LF

LIMITS OF CONSTRUCTION
BEGIN NORTHBOUND MILLING/STRIPING STA 400+39
END SOUTHBOUND MILLING/STRIPING STA 530+41
SOUTH MAIN STREET

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0 40 80
SCALE 1"=40'

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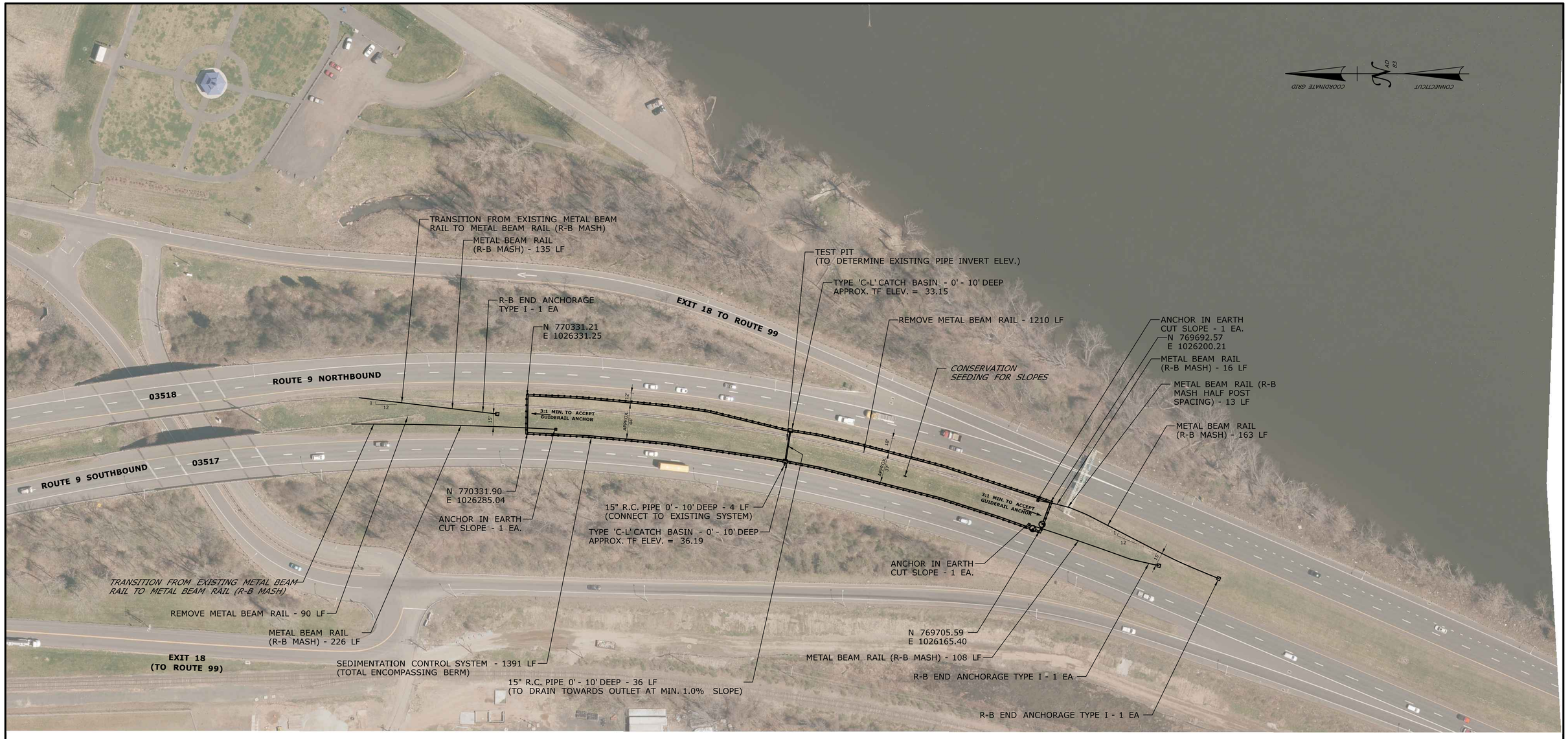
SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Tait

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **CONSTRUCTION PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **PLN-06**
SHEET NO.



CONTAMINATED SOIL PLAN

1. THE INTENT OF THIS PLAN IS TO PROVIDE A FINAL STORAGE LOCATION FOR ALL EXCAVATION OF EXCESS CONTAMINATED SOIL IN THIS PROJECT. SEE MISCELLANEOUS DETAILS FOR TYPICAL SECTION.

2. CONTAMINATED SOIL SHALL TAKE PRIORITY AT THIS SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE REMOVAL OF NON-CONTAMINATED SOIL OFFSITE. ALL EXCAVATION OF EARTH FOR THIS PROJECT WILL BE PAID FOR AS "EARTH EXCAVATION". WITH THE EXCEPTION OF THE PRESENCE OF CONCRETE ROADWAY STRUCTURE ON ROUTE 9, WHERE THE REMOVAL OF THAT STRUCTURE WILL BE PAID FOR AS, "REMOVAL OF CONCRETE PAVEMENT".

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: WJPG
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SCALE IN FEET 0 60 120
SCALE 1"=60'

STATE OF CONNECTICUT
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Filename: ...\0082-0316_Contaminated_PLN.dgn

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APPROVED BY: Matthew Pail

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: CONSTRUCTION PLAN

PROJECT NO. 0082-0316
DRAWING NO. PLN-07
SHEET NO.

LEGEND

- COASTAL JURISDICTION LINE (CJL)
- HTL — HIGH TIDE LINE (HTL)
- MHW — MEAN HIGH WATER (MHW)
- MLW — MEAN LOW WATER (MLW)

END STATE PROJECT NUMBER 0082-0316
END NORTHBOUND MILLING
BEGIN SOUTHBOUND MILLING
ROUTE 9 BASELINE - STA. 136+00

TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
MANHOLE FRAME AND COVER
RESET MANHOLE
MANHOLE FRAME AND COVER
RESET MANHOLE

TYPE 'C-L' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN

85 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
33' - 15" R.C. PIPE - 0' - 10' DEEP
8' - 15" R.C. PIPE - 0' - 10' DEEP
MANHOLE - 0' - 10' DEEP
TEST PIT
MANHOLE INVERT ELEVATIONS NEED TO BE VERIFIED
43' - 15" R.C. PIPE - 0' - 10' DEEP
PERMANATELY CLOSE HARBOR DRIVE ON-RAMP TO ROUTE 9 NORTHBOUND
73' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
33 L.F. - REMOVE EXISTING PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
7' - 15" R.C. PIPE - 0' - 10' DEEP
72' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN - 0' - 10' DEEP
10' - 15" R.C. PIPE - 0' - 10' DEEP

REMOVE DRAINAGE STRUCTURE - 0' TO 10' DEEP
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 27 L.F.
REMOVE DRAINAGE STRUCTURE - 0' TO 10' DEEP
38' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP

CONNECTICUT RIVER

105 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
RESET MANHOLE
MANHOLE FRAME AND COVER
12 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
38 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER

CLEAN EXISTING CATCH BASIN
RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
TYPE 'C-L' CATCH BASIN TOP

TYPE 'C' CATCH BASIN - 0' - 10' DEEP
ABANDONED 10" GAS MAIN
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
55' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
33' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 33 L.F.
REMOVE DRAINAGE STRUCTURE - 0' TO 10' DEEP

64' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP

RESET MANHOLE
MANHOLE FRAME AND COVER

TEST PIT
INVERT ELEVATION NEEDS TO BE VERIFIED
8' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-M' CATCH BASIN - 0' - 10' DEEP
136' - 15" R.C. PIPE - 0' - 10' DEEP

MODIFIED RIPRAP
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 24 L.F.
TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
REMOVE DRAINAGE STRUCTURE - 0' TO 10' DEEP
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 30 L.F.
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 13 L.F.
REMOVE DRAINAGE STRUCTURE - 0' TO 10' DEEP
REMOVE EXISTING PIPE - 0' TO 10' DEEP - 115 L.F.

MATCH MARK - SEE DRAWING NO. DRG-02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_DRG.dgn

SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY: Matthew Tait

PROJECT TITLE: **RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND**

TOWN: **MIDDLETOWN**
DRAWING TITLE: **DRAINAGE PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **DRG-01**
SHEET NO.

COASTAL JURISDICTION LINE (CJL)

HIGH TIDE LINE (HTL)
MEAN HIGH WATER (MHW)
MEAN LOW WATER (MHW)

43' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP

38' - REMOVE EXISTING PIPE - 0' - 10' DEEP
(REMOVE PIPE UNDER ROUTE 9, PLUG REMAINING PIPE)
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP
44' - 15" R.C. PIPE - 0' - 10' DEEP
REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
28' - REMOVE EXISTING PIPE - 0' - 10' DEEP
FEMA 100-YEAR FLOOD (CALCULATED)
45' - 15" R.C. PIPE - 0' - 10' DEEP
8' - 15" C.C.M. PIPE - 0' - 20' DEEP
MANHOLE - 0' - 20' DEEP
TF = 25.00
INV (IN - R.C.P.) = 15.00
INV (IN - H.D.P.E.) = 10.04
INV (OUT) = 9.90
BT = 9.90

HARBOR DRIVE

TEST PIT
EXISTING PIPE ELEVATIONS NEED TO BE VERIFIED

8' - 15" C.C.M. PIPE - 0' - 20' DEEP
50' - 15" R.C. PIPE - 10' - 20' DEEP
MANHOLE - 10' - 20' DEEP
207' - 15" R.C. PIPE - 10' - 20' DEEP

ROUTE 9 NB
ROUTE 9 SB

CURED-IN-PLACE PIPE LINING - 236 LF

CONFIRM EXISTING PIPE MATERIAL
CLEAN EXISTING CULVERT - 12" TO 42" - 236 L.F.
8' - 15" C.C.M. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
31' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'P-R-W' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP
TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
125' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
27' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'P-R-W' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP

LIMIT OF CONSTRUCTION
EXIT 14
STA 74+65

CONFIRM PIPE SLOPE

UNION STREET

END PROPOSED BRIDGE #00638 APPROACH SLAB
ROUTE 9 BASELINE - STA. 119+92

TYPE 'C-M 2' CATCH BASIN - 0' - 10' DEEP
57' - 15" R.C. PIPE - 0' - 10' DEEP

START PROPOSED BRIDGE #00638 APPROACH SLAB
ROUTE 9 BASELINE - STA. 116+95

TYPE 'C-M' CATCH BASIN - 0' - 10' DEEP
44' - 15" R.C. PIPE - 0' - 10' DEEP

REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
95' - 15" R.C. PIPE - 0' - 10' DEEP
45' - 15" R.C. PIPE - 0' - 10' DEEP
COASTAL JURISDICTION LINE (CJL)
31' - REMOVE EXISTING PIPE - 0' - 10' DEEP
(REMOVE PIPE UNDER ROUTE 9, PLUG REMAINING PIPE)
REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP

RIVER ROAD

TYPE 'C-M' CATCH BASIN - 0' - 10' DEEP
197' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-M' CATCH BASIN - 0' - 10' DEEP
32' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'P-R-W' CATCH BASIN DOUBLE GRATE TYPE 1 - 0' - 10' DEEP

PROPOSED RETAINING WALL (SEE STRUCTURE DRAWINGS)
58' - 15" R.C. PIPE - 0' - 10' DEEP

ROUTE 17 NB
ROUTE 9 N.B.
ROUTE 9 S.B.

MATCH MARK - SEE DRAWING NO. DRG-01

MATCH MARK - SEE DRAWING NO. DRG-03

UTILITY TEST PIT DATA

GAS (EVERSOURCE)

TEST PIT #	BASELINE STATION	BASELINE OFFSET	NORTHING	EASTING	GROUND ELEVATION (FT)	TOP OF PIPE ELEVATION (FT)	UTILITY DESCRIPTION	RELOCATION ANTICIPATED
TP-5	117+47.64	29.86'	763939.588	1029040.206	24.10	21.13	6" STEEL	YES
TP-6	116+48.17	53.36	763843.196	1029074.108	22.30	18.49	6" STEEL	YES

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SCALE 1"=40'

STATE OF CONNECTICUT
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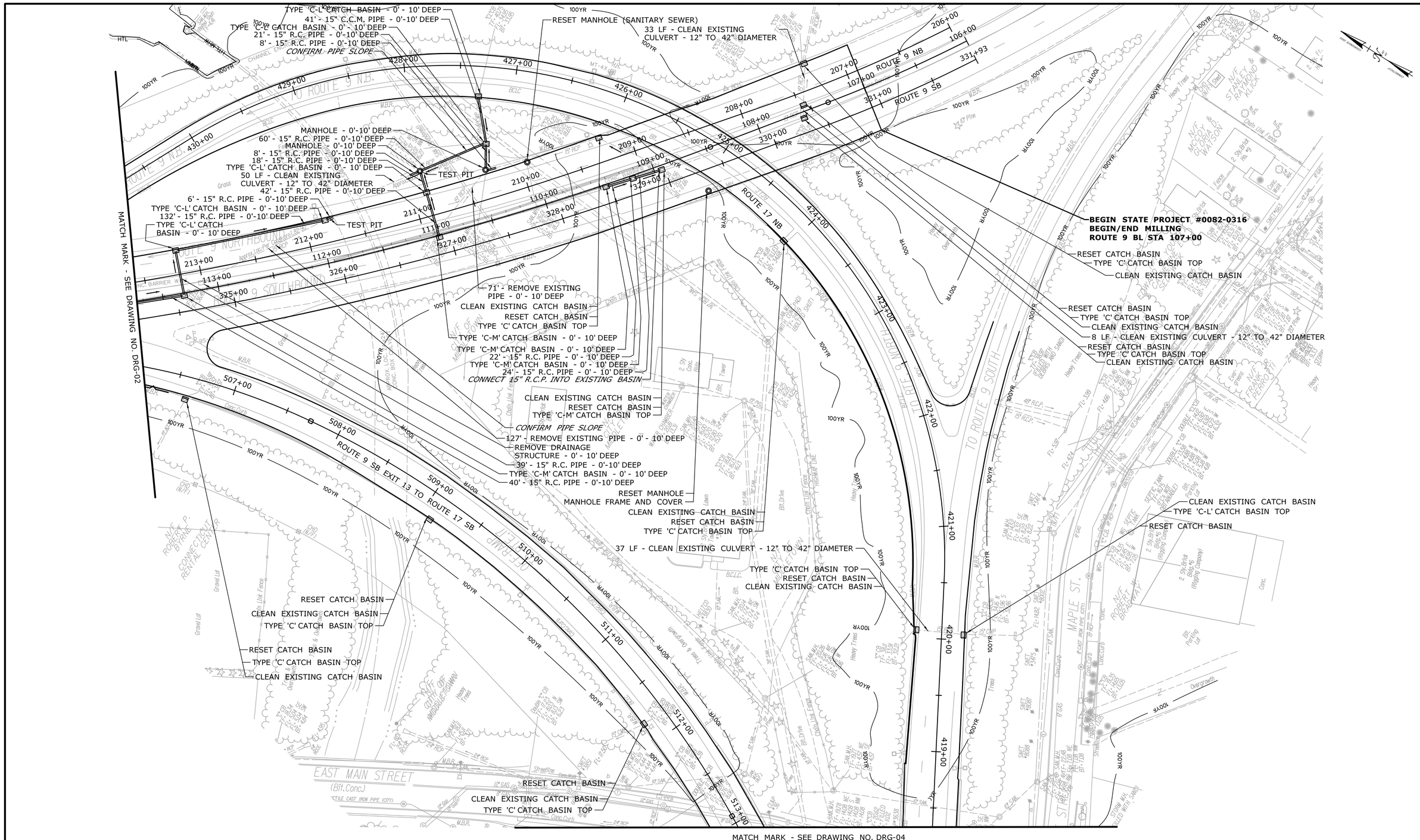
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SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Paul

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**
DRAWING TITLE: **DRAINAGE PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **DRG-02**
SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**

APPROVED BY: Matthew Pad

PROJECT TITLE: **RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND**

TOWN: **MIDDLETOWN**

DRAWING TITLE: **DRAINAGE PLAN**

PROJECT NO. **0082-0316**

DRAWING NO. **DRG-03**

SHEET NO.

MATCH MARK - SEE DRAWING NO. DRG-03

UTILITY TEST PIT DATA

GAS (EVERSOURCE)

TEST PIT #	BASELINE		NORTHING	EASTING	GROUND ELEVATION (FT)	TOP OF PIPE ELEVATION (FT)	UTILITY DESCRIPTION	RELOCATION ANTICIPATED
	STATION	OFFSET						
TP-1	603+18.21	37.61	762756.822	1028590.142	33.40	30.56	6" STEEL	NO

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BEGIN MILLING & OVERLAY
MAIN STREET EXTENSION
STA 600+88

REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP
45 LF - REMOVE EXISTING PIPE - 0' - 10' DEEP

TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
TF = 30.75
INV (IN) = 27.24
INV (OUT) = 26.94
SUMP = 24.94

22' - 15" R.C. PIPE - 0' - 10' DEEP

TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
TF = 28.55
INV (IN) = 26.17
INV (OUT) = 25.92
SUMP = 23.92

PAVED APRON
47' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN - 0' - 10' DEEP
TF = 31.92
INV (IN) = 25.40
INV (OUT) = 23.99
SUMP = 21.99

40' - 15" C.C.M. PIPE - 0' - 10' DEEP
MANHOLE - 0' - 20' DEEP
TF = 19.79
INV (IN - SOUTH) = 9.59
INV (IN - WEST) = 9.80
INV (OUT) = 8.83
BT = 8.83
8' - 24" R.C. PIPE - 0' - 10' DEEP
8' - 15" R.C. PIPE - 0' - 10' DEEP
25 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
RESET CATCH BASIN

SPECIAL ROUND TYPE 'C' CATCH BASIN - 0' - 10' DEEP
ABANDON DRAINAGE STRUCTURE
42' - 15" R.C. PIPE - 0' - 10' DEEP
6' - 15" R.C. PIPE - 0' - 10' DEEP
PAVED APRON
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
27' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
RESET MANHOLE (SANITARY SEWER)
12' - 15" R.C. PIPE - 0' - 10' DEEP
8' - 18" R.C. PIPE - 0' - 20' DEEP
TEST PIT
MANHOLE - OVER 20' DEEP
8' - 18" R.C. PIPE - 0' - 20' DEEP
20' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C-L' CATCH BASIN - 0' - 10' DEEP
PAVED APRON
37' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE 2 - 0' - 10' DEEP
TF = 30.75
INV (IN) = 26.65
INV (OUT) = 26.55
SUMP = 24.55
56' - 15" C.C.M. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN - 0' - 10' DEEP
36 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER

MATCH MARK
SEE DRAWING NO. DRG-05

MODIFIED RIPRAP (TO ARMOR LEAKOFF)

119' - 15" R.C. PIPE - 0' - 10' DEEP
TYPE 'C' CATCH BASIN - 0' - 10' DEEP
TF = 32.20
INV (OUT) = 28.18
SUMP = 26.18
TYPE 'C-L' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
RESET CATCH BASIN
22 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
MANHOLE FRAME AND COVER
RESET MANHOLE
30 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
50 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
MANHOLE FRAME AND COVER
RESET MANHOLE
63 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
16 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN

END MILLING & OVERLAY
MAIN STREET EXTENSION
STA 609+05

RESET MANHOLE
MANHOLE FRAME AND COVER
20 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN
TYPE 'C-L' CATCH BASIN TOP
125' - 15" R.C. PIPE - 0' - 10' DEEP
RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
28 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER

CLEAN EXISTING CATCH BASIN
RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
43 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
RESET MANHOLE (SANITARY SEWER)
TYPE 'C' CATCH BASIN - 0' - 10' DEEP
TF = 31.78
INV (OUT) = 27.90
SUMP = 25.90

RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
8' - 15" R.C. PIPE - 0' - 10' DEEP

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\HW_MSH_0082-0316_DRG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Pauf

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: DRAINAGE PLAN

PROJECT NO. 0082-0316
DRAWING NO. DRG-04
SHEET NO.

MATCH MARK - SEE DRAWING NO. DRG-04

TYPE 'C' CATCH BASIN - 0' - 10'
31' - 12" C.C.M. PIPE - 0' - 10' DEEP

57 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
CLEAN EXISTING CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN

RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
82 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
CLEAN EXISTING CATCH BASIN

RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN
87 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
RESET CATCH BASIN
TYPE 'C' CATCH BASIN TOP
CLEAN EXISTING CATCH BASIN

MATCH MARK - SEE DRAWING NO. DRG-06

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pugh

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: DRAINAGE PLAN

PROJECT NO. 0082-0316
DRAWING NO. DRG-05
SHEET NO.

MATCH MARK - SEE DRAWING NO. DRG-05

24 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
CLEAN EXISTING CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
168 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
MANHOLE FRAME AND COVER
RESET MANHOLE
8 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
CLEAN EXISTING CATCH BASIN
TYPE 'C' DOUBLE GRATE TYPE 1 CATCH BASIN TOP
RESET CATCH BASIN
MANHOLE FRAME AND COVER
RESET MANHOLE
24 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
MANHOLE FRAME AND COVER
RESET MANHOLE

CLEAN EXISTING CATCH BASIN
TYPE 'C' CATCH BASIN TOP
RESET CATCH BASIN
28 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
57 LF - CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER
CLEAN EXISTING CATCH BASIN
TYPE 'C' DOUBLE GRATE TYPE 1 CATCH BASIN TOP
RESET CATCH BASIN

100YR

LIMITS OF CONSTRUCTION
BEGIN NORTHBOUND MILLING/STRIPING STA 400+39
END SOUTHBOUND MILLING/STRIPING STA 530+41
SOUTH MAIN STREET

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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APPROVED BY: Matthew Tait

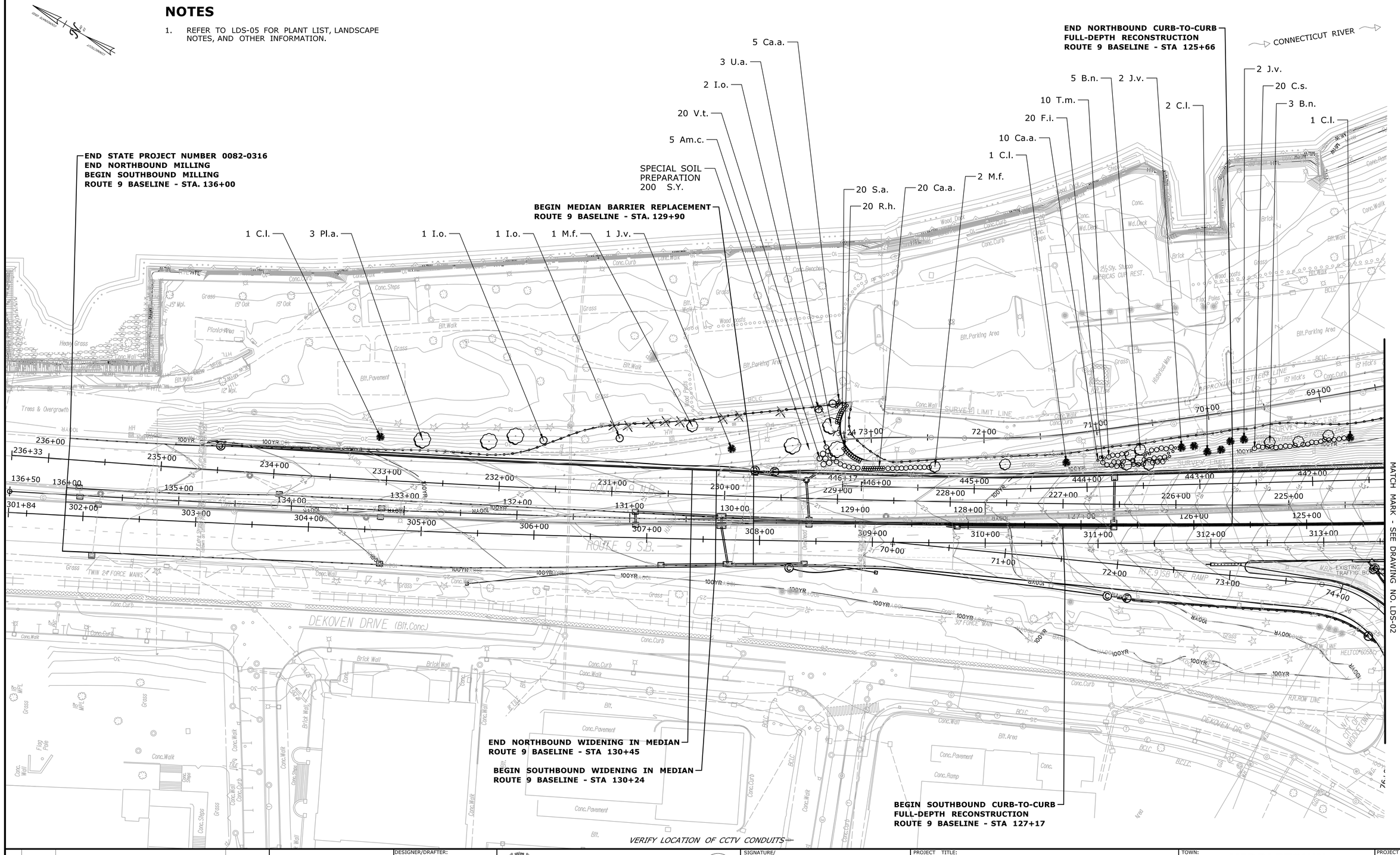
PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: DRAINAGE PLAN

PROJECT NO. 0082-0316
DRAWING NO. DRG-06
SHEET NO.

NOTES

1. REFER TO LDS-05 FOR PLANT LIST, LANDSCAPE NOTES, AND OTHER INFORMATION.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SF
CHECKED BY: SB
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\DGN\LS..MSH..0082-0316..PLN.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Vail

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: LANDSCAPE DESIGN PLAN

PROJECT NO. 0082-0316
DRAWING NO. LDS-01
SHEET NO.

NOTES

1. REFER TO LDS-05 FOR PLANT LIST, LANDSCAPE NOTES, AND OTHER INFORMATION.

GRAVEL MULCH 300 S.Y.
GRAVEL MULCH 1,100 S.Y.
7 B.n.
1 A.s.
FIBER ROLL 2 ROWS 600 L.F. TOTAL
3 I.o.
20 A.m.
2 Q.p.
100 A.r.
100 B.l.
10 Am.c.
3 M.f.
25 R.m.
3 A.s.
20 A.m.
SPECIAL SOIL PREPARATION 50 S.Y.
20 I.v.
2 U.a.
3 I.o.
1 U.a.
1 *A.r.
10 Am.c.
3 P.a.
30 C.s.
1 A.s.
SELECTIVE CLEARING AND THINNING AS DIRECTED
CONTROL & REMOVAL OF INVASIVE VEGETATION 500 S.Y.
8 P.a.
8 P.p.
30 Am.c.
RIVER ROAD
HARBOR DRIVE
ROUTE 17 NB
ROUTE 9 NB
ROUTE 9 SB
UNION STREET
MATCH MARK - SEE DRAWING NO. LDS-01
MATCH MARK - SEE DRAWING LDS-03
GRAVEL MULCH 360 S.Y.
LIMIT OF CONSTRUCTION ROUTE 9 SB EXIT 14 STA 74+65
END PROPOSED BRIDGE #00638 ROUTE 9 BASELINE - STA. 119+95
START PROPOSED BRIDGE #00638 ROUTE 9 BASELINE - STA. 116+93
2 Q.p.
100 A.r.
100 B.l.
1 T.a.
1 T.a.
1 M.f.
3 *A.r.
2 U.a.
3 Q.p.
SELECTIVE CLEARING AND THINNING AS DIRECTED
PROTECTIVE FENCING 200 L.F.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

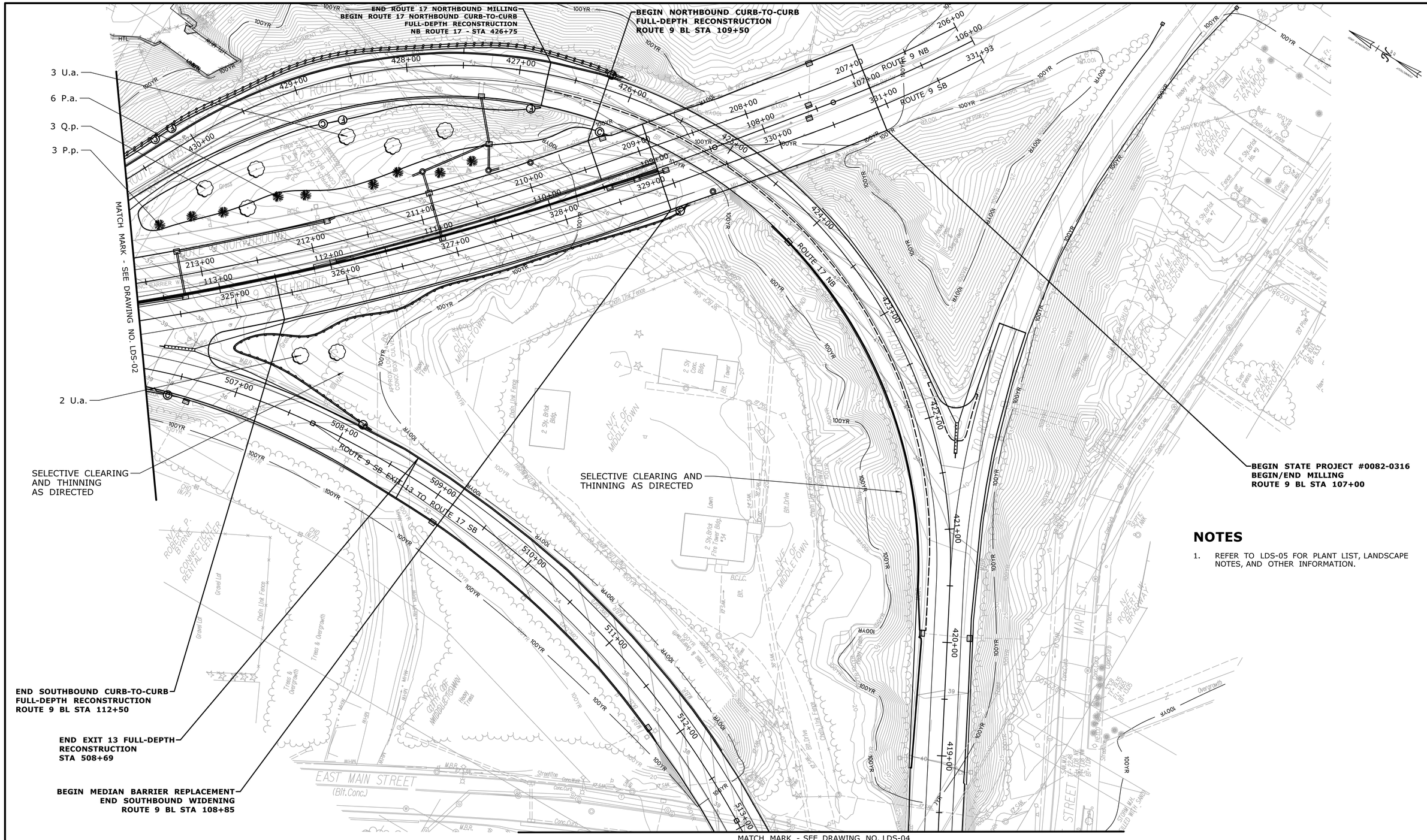
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SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Vaz

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: LANDSCAPE DESIGN PLAN

PROJECT NO. 0082-0316
DRAWING NO. LDS-02
SHEET NO.



NOTES

1. REFER TO LDS-05 FOR PLANT LIST, LANDSCAPE NOTES, AND OTHER INFORMATION.

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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\DGN\LS..MSH..0082-0316..PLN.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Paul

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
PROJECT NO. 0082-0316
DRAWING NO. LDS-03
DRAWING TITLE: LANDSCAPE DESIGN PLAN
SHEET NO.

MATCH MARK - SEE DRAWING NO. LDS-03

NOTES

1. REFER TO LDS-05 FOR PLANT LIST, LANDSCAPE NOTES, AND OTHER INFORMATION.

LIMIT OF TREE CLEARING - 20'OFFSET FROM RT 17 SB

3 *A.r.

CONTROL AND REMOVAL 2,000 S.Y. THIS SHEET

GRAVEL MULCH 115 S.Y.

FIBER ROLL 105 L.F.

3 Pl.a.

10 I.g.

GRAVEL MULCH 70 S.Y.

FIBER ROLL 105 L.F.

10 B.n.

10 I.g.

1 P.p

10 V.d.

1 C.l.

2 M.f.

3 Pl.a.

20 A.m.

1 M.s.

5 V.d.

3 Am.c.

5 *A.r.

40 C.sp.

1 P.p.

2 M.f.

10 V.d.

1 C.l.

20 A.m.

20 M.p.

40 R.v.

PROTECTIVE FENCING 100 L.F.

1 M.s.

3 P.a.

LIMIT OF CONSTRUCTION

LIMIT OF CONSTRUCTION

40 R.v.

20 M.p.

40 I.s.

2 Q.p.

3 T.a.

SPECIAL SOIL PREPARATION 240 S.Y.

20 A.t.

3 Q.p.

30 A.t.

20 A.r.

20 B.l.

45 V.t.

35 V.d.

5 P.a.

FIBER ROLL 50 L.F.

GRAVEL MULCH 35 S.Y.

MATCH MARK SEE DRAWING NO. LDS-05

5 P.p.

40 I.s.

35 V.d.

FIBER ROLL 50 L.F.

GRAVEL MULCH 55 S.Y.

3 M.s.

15 P.f.

15 P.f.

15 An.s.

3 M.f.

SELECTIVE CLEARING AND THINNING AS DIRECTED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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APPROVED BY: Matthew Vaz

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: LANDSCAPE DESIGN PLAN

PROJECT NO. 0082-0316

DRAWING NO. LDS-04

SHEET NO.



PLANT LIST

TREES

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	SPACING	COMMENTS
Am.c.	Amelanchier canadensis	Shadblow Serviceberry	4'-5' Ht. B.B.	58	7' On Center	
*A.r.	Acer rubrum	Red Maple	2"-2 1/2" Cal. B.B.	15	Field Locate	
A.r.	Acer rubrum	Red Maple	3'-4' Ht. Whips Cont.	220	5' On Center	
A.s.	Acer saccharum	Sugar Maple	2"-2 1/2" Cal. B.B.	5	Field Locate	
B.l.	Betula lenta	Sweet Birch	3'-4' Ht. B.B.	220	5' On Center	
B.n.	Betula nigra	River Birch	6'-8' Ht. B.B.	25	Field Locate	Single Stem
C.l.	Cupressocyparis leyandii	Leyland Cypress	5'-6' Ht. B.B.	17	Field Locate	
I.o.	Ilex opaca	American Holly	6'-8' Ht. B.B.	10	Field Locate	
J.v.	Juniperus virginiana	Eastern Redcedar	5'-6' Ht. B.B.	5	Field Locate	
M.f.	Malus floribunda	Japanese Flowering Crabapple	2"-2 1/2" Cal. B.B.	20	Field Locate	
M.s.	Magnolia stellata	Star Magnolia	5'-6' Ht. B.B.	8	Field Locate	
P.a.	Picea abies	Norway Spruce	6'-8' Ht. B.B.	33	Field Locate	
Pl.a.	Platanus acerifolia	London Planetree	2"-2 1/2" Cal. B.B.	12	Field Locate	
P.p.	Picea pungens	Colorado Spruce	6'-8' Ht. B.B.	18	Field Locate	
Q.p.	Quercus palustris	Pin Oak	2 1/2"-3" Cal. B.B.	25	Field Locate	
T.a.	Tilia americana	American Linden	2 1/2"-3" Cal. B.B.	7	Field Locate	
U.a.	Ulmus americana 'Princeton'	Princeton American Elm	2.5"-3" Cal. B.B.	13	Field Locate	

SHRUBS

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	SPACING	COMMENTS
A.m.	Aronia melanocarpa	Black Chokeberry	2'-3' Ht. B.B.	110	4' On Center	
C.s.	Cornus sericea	Red Osier Dogwood	24"-36" Ht. B.B.	50	4' On Center	
F.i.	Forsythia intermedia	Border Forsythia	2'-3' Ht. B.B.	20	4' On Center	
I.g.	Ilex glabra	Inkberry	24"-36" Ht. B.B.	20	4' On Center	
I.v.	Ilex verticillata	Common Winterberry	18"-24" Ht. B.B.	20	4' On Center	
M.p.	Myrica pensylvanica	Northern Bayberry	36"-48" Ht. B.B.	65	4' On Center	
P.f.	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla	2 Gal. Container	45	4' On Center	
R.m.	Rhododendron maximum	Rosebay Rhododendron	3'-4' Ht. B.B.	25	4' On Center	
R.v.	Rosa virginiana	Virginia Rose	15"-18" Spread	80	4' On Center	
T.m.	Taxus media 'Densiformis'	Dense Spreading Yew	24"-30" Ht. B.B.	10	4' On Center	
V.a.	Viburnum acerifolium	Mapleleaf Viburnum	2'-3' Ht. B.B.	10	4' On Center	
V.d.	Viburnum dentatum	Arrowwood	24"-36" Ht. B.B.	95	4' On Center	
V.t.	Viburnum tomentosum	Doublefile Viburnum	2'-3' Ht. B.B.	65	4' On Center	

HERBACEOUS MATERIAL

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	SPACING	COMMENTS
A.n.	Aster novae 'Angliae'	New England Aster	1 Gal. Container	15		
An.s.	Andropogon scoparium	Little Bluestem	1 Gal. Container	15		
A.t.	Asclepias tuberosa	Butterfly Weed	1 Gal. Container	50		
Ca.a.	Calamagrostis acutiflora 'Stricta'	Stricta Reed Grass	1 Gal. Container	35		
C.sp.	Carex Species	Sedge	1 Gal. Container	40		Pensylvanica
I.s.	Iris sibirica	Siberian Iris	1 Gal. Container	80		
R.h.	Rudbeckia hirta	Black-Eyed Susan	1 Gal. Container	20		
S.a.	Sedum 'Autumn Joy'	Autumn Joy Sedum	1 Gal. Container	20		

SUPPLEMENTAL ITEMS

ITEM #	NAME	QTY	COMMENTS
0952051A	Control and Removal of Invasive Vegetation	2,500 S.Y.	
0949315A	Fiber Roll	1,020 L.F.	
0949000.10A	Gravel Mulch	2,140 S.Y.	
0949111A	Protective Fencing	300 L.F.	
0949160A	Special Soil Preparation	1,190 S.Y.	
0949000	Wood Chip Mulch	1,800 S.Y.	

NOTES

1. "*" DENOTES PLANTINGS WITH TWO DIFFERENT SIZES.
2. ALL SHRUBS MUST CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK FOR DECIDUOUS SHRUBS, CHAPTER THREE, AND MEET MINIMUM CONTAINER SIZE, ROOT MASS, AND NUMBER OF CANES FOR THE TYPE AND HEIGHT SPECIFIED.
3. LIMIT OF WORK MAY BE OUTSIDE OF THE LIMITS OF GRADING.
4. SELECTIVE CLEARING AND THINNING TO BE PAID FOR UNDER THE LUMP SUM ITEM 0952001A. SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

LEGEND

- EXISTING TREE TO BE REMOVED
- FIBER ROLL
- GRAVEL MULCH

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\DGN\LS_MSH_0082-0316_PLN.dgn

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OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pail

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: LANDSCAPE DESIGN PLAN

PROJECT NO. 0082-0316
DRAWING NO. LDS-05
SHEET NO.

MATCH MARK - SEE DRAWING NO. LDS-05

1 Q.p.
3 C.l.
5 V.a.
SELECTIVE CLEARING AND THINNING AS DIRECTED
5 V.a.
1 Q.p.
15 P.f.
3 M.f.
1 Pl.a.
2 T.a.
3 M.s.

ROUTE 17 SB
ROUTE 17 NB
ROUTE 17
SOUTH MAIN STREET
MILL STREET
LOVELAND STREET
100YR

NOTES

1. REFER TO LDS-05 FOR PLANT LIST, LANDSCAPE NOTES, AND OTHER INFORMATION.

LIMITS OF CONSTRUCTION
BEGIN NORTHBOUND MILLING/STRIPING STA 400+71
END SOUTHBOUND MILLING/STRIPING
SOUTH MAIN STREET

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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STATE OF CONNECTICUT
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SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Tait

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**
DRAWING TITLE: **LANDSCAPE DESIGN PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **LDS-06**
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL SEDIMENTATION CONTROL SYSTEM
2. CLEARING AND GRUBBING
3. ESTABLISH NEW TRAFFIC PATTERN
4. CONSTRUCT DRAINAGE
5. RELOCATE EXISTING SIGNS WHERE APPLICABLE
6. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
7. STABILZE DISTRUBED AREA
8. CONSTRUCT CURBING

LEGEND

FULL DEPTH RECONSTRUCTION

100YR — FEMA 100-YEAR FLOOD (CALCULATED)

TRAFFIC DRUMS

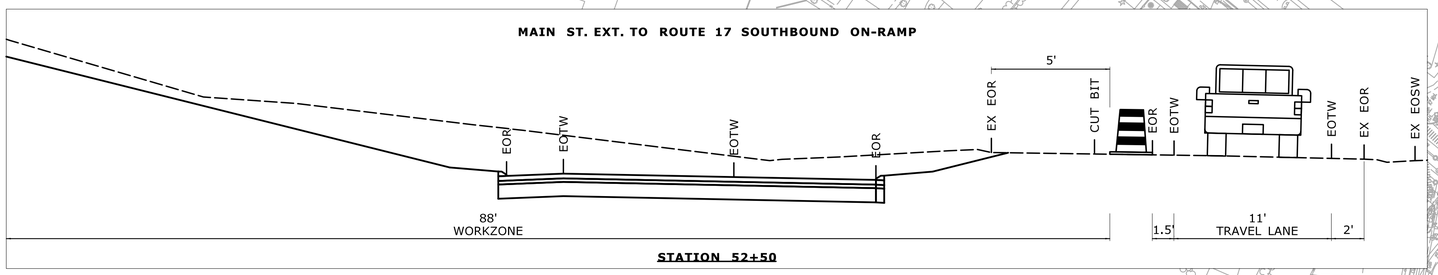
GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11'IN WIDTH WITH 1' SHOULDERS

STAGE 1A

FULL DEPTH RECONSTRUCTION OF THE ROUTE 17 SOUTHBOUND ON-RAMP

CUT BITUMINOUS CONCRETE PAVEMENT

CUT BITUMINOUS CONCRETE PAVEMENT



STAGE 1A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB

CHECKED BY: SDH

SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:
Matthew Ford

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316

DRAWING NO. STG-01

SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL SEDIMENTATION CONTROL SYSTEM
2. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
3. OVERLAY 2" CURB-TO-CURB
4. CONSTRUCT CURBING ON ON-RAMP
5. INSTALL PAVEMENT MARKINGS
6. OPEN NEWLY CONSTRUCTED ON-RAMP TO THRU TRAFFIC
7. EXCAVATE EXISTING ON-RAMP
8. CONSTRUCT DRAINAGE
9. CONSTRUCT SIDEWALK AND RAMPS
10. CONSTRUCT CURBING ON MAIN STREET EXTENSION
11. INSTALL GUIDERAIL

LEGEND

REMOVAL OF EXISTING ON-RAMP

MILL AND OVERLAY

100YR — FEMA 100-YEAR FLOOD (CALCULATED)

TRAFFIC DRUMS

GENERAL NOTES:
- THE REMAINING FULL DEPTH RECONSTRUCTION OF THE ON-RAMP SHALL BE COMPLETED AS NIGHT WORK.

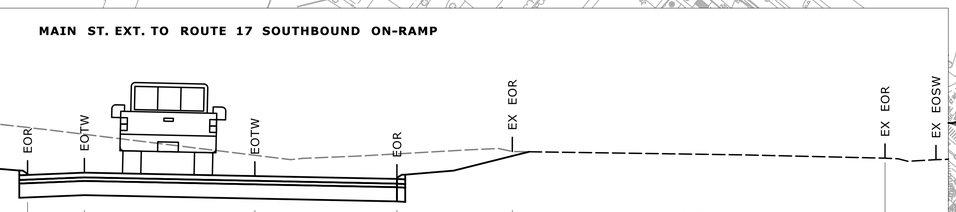
STAGE 1B

FULL DEPTH RECONSTRUCTION OF THE ROUTE 17 SOUTHBOUND ON-RAMP

CUT BITUMINOUS CONCRETE PAVEMENT

CUT BITUMINOUS CONCRETE PAVEMENT

MAIN ST. EXT. TO ROUTE 17 SOUTHBOUND ON-RAMP



STATION 52+50

STAGE 1B

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: SJB

CHECKED BY: SDH

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0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:
Matthew Ford

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316

DRAWING NO. STG-02

SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL CROSSING MARKINGS AT COOLEY AVENUE
2. ESTABLISH PEDESTRIAN DETOURS AS NECESSARY
3. ESTABLISH NEW TRAFFIC PATTERN
4. CONSTRUCT DRAINAGE
5. RESET UTILITIES (BY OTHERS)
6. RESET WATER GATES
7. RELOCATE EXISTING SIGNS WHERE APPLICABLE
8. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
9. INSTALL PRECAST CONCRETE BARRIER CURB
10. CONSTRUCT SIDEWALK AND RAMPS
11. CONSTRUCT CURBING
12. MILL AND OVERLAY 2"
13. INSTALL GUIDERAIL

LEGEND

- FULL DEPTH RECONSTRUCTION
- MILL AND OVERLAY
- 100YR — FEMA 100-YEAR FLOOD (CALCULATED)
- TRAFFIC DRUMS

GENERAL NOTES:
1. DETOUR PEDESTRIAN TRAFFIC TO SIDEWALK ON EASTERN SIDE OF MSE STARTING AT CRESCENT STREET AND ENDING AT COOLEY AVENUE TO ENSURE ACCESS REMAINS THROUGHOUT CONSTRUCTION OF STAGE 9.

STAGE 2

SLIVER WIDEN ROUTE 17 NB OFF-RAMP/SIDEWALK CONSTRUCTION ON MAIN ST. EXT.

CUT BITUMINOUS CONCRETE PAVEMENT

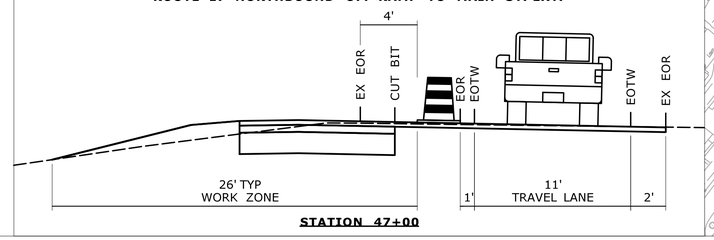
CUT BITUMINOUS CONCRETE PAVEMENT

COORDINATE GRID

AD 83

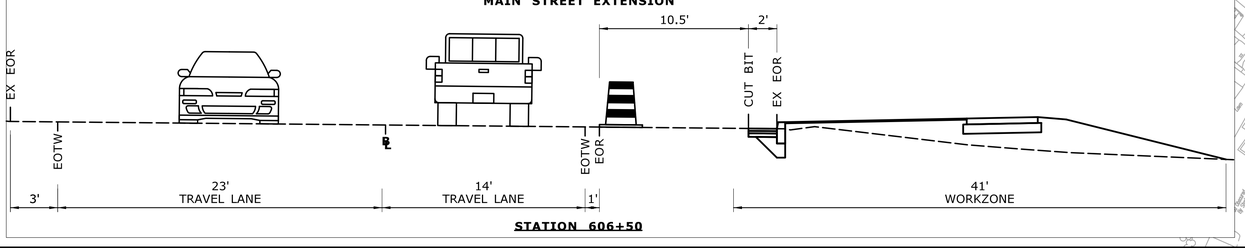
CONNECTICUT

ROUTE 17 NORTHBOUND OFF-RAMP TO MAIN ST. EXT.



STATION 47+00

MAIN STREET EXTENSION



STATION 606+50

STAGE 2

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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CHECKED BY: SDH
SCALE IN FEET 0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Tad

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-03
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL SEDIMENTATION CONTROL SYSTEM
2. ESTABLISH NEW TRAFFIC PATTERN
3. CONSTRUCT DRAINAGE
4. RELOCATE EXISTING SIGNS WHERE APPLICABLE
5. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
6. MILL ROADWAYS 2"
7. CONSTRUCT SIDEWALK AND RAMPS
8. CONSTRUCT CURBING
9. OVERLAY 2" CURB-TO-CURB
10. INSTALL PAVEMENT MARKINGS ON MAIN STREET EXTENSION
11. INSTALL GUIDERAIL
12. REMOVE SEDIMENTATION CONTROL SYSTEM AFTER TURF HAS BEEN ESTABLISHED

LEGEND

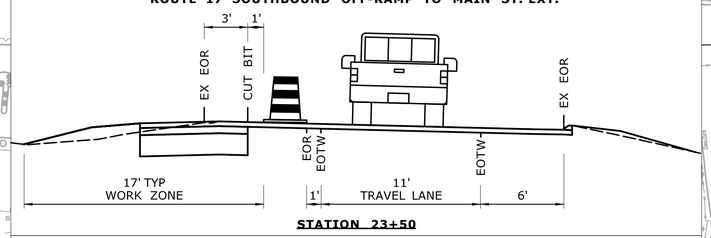
- FULL DEPTH RECONSTRUCTION
- MILL AND OVERLAY
- TRAFFIC DRUMS
- 100YR — FEMA 100-YEAR FLOOD (CALCULATED)
- HTL — HIGH TIDE LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- CJL — COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11'IN WIDTH WITH 1' SHOULDERS

STAGE 3

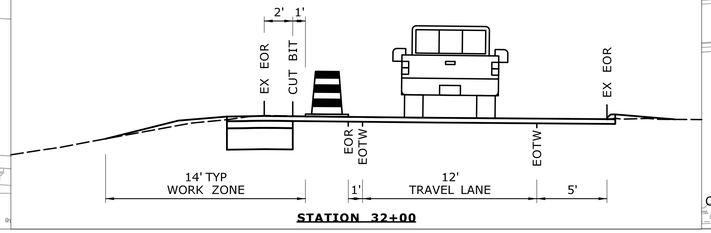
SLIVER WIDEN RTE 17 ON & OFF-RAMPS/
SIDEWALK RECONSTRUCTION ON MAIN ST. EXT.

ROUTE 17 SOUTHBOUND OFF-RAMP TO MAIN ST. EXT.



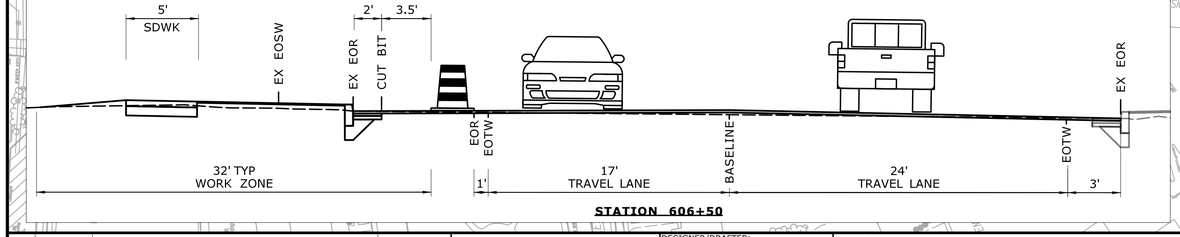
STATION 23+50

MAIN ST. EXT. TO ROUTE 17 NORTHBOUND ON-RAMP



STATION 32+00

MAIN STREET EXTENSION



STATION 606+50

CUT BITUMINOUS CONCRETE PAVEMENT
CUT BITUMINOUS CONCRETE PAVEMENT
CUT BITUMINOUS CONCRETE PAVEMENT
CUT BITUMINOUS CONCRETE PAVEMENT
CUT BITUMINOUS CONCRETE PAVEMENT
CUT BITUMINOUS CONCRETE PAVEMENT
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STAGE 3

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET 0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY: Matthew Pad

PROJECT TITLE: **RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND**

TOWN: **MIDDLETOWN**
DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **STG-04**
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. CLEARING AND GRUBBING
2. ESTABLISH NEW TRAFFIC PATTERN
3. CONSTRUCT DRAINAGE
4. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
5. MILL AND OVERLAY 2"
6. CONSTRUCT CURBING
7. INSTALL GUIDERAIL

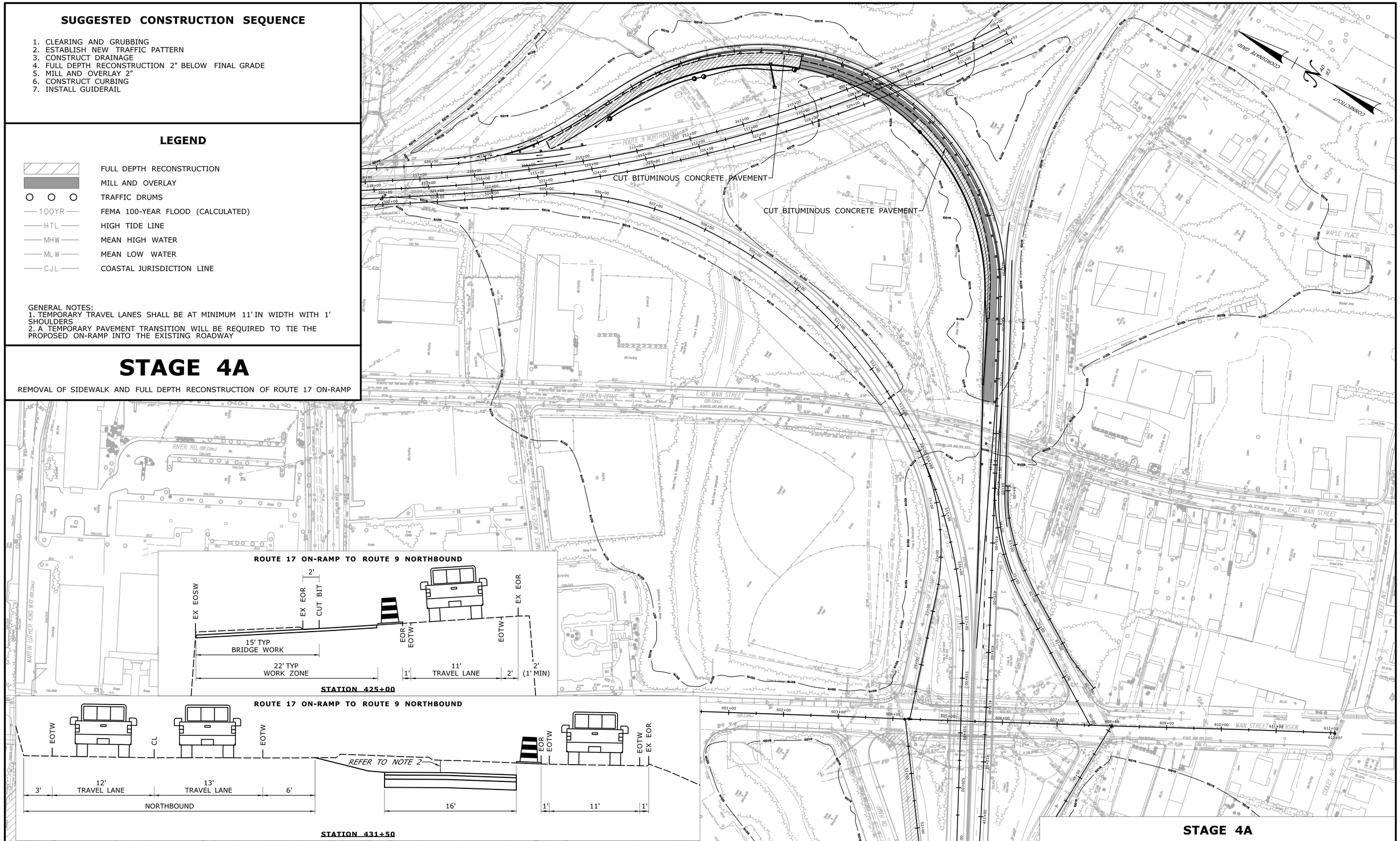
LEGEND

	FULL DEPTH RECONSTRUCTION
	MILL AND OVERLAY
O O O	TRAFFIC DRUMS
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
1. TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS
2. A TEMPORARY PAVEMENT TRANSITION WILL BE REQUIRED TO TIE THE PROPOSED ON-RAMP INTO THE EXISTING ROADWAY

STAGE 4A

REMOVAL OF SIDEWALK AND FULL DEPTH RECONSTRUCTION OF ROUTE 17 ON-RAMP



STAGE 4A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **STG-05**
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. INSTALL SEDIMENTATION CONTROL SYSTEM
3. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
4. INSTALL GUIDERAIL
5. MILL AND OVERLAY 2"
6. INSTALL PAVEMENT MARKINGS ON ROUTE 17 ON-RAMP

LEGEND

	FULL DEPTH RECONSTRUCTION
	MILL AND OVERLAY
O O O	TRAFFIC DRUMS
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
1. TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS
2. A TEMPORARY PAVEMENT TRANSITION WILL BE REQUIRED TO TIE THE PROPOSED ON-RAMP INTO THE EXISTING ROADWAY

STAGE 4B

FULL DEPTH RECONSTRUCTION OF THE ROUTE 17 ON-RAMP

CUT BITUMINOUS CONCRETE PAVEMENT

CUT BITUMINOUS CONCRETE PAVEMENT

ROUTE 9 NORTHBOUND

ROUTE 9 SOUTHBOUND

TO ROUTE 9 SOUTH

TO ROUTE 9 NORTH

TO ROUTE 17

OFF RAMP

ON RAMP

REKOWEN DRIVE

EAST MAIN STREET

MAPLE ST.

MAPLE PLACE

COOLEY AVE.

MAIN STREET EXTENSION

RIVER RD. (Bit.Conc.)

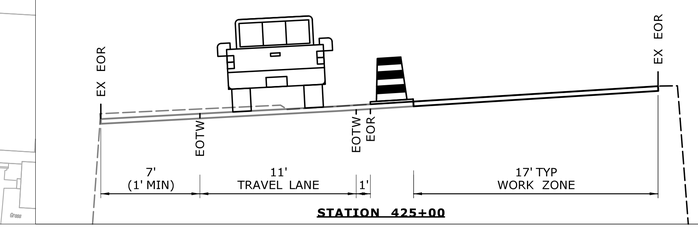
MARTIN LUTHER KING WAY (Bit.Conc.)

COORDINATE GRID

CONNECTICUT

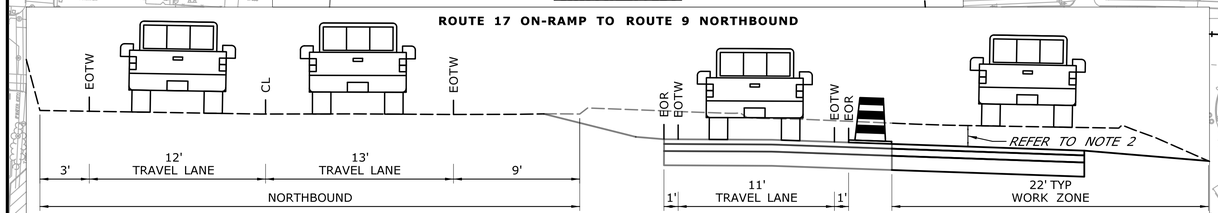
NAD 83

ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND



STATION 425+00

ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND



STATION 431+50

STAGE 4B

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: SJB

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SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**

APPROVED BY: Matthew Vaz

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

PROJECT NO. **0082-0316**

DRAWING NO. **STG-06**

DRAWING TITLE: **STAGING PLAN**

SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. INSTALL SEDIMENTATION CONTROL SYSTEM
3. RELOCATE IMS CAMERA POLE
4. REMOVE EXISTING OVERHEAD SIGN STRUCTURE
5. INSTALL OVERHEAD SIGN STRUCTURE
6. BRIDGE WORK
7. CONSTRUCT DRAINAGE AND INSTALL LOCK DOWN TOPS AS REQUIRED
8. REMOVE AND RELOCATE EXISTING SIGNS WHERE APPLICABLE
9. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
10. INSTALL GUIDERAIL

LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
O O O	TRAFFIC DRUMS
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11'IN WIDTH WITH 1' SHOULDERS
- DETOUR TRAFFIC AS DESCRIBED IN THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION

STAGE 5A

WIDEN ROUTE 9 TO THE WEST

TEMPORARY TRAFFIC BARRIER (BOLTED)

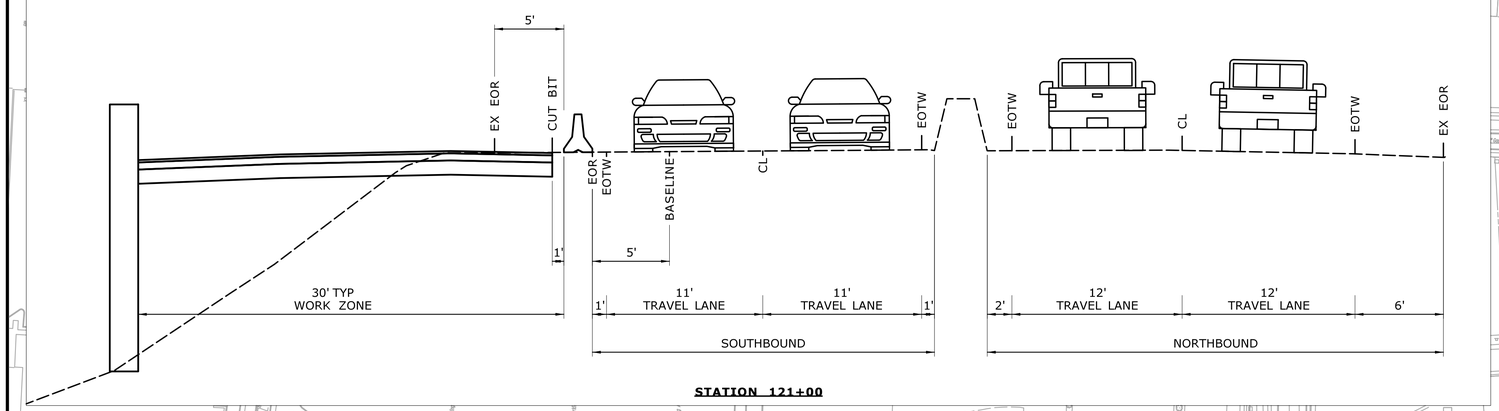
TEMPORARY TRAFFIC BARRIER
CUT BITUMINOUS CONCRETE PAVEMENT

TEMPORARY SAND BARREL ARRAY

CUT BITUMINOUS CONCRETE PAVEMENT

TEMPORARY TRAFFIC BARRIER
CUT BITUMINOUS CONCRETE PAVEMENT

ROUTE 9



STATION 121+00

STAGE 5A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-07
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. INSTALL SEDIMENTATION CONTROL SYSTEM
3. REMOVE AND RELOCATE EXISTING SIGNS WHERE APPLICABLE
4. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
5. INSTALL GUIDERAIL

LEGEND

▨	FULL DEPTH RECONSTRUCTION
O O O	TRAFFIC DRUMS
—— 100YR ——	FEMA 100-YEAR FLOOD (CALCULATED)
—— HTL ——	HIGH TIDE LINE
—— MHW ——	MEAN HIGH WATER
—— MLW ——	MEAN LOW WATER
—— CJL ——	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 12' IN WIDTH WITH 1' SHOULDERS

STAGE 5B

WIDEN ROUTE 9 TO THE WEST

CUT BITUMINOUS CONCRETE PAVEMENT

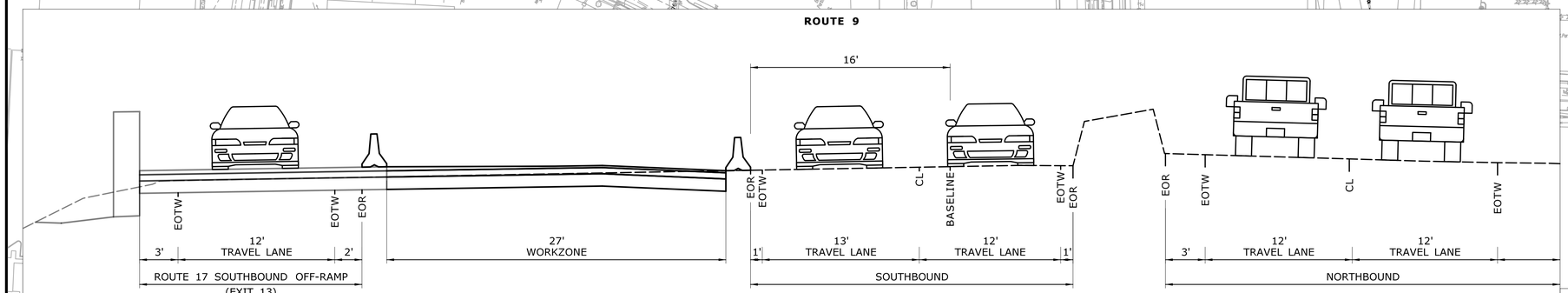
RELOCATED TEMPORARY TRAFFIC BARRIER

CUT BITUMINOUS CONCRETE PAVEMENT

TEMPORARY IMPACT ATTENUATION SYSTEM

TEMPORARY IMPACT ATTENUATION SYSTEM

ROUTE 9



STATION 114+00

STAGE 5B

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:
Matthew Pulp

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**

DRAWING NO. **STG-08**

SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. BRIDGE WORK
3. REMOVE PRECAST CONCRETE BARRIER CURB
4. CONSTRUCT DRAINAGE AND INSTALL LOCK DOWN TOPS AS REQUIRED
5. INSTALL PRECAST CONCRETE BARRIER CURB AT NORTHERN LIMITS
6. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
7. INSTALL GUIDERAIL

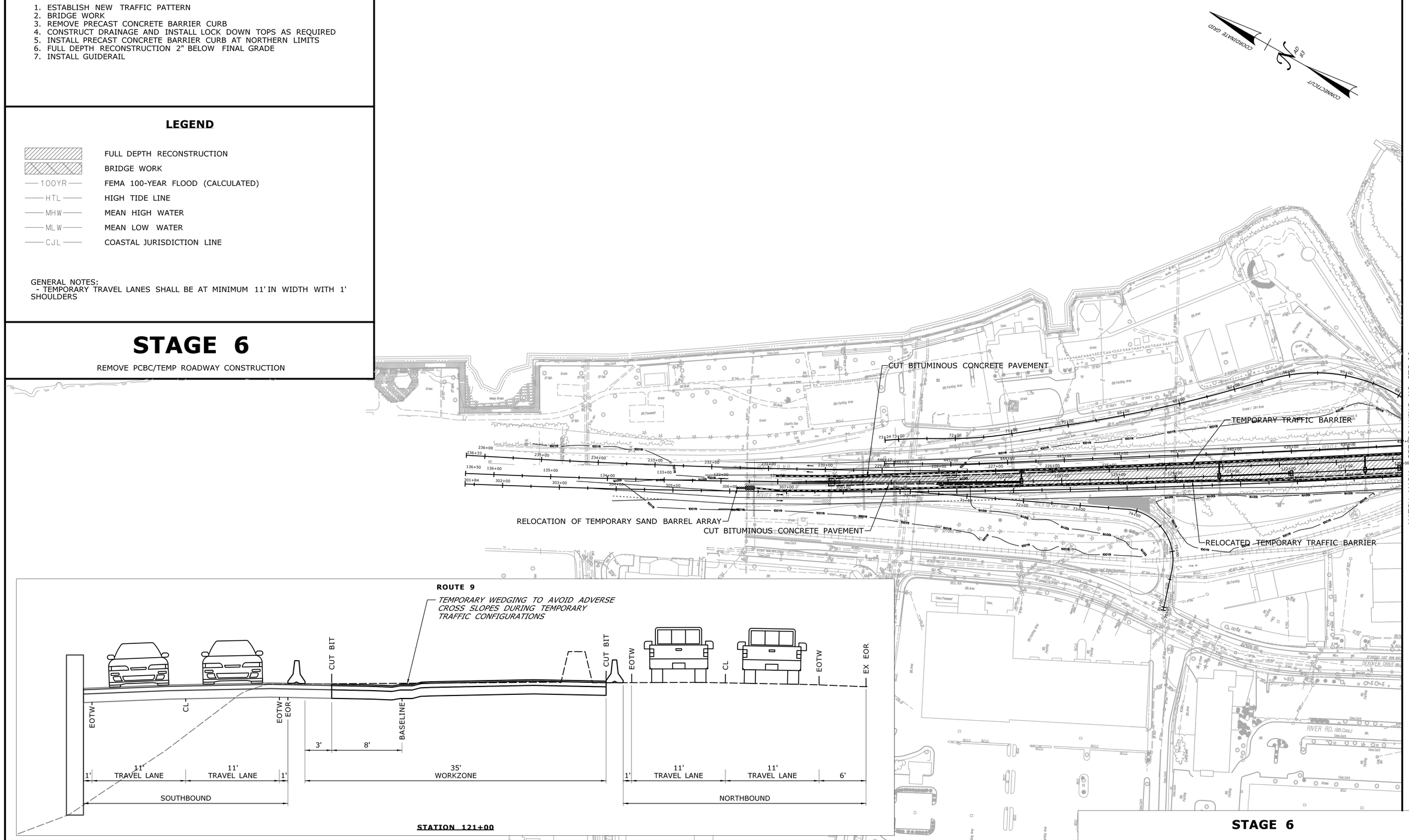
LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 6

REMOVE PCBC/TEMP ROADWAY CONSTRUCTION



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**

DRAWING NO. **STG-09**

SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. BRIDGE WORK
3. REMOVE PRECAST CONCRETE BARRIER CURB
4. CONSTRUCT DRAINAGE AND INSTALL LOCK DOWN TOPS AS REQUIRED
5. INSTALL PRECAST CONCRETE BARRIER CURB AT NORTHERN LIMITS
6. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
7. INSTALL GUIDERAIL

LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 6

REMOVE PCBC/TEMP ROADWAY CONSTRUCTION

TEMPORARY IMPACT ATTENUATION SYSTEM

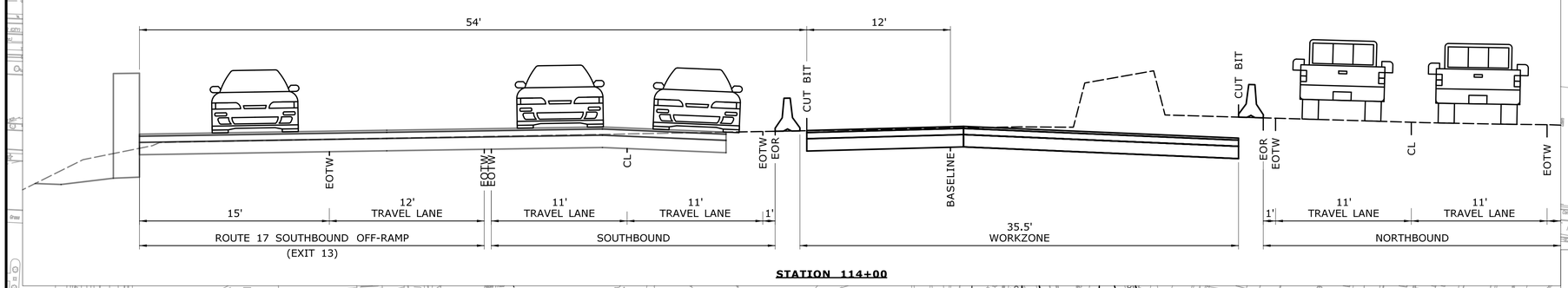
CUT BITUMINOUS CONCRETE PAVEMENT

TEMPORARY TRAFFIC BARRIER (BOLTED)
TEMPORARY TRAFFIC BARRIER

RELOCATED TEMPORARY TRAFFIC BARRIER
RELOCATED TEMPORARY TRAFFIC BARRIER (BOLTED)

MATCH MARK - SEE DRAWING NO. STG-06

ROUTE 9



STATION 114+00

STAGE 6

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET 0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW..MSH..0082-0316..STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Tait

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-10
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. INSTALL SEDIMENTATION CONTROL SYSTEM
3. BRIDGE WORK
4. CONSTRUCT DRAINAGE
5. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
6. INSTALL GUIDERAIL

LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
O O O	TRAFFIC DRUMS
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11'IN WIDTH WITH 1' SHOULDERS

STAGE 7

NORTHBOUND BRIDGE CONSTRUCTION

RELOCATED TEMPORARY TRAFFIC BARRIER
CUT BITUMINOUS CONCRETE PAVEMENT

RELOCATED TEMPORARY TRAFFIC BARRIER (BOLTED)
CUT BITUMINOUS CONCRETE PAVEMENT

CUT BITUMINOUS CONCRETE PAVEMENT

TEMPORARY SAND BARREL ARRAY

RELOCATED TEMPORARY TRAFFIC BARRIER

TEMPORARY TRAFFIC BARRIER

ROUTE 9 NORTHBOUND

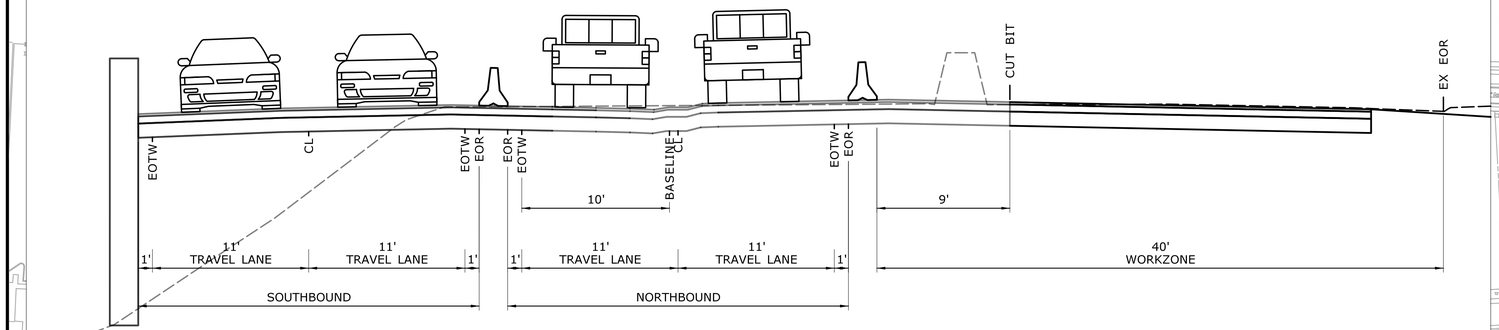
ROUTE 9 SOUTHBOUND

EAST MAIN STREET (US1) (CT66)

BECKWITH DRIVE

JAMES A MOSES AVENUE

ROUTE 9



STATION 121+00

STAGE 7

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-11
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. CONSTRUCT DRAINAGE AND INSTALL LOCK DOWN TOPS AS REQUIRED
3. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE

LEGEND

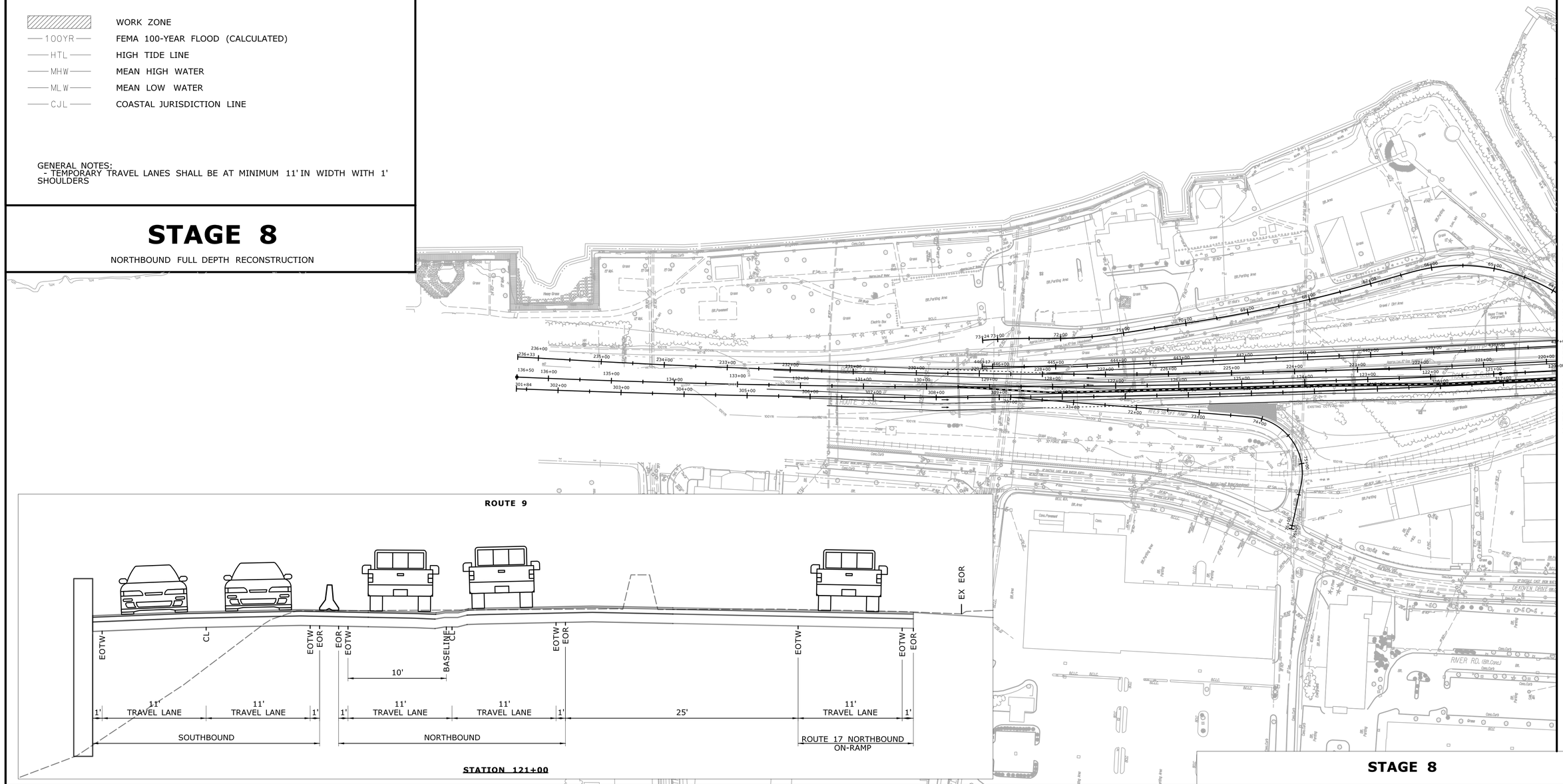
	WORK ZONE
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 8

NORTHBOUND FULL DEPTH RECONSTRUCTION

COORDINATE GRID
NAD 83
CONNECTICUT



STAGE 8

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-12
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. CONSTRUCT DRAINAGE AND INSTALL LOCK DOWN TOPS AS REQUIRED
3. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE

LEGEND

	WORK ZONE
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 8

NORTHBOUND FULL DEPTH RECONSTRUCTION

RELOCATED TEMPORARY TRAFFIC BARRIER

CUT BITUMINOUS CONCRETE PAVEMENT
TEMPORARY SAND BARREL ARRAY

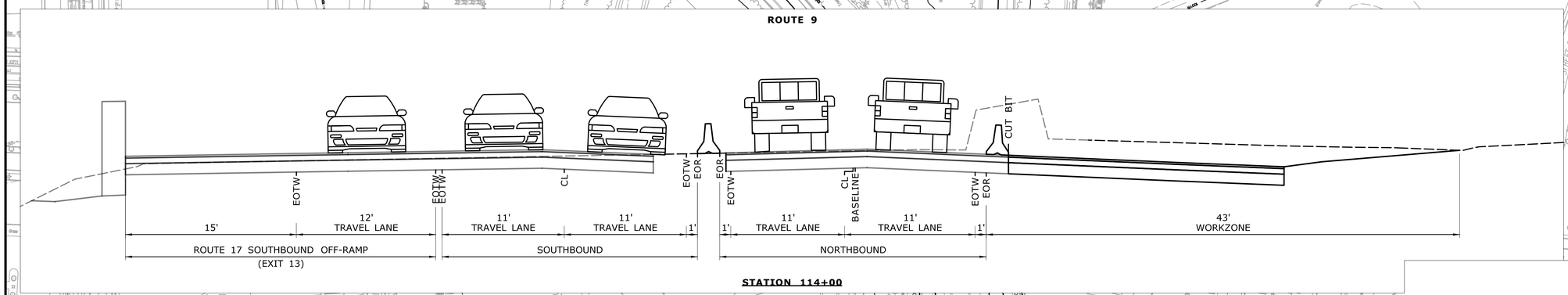
RELOCATED TEMPORARY TRAFFIC BARRIER

TEMPORARY SAND BARREL ARRAY

RELOCATED TEMPORARY TRAFFIC BARRIER

MATCH MARK - SEE DRAWING NO. STG-09

ROUTE 9



STATION 114+00

STAGE 8

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Vaz

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **STG-13**
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. CONSTRUCT DRAINAGE
3. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
4. MILL AND OVERLAY 2" BELOW FINAL GRADE

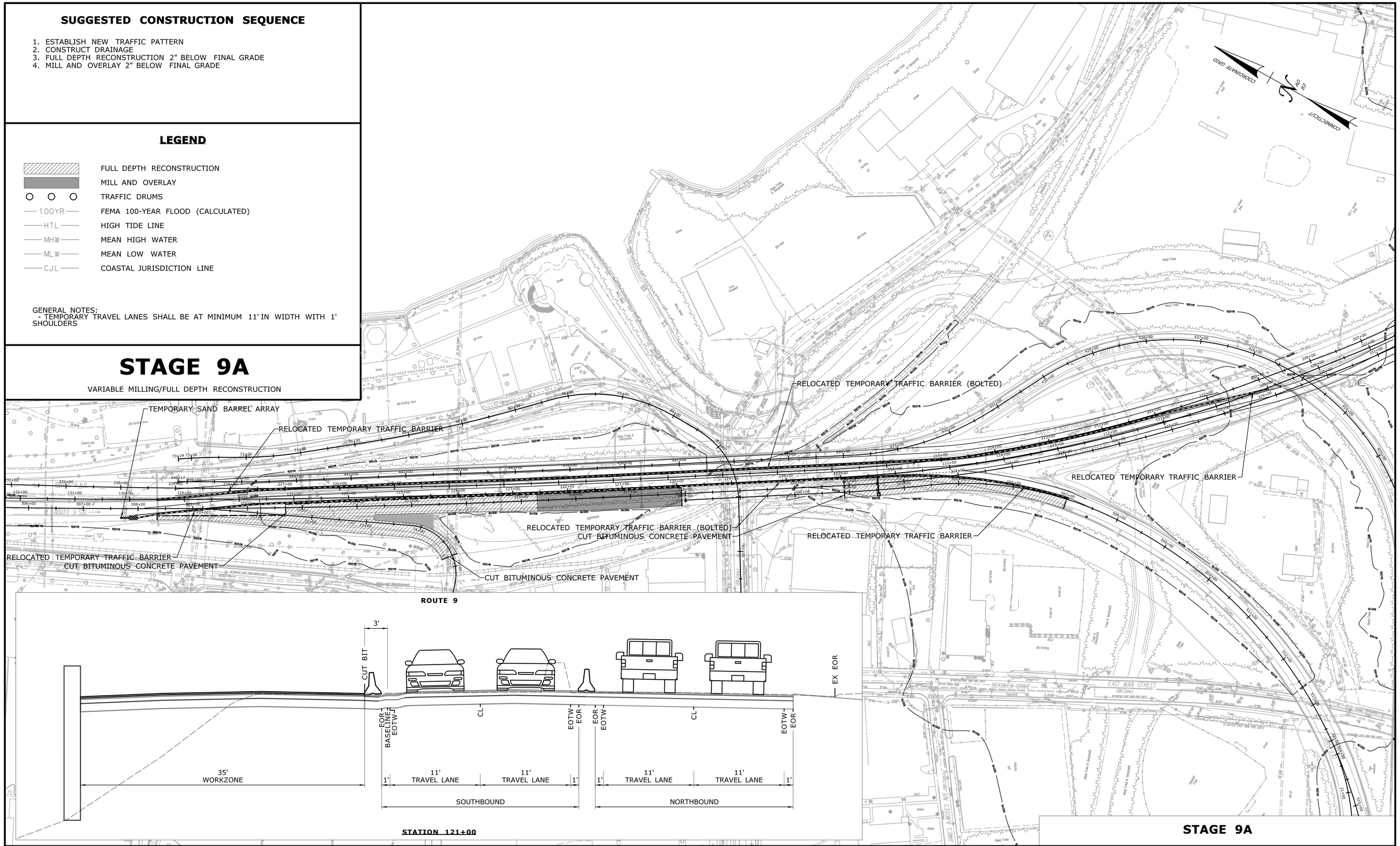
LEGEND

- FULL DEPTH RECONSTRUCTION
- MILL AND OVERLAY
- TRAFFIC DRUMS
- 100YR — FEMA 100-YEAR FLOOD (CALCULATED)
- HTL — HIGH TIDE LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- CJL — COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 9A

VARIABLE MILLING/FULL DEPTH RECONSTRUCTION



ROUTE 9

STATION 121+00

STAGE 9A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pad

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE: **STAGING PLAN**

PROJECT NO. **0082-0316**
DRAWING NO. **STG-14**
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE

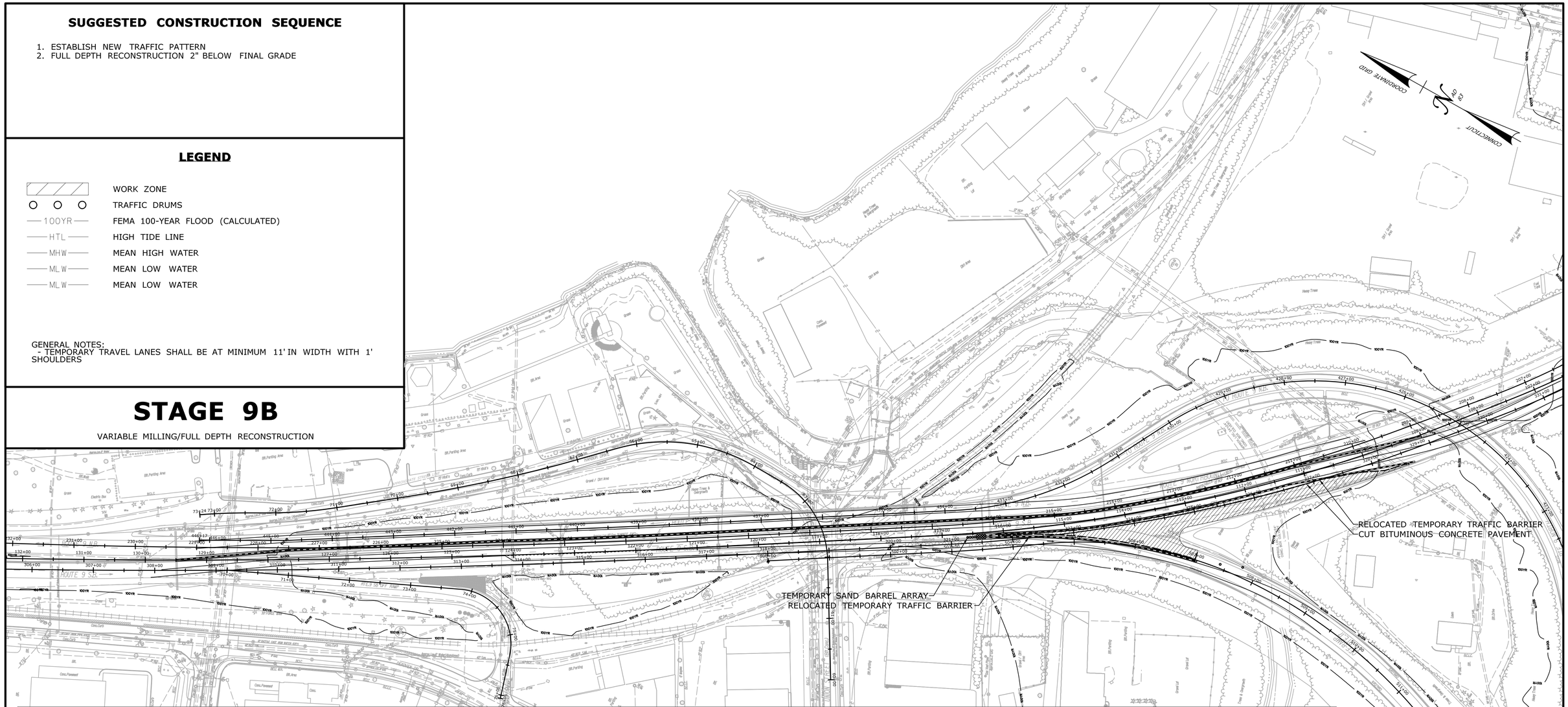
LEGEND

▨	WORK ZONE
○ ○ ○	TRAFFIC DRUMS
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MLW	MEAN LOW WATER

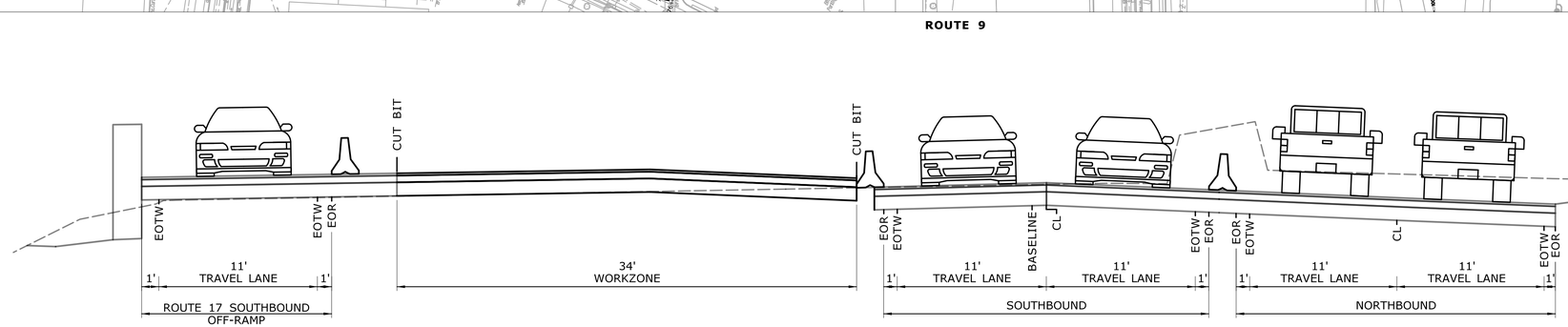
GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11'IN WIDTH WITH 1' SHOULDERS

STAGE 9B

VARIABLE MILLING/FULL DEPTH RECONSTRUCTION



ROUTE 9



STATION 114+00

STAGE 9B

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Pad

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-15
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. CONSTRUCT DRAINAGE
3. BRIDGE WORK
4. INSTALL PRECAST CONCRETE BARRIER CURB
5. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE

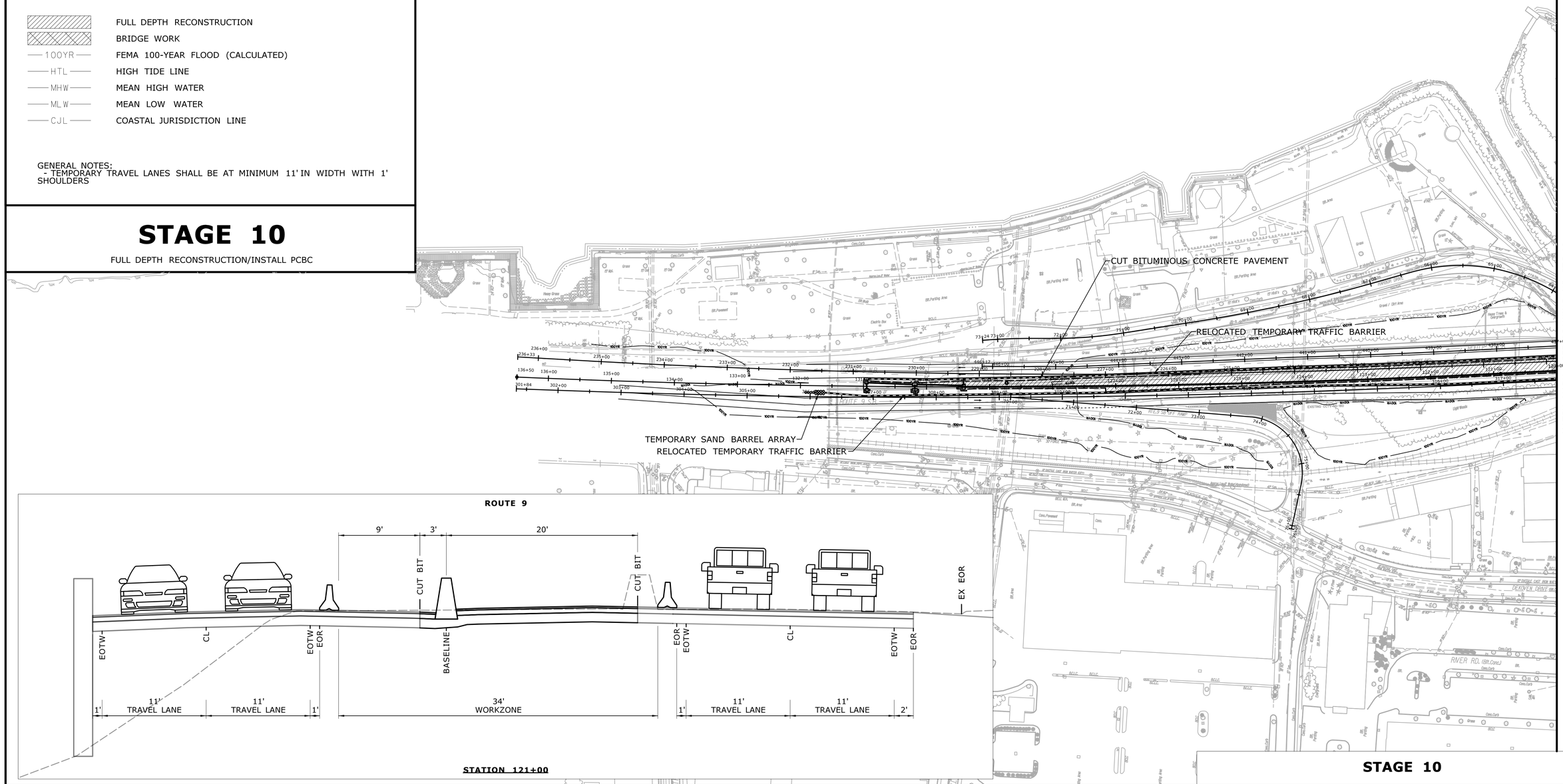
LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 10

FULL DEPTH RECONSTRUCTION/INSTALL PCBC



STAGE 10

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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CHECKED BY: SDH
SCALE IN FEET 0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Pad

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-16
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. ESTABLISH NEW TRAFFIC PATTERN
2. CONSTRUCT DRAINAGE
3. BRIDGE WORK
4. INSTALL PRECAST CONCRETE BARRIER CURB
5. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE

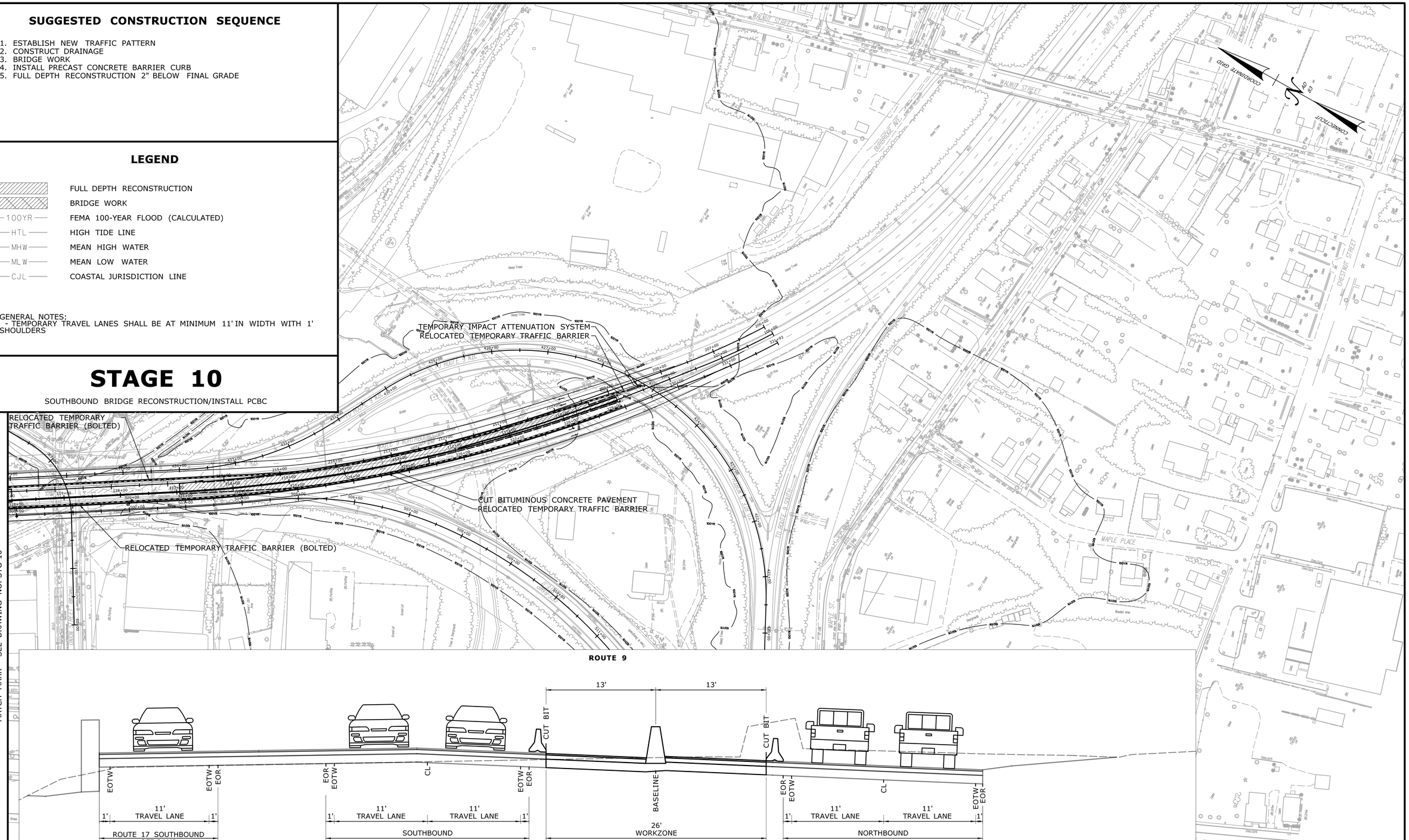
LEGEND

	FULL DEPTH RECONSTRUCTION
	BRIDGE WORK
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- TEMPORARY TRAVEL LANES SHALL BE AT MINIMUM 11' IN WIDTH WITH 1' SHOULDERS

STAGE 10

SOUTHBOUND BRIDGE RECONSTRUCTION/INSTALL PCBC



STAGE 10

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Vaz

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN
DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-17
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL SEDIMENTATION CONTROL SYSTEM
2. CLOSE HARBOR DRIVE ON-RAMP
3. CONSTRUCT DRAINAGE
4. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
5. STABILIZE DISTRUBED AREAS
6. MILL AND OVERLAY 2"
7. CONSTRUCT CURBING
8. INSTALL GUIDERAIL
9. INSTALL PERMANENT PAVEMENT MARKINGS
10. REMOVE SEDIMENTATION CONTROL SYSTEM AFTER TURF HAS BEEN ESTABLISHED

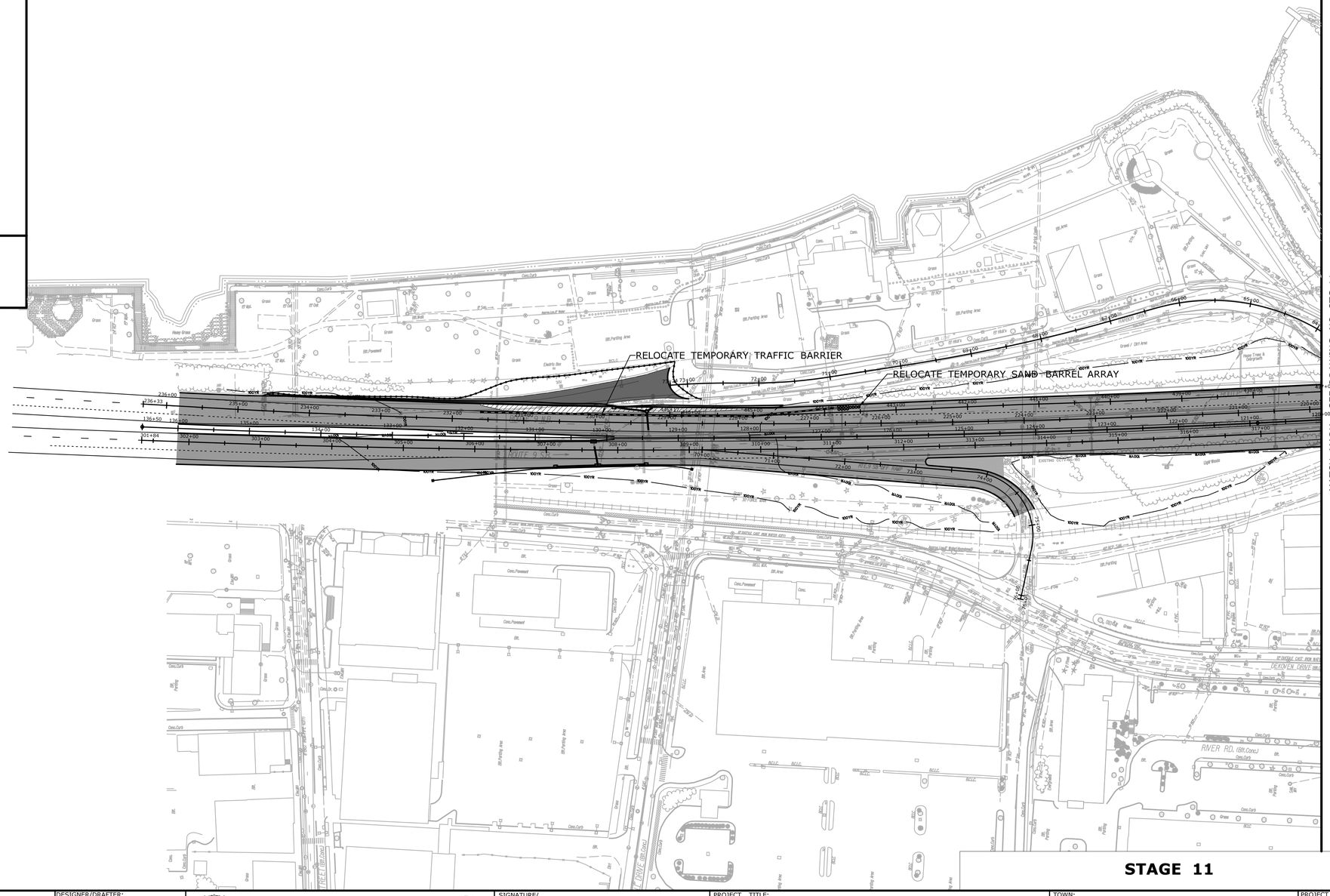
LEGEND

	FULL DEPTH RECONSTRUCTION
	MILL AND OVERLAY
	EXCAVATE EXISTING ROADWAY
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- ALTERNATING ONE-WAY TRAFFIC SHALL BE REQUIRED DURING CONSTRUCTION OF THE DRAINAGE SYSTEM

STAGE 11

CLOSURE OF HARBOR DRIVE ON-RAMP/
ROUTE 9 DRAINAGE AND OVERLAY



STAGE 11

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

SIGNATURE/ BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Pad

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

PROJECT NO. 0082-0316
DRAWING NO. STG-18
SHEET NO.

SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL SEDIMENTATION CONTROL SYSTEM
2. CLOSE HARBOR DRIVE ON-RAMP
3. CONSTRUCT DRAINAGE
4. FULL DEPTH RECONSTRUCTION 2" BELOW FINAL GRADE
5. STABILIZE DISTRUBED AREAS
6. MILL AND OVERLAY 2"
7. CONSTRUCT CURBING
8. INSTALL GUIDERAIL
9. INSTALL PERMANENT PAVEMENT MARKINGS
10. REMOVE SEDIMENTATION CONTROL SYSTEM AFTER TURF HAS BEEN ESTABLISHED

LEGEND

	FULL DEPTH RECONSTRUCTION
	MILL AND OVERLAY
	EXCAVATE EXISTING ROADWAY
100YR	FEMA 100-YEAR FLOOD (CALCULATED)
HTL	HIGH TIDE LINE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CJL	COASTAL JURISDICTION LINE

GENERAL NOTES:
- ALTERNATING ONE-WAY TRAFFIC SHALL BE REQUIRED DURING CONSTRUCTION OF THE DRAINAGE SYSTEM

STAGE 11

CLOSURE OF HARBOR DRIVE ON-RAMP/
ROUTE 9 DRAINAGE AND OVERLAY

MATCH MARK - SEE DRAWING NO. STG-11



STAGE 11

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER: SJB
CHECKED BY: SDH
SCALE IN FEET
0 80 160
SCALE 1"=80'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_STG.dgn

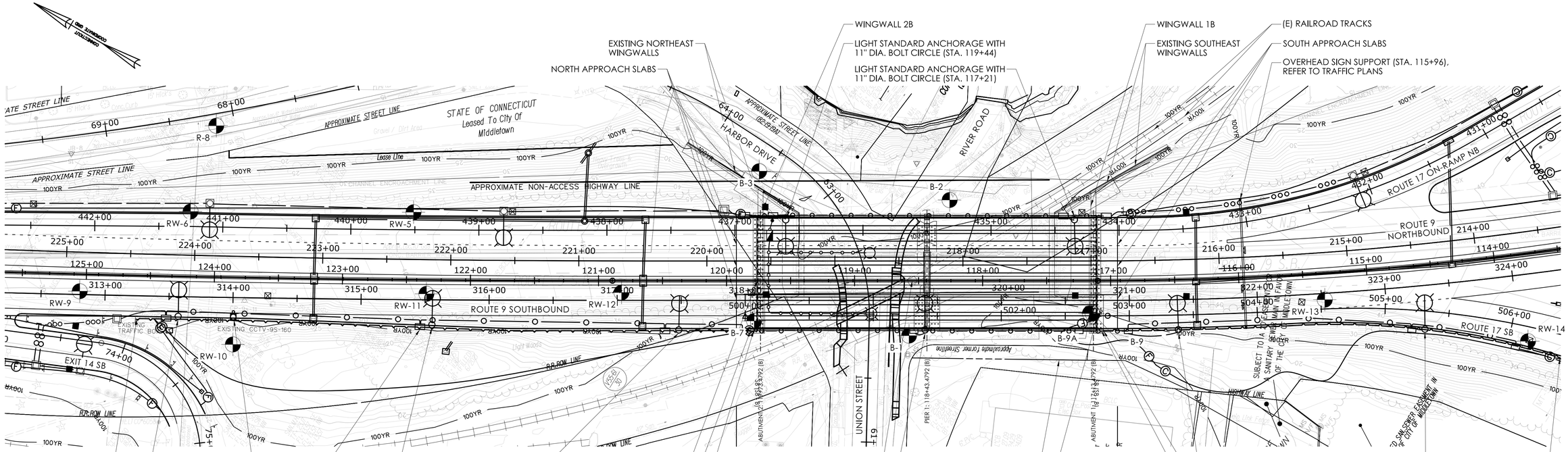
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY: Matthew Vaz

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: STAGING PLAN

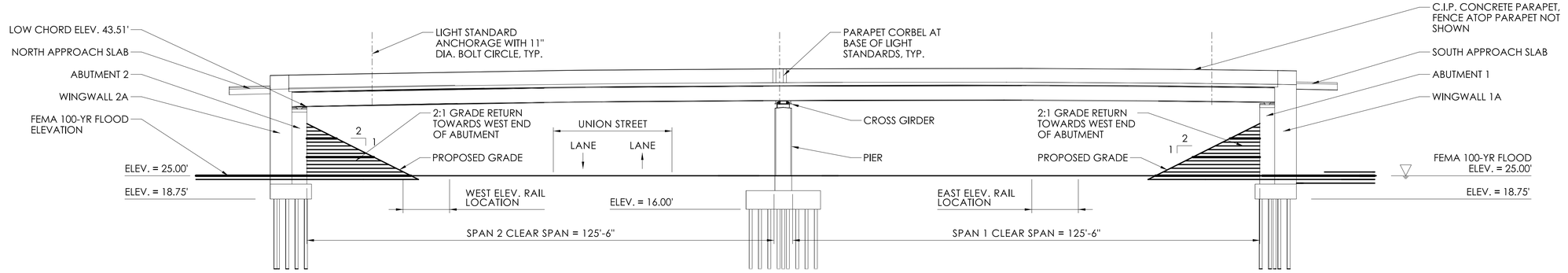
PROJECT NO. 0082-0316
DRAWING NO. STG-19
SHEET NO.



GENERAL PLAN

SCALE: 1" = 40'

NOTE: RAILROAD CLEARANCES NOT SHOWN, REFER TO S-15.
GRADING NOT SHOWN FOR CLARITY, REFER TO GRADING PLANS.



WEST ELEVATION

SCALE: 1/16"=1'-0"

NOTE: MODULAR RETAINING WALLS NOT SHOWN FOR CLARITY.
RAILROAD CLEARANCES NOT SHOWN. REFER TO S-15.

LEGEND

- 100YR — FEMA 100-YEAR FLOOD (CALCULATED)
- CONCRETE HANDHOLE
- 2" RMC
- CABLE IN DUCT - 3 #2 & 1 #8 CU GND

NOTE: REFER TO PRECAST RETAINING WALL ELECTRICAL DETAILS ON S-58

REV. | DATE | REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

SCALE AS NOTED

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: GENERAL PLAN AND ELEVATION

DRAWING NO. S-02
SHEET NO.

82-316

LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_General Plan.dgn
PLOTTED DATE: 7/12/2022

Figure C-5

Driller: C. Johnston	**Connecticut DOT Boring Report**	Hole No.: B-1
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764026
Start Date: 2-5-16	Route No.: Union St.	Easting: 1028971
Finish Date: 2-8-16	Bridge No.: 0638	Surface Elevation: 22.9
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @11 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						TOPSOIL / MISC FILL		20
5	S-1	4 5 6 8	24	24			Brown f SAND, some silt	
						SANDY SILT		15
10	S-2	6 6 6 6	24	20			Reddish brown SILT, some f sand	10
15	S-3	6 8 11 12	24	24			Reddish brown SILT, some f sand	5
20	S-4	5 7 7 8	24	21			Reddish brown SILT, some f sand	0
25	S-5	4 21 25 30	24	24		GLACIAL TILL	Reddish brown f-c SAND, little f-c gravel, little silt, with cobbles	-5
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES:	Sheet
Earth: 40.25ft Rock: 8ft		1 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

B-1 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**	Hole No.: B-1
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764026
Start Date: 2-5-16	Route No.: Union St.	Easting: 1028971
Finish Date: 2-8-16	Bridge No.: 0638	Surface Elevation: 22.9
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @11 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	11 10 10 20	24	20		GLACIAL TILL (cont'd)	Top 16", Brown f SAND, tr. silt Btm 4" Reddish brown f SAND, some silt	-10
35	S-7	18 26 50	17	14			Reddish brown f-c SAND, little silt, tr. f-c gravel	-15
40	S-8	50	3	2		WEATHERED BEDROCK / BEDROCK	Reddish completely weathered bedrock	-20
	C-1		33	18	13		Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, weak, silt seams present. Core times in min/ft: 4, 6, 20	
45	C-2		60	59	41		Red-brown arkose/siltstone, fine-grained, highly fractured, moderately weathered, weak, silt seams present. Core times in min/ft: 3, 2, 4, 4, 4	-25
50							END OF BORING 48ft	-30
55								-35
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES:	Sheet
Earth: 40.25ft Rock: 8ft		2 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

B-1 (2/2)

Driller: J. Dorau	**Connecticut DOT Boring Report**	Hole No.: B-2
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764055
Start Date: 2-22-16	Route No.: Union St.	Easting: 1029077
Finish Date: 2-23-16	Bridge No.: 0638	Surface Elevation: 28.5
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @12 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	7 10 9 9	24	19		MISC FILL	Dark brown f-c SAND, some -f cgravel, tr. silt, glass and other debris present	25
5	S-2	6 5 3 4	24	10			Reddish brown f SAND, some silt	20
10	S-3	6 10 13 8	24	3			Brown f SAND, little f-c gravel, tr. silt	15
15	S-4	2 4 2 3	24	3		SANDY SILT	Brown f SAND, some silt, little f-c gravel, brick and cermic present with other debris	10
20	S-5	WOH 2 3 9	24	4			Brown organic SILT, little f sand	5
25	S-6	8 10 8 12	24	14		SAND	Brown f-c SAND, little fc gravel, little silt	0
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Roller bitted through wood from 28 to 29'.	Sheet
Earth: 45ft Rock: 10ft		1 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-2 (1/2)

Driller: J. Dorau	**Connecticut DOT Boring Report**	Hole No.: B-2
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764055
Start Date: 2-22-16	Route No.: Union St.	Easting: 1029077
Finish Date: 2-23-16	Bridge No.: 0638	Surface Elevation: 28.5
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @12 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-7	15 11 11 14	24	22		GLACIAL TILL (cont'd)	Brown f-c SAND, little f-c gravel, little silt	-5
35	S-8	7 13 17 21	24	13			Reddish brown f-c SAND, little f-c gravel, little silt, with cobbles	-10
40	S-9	41 47 35 33	24	16			Reddish brown f SAND, little silt, tr. f-c gravel, with cobbles	-15
45						BEDROCK		
	C-1		60	58	70		Red-brown arkose/siltstone, fine-grained, slightly fractured, moderately weathered, medium strong. Core times in min/ft: 3, 5, 5, 2, 2.5	-20
50	C-2		60	60	88		Red-brown arkose/siltstone, fine-grained, slightly fractured, slightly weathered, medium strong. Core times in min/ft: 3, 2.5, 4, 5, 7	-25
55							END OF BORING 55ft	-30
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Roller bitted through wood from 28 to 29'.	Sheet
Earth: 45ft Rock: 10ft		2 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-2 (2/2)

Driller: J. Dorau	**Connecticut DOT Boring Report**	Hole No.: B-3
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764193
Start Date: 2-23-16	Route No.: Union St.	Easting: 1029017
Finish Date: 2-24-16	Bridge No.: 0638	Surface Elevation: 14.2
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ/3" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @13 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	6 3 4 4	24	13		MISC FILL	Brown f-c SAND, some f-c gravel, tr. silt	10
5	S-2	4 3 4 3	24	10			Brown f-c SAND, some f-c gravel, tr. silt, with brick pieces	5
10	S-3	9 5 4 4	24	14		SILTY SAND	Reddish brown f SAND, some silt	0
15	S-4	5 8 11 9	24	18		SANDY SILT	Reddish brown SILT, some f sand	-5
20	S-5	3 3 11 17	24	17		SAND	Top 12" Reddish brown SILT, some f sand Btm 5" Reddish brown f-c SAND, little f-c gravel, tr. silt	-10
25	S-6	11 11 17 15	24	13		GLACIAL TILL	Reddish brown f-c SAND, little f-c gravel, tr. silt	-15
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Between core run C-1 and C-2 the driller telescoped through the casing with 3" casing to a depth of 53 feet	Sheet
Earth: 39ft Rock: 10ft		1 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

B-3 (1/2)

Driller: J. Dorau	**Connecticut DOT Boring Report**	Hole No.: B-3
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764193
Start Date: 2-23-16	Route No.: Union St.	Easting: 1029017
Finish Date: 2-24-16	Bridge No.: 0638	Surface Elevation: 14.2
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ/3" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @13 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-7	8 12 22 14	24	14		GLACIAL TILL (cont'd)	Reddish brown f-c SAND, little f-c gravel, tr. silt	-20
35	S-8	11 12 80	16	14			Reddish brown f-c SAND, little f-c gravel, tr. silt	-25
40						WEATHERED BEDROCK / BEDROCK		
	C-1		60	47	25		Red-brown arkose/siltstone, fine-grained, highly fractured, moderately weathered, weak. Core times in min/ft: 5, 7, 7, 5.5, 4	-30
45	C-2		60	40	45		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, weak. Core times in min/ft: 4, 7, 6.5, 8, 7	-35
50							END OF BORING 49ft	-40
55								-45
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Between core run C-1 and C-2 the driller telescoped through the casing with 3" casing to a depth of 53 feet	Sheet
Earth: 39ft Rock: 10ft		2 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

B-3 (2/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**	Hole No.: B-4
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764151
Start Date: 2-3-16	Route No.: 22 River Road	Easting: 1029177
Finish Date: 2-4-16	Bridge No.:	Surface Elevation: 16.9
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @17 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						MISC FILL		15
5	S-1	7 7 6 6	24	22			Brown f-c SAND, little f-c gravel, little silt	10
10	S-2	10 7 5 5	24	12			Brown f-c SAND, little f-c gravel, little silt	5
15	S-3	9 6 1 1	24	3		SILT	Top 2" Brown f-c SAND, little f-c gravel, little silt Btm 1" Gray SILT	0
20	S-4	1 1 WOH 2	24	3			Gray SILT	-5
25	S-5	WOHWOHWOHWOH	24	24		SANDY SILT	Gray SILT, little f sand	-10
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Roller bitted through wood from 39 to 40'.	Sheet
Earth: 48ft Rock: 9.5ft		1 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-4 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**	Hole No.: B-4
Inspector: G. Arzt	Town: Middletown	Stat./Offset:
Engineer: R. Pion	Project No.: 82-316	Northing: 764151
Start Date: 2-3-16	Route No.: 22 River Road	Easting: 1029177
Finish Date: 2-4-16	Bridge No.:	Surface Elevation: 16.9
Project Description: Improvements at Route 9 at the Route 17 Interchange		
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID	Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @17 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	1 2 3 4	24	24		SILTY SAND	Dark gray f SAND, some silt	-15
35	S-7	3 2 2 2	24	16			Gray f SAND, some silt	-20
40	S-8	3 2 1 WOH	24	3		SAND	Grayish brown f-c SAND, little f gravel, little silt	-25
45	S-9	8 7 9 82	22	12		GLACIAL TILL	Reddish brown f-c SAND, little silt, tr. f-c gravel	-30
						BEDROCK		
50	C-1		54	50	47		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, weak. Core times in min/ft: 7, 4, 5, 4, 4	-35
55	C-2		60	49	14		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, medium strong. Core times in min/ft: 4, 4.5, 6, 8, 4.5	-40
60							END OF BORING 58ft	-45

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Roller bitted through wood from 39 to 40'.	Sheet
Earth: 48ft Rock: 9.5ft		2 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-4 (2/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

NOT TO SCALE

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 1

DRAWING NO. S-04
SHEET NO.

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: B-5
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764188
Start Date: 2-4-16	Route No.: 22 River Road		Easting: 1029172
Finish Date: 2-5-16	Bridge No.:		Surface Elevation: 15.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @13 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						MISC FILL		15
5	S-1	5 6 8 8	24	14			Brown f-c SAND, some f-c gravel, tr. silt	10
10	S-2	10 7 3 3	24	4			Brown f-c SAND, some f-c gravel, tr. silt, with brick pieces	5
15	S-3	1 WOH WOH 2	24	3		SANDY SILT	Gray SILT, some f sand	0
20	S-4	2 1 2 4	24	22			Gray SILT, some f sand	-5
25	S-5	WOH 3 3 4	24	24		SILTY SAND	Gray f SAND, some silt	-10
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 49.5ft Rock: 10ft	NOTES:	Sheet 1 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-5 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: B-5
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764188
Start Date: 2-4-16	Route No.: 22 River Road		Easting: 1029172
Finish Date: 2-5-16	Bridge No.:		Surface Elevation: 15.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @13 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	1 3 3 4	24	24		SILTY SAND (cont'd)	Gray f SAND, some silt	-15
35	S-7	3 5 4 5	24	23			Gray f SAND, some silt	-20
40	S-8	9 6 5 7	24	3		SAND	Brown f-c SAND, little f-c gravel, tr. silt	-25
45	S-9	50	0.5	0.5		WEATHERED BEDROCK	Reddish brown f-c SAND, little f-c gravel, tr. silt	-30
50	C-1		60	60	57	BEDROCK	Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, medium strong. Core times in min/ft: 5, 4.5, 6.5, 4, 4	-35
55	C-2		60	55	21		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, medium strong. Core times in min/ft: 5, 7, 6, 5, 4	-40
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 49.5ft Rock: 10ft	NOTES:	Sheet 2 of 2
No. of Soil Samples: 9 No. of Core Runs: 2		SM-001-M REV. 1/02

B-5 (2/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: B-6
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764339
Start Date: 2-9-16	Route No.: Harbor Park		Easting: 1029109
Finish Date: 2-10-16	Bridge No.:		Surface Elevation: 16.0
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @10 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						TOPSOIL		15
5	S-1	3 8 7 4	24	0		MISC FILL	Brown f-c SAND, little f-c gravel, tr. silt	10
10	S-2	6 12 9 11	24	12		SILTY SAND	Top 11": Brown f-c SAND, little f-c gravel, tr. silt Bottom 1": Gray f SAND, little silt	5
15	S-3	7 7 6 10	24	20			Gray f SAND, little silt	0
20	S-4	2 3 2 1	24	15			Gray f SAND, some silt	-5
25	S-5	17 13 10 11	24	13		SANDY SILT	Reddish brown SILT, some sand	-10
30						SAND		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 39ft Rock: 9.5ft	NOTES:	Sheet 1 of 2
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

B-6 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: B-6
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764339
Start Date: 2-9-16	Route No.: Harbor Park		Easting: 1029109
Finish Date: 2-10-16	Bridge No.:		Surface Elevation: 16.0
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @10 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	9 20 20 19	24	12		SAND (cont'd)	Brown f-c SAND, little f-c gravel, tr. silt	-15
35	S-7	14 18 18 33	24	16		GLACIAL TILL	Reddish brown f-c SAND, little f-c gravel, little silt	-20
40	C-1		54	53	27	BEDROCK	Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, medium strong. Core times in min/ft: 5, 7, 6, 5, 4	-25
45	C-2		60	35	7		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered, medium strong. Core times in min/ft: 5.5, 11, 12, 13, 9	-30
50							END OF BORING 48.5ft	-35
55								-40
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 39ft Rock: 9.5ft	NOTES:	Sheet 2 of 2
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

B-6 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: B-7
Inspector: R.M. Downes	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764134
Start Date: 3-9-22	Route No.: 9		Easting: 1028916
Finish Date: 3-10-22	Bridge No.: 00638		Surface Elevation: 23.9
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @13.0 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	2 5 7 3	24	13		MISC FILL	Reddish brown SILT and f sand, trace c-f gravel	20
5	S-2	7 2 2 2	24	4			Reddish brown SILT and f sand, litle c gravel (piece of gravel in tip)	15
10	S-3	9 8 8 8	24	18		CLAYEY SILT	Reddish brown Clayey SILT, trace f sand	10
15	S-4	5 7 7 9	24	18			Reddish brown Clayey SILT, trace f sand	5
20	S-5	4 4 4 5	24	21			Reddish brown Clayey SILT, trace f sand	0
25	S-6	19 21 19 35	24	19			Reddish brown Clayey SILT, little c-f sand	-5
30	S-7	12 50/1"	7	6		GLACIAL TILL	Reddish brown Clayey SILT, little f sand, little c-f gravel; piece of highly weathered sandstone in tip	-10
35	C-1		48	47	8	WEATHERED BEDROCK / BEDROCK	Dark brown medium grained, laminated, intensely fractured, moderately weathered, weak SANDSTONE; Coring times (min/ft) 3.0, 1.5, 3.0, 5.5 (Core barrel plugged at 4 ft)	-15
40	C-2		60	49	23		Red brown fine to medium grained, medium bedded, highly fractured, slightly weathered,medium strong SILTSTONE and SANDSTONE. Coring times (min/ft): 4.5, 6.0, 6.0, 8.0, 7.5	
							END OF BORING 39.5ft	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 30.5ft Rock: 9.0ft	NOTES: Very slow progress with roller bit from 29 to 30.5 ft. First water reading at completion with casing in to 29 ft.	Sheet 1 of 1
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

B-7

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: B-9
Inspector: H. Karimi	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 763913
Start Date: 3-22-22	Route No.: 9		Easting: 1029062
Finish Date: 3-22-22	Bridge No.: 00638		Surface Elevation: 27.7
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @9.2 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	1 1 6 6	24	10		MISC FILL	Brown f-c SAND, little silt, little c-f gravel	25
5	S-2	7 3 1 7	24	12			Brown, f-c SAND, little silt, trace f gravel with roots and fibers	20
10	S-3	5 4 4 5	24	15		CLAYEY SILT	Brown silty CLAY, little f-c sand	15
15	S-4	4 6 8 8	24	18			Brown silty CLAY, little f-c sand	10
20	S-5	7 7 9 13	24	17			Brown clayey SILT, trace f-c sand	5
25	S-6	10 9 8 15	24	4		GRAVELLY SAND	Brown clayey SILT, trace f-c sand	0
30	S-7	26 38 27 22	24	16			Brown f-c SAND. little f-c gravel, trace silt	-5
35							END OF BORING 31ft	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 31ft Rock: 0ft	NOTES: Drill the ahead of casing from 21ft Broke casing off in hole at 29 feet on B-9. Abandoned B-9 at 31' (at bottom of sample S-7). Drill new hole approximately 4' northeast of B-9. Named new hole B-9A	Sheet 1 of 1
No. of Soil Samples: 7 No. of Core Runs: 0		SM-001-M REV. 1/02

B-9

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: B-9A
Inspector: H. Karimi	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 763915
Start Date: 3-23-22	Route No.: 9		Easting: 1029061
Finish Date: 3-23-22	Bridge No.: 00638		Surface Elevation: 27.7
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @15.4 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						MISC FILL		25
5								20
10						CLAYEY SILT		15
15								10
20								5
25								0
30								-5
35	S-1	31 30 43 51	24	19			Red brown f-c SAND, and f-c GRAVEL, trace silt	-10
40						GRAVELLY SAND		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 46ft Rock: 10ft	NOTES: Broke casing off in hole at 29 feet on B-9. Abandon B-9. Drill new hole approximately 4' northeast of B-9. Named new hole B-9A Generalized Strata Descriptions for the top 31 feet is based upon sampling from B-9	Sheet 1 of 2
No. of Soil Samples: 3 No. of Core Runs: 2		SM-001-M REV. 1/02

B-9A (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: B-9A
Inspector: H. Karimi	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 763915
Start Date: 3-23-22	Route No.: 9		Easting: 1029061
Finish Date: 3-23-22	Bridge No.: 00638		Surface Elevation: 27.7
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @15.4 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-2	28 58 71 66	24	18		GRAVELLY SAND (cont'd)	Brown f-c SAND, little f-c GRAVEL, little silt	-15
45	S-3	100/3	3	2		BEDROCK	Red brown weathered rock,	-20
50	C-1		60	58	75		Red brown medium bedded, highly fractured, moderately weathered Siltstone, core times in min/ft: 3.5, 2.5, 3.0, 3.0, 4.5	-25
55	C-2		60	60	75		Red brown medium bedded, highly fractured, moderately weathered Siltstone, core times in min/ft: 3.5, 3.0, 4.0, 2.0, 2.0	-30
60							END OF BORING 54.5ft	-35
65								-40
70								-45
75								-50
80								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 46ft Rock: 10ft	NOTES: Broke casing off in hole at 29 feet on B-9. Abandon B-9. Drill new hole approximately 4' northeast of B-9. Named new hole B-9A Generalized Strata Descriptions for the top 31 feet is based upon sampling from B-9	Sheet 2 of 2
No. of Soil Samples: 3 No. of Core Runs: 2		SM-001-M REV. 1/02

B-9A (2/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

NOT TO SCALE

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 2

DRAWING NO. S-05
SHEET NO.

82-316

LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_Boring Logs.dgn
PLOTTED DATE: 6/24/2022

Figure C-5

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: R-1
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762660
Start Date: 2-11-16	Route No.: Main St. Ext.		Easting: 1028575
Finish Date: 2-11-16	Bridge No.:		Surface Elevation: 32.4
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @19 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	2 4 3 4	24	8		TOPSOIL	Brown f-c SAND, tr. silt, topsoil	32.4
5	S-2	4 4 8 12	24	0		SAND	Brown f-c SAND, tr. silt	27.4
10	S-3	4 3 4 5	24	15			Brown f-c SAND, tr. silt	22.4
15	S-4	5 8 16 11	24	24			Brown f-c SAND, tr. f gravel, tr. silt	17.4
20	S-5	3 3 3 5	24	20			Brown f SAND, little silt	12.4
25							END OF BORING 22ft	7.4
30								2.4

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 22ft Rock: ft	NOTES: 6" Topsoil.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-1

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-2
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762445
Start Date: 2-24-16	Route No.: Main St. Ext.		Easting: 1028767
Finish Date: 2-24-16	Bridge No.:		Surface Elevation: 32.9
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @17 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	3 2 2 2	24	12		PAVEMENT STRUCTURE		32.9
5	S-2	2 4 35 58	24	0		MISC FILL	Brown f-c SAND, little silt, tr. c gravel, asphalt present	30.9
10	S-3	35 28 24 22	24	13		GLACIAL TILL	No Recovery.	25.9
15	S-4	17 21 24 38	24	15			Reddish brown f SAND, some c gravel, tr. silt, cobbles present	20.9
20	S-5	24 31 66	13	12			Reddish brown f SAND, some f gravel, little silt, cobbles present	15.9
25							Reddish brown f SAND, some silt, tr. f-c gravel	10.9
30							END OF BORING 21.1ft	5.9

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 21.1ft Rock: ft	NOTES: 5" Pavement.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-2

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-3
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762172
Start Date: 2-25-16	Route No.: Main St. Ext.		Easting: 1028915
Finish Date: 2-25-16	Bridge No.:		Surface Elevation: 44.0
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @Dry after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	7 5 8 7	24	22		PAVEMENT STRUCTURE		44.0
5	S-2	3 3 4 5	24	20		SILTY SAND	Reddish brown f SAND, some silt, tr. c gravel	39.0
10	S-3	5 8 15 22	24	24			Reddish brown f SAND, some silt, tr. c gravel	34.0
15	S-4	11 18 24 27	24	24		SAND AND GRAVEL	Reddish brown f-c SAND, some f-c gravel, little silt, cobbles present	29.0
20	S-5	21 28 35 28	24	24			Reddish brown f-c SAND, some f-c gravel, little silt, cobbles present	24.0
25							Reddish brown f-c SAND, some f-c gravel, little silt, cobbles present	19.0
30							END OF BORING 20ft	14.0

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 20ft Rock: ft	NOTES: C-1 = 4" Pavement.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-3

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: R-4
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762505
Start Date: 2-11-16	Route No.: On ramp- 17		Easting: 1028671
Finish Date: 2-11-16	Bridge No.:		Surface Elevation: 34.6
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @Dry after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	3 4 7 3	24	20		TOPSOIL		34.6
5	S-2	4 5 5 6	24	24		MISC FILL	6" Topsoil, 14" Brown f-c SAND, tr. silt	33.1
10	S-3	4 15 17 22	24	24		GLACIAL TILL	Reddish brown SILT, little f sand	28.1
15	S-4	15 22 22 25	24	24			Brown f-c SAND, tr. f-c gravel, tr. silt	23.1
20	S-5	33 50 40	12	12			Brown f-c SAND, little f-c gravel, tr. silt	18.1
25							Brown f-c SAND, little f-c gravel, tr. silt	13.1
30							END OF BORING 21ft	8.1

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 21ft Rock: ft	NOTES: 6" Topsoil.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-4

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-5
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762369
Start Date: 3-2-16	Route No.: Off ramp - 17		Easting: 1028560
Finish Date: 3-2-16	Bridge No.:		Surface Elevation: 49.2
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @Dry after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	8 11 15 11	24	15		PAVEMENT STRUCTURE		49.2
5	S-2	7 6 8 7	24	18		MISC FILL	Brown f-c SAND, little f-c gravel, tr. silt	44.2
10	S-3	5 8 9 5	24	12			Brown f-c SAND, little f-c gravel, tr. silt	39.2
15	S-4	7 7 12 10	24	22		SILT AND SAND	Brown f-c SAND, little f-c gravel, tr. silt	34.2
20	S-5	15 13 20 11	24	18			Reddish brown f-c SAND, little f-c gravel, little silt	29.2
25							Reddish brown f-c SAND, little f-c gravel, little silt	24.2
30							END OF BORING 22ft	19.2

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 22ft Rock: ft	NOTES: C-2 = 5" Pavement.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-5

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-6
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764141
Start Date: 2-23-16	Route No.: River Road		Easting: 1029255
Finish Date: 2-23-16	Bridge No.:		Surface Elevation: 16.6
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @13 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	35 24 10 13	24	15		MISC FILL	Dark brown f-c SAND, little f-c gravel, tr. silt	16.6
5	S-2	4 3 3 2	24	12			Brown f SAND, some silt	11.6
10	S-3	2 2 2 2	24	12		SANDY SILT	Gray SILT, little f sand	6.6
15	S-4	WOH/WOH/WOH 2	24	24			Gray SILT, some f sand	1.6
20	S-5	1 2 3 3	24	24		SILTY SAND	Gray f SAND, some silt	-3.4
25							END OF BORING 22ft	-8.4
30								-13.4

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 22ft Rock: ft	NOTES:	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-6

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-7
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764338
Start Date: 2-24-16	Route No.: Harbor Drive		Easting: 1029035
Finish Date: 2-24-16	Bridge No.:		Surface Elevation: 14.7
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @11 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	13 6 14 39	24	18		PAVEMENT STRUCTURE		14.7
5	S-2	13 7 7 8	24	15		MISC FILL	Brown f-c SAND, little f-c gravel, tr.s ilt	9.7
10	S-3	5 5 5 5	24	14		SAND	Top 9" Brown f-c SAND, little f-c gravel, tr.s ilt Btm 4" Gray f SAND, tr. silt	4.7
15	S-4	3 2 3 4	24	24		SILTY SAND	Reddish brown f SAND, some silt	-0.3
20	S-5	10 8 9 12	24	18		SANDY SILT	Reddish brown SILT, little f sand	-5.3
25						SAND	Reddish brown f-c SAND, little f-c gravel, tr. silt, with cobbles	-10.3
30							END OF BORING 22ft	-15.3

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 22ft Rock: ft	NOTES: 6" Pavement.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-7

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: R-8
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764571
Start Date: 2-24-16	Route No.: Harbor Drive		Easting: 1028821
Finish Date: 2-24-16	Bridge No.:		Surface Elevation: 13.3
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 3" HSA	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @10 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	31 7 14 14	24	14		PAVEMENT STRUCTURE		13.3
5	S-2	7 18 8 7	24	10		MISC FILL	Dark brown f-c SAND, little f-c gravel, tr. silt	8.3
10	S-3	10 6 4 3	24	6			Brown f-c SAND, little f-c gravel, tr. silt	3.3
15	S-4	WOH/WOH/WOH 1	24	24		SILTY SAND	Gray f SAND, some silt, tr. f gravel	-1.7
20	S-5	7 7 8 8	24	24			Brown f SAND, some silt	-6.7
25						SAND	Brown f-c SAND, tr. f gravel, tr. silt	-11.7
30							END OF BORING 22ft	-16.7

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 22ft Rock: ft	NOTES: 6" Pavement.	Sheet 1 of 1
No. of Soil Samples: 5 No. of Core Runs: ---		SM-001-M REV. 1/02

R-8

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

NOT TO SCALE

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 3

DRAWING NO. S-06
SHEET NO.

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-1
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762689
Start Date: 2-10-16	Route No.: Off ramp - 17		Easting: 1028759
Finish Date: 2-11-16	Bridge No.:		Surface Elevation: 30.6
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @Dry after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						TOPSOIL		30
						MISC FILL		
5	S-1	16 18 18 20	24	20			Brown f-c SAND, some f-c gravel, little silt	25
10	S-2	14 15 14 14	24	18			Brown f-c SAND, some f-c gravel, little silt	20
15	S-3	15 17 31 25	24	16			Brown f-c SAND, some f-c gravel, little silt	15
20						SAND		
	S-4	10 10 7 7	24	13			Brown f SAND, tr. silt	10
25						SILTY SAND		
	S-5	1 WOH 1 1	24	10			Brown f SAND, some silt, tr. f-c gravel	5
30						SANDY SILT		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 45ft Rock: 10ft	NOTES: 5" Topsoil.	Sheet 1 of 2
No. of Soil Samples: 8 No. of Core Runs: 3		SM-001-M REV. 1/02

RW-1 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-1
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 762689
Start Date: 2-10-16	Route No.: Off ramp - 17		Easting: 1028759
Finish Date: 2-11-16	Bridge No.:		Surface Elevation: 30.6
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @Dry after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	2 4 4 4	24	8		SANDY SILT (cont'd)	Gray SILT, some f sand	0
35	S-7	5 9 9 20	24	1		GLACIAL TILL	Reddish brown f-c SAND, little f-c gravel, tr. silt, with cobbles	-5
40	S-8	50	1	1				
	C-1		13	14	0	BEDROCK	Reddish brown f-c SAND, little f-c gravel, tr. silt, with cobbles Red-brown arkose/siltstone, fine-grained, highly fractured, moderately weathered, several vertical joints, weak. Core times in min/ft: 4.5,5,3,4,6	-10
45								
	C-2		60	45.5	0		Red-brown arkose/siltstone, fine-grained, highly fractured, moderately weathered, several vertical joints, weak. Core timesin min/ft: 5.5, 5, 4, 4.5, 5	-15
50								
	C-3		60	39	0		Red-brown arkose/siltstone, fine-grained, highly fractured, moderately weathered, several vertical joints, weak. Core times in min/ft: 5.5, 5, 10, 6, 12	-20
55								
60							END OF BORING 55ft	-25

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 45ft Rock: 10ft	NOTES: 5" Topsoil.	Sheet 2 of 2
No. of Soil Samples: 8 No. of Core Runs: 3		SM-001-M REV. 1/02

RW-1 (2/2)

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: RW-2
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763532
Start Date: 2-25-16	Route No.: 17 to 9 Ramp		Easting: 1028759
Finish Date: 2-29-16	Bridge No.:		Surface Elevation: 39.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @36 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		35
						MISC FILL		
5	S-1	1 3 11 12	24	12			Brown f-c SAND, little f-c gravel, tr. silt	30
10	S-2	5 3 2 3	24	0			Brown f-c SAND, little silt, tr. c gravel	25
15	S-3	5 3 5 6	24	10			Brown f-c SAND, little silt, tr. c gravel	20
20	S-4	4 5 6 5	24	12			Brown f SAND, little silt, tr. c gravel	15
25	S-5	2 6 7 7	24	17			Brown f SAND, little silt, tr. c gravel	10
30	S-6	8 11 15 19	24	15			Brown f SAND, little silt, tr. c gravel	10

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 85ft Rock: 5ft	NOTES: 5" Topsoil.	Sheet 1 of 4
No. of Soil Samples: 18 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-2 (1/4)

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: RW-2
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763532
Start Date: 2-25-16	Route No.: 17 to 9 Ramp		Easting: 1029568
Finish Date: 2-29-16	Bridge No.:		Surface Elevation: 39.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @36 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-7	16 16 17 22	24	15		MISC FILL (cont'd)	Brown f-c SAND, little f-c gravel, tr. silt	5
35	S-8	9 8 7 6	24	13			Brown f-c SAND, little f-c gravel, little silt	0
40	S-9	8 3 2 4	24	14		SILT	Brown f-c SAND, little f-c gravel, little silt, with wood pieces	-5
45	S-10	1 1 2 3	24	20			Gray SILT, tr. f sand	-10
50	S-11	2 2 3 3	24	24			Gray SILT, tr. f sand	-15
55	S-12	WORWORWOR 6	24	24		SILTY SAND	Dark brown f SAND, little organic silt	-20
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 85ft Rock: 5ft	NOTES: 5" Topsoil.	Sheet 2 of 4
No. of Soil Samples: 18 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-2 (2/4)

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: RW-2
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763532
Start Date: 2-25-16	Route No.: 17 to 9 Ramp		Easting: 1029568
Finish Date: 2-29-16	Bridge No.:		Surface Elevation: 39.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @36 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
60	S-13	3 3 6 10	24	23		SILTY SAND (cont'd)	Brown f SAND, some silt	-25
65	S-14	6 7 6 5	24	12			Brown f SAND, some silt	
70	S-15	9 17 12 17	24	15		GLACIAL TILL	Brown f-c SAND and f-c GRAVEL, tr. silt	-30
75			28			BOULDER	Boulder.	-35
	S-16	23 42 78	13	13		SAND AND GRAVEL	Reddish brown f-c SAND, tr. f-c gravel, tr. silt	
80	S-17	28 88	8	6			Reddish brown f-c SAND, tr. f-c gravel, tr. silt, cobbles present	-40
85	S-18	50	0	0		BEDROCK	Reddish brown f-c SAND, tr. f-c gravel, tr. silt, cobbles present	-45
	C-1		60	49	0		Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, weak, interbedded with Gray Schist, highly fractured, slightly weathered, medium strong, medium bedded. Core times in min/ft: 8, 6.5, 5, 3.5, 4.5	
90								-50

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 85ft Rock: 5ft	NOTES: 5" Topsoil.	Sheet 3 of 4
No. of Soil Samples: 18 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-2 (3/4)

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: RW-2
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763532
Start Date: 2-25-16	Route No.: 17 to 9 Ramp		Easting: 1029568
Finish Date: 2-29-16	Bridge No.:		Surface Elevation: 39.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @36 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
90								-55
95								
100								-60
105								-65
110								-70
115								-75
120								-80

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 85ft Rock: 5ft	NOTES: 5" Topsoil.	Sheet 4 of 4
No. of Soil Samples: 18 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-2 (4/4)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-3
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763648
Start Date: 3-2-16	Route No.: 17 to 9 Ramp		Easting: 1029429
Finish Date: 3-2-16	Bridge No.:		Surface Elevation: 36.9
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @28 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		35
						MISC FILL		
5	S-1	11 10 7 13	24	14			Reddish brown f-c SAND, little f gravel, little silt	30
10	S-2	14 21 15 14	24	24			Reddish brown f-c SAND, little f gravel, little silt	25
15	S-3	6 9 6 14	24	12			Brown f-c SAND, little f-c gravel, tr. silt	20
20	S-4	12 7 9 7	24	12			Brown f-c SAND, little f-c gravel, tr. silt	15
25	S-5	10 15 16 18	24	14			Brown f-c SAND, little f-c gravel, tr. silt	10
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 72ft Rock: ft	NOTES: 10" Pavement.	Sheet 1 of 3
No. of Soil Samples: 14 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-3 (1/3)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-3
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 763648
Start Date: 3-2-16	Route No.: 17 to 9 Ramp		Easting: 1029429
Finish Date: 3-2-16	Bridge No.:		Surface Elevation: 36.9
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @28 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	11 23 28 25	24	0		MISC FILL (cont'd)	Brown f SAND, little silt	5
35	S-7	4 5 5 9	24	2			Brown f SAND, little silt	0
40	S-8	2 3 3 5	24	22		SILTY SAND	Gray f SAND, some silt	-5
45	S-9	9 15 13 16	24	3			Gray f SAND, some silt	-10
50	S-10	2 3 4 7	24	20			Gray brown f SAND, little silt	-15
55	S-11	2 3 8 12	24	2			Gray brown f-c SAND, little silt, tr f gravel	-20
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 72ft Rock: ft	NOTES: 10" Pavement.	Sheet 2 of 3
No. of Soil Samples: 14 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-3 (2/3)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

NOT TO SCALE

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 4

DRAWING NO. S-07
SHEET NO.

82-316

LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_Boring Logs.dgn
PLOTTED DATE: 6/24/2022

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Figure C-5

Driller:	C. Johnston	**Connecticut DOT Boring Report**		Hole No.:	RW-3
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	763648
Start Date:	3-2-16	Route No.:	17 to 9 Ramp	Easting:	1029429
Finish Date:	3-2-16	Bridge No.:		Surface Elevation:	36.9
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@28 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
60						SILTY SAND (cont'd)	Gray f SAND, some silt, 1" Brown f sand layer	25
65	S-12	6 7 7 9	24	24				
	S-13	11 10 7 4	24	17			Brown f SAND, some silt, with cobbles	30
70						GLACIAL TILL		
	S-14	15 47 44 37	24	14			Brown c gravel, little f sand, little silt	35
75							END OF BORING 72ft	
80								40
85								45
90								50

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 10" Pavement.	Sheet
Earth: 72ft Rock: ft		3 of 3
No. of Soil Samples: 14 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-3 (3/3)

Driller:	J. Dorau	**Connecticut DOT Boring Report**		Hole No.:	RW-4
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	762775
Start Date:	3-3-16	Route No.:	Main St. Ext.	Easting:	1028647
Finish Date:	3-3-16	Bridge No.:		Surface Elevation:	33.4
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@Dry after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		30
	S-1	5 8 8 6	24	10		MISC FILL	Brown f-c SAND, little f-c gravel, tr. silt	
5								25
	S-2	4 3 4 4	24	12			Brown f-c SAND, little f-c gravel, tr. silt	
10							END OF BORING 7ft	20
15								15
20								10
25								5
30								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 5" Pavement.	Sheet
Earth: 7ft Rock: ft		1 of 1
No. of Soil Samples: 2 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-4

Driller:	C. Johnston	**Connecticut DOT Boring Report**		Hole No.:	RW-5
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764404
Start Date:	2-29-16	Route No.:	Rt. 9 NB	Easting:	1028846
Finish Date:	2-29-16	Bridge No.:	0638	Surface Elevation:	38.7
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@36 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		35
						MISC FILL		
5	S-1	5 11 12 134	24	22			Brown f-c SAND, little f-c gravel, tr. silt	30
10	S-2	10 8 12 17	24	18			Brown f-c SAND, little f-c gravel, tr. silt	25
15	S-3	9 11 23 18	24	20			Brown f-c SAND, little f-c gravel, tr. silt	20
20	S-4	11 11 13 26	24	8			Brown f-c SAND, little f-c gravel, tr. silt	15
25	S-5	8 8 7 7	24	20			Top 12": Brown f-c SAND, little f-c gravel, tr. silt, Bottom 8": Black f-c SAND, tr. f gravel, tr silt	10
30						SILT		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 6" Pavement, 6" Concrete.	Sheet
Earth: 57ft Rock: 10ft		1 of 3
No. of Soil Samples: 10 No. of Core Runs: 3		SM-001-M REV. 1/02

RW-5 (1/3)

Driller:	C. Johnston	**Connecticut DOT Boring Report**		Hole No.:	RW-5
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764404
Start Date:	2-29-16	Route No.:	Rt. 9 NB	Easting:	1028846
Finish Date:	2-29-16	Bridge No.:	0638	Surface Elevation:	38.7
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@36 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30						SILT (cont'd)	Gray SILT, tr. f sand	0
	S-6	3 4 4 5	24	20				
35						SAND		-5
	S-7	5 8 8 11	24	20			Brown f-c SAND, little f-c gravel, little silt	
40						GLACIAL TILL		0
	S-8	14 15 14 15	24	20			Brown f-c SAND, little f-c gravel, little silt	
45								-5
	S-9	8 17 23 30	24	18			Brown f-c SAND, little f-c gravel, little silt	
50								-10
	S-10	11 30 50	17	10			Brown f-c SAND, little f-c gravel, little silt, with cobbles	
55	C-1		30	19	10	BOULDER	Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, weak, interbedded with Gray Schist, slightyl fractured, moderately weathered, medium strong. Core times in min/ft: 1,2,2,2,1	-15
						GLACIAL TILL		
60						BEDROCK		-20
	C-2		60	32	0		Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, weak, interbedded with Gray Schist, slightyl fractured, moderately	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 6" Pavement, 6" Concrete.	Sheet
Earth: 57ft Rock: 10ft		2 of 3
No. of Soil Samples: 10 No. of Core Runs: 3		SM-001-M REV. 1/02

RW-5 (2/3)

Driller:	C. Johnston	**Connecticut DOT Boring Report**		Hole No.:	RW-5
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764404
Start Date:	2-29-16	Route No.:	Rt. 9 NB	Easting:	1028846
Finish Date:	2-29-16	Bridge No.:	0638	Surface Elevation:	38.7
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@36 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
60						BEDROCK (cont'd)	weathered, medium strong. Core times in min/ft: 2, 4, 3, 2, 2	25
65	C-3		60	50	8		Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, weak. Core times in min/ft: 3, 3, 4, 4, 3	30
70								
75							END OF BORING 67ft	35
80								40
85								45
90								50

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 6" Pavement, 6" Concrete.	Sheet
Earth: 57ft Rock: 10ft		3 of 3
No. of Soil Samples: 10 No. of Core Runs: 3		SM-001-M REV. 1/02

RW-5 (3/3)

Driller:	J. Dorau	**Connecticut DOT Boring Report**		Hole No.:	RW-6
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764552
Start Date:	2-29-16	Route No.:	Rt. 9 NB	Easting:	1028754
Finish Date:	2-29-16	Bridge No.:		Surface Elevation:	32.6
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@20 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		30
	S-1	13 14 13 12	24	18		MISC FILL	Brown f-c SAND, little f-c gravel, tr. silt	
5	S-2	9 7 9 8	24	10			Brown f-c SAND, tr. f-c gravel, tr. silt	25
10	S-3	10 8 7 9	24	13			Brown f-c SAND, little gravel, tr. silt	20
15	S-4	13 11 10 9	24	16			Brown f-c SAND, little silt, tr. f gravel	15
20	S-5	8 7 6 7	24	7		SAND AND GRAVEL	Top 4": Brown f-c SAND, little silt, tr. f gravel Bottome 3": Dark brown f-c SAND and f-c gravel, tr. silt	10
25	S-6	10 9 14 8	24	12			Brown f-c SAND and f-c GRAVEL, tr. silt, cobbles present	5
30						SAND SILT		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: C-7 = 6" Pavement. 6" Concrete.	Sheet
Earth: 44ft Rock: 5ft		1 of 2
No. of Soil Samples: 9 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-6 (1/2)

Driller:	J. Dorau	**Connecticut DOT Boring Report**		Hole No.:	RW-6
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764552
Start Date:	2-29-16	Route No.:	Rt. 9 NB	Easting:	1028754
Finish Date:	2-29-16	Bridge No.:		Surface Elevation:	32.6
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@20 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-7	25 5 3 5	24	12		SAND SILT (cont'd)	Gray SILT, some f sand	0
35	S-8	3 3 3 4	24	0			Gray SILT, some f sand	-5
40						SAND AND GRAVEL		-10
	S-9	3 3 8 13	24	16			Reddish brown f-c SAND and f-c GRAVEL, tr. silt	
45						BEDROCK		-15
	C-1		60	53	18		Red-brown arkose/siltstone, fine-grained, moderately fractured, moderately weathered. Core times in min/ft: 3, 2.5, 2, 2, 2	
50								-20
55							END OF BORING 49ft	-25
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: C-7 = 6" Pavement. 6" Concrete.	Sheet
Earth: 44ft Rock: 5ft		2 of 2
No. of Soil Samples: 9 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-6 (2/2)

Driller:	J. Dorau	**Connecticut DOT Boring Report**		Hole No.:	RW-7
Inspector:	G. Arzt	Town:	Middletown	Stat./Offset:	
Engineer:	R. Pion	Project No.:	82-316	Northing:	764706
Start Date:	3-1-16	Route No.:	Rt. 9 NB	Easting:	1028657
Finish Date:	3-1-16	Bridge No.:		Surface Elevation:	26.2
Project Description:	Improvements at Route 9 at the Route 17 Interchange				
Casing Size/Type:	4" HFJ	Sampler Type/Size:	SS 1 3/8 ID	Core Barrel Type:	NQ2
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@11 after 0 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		25
	S-1	11 17 17 22	24	18		MISC FILL	Brown f-c SAND, little f-c gravel, tr. silt	
5	S-2	58 9 10 7	24	15			Brown f-c SAND, little f-c gravel, tr. silt	20
10	S-3	5 5 2 3	24	10		GRAVELLY SAND	Brown f-c SAND, little f-c gravel, tr. silt	15
15	S-4	2 2 3 5	24	13		SILTY SAND	Reddish brown f SAND, some silt, tr. f gravel	10
20	S-5	4 1 1 1	24	18		SANDY SILT	Gray SILT, some f sand	5
25	S-6	WORWORWORWOR	24	24			Gray SILT, tr. f sand	0
30						GRAVELLY SAND		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: 6" Pavement, 6" Concrete.	Sheet
Earth: 42ft Rock: 5ft		1 of 2
No. of Soil Samples: 9 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-7 (1/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

NOT TO SCALE

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 5

DRAWING NO. S-08
SHEET NO.

Driller: J. Dorau	**Connecticut DOT Boring Report**		Hole No.: RW-7
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764706
Start Date: 3-1-16	Route No.: Rt. 9 NB		Easting: 1028657
Finish Date: 3-1-16	Bridge No.:		Surface Elevation: 26.2
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type: NQ2
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @11 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-7	5 8 12 11	24	17		GRAVELLY SAND (cont)	Brown f-c SAND, little f-c gravel, tr. silt	5
35	S-8	6 9 10 14	24	15		GLACIAL TILL	Reddish brown f-c SAND, little silt, tr. c gravel, with cobbles	10
40	S-9	26 72	12	10		BEDROCK	Reddish brown f-c SAND, little silt, tr. c gravel, with cobbles	15
45	C-1		60	37	15		Red-brown arkose/siltstone, fine-grained, highly fractured, highly weathered, medium strong. Core times in min/ft: 2.5, 2, 2.5, 3, 3	20
50							END OF BORING 47ft	25
55								30
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 42ft Rock: 5ft	NOTES: 6" Pavement, 6" Concrete.	Sheet 2 of 2
No. of Soil Samples: 9 No. of Core Runs: 1		SM-001-M REV. 1/02

RW-7 (2/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-8
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764959
Start Date: 3-1-16	Route No.: Rt. 9 NB		Easting: 1028500
Finish Date: 3-1-16	Bridge No.:		Surface Elevation: 19.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @15 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE		15
5	S-1	6 5 5 6	24	16		MISC FILL	Brown black f-c SAND, little f-c gravel, tr. silt, with wood pieces	10
10	S-2	4 7 5 6	24	16			Brown f-c SAND, some f-c gravel, tr. silt, with cobbles and brick	5
15	S-3	5 3 3 6	24	12		SILT	Brown SILT	0
20	S-4	WOH/WOH 3 3	24	20			Brown SILT, tr. f sand	-5
25	S-5	15 16 10 10	24	10		SAND	Brown f-c SAND, little f-c gravel, little silt	-10
30								-15

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 45.5ft Rock: ft	NOTES: C-8 = 5" Pavement. 6" Concrete.	Sheet 1 of 2
No. of Soil Samples: 9 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-8 (1/2)

Driller: C. Johnston	**Connecticut DOT Boring Report**		Hole No.: RW-8
Inspector: G. Arzt	Town: Middletown		Stat./Offset:
Engineer: R. Pion	Project No.: 82-316		Northing: 764959
Start Date: 3-1-16	Route No.: Rt. 9 NB		Easting: 1028500
Finish Date: 3-1-16	Bridge No.:		Surface Elevation: 19.8
Project Description: Improvements at Route 9 at the Route 17 Interchange			
Casing Size/Type: 4" HFJ	Sampler Type/Size: SS 1 3/8 ID		Core Barrel Type:
Hammer Wt.: Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @15 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
30	S-6	10 10 17 9	24	12		SAND (cont)	Brown f-c SAND, little f-c gravel, little silt	
35	S-7	27 50	12	8			Brown f-c SAND, little f-c gravel, little silt, with cobbles	
40	S-8	50	4	4			Brown f-c SAND, little f-c gravel, little silt, with cobbles	
45	S-9	50	5	4			Brown f-c SAND, little f-c gravel, little silt, with cobbles	
50							END OF BORING 45.5ft	
55								
60								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 45.5ft Rock: ft	NOTES: C-8 = 5" Pavement. 6" Concrete.	Sheet 2 of 2
No. of Soil Samples: 9 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-8 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-09
Inspector: R.M. Downes	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764592
Start Date: 3-8-22	Route No.: 9		Easting: 1028655
Finish Date: 3-9-22	Bridge No.:		Surface Elevation: 31
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @18.7 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						6.5" ASPHALT PAVEMENT STRUCTURE		30
	S-1	13 12 17 23	24	18		MISC FILL	Brown c-f SAND, little c-f gravel, trace silt	
5	S-2	20 12 8 20	24	13			Brown c-f SAND, little c-f gravel, little silt	25
10	S-3	18 10 7 15	24	14			Brown c-f SAND, little silt, little c-f gravel	20
15	S-4	10 9 86 50/2"	20	12			Top 10"- Brown c-f SAND, little silt, little c-f gravel. Bottom 10" - light brown c-f SAND and c-f GRAVEL, trace silt.	15
20	S-5	6 2 2 3	24	0		SILTY SAND	Gray-brown f SAND, some silt, trace clay	10
25	S-6	4 5 5 4	24	0			No recovery initially - re-drove for sample and recovered Gray-brown f SAND, some silt, trace clay	5
30	S-7	2 3 3 2	24	0		CLAYEY SILT	No recovery initially - re-drove for sample and recovered Gray Clayey SILT, little f sand	0
35	S-8	WOH/18" 3	24	24			Gray Clayey SILT, trace f sand	-5

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 43.8ft Rock: 10ft	NOTES: Casing refused at 43 ft. Very slow progress with roller bit at 43.5 ft. First water reading at completion with casing in to 43 ft. After pulling casing borehole caved at 40.5 ft with water at 14.6 ft.	Sheet 1 of 2
No. of Soil Samples: 10 No. of Core Runs: 2		SM-001-M REV. 1/02

RW-9 (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-09
Inspector: R.M. Downes	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764592
Start Date: 3-8-22	Route No.: 9		Easting: 1028655
Finish Date: 3-9-22	Bridge No.:		Surface Elevation: 31
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @18.7 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-9	2 2 2 11	24	16		CLAYEY SILT (cont)	Top 10" - Gray Clayey SILT. Bottom 6" - Gray c-f SAND, some silt, some c-f gravel. Piece of gravel stuck in tip.	10
	S-10	100/3"	3	3		GLACIAL TILL	Fragments of highly weathered SANDSTONE/SILTSTONE	
45	C-1		60	57	30	WEATHERED BEDROCK BEDROCK	Red-brown fine grained, medium bedded, highly fracured, slightly weathered, weak SILTSTONE; Coring times in min/ft: 4.0, 3.5, 3.0, 5.0, 5.0	15
50	C-2		60	60	72		Red-brown fine grained, medium bedded, highly fractured, slightly weathered, medium strong SILTSTONE; Coring times in min/ft: 5.5, 4.5, 4.0, 6.0, 5.5	20
55								25
60							END OF BORING 53.8ft	30
65								35
70								40

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 43.8ft Rock: 10ft	NOTES: Casing refused at 43 ft. Very slow progress with roller bit at 43.5 ft. First water reading at completion with casing in to 43 ft. After pulling casing borehole caved at 40.5 ft with water at 14.6 ft.	Sheet 2 of 2
No. of Soil Samples: 10 No. of Core Runs: 2		SM-001-M REV. 1/02

RW-9 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-10
Inspector: H. Karimi	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764469
Start Date: 3-23-22	Route No.: 9		Easting: 1028684
Finish Date: 3-24-22	Bridge No.:		Surface Elevation: 20.5
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @25 after 0 hours, @4.3 after 15 hours, @7.5 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	2 6 14 13	24	12		MISC FILL	Top 3 inches brown c-f SAND, little silt, trace f-m GRAVEL, bottom 9 inches gray c-f GRAVEL, some c-f SAND trace silt	20
5	S-2	7 5 4 4	24	0			Gray c-f GRAVEL, some c-f sand, trace silt	15
10	S-3	3 2 1 1	24	0		CLAYEY SILT	Brown SILT, some clay, trace f sand	10
	S-4	3 4 5 6	24	17			Brown SILT, some clay, trace f sand	
15	S-5	1 2 5 5	24	23			Gray brown SILT, and CLAY	5
20	S-6	4 16 24 22	24	14			Top 5 inches: Gray-brown CLAY, and SILT Bottom 9 inches: Brown f-c SAND, little silt.	0
25	S-7	15 14 14 16	24	21		SAND	Brown f-c SAND, trace silt	-5
	S-8	100/0.5	0.5	0		WEATHERED BEDROCK	Highly weathered SANDSTONE/SILTSTONE	
30	C-1		60	60	10	BEDROCK	Red brown medium bedded, highly fractured, moderately weathered Siltstone, core times in min/ft: 3.0, 2.5, 3.0, 5.0, 3.5	-10
35	C-2		60	60	60		Red brown medium bedded, highly fractured, moderately weathered Siltstone, core times in	-15

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 28.4ft Rock: 10ft	NOTES: After installation of well ground water is 7.5' One-inch PVC observation well installed with 10 ft screen, 15 ft riser (total 25 ft depth); bentonite pellet seal at 1 to 2 ft BGS, and 4" riser (protective) casing installed.	Sheet 1 of 2
No. of Soil Samples: 8 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-10 (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-10
Inspector: H. Karimi	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764469
Start Date: 3-23-22	Route No.: 9		Easting: 1028684
Finish Date: 3-24-22	Bridge No.:		Surface Elevation: 20.5
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @25 after 0 hours, @4.3 after 15 hours, @7.5 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
						BEDROCK (cont)	min/ft: 3.5, 3.0, 3.0, 3.0, 3.5	
40							END OF BORING 38.4ft	
45								
50								
55								
60								
65								
70								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 28.4ft Rock: 10ft	NOTES: After installation of well ground water is 7.5' One-inch PVC observation well installed with 10 ft screen, 15 ft riser (total 25 ft depth); bentonite pellet seal at 1 to 2 ft BGS, and 4" riser (protective) casing installed.	Sheet 2 of 2
No. of Soil Samples: 8 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-10 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-11
Inspector: R.M. Downes	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 764362
Start Date: 3-10-22	Route No.: 9		Easting: 1028798
Finish Date: 3-11-22	Bridge No.:		Surface Elevation: 40.5
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @21.1 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						7" ASPHALT PAVEMENT STRUCTURE		40
	S-1	16 18 20 20	24	21		MISC FILL	Top 10" - Dark brown c-f SAND and c-f gravel, trace silt. Bottom 11" - Brown c-f SAND, little silt, little f gravel.	
5	S-2	18 17 12 17	24	16			Brown c-f SAND, little c-f gravel trace silt.	35
10	S-3	8 8 14 21	24	16			Brown c-f SAND, little c-f gravel, little silt.	30
15	S-4	19 12 14 19	24	14			Brown c-f SAND, little c-f gravel, little silt	25
20	S-5	33 23 18 13	24	10			Brown c-f SAND, some c-f gravel, little silt; Sandstone fragment stuck in tip.	20
25	S-6	22 26 21 18	24	18		GRAVELLY SAND	Top 12" - Brown c-f SAND,little c-f gravel, little silt. Bottom 6" - Black c-f SAND, some c-f gravel, trace (+) silt.	15
30	S-7	8 5 4 5	24	9		SAND AND SILT	Top 4" - Brown c-f SAND, some f gravel, trace silt. Bottom 5" - Black c-f SAND, some c-f gravel, trace silt; with hard SILT, trace clay in tip.	10
35	S-8	22 31 23 15	24	18			Reddish brown SILT and f sand, little c-f gravel; piece of gravel stuck in tip.	5

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 51.0ft Rock: 0ft	NOTES: First water reading at completion with casing in to 49 ft. After pulling casing the borehole caved at 29.9 ft with water at 7.6 ft.	Sheet 1 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-11 (1/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 6

DRAWING NO. S-09
SHEET NO.

82-316
LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_Boring Logs.dgn
PLOTTED DATE: 6/24/2022

Figure C-5

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-11
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 764362
Start Date: 3-10-22	Route No.: 9	Easting: 1028798
Finish Date: 3-11-22	Bridge No.:	Surface Elevation: 40.5
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @21.1 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-9	23 20 18 24	24	17		SAND AND SILT *(cont)*	Reddish brown c - f SAND and silt, little c-f gravel	0
45	S-10	28 23 19 34	24	14		GLACIAL TILL	Reddish brown c- f SAND and silt, little c-f gravel.	-5
50	S-11	20 20 31 38	24	13			Reddish brown c-f SAND, some c-f gravel, some silt.	-10
55							END OF BORING 51ft	-15
60								-20
65								-25
70								-30

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: First water reading at completion with casing in to 49 ft. After pulling casing the borehole caved at 29.9 ft with water at 7.6 ft.	Sheet
Earth: 51.0ft Rock: 0ft		2 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-11 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-12
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 764233
Start Date: 3-11-22	Route No.: 9	Easting: 1028880
Finish Date: 3-14-22	Bridge No.:	Surface Elevation: 45.8
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @8.8 after 0 hours, @25.3 after 78 hours, @20.8 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						7" ASPHALT PAVEMENT STRUCTURE/ MISC FILL		45
5	S-1	18 18 20 19	24	22			Brown c-f SAND, some c-f gravel, little silt	40
10	S-2	15 11 19 24	24	18			Brown c-f SAND, some silt, little c-f gravel. Gravel fragment struck in tip.	35
15	S-3	27 44 17 14	24	12			Brown c-f SAND, some c-f gravel, little silt	30
20	S-4	17 11 13 16	24	14			Brown c-f SAND, some c-f gravel, little silt	25
25	S-5	19 17 23 19	24	13			Brown c-f SAND, some c-f gravel, little silt	20
30	S-6	21 15 19 19	24	18			Brown c-f SAND, some c-f gravel, little silt	15
35	S-7	28 28 12 12	24	15		GRAVELY SAND	Layered black and light brown c-f SAND, little f gravel, trace to some silt.	10
	S-8	9 7 9 9	24	17		CLAYEY SILT	Reddish brown Clayey SILT, trace f sand	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: First water reading at conclusion of drilling oN 3/11 with 24 ft of casing in ground. Second water reading taken at resumption of drilling on 3/14 with 25 ft of casing in ground, hole open to 26 ft. Third water reading taken at completion with 49 ft of casing in ground. After pulling casing borehole caved at 6 ft with water at 3.5 ft.	Sheet
Earth: 51.0ft Rock: 0ft		1 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-12 (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-12
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 764233
Start Date: 3-11-22	Route No.: 9	Easting: 1028880
Finish Date: 3-14-22	Bridge No.:	Surface Elevation: 45.8
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @8.8 after 0 hours, @25.3 after 78 hours, @20.8 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-9	4 3 7 7	24	21		CLAYEY SILT *(cont)*	Reddish brown Clayey SILT, trace f sand	5
45	S-10	17 27 34 30	24	17			Reddish brown Clayey SILT, trace f sand, trace f gravel.	0
50	S-11	20 32 45 46	24	24			Reddish brown Clayey SILT, trace f sand, trace f gravel.	-5
55							END OF BORING 51ft	-10
60								-15
65								-20
70								-25

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: First water reading at conclusion of drilling oN 3/11 with 24 ft of casing in ground. Second water reading taken at resumption of drilling on 3/14 with 25 ft of casing in ground, hole open to 26 ft. Third water reading taken at completion with 49 ft of casing in ground. After pulling casing borehole caved at 6 ft with water at 3.5 ft.	Sheet
Earth: 51.0ft Rock: 0ft		2 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-12 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-13
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 763766
Start Date: 3-15-22	Route No.: 9	Easting: 1029168
Finish Date: 3-15-22	Bridge No.:	Surface Elevation: 42.9
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @21.0 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						ASPHALT/CONCRETE PAVEMENT STRUCTURE		40
5	S-1	12 14 16 14	24	18			Brown c-f SAND and c-f gravel, little silt	35
10	S-2	6 10 14 10	24	13		MISC FILL	Brown c-f SAND, some silt, little m-f gravel	30
15	S-3	16 18 13 12	24	16			Brown c-f SAND, some silt, little m-f gravel	25
20	S-4	16 14 11 12	24	11			Brown c-f SAND, little silt, little m-f gavel	20
25	S-5	13 11 11 15	24	14			Brown c-f SAND, some c-f gravel, little silt	15
30	S-6	12 13 15 12	24	15			Brown c-f SAND, some c-f gravel, little silt	10
35	S-7	7 5 7 7	24	9			Brown c-f SAND, little silt, trace m-f gravel	5
	S-8	16 18 14 15	24	9		GRAVELLY SAND	Black c-f SAND, some silt, some m-f gravel	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Pavement consisted of 7 inches of asphalt over 5 inches of concrete with no discernable subbase First water reading taken at completion with 49 ft of casing in the ground. After pulling casing borehole caved at 37 ft with water at 23.5 ft.	Sheet
Earth: 51.0ft Rock: 0ft		1 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-13 (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-13
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 763766
Start Date: 3-15-22	Route No.: 9	Easting: 1029168
Finish Date: 3-15-22	Bridge No.:	Surface Elevation: 42.9
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @21.0 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-9	5 6 7 8	24	20		GRAVELLY SAND *(cont)*	Brown c-f SAND, some c-f gravel, little silt	5
45	S-10	7 8 9 10	24	18			Brown c-f SAND, some c-f gravel, little silt	0
50	S-11	8 9 10 11	24	19			Brown c-f SAND, some c-f gravel, little silt	-5
55							END OF BORING 51ft	-10
60								-15
65								-20
70								-25

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Pavement consisted of 7 inches of asphalt over 5 inches of concrete with no discernable subbase First water reading taken at completion with 49 ft of casing in the ground. After pulling casing borehole caved at 37 ft with water at 23.5 ft.	Sheet
Earth: 51.0ft Rock: 0ft		2 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-13 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-14
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 763614
Start Date: 3-15-22	Route No.: 9	Easting: 1029225
Finish Date: 3-16-22	Bridge No.:	Surface Elevation: 37.9
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @22.3 after 0 hours, @27.9 after 17 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						6" ASPHALT PAVEMENT STRUCTURE/ MISC FILL		35
5	S-1	16 16 20	18	17			Brown c-f SAND, some m-f gravel, trace silt	30
10	S-2	15 18 17 20	24	18			Brown c-f SAND, some silt trace clay, trace m-f gravel	25
15	S-3	26 21 23 21	24	17			Brown c-f SAND, some c-f gravel, little silt	20
20	S-4	11 11 10 11	24	13			Brown c-f SAND, little silt, trace m-f gravel	15
25	S-5	17 18 16 11	24	0			Brown c-f SAND, little silt, trace m-f gravel	10
30	S-6	21 21 25 26	24	15			Brown c-f SAND, little silt, trace m-f gravel	5
35	S-7	4 7 6 10	24	2			Brown c-f SAND, trace silt	
	S-8	6 4 4 6	24	15		GRAVELLY SAND	Brown c-f SAND, some silt, some c-f gravel	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: First water reading taken at completion with 49' of casing in ground. After pulling casing borehole caved at 37' with water at 23.5'. One-inch PVC observation well installed with 10 ft screen, 25 ft riser (total 35 ft depth); bentonite pellet seal at 1 to 2 ft BGS; and flush mounted road box. Second water reading taken in observation well.	Sheet
Earth: 51.0ft Rock: 0ft		1 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-14 (1/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-14
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 763614
Start Date: 3-15-22	Route No.: 9	Easting: 1029225
Finish Date: 3-16-22	Bridge No.:	Surface Elevation: 37.9
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @22.3 after 0 hours, @27.9 after 17 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
40	S-9	2 4 3 5	24	12		CLAYEY SILT *(cont'l)*	Gray Clayey SILT, little m-f gravel, little f-c sand	0
45	S-10	WOH/12" 2 6	24	0			Gray Clayey SILT, little m-f gravel, little f-c sand	-5
50	S-11	3 3 3 3	24	24			Gray Clayey SILT, trace f sand	-10
55							END OF BORING 51ft	-15
60								-20
65								-25
70								-30
								-35

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: First water reading taken at completion with 49' of casing in ground. After pulling casing borehole caved at 37' with water at 23.5'. One-inch PVC observation well installed with 10 ft screen, 25 ft riser (total 35 ft depth); bentonite pellet seal at 1 to 2 ft BGS; and flush mounted road box. Second water reading taken in observation well.	Sheet
Earth: 51.0ft Rock: 0ft		2 of 2
No. of Soil Samples: 11 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-14 (2/2)

Driller: M. Childs	**Connecticut DOT Boring Report**	Hole No.: RW-15
Inspector: R.M. Downes	Town: Middletown, Connecticut	Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316	Northing: 763465
Start Date: 3-16-02	Route No.: 9	Easting: 1029254
Finish Date: 3-17-22	Bridge No.:	Surface Elevation: 34
Project Description: Route 9 Improvements		
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS	Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.	
Groundwater Observations: @49.7 after 0 hours		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						6.5" ASPHALT PAVEMENT STRUCTURE/ MISC FILL		30
5	S-1	13 18 22 24	24	21			Brown c-f SAND, and c-f GRAVEL, trace silt	25
10	S-2	27 50 51 45	24	20			Brown c-f SAND, some c-f gavel, little silt	20
15	S-3	23 39 51 45	24	20			Brown c-f SAND, some c-f gravel, little silt	15
20	S-4	6 6 9 10	24	12			Brown c-f SAND, some silt, trace clay, some c-f gravel	10
25	S-5	24 24 14 20	24	17			Brown c-f SAND, some silt, trace clay, little c-f gravel	5
30	S-6	19 14 10 8	24	13			Brown c-f SAND, some silt, little c-f gravel	0
35	S-7	9 1 1 3	24	4		GRAVELLY SAND/ CLAYEY SILT	Top 5": Black c-f SAND and m-f gravel, little silt. Bottom 4": Reddish brown Clayey SILT, trace f sand.	-5
	S-8	13 3 3 3	24	3			Dark gray c-f SAND and Clayey SILT, little c-f gravel	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Very slow progress with spun casing at 63 ft. roller bit ahead of casing to 64 ft. - also very slow progress. First water reading taken at completion with 63 ft of casing in the ground.	Sheet
Earth: 64.5ft Rock: 0ft		1 of 2
No. of Soil Samples: 13 No. of Core Runs: ---		SM-001-M REV. 1/02

RW-15 (1/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 7

DRAWING NO. S-10
SHEET NO.

82-316

LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_Boring Logs.dgn
PLOTTED DATE: 6/24/2022

Figure C-5

Driller: M. Childs	**Connecticut DOT Boring Report**		Hole No.: RW-15
Inspector: R.M. Downes	Town: Middletown, Connecticut		Stat./Offset:
Engineer: R. Pion	Project No.: 0082-0316		Northing: 763465
Start Date: 3-16-02	Route No.: 9		Easting: 1029254
Finish Date: 3-17-22	Bridge No.:		Surface Elevation: 34
Project Description: Route 9 Improvements			
Casing Size/Type: 3" NW FJ	Sampler Type/Size: 2" SS		Core Barrel Type: NQ2
Hammer Wt.: SPUN Fall: in.	Hammer Wt.: 140 Fall: 30in.		
Groundwater Observations: @49.7 after 0 hours			

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	ROD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
						CLAYEY SILT *(cont'd)*		
40	S-9	2 4 6 9	24	24			Gray Clayey SILT, trace f sand	-5
45	S-10	3 4 5 9	24	14			Gray brown SILT trace clay, some f sand, trace m-f gravel	-10
50	S-11	1 1 2 3	24	24			Gray Clayey SILT, trace f sand	-15
55	S-12	2 5 4 7	24	18			Gray brown c-f SAND, little silt, little m-f gravel	-20
60								-25
65	S-13	100	6	6			Reddish Brown Clayey SILT	-30
							END OF BORING 64.5ft	-35
70								-40

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 64.5ft Rock: 0ft No. of Soil Samples: 13 No. of Core Runs: ---	NOTES: Very slow progress with spun casing at 63 ft. roller bit ahead of casing to 64 ft. - also very slow progress. First water reading taken at completion with 63 ft of casing in the ground.	Sheet 2 of 2 SM-001-M REV. 1/02

RW-15 (2/2)

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: BORING LOGS 8

DRAWING NO. S-11
SHEET NO.

82-316

LASTED SAVED BY: smithsm **FILE NAME:** D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSta_Sheet_Files\Bridge 00638\SB_CP_0082_0316_Boring Logs.dgn
PLOTTED DATE: 6/24/2022

Figure C-5

GENERAL NOTES

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2020), SUPPLEMENTAL SPECIFICATIONS THERETO DATED JANUARY 2022, AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION (2020), WITH LATEST INTERIM SPECIFICATIONS AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH INTERIM REVISIONS UP TO AND INCLUDING 12/2019.

MATERIAL STRENGTHS:

CONCRETE:
CLASS PCC03340 BASED ON f'c = 3000 PSI
CLASS PCC04462 BASED ON f'c = 4000 PSI
HIGH EARLY STRENGTH CONCRETE BASED ON f'c = 5000 PSI

REINFORCEMENT:
ASTM A615, GRADE 60.....Fy = 60 KSI

STRUCTURAL STEEL:
- AASHTO M270, GRADE 50T2.....Fy = 50 KSI

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, f'c, OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF 'SECTION 6.01 CONCRETE FOR STRUCTURES' AND 'SECTION M.03 PORTLAND CEMENT CONCRETE' FOR THE CLASS OF CONCRETE SPECIFIED.

LIVE LOAD: HL 93, LEGAL, AND PERMIT VEHICLES.

FUTURE PAVING ALLOWANCE: NONE

BITUMINOUS CONCRETE OVERLAY: OVERLAY ON THE BRIDGE SHALL CONSIST OF 2" PMA S0.5 TRAFFIC LEVEL 3 ON HMA S0.375 TRAFFIC LEVEL 2 (WEDGE COURSE, PLACED IN LIFTS VARYING IN THICKNESS BETWEEN 0" MIN. TO 2.5" MAX. TO DEVELOP CROSS SLOPE AS NEEDED) ON 1" HMA S0.25 TRAFFIC LEVEL 2 ON WATERPROOFING MEMBRANE (COLD LIQUID ELASTOMERIC).

STRUCTURAL STEEL: SEE STRUCTURAL STEEL NOTES FOR DESIGNATIONS AND REQUIREMENTS.

METALLIZING: STRUCTURAL STEEL SHALL BE METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)." THE COLOR OF THE TOP COAT MATERIAL ON THE STRUCTURAL STEEL SHALL CONFORM TO AMS-STD-595 NO. 24172.

FOUNDATION PRESSURES: THE LIMIT STATES NOTED ON THE SUBSTRUCTURE PLAN SHEETS REFER TO THE LIMIT STATES AS GIVEN IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC): COLD LIQUID ELASTOMERIC SHALL BE PLACED ON THE BRIDGE DECK AFTER IT HAS BEEN POURED AND CURED. THE COLD LIQUID ELASTOMERIC SHALL EXTEND 2" UP THE CURBS.

DIMENSIONS AND ELEVATIONS: ALL DIMENSIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE GIVEN IN FEET. WHEN DECIMAL DIMENSIONS OR ELEVATIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY.

SUBSTRUCTURE AND SUPERSTRUCTURE REMOVAL: BEFORE INITIATING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL DEFINING METHOD FOR CONSTRUCTION AND PROTECTING DEBRIS FROM FALLING ONTO UNION STREET AND RAILROAD TRACKS DURING REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE. COST TO BE INCLUDED FOR PAYMENT UNDER THE ITEM "REMOVAL OF SUPERSTRUCTURE".

BRIDGE IDENTIFICATION PLACARDS: THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW BRIDGE IDENTIFICATION SIGNS AT THE LEADING END OF THE BRIDGE PARAPET. THE SIGNS SHALL BE FABRICATED WITH 40 GAUGE ALUMINUM SHEET METAL. THE SIGNS SHALL BE 4"X12" WITH 3" WHITE RETROREFLECTIVE BLOCK LETTERS ON GREEN RETROREFLECTIVE SHEETING. EACH SIGN SHALL READ: 00638. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE BRIDGE SIGNS SHALL BE COVERED UNDER THE ITEM "SIGN FACE - SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)". THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

TRAFFIC: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS "MAINTENANCE AND PROTECTION OF TRAFFIC" AND "PROSECUTION AND PROGRESS."

DEFORMATION MONITORING POINTS: A MINIMUM OF 2 DEFORMATION MONITORING POINTS (DMPs) SHALL BE INSTALLED ON EACH EXISTING ABUTMENT STEM ADJACENT TO THE CURRENT STAGE OF CONSTRUCTION. SHOULD THE LIMITING VALUE OF 0.25 INCHES BE EXCEEDED, THE CONTRACTOR SHALL STOP ALL OPERATIONS AND NOTIFY THE ENGINEER IMMEDIATELY AND IMPLEMENT REMEDIAL ACTION. DMPs SHALL BE INCLUDED FOR PAYMENT UNDER ITEM "MONITORING STRUCTURES."

WATER ENCOUNTERED IN THE EXCAVATION THAT REQUIRES DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVOSIONS OF SUBARTICLE 2.04.03-2 OF THE STANDARD SPECIFICATIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR DEWATERING. THE COST FOR DEWATERING WITHIN THE LIMITS OF EXCAVATION REQUIRED FOR RETAINING WALL (SITE NO. 1) AND RETAINING WALL (SITE NO. 2) SHALL BE INCLUDED UNDER THE APPLICABLE ITEM. DEWATERING WITHIN THE LIMITS OF EXCAVATION FOR BRIDGE COMPONENTS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM "STRUCTURE EXCAVATION - EARTH (COMPLETE)".

SALVAGE: BRIDGE 00638: ALL COMPONENTS OF THE (E) METAL BRIDGE RAIL, INCLUDING POSTS AND HARDWARE SHALL BE SALVAGED. REMOVAL AND SALVAGE OF METAL BRIDGE RAIL SHALL BE PAID FOR UNDER ITEM "REMOVAL OF SUPERSTRUCTURE".

CONCRETE NOTES

EXPOSED CONCRETE EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1", UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT IN THE SUBSTRUCTURE SHALL HAVE A 3" MINIMUM COVER, ALL OTHER REINFORCEMENT SHALL HAVE A 2" MINIMUM COVER, UNLESS DIMENSIONED OTHERWISE.

STAY-IN-PLACE FORMS: THE USE OF STAY-IN-PLACE FORMS IS PROHIBITTED EXCEPT OVER THE CROSS GIRDER.

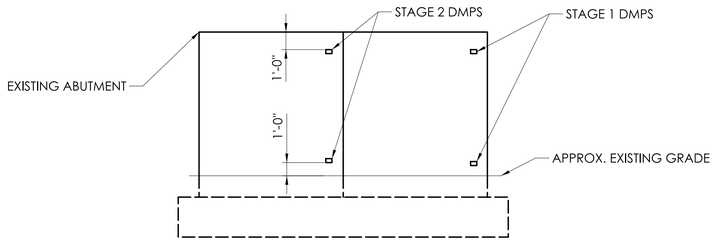
COMPOSITE CONSTRUCTION: NO TEMPORARY INTERMEDIATE SUPPORTS SHALL BE USED DURING THE PLACING AND SETTING OF THE CONCRETE DECK SLAB. TEMPORARY SUPPORTS MAY BE USED FOR THE STRUCTURAL STEEL ERECTION ONLY. CONSTRUCTION LOADS AND DEAD LOADS (INCLUDING PARAPETS) WILL BE PERMITTED WHEN DIRECTED BY THE ENGINEER BUT ONLY WHEN THE CONCRETE HAS REACHED A STRENGTH OF f'c = 3500 PSI. LIVE LOAD (TRAFFIC) WILL BE PERMITTED ON THE STRUCTURE AFTER THE CONCRETE HAS REACHED A STRENGTH OF f'c = 4000 PSI.

THE FOLLOWING PAY ITEMS AND CONCRETE CLASSES ARE REQUIRED FOR CAST-IN-PLACE BRIDGE COMPONENTS:

ITEM NAME	BRIDGE COMPONENTS	PCC CLASS
FOOTING CONCRETE	ABUTMENT PILE CAPS	PCC03340
FOOTING CONCRETE (MASS)	PIER PILE CAPS	PCC03340
ABUTMENT AND WALL CONCRETE	ABUTMENT WALL, PIER WALL AND BEARING PEDESTALS	PCC03340
BRIDGE DECK CONCRETE	BRIDGE DECK, HAUNCHES & SEMI-INTEGRAL BACKWALL	PCC04462
BRIDGE DECK CONCRETE (SIP FORMS)	BRIDGE DECK & HAUNCHES WITHIN CROSS GIRDER	PCC04462
APPROACH SLAB CONCRETE	APPROACH SLABS	PCC04462
PARAPET CONCRETE	BRIDGE PARAPETS	PCC04462
HIGH EARLY STRENGTH CONCRETE	DECK CLOSURE POURS	PCC05562

REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60 GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. STEEL REINFORCEMENT BARS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A767, CLASS 1. THESE BARS SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM, "DEFORMED STEEL BARS-GALVANIZED".

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. THE SURFACES BETWEEN THE NEW AND EXISTING CONCRETE SHALL BE FREE OF LOOSE MATERIAL, UNSOUND CONCRETE, AND FOREIGN MATERIAL. THE SURFACES SHALL BE CLEANED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE DAMPENED WITH WATER JUST PRIOR TO PLACING THE CONCRETE.



DEFORMATION MONITORING POINTS PLACEMENT SCHEMATIC

NTS

NOTE: THE CONTRACTOR SHALL INSTALL, AT A MINIMUM, 2 DMPs PER STAGE ON THE EXISTING ABUTMENT. ADDITIONAL DMPs MAY BE REQUIRED AT THE REQUEST OF THE ENGINEER.

STRUCTURAL STEEL NOTES

1. THE STRUCTURAL STEEL (LOW ALLOY) SHALL CONFORM TO AASHTO M270, GRADE 50T2.
2. WELDING DETAILS, PROCEDURE AND TESTING METHODS SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS D1.5 - BRIDGE WELDING CODE, UNLESS OTHERWISE NOTED ON THE PLANS.
3. BOLTED FIELD SPLICES, OTHER THAN THOSE INDICATED ON THE PLANS, WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF SHOP DRAWINGS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO EXTRA EXPENSE TO THE STATE. WELDED FIELD SPLICES WILL NOT BE ALLOWED.
4. ALL WEB TO FLANGE, WEB TO BEARING STIFFENERS, WEB TO CONNECTION PLATE, AND BEARING STIFFENER TO FLANGE FILLET WELDS SHALL BE INSPECTED BY MAGNETIC PARTICLE METHOD.
5. MULTIPLE PASS WELDS, INSPECTED BY THE MAGNETIC PARTICLE METHOD, SHALL HAVE EACH PASS OR LAYER INSPECTED AND ACCEPTED BEFORE PROCEEDING TO THE NEXT PASS OR LAYER, AS DETERMINED BY THE ENGINEER.
6. SHOP FLANGE SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM WEB SPLICES.
7. FLANGE OR WEB SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM STIFFENERS.
8. BEARING STIFFENERS AND THE END OF GIRDERS SHALL BE VERTICAL AFTER THE APPLICATION OF FULL DEAD LOAD.
9. ONLY BEARING STIFFENERS WILL BE PLACED ON THE OUTSIDE FACE OF FASCIA GIRDERS.
10. STRUCTURAL STEEL FABRICATOR SHALL BE CERTIFIED UNDER THE AISC CERTIFICATION PROGRAM CATEGORY BRIDGE FABRICATOR ADVANCE AND BE CERTIFIED TO PRODUCE FRACTURE CRITICAL MEMBERS (ABR,F).
11. NO ATTACHMENTS, OTHER THAN THOSE SHOWN ON THE PLANS, SHALL BE FILLET WELDED, PLUG WELDED OR TACK WELDED TO GIRDERS.
12 NO ATTACHMENT SHALL BE FILLET WELDED, PLUG WELDED OR TACK WELDED TO THE TENSION FLANGE.
13. THERE SHALL BE NO AUTHORIZED FIELD WELDING, INCLUDING TACK WELDING.
14. ALL STRUCTURAL STEEL GIRDERS, CROSS FRAMES, SPLICE PLATES, AND BEARING SOLE PLATES SHALL BE SHOP METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)."
15. ALL FABRICATION, INCLUDING CUTTING, WELDING AND DRILLING OR PUNCHING HOLES SHALL BE PERFORMED BEFORE METALLIZING, FABRICATION, INCLUDING METALLIZING AND PAINTING ALL COMPONENTS SHALL BE PERFORMED IN THE SHOP.
16. THE TOP OF THE TOP FLANGE OF THE GIRDER SHALL BE MASKED OFF FROM SEALING AND TOPCOATS. THIS SURFACE SHALL ONLY BE METALLIZED.
17. THE COATING OF ELEMENTS WHOSE FINISH COAT IS MARRED OR OTHERWISE DAMAGED DURING SHIPPING, HANDLING, OR DURING OTHER CONSTRUCTION OPERATIONS AFTER ERECTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST. REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)."
18. THE GIRDER SHALL BE FABRICATED TO MEET THE FOLLOWING FIT CONDITION: STEEL DEAD LOAD FIT (SDLF)

RAILROAD NOTES

1. THE CONTRACTOR SHALL NOTIFY G&W PUBLIC PROJECTS DEPARTMENT 30 DAYS PRIOR TO STARTING CONSTRUCTION.
2. G&W FLAGGING SERVICES WILL BE REQUIRED FOR ALL WORK WITHIN G&W RIGHT-OF-WAY OR ANY WORK THAT HAS A POTENTIAL TO FOUL.
3. THE CONTRACTOR SHALL NOT USE THE RAILROAD RIGHT OF WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE RAILROAD RIGHT OF WAY MUST REMAIN CLEAR AT ALL TIMES. THE CONTRACTOR SHALL PLAN AND PERFORM ALL WORK IN A MANNER SUCH THAT THE RAILROAD TRACKS AT THE PROJECT LOCATION REMAIN FULLY CAPABLE OF OPERATING RAIL TRAFFIC THROUGHOUT THE WORK PERIOD AND RAIL TRAFFIC IS NOT DELAYED OR OTHERWISE IMPACTED DUE TO THE WORK BEING PERFORMED.
4. ALL WORK PERFORMED ON, ABOVE, OR ADJACENT TO RAILROAD PROPERTY SHALL BE IN ACCORDANCE WITH THE PUBLIC PROJECT MANUAL, LATEST EDITION. WORK PLANS RELATED TO DEMOLITION, DEBRIS SHIELD, HOISTING, ERECTION, EXCAVATION AND SHORING, JACKING PROCEDURE, SITE ACCESS AND SAFETY ACTION PLAN, UTILITY BORING, TRACK MONITORING, STORM WATER MANAGEMENT, ANY OTHER WORK ON, OVER, UNDER, OR WITH THE POTENTIAL TO ENCROACH UPON THE RAILROAD RIGHT OF WAY SHALL BE SUBMITTED FOR REVIEW TO THE RAILROAD FOR ALL WORK THAT PRESENTS THE POTENTIAL TO AFFECT RAILROAD PROPERTY OR OPERATIONS. ALL WORK PLANS SHALL BE PREPARED AND SUBMITTED TO THE RAILROAD IN ADHERENCE WITH THE PUBLIC PROJECT MANUAL, SECTION 1.11 CONSTRUCTION SUBMISSION CRITERIA.

SITE DESIGNATION

STRUCTURE	SITE NO.
RETAINING WALL 101	1
RETAINING WALL 102	2
BRIDGE NO. 00638	1
BRIDGE NO. 00636	3
BRIDGE NO. 00861	4
BRIDGE NO. 00862	5
BRIDGE NO. 00860	6

REV. | DATE | REVISION DESCRIPTION

DESIGNER/DRAFTER: SMS CHECKED BY: JWP

SCALE AS NOTED

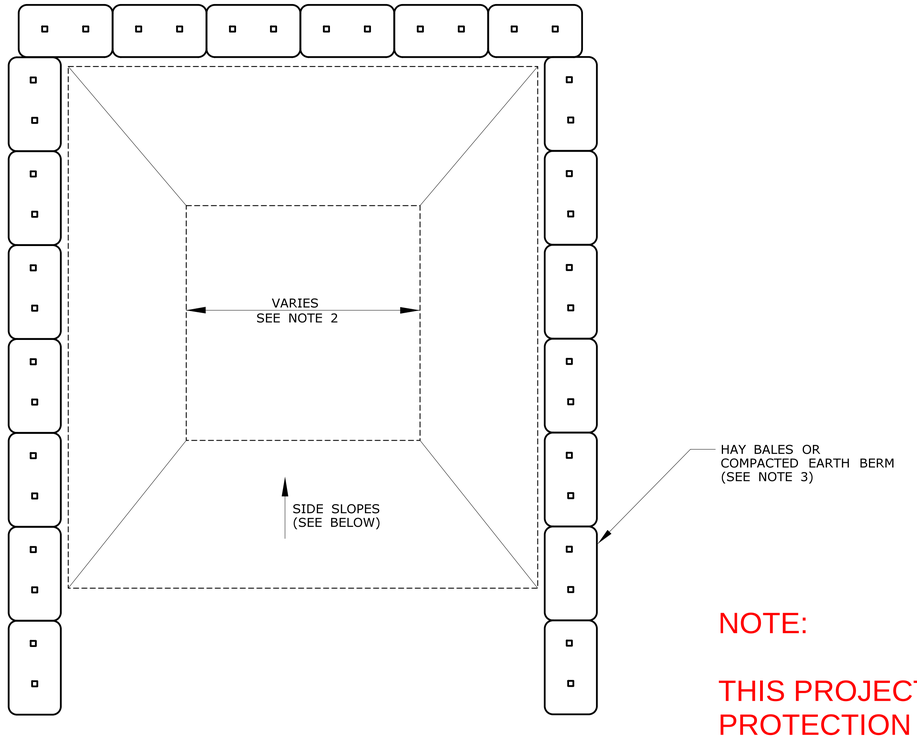
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0082-0316
PROJECT DESCRIPTION: RECONFIGURATION OF ROUTE 17 ON-RAMP ONTO ROUTE 9 NORTHBOUND
TOWN(S): MIDDLETOWN
DRAWING TITLE: GENERAL NOTES

DRAWING NO. S-03
SHEET NO.

LASTED SAVED BY: plattjw FILE NAME: D:\Users\smithsm\State of Connecticut\0082-0316 - Internal Documents\330_Design_Data\Structure_Bridge\MSTa_Sheet_Files\Bridge 00638\SB_CP_0082_0316_General Notes.dgn
PLOTTED DATE: 7/12/2022



PLAN

GENERAL NOTES:

1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.

2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER.

   LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AT LEAST 50 FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

   SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS ASSOCIATED WITH CONCRETE, GROUT, AND MORTAR.

3. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.

4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHOD.

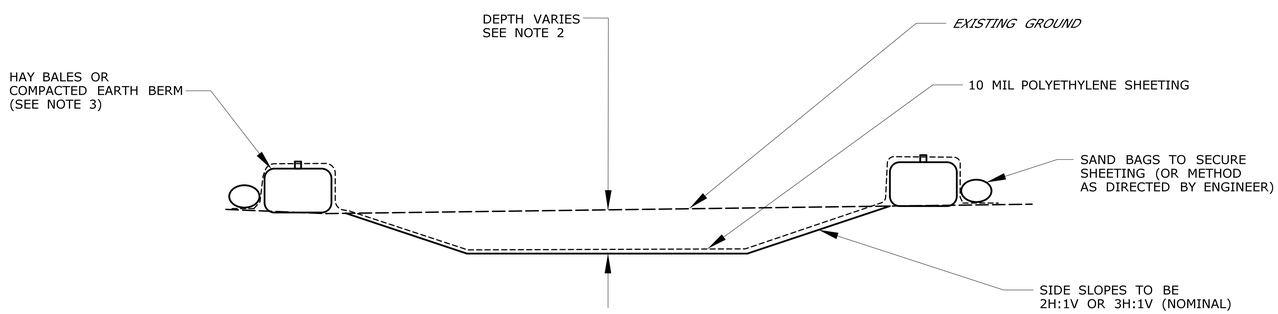
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONSTRUCTION SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS.

6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S DEPTH. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.

7. PAYMENT FOR THIS ITEM IS TO BE INCLUDED UNDER THE GENERAL COST OF THE WORK FOR THE PROJECT, INCLUDING SITE RESTORATION.

NOTE:

THIS PROJECT UTILIZES A DESIGN-BUILD MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION. THAT PROVISION REQUIRES THE CONTRACTOR TO SUBMIT WORK PLANS FOR APPROVAL BY THE STATE. ANTI-TRACKING PAD IS INCLUDED IN THE REQUIRED SUBMITTALS.



CONCRETE WASHOUT AREA
NOT TO SCALE
(SEE NOTE 2)

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 7/26/2022

DESIGNER/DRAFTER: WSN
CHECKED BY: SDH
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082_0316_MDS.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:
Matthew Pauf

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE:
MISCELLANEOUS DETAILS
CONCRETE WASHOUT

PROJECT NO. 0082-0316
DRAWING NO. MDS-01
SHEET NO.

Appendix D - CTDOT MS4 Project Design Maximum Extent Practicable Worksheet

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0082-0316
	Title:	Reconfiguration of the Route 17 On-ramp to Route 9 Northbound
	Location:	City of Middletown

Section 2: Existing Conditions

EC1	Total Project Area			22.77 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			13.80 acres	60.61 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified		☑Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater		☐TBD	8.8 to 49.7 ft below grade		
EC5	Depth to Bedrock		☐TBD	30.5 to 85 ft below grade		
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)			☐Yes (See Below)	☑No	
	Check All That Apply	☑Urbanized Area	☑DCIA >11%	☐Impaired Waterbody (See Below)		
	Select All Impairments That Apply	Choose an Item	Choose an Item	Choose an Item		
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☑Yes	☐No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			0 acres		

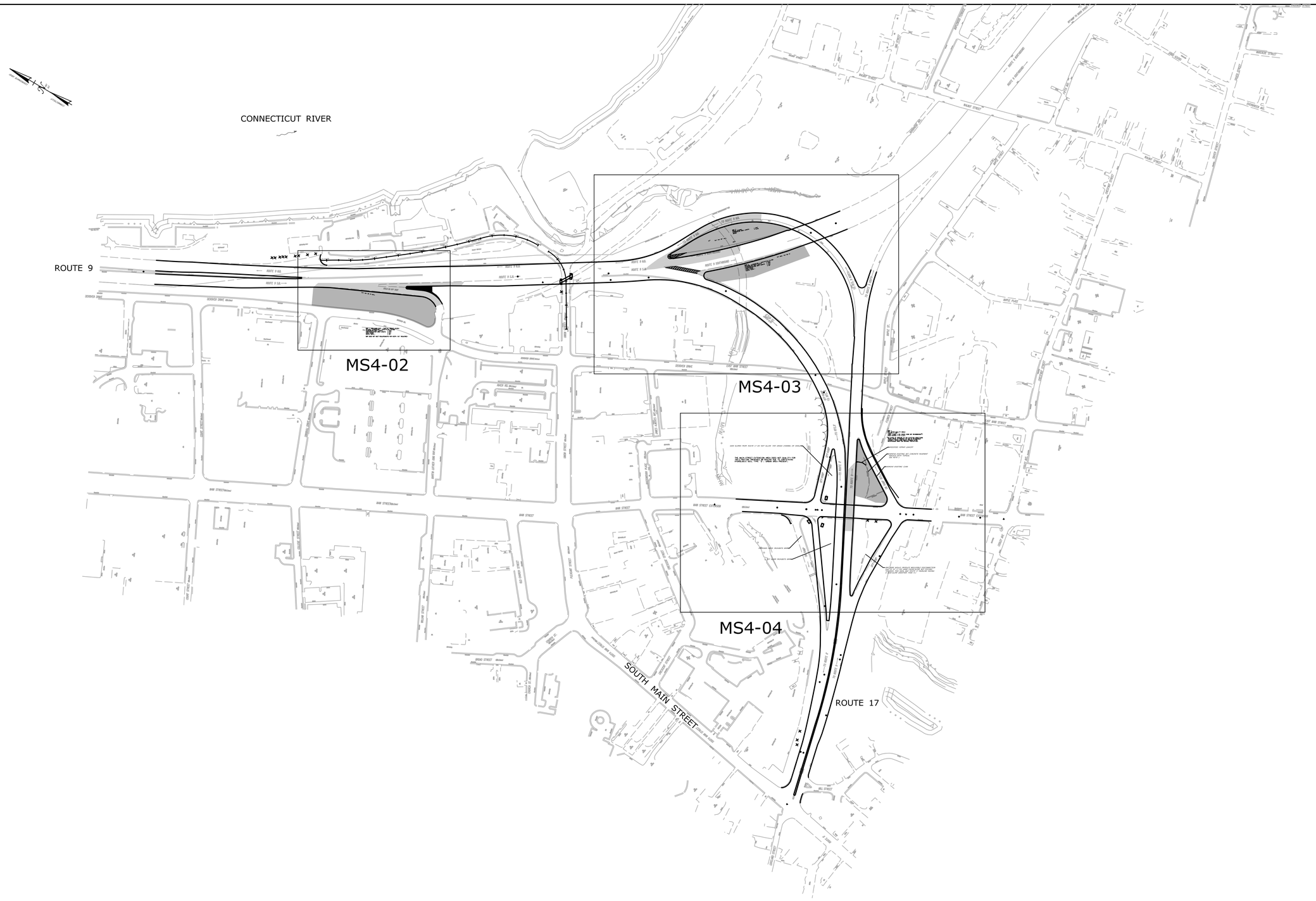
Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☑ 1/2"-WQV	ac-ft	☑ TBD	0.543 ac-ft	0.509 ac-ft	0.545 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		0.005 ac-ft	0.015 ac-ft	0.020 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		0.005 ac-ft	0.017 ac-ft	0.022 ac-ft
DC4	Total WQV *retained and treated*		0	**ac-ft**	0.01 **ac-ft**	0.032 **ac-ft**	0.042 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☑ TBD	13.15 ac.	12.98 ac.	13.26 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		13.80 ac.	13.80 ac.	13.80 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☑ **TBD**	-0.65 **ac.**	-0.82 **ac.**	-0.540 **ac.**
	Date completed				02/24/2022	5/13/2022	7/13/2022
	Completed by (initials)				WJPG	WJPG	WJPG
	Reviewed by (initials)						

Notes: BMPs included in this submission include a partial credit natural dispersion, full credit natural dispersion, a grass channel, and a dry water quality swale. Many other areas along Route 9 and Main St Ext will have curbing removed, but were not included in this submission due to not meeting all requirements. See page 2 notes for site constraints.

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
No curb / natural dispersion	0.005	0.005	0.1	50%	0.05	other - describe in comment sect
No curb / natural dispersion	0.005	0.005	0.47	25%	0.12	other - describe in comment sect
						Choose an Item.
Conveyance (Swales / Channels)						
Grass Channel	0	0.007	0.55	15%	0.0825	other - describe in comment sec
Dry Water Quality Swale	0.01	0.005	0.24	75%	0.18	other - describe in comment sec
						Choose an Item.
Infiltration / Retention						
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0.02	0.022	1.36	165	0.4325	

Notes: The project site is located in a urban area that abuts the Connecticut River and Sumner Brook. Site constraints for all perspective BMPs include steep side slopes, wetlands, high water tables, and ROW. Dry Water Quality Swale will be within Hydrologic Soil Group D. See attached plans.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

SCALE: 1" = 200"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-MS4.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE:
MS4
INDEX PLAN

PROJECT NO. 0082-0316

DRAWING NO. MS4-01

SHEET NO.

APPROXIMATE HIGHWAY LINE

APPROXIMATE STREET LINE

CURBING REMOVED

CURBING REMOVED

ROUTE 9 NB

ROUTE 9 SB

ROUTE 9 EXIT 14

5:1 for 25 ft min.

STATE OF CONNECTICUT D.O.T.
(OPERATOR-CT CENTRAL R.R.)

R.R.ROW LINE

30" FORCE MAIN

42" R.C.P. SAN.

42" San.

HELTCO#6058

SNET #789

AREA = 1.06 ACRES

AREA = 0.32 ACRES

0.03 ACRES

AREA = 0.02 ACRES

MODIFIED RIPRAP

LEGEND

- BMP PERVIOUS DRAINAGE AREA
- DISCONNECTED IMPERVIOUS AREA - EXISTING
- DISCONNECTED IMPERVIOUS AREA - ADDED
- PROPOSED DCIA
- DISCONNECTED IMPERVIOUS AREA - REMOVED

BMP 1 (NON-COMPLIENT - PARTIAL CREDIT GIVEN)
NATURAL DISPERSION / VEGETATIVE FILTER
DISPERSION AREA LENGTH = 530'
CONTRIBUTATING AREA LENGTH = 515'
SIDE SLOPE = 5:1
WIDTH (MIN.) = 25'

BMP DOES NOT MEET REQUIREMENTS FOR WIDTH (50' REQUIRED)

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG
CHECKED BY: SH
SCALE IN FEET 0 20 40
SCALE 1"=20'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-MS4.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: MS4 BMP 1 PLAN

PROJECT NO. 0082-0316
DRAWING NO. MS4-02
SHEET NO.

AREA = 0.06 ACRES

AREA = 0.02 ACRES

AREA = 0.75 ACRES

AREA = 0.55 ACRES

AREA = 0.04 ACRES

0.10 ACRES

AREA = 0.62 ACRES

LEGEND

- POSSIBLE GRASS CHANNEL LENGTH
- BMP PERVIOUS DRAINAGE AREA
- DISCONNECTED IMPERVIOUS AREA - EXISTING
- DISCONNECTED IMPERVIOUS AREA - ADDED
- PROPOSED DCIA
- DISCONNECTED IMPERVIOUS AREA - REMOVED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-MS4.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: **MIDDLETOWN**

DRAWING TITLE:
MS4 BMP 2 & 3 PLAN

PROJECT NO. **0082-0316**

DRAWING NO. **MS4-03**

SHEET NO.

SIDE SLOPES FROM ROUTE 17 DO NOT ALLOW FOR GRASS CHANNEL OR SWALE

THE MAIN STREET EXTENSION AREA DOES NOT QUALIFY FOR INFILTRATION TRENCHES OR BASINS DUE TO CONTAINING HYDROLOGIC SOIL TYPE 'D'. URBAN AREA PRESENT.

BMP 4
DRY WATER QUALITY SWALE
LENGTH = 175'
LONG. SLOPE = 5% (CHECK DAMS NOT RECOMMENDED*)
SIDE SLOPES = 3:1 & 6:1

*NO SIGNS OF EROSION IN THE EXISTING CONDITIONS WHERE GRASS IS PRESENT ON TOP OF BITUMINOUS LEAKOFF. CHECK DAMS WOULD PRODUCE EXTRA MAINTENANCE WORK FOR MINIMAL PROTECTION.

MODIFIED RIPRAP LEAKOFF

REMOVE EXISTING BIT. CONCRETE PAVEMENT
REPLACE WITH TOPSOIL
SEE NOTE 1

REMOVE EXISTING CURB

AREA = 0.42 ACRES

AREA = 0.02 ACRES

AREA = 0.22 ACRES

PROPOSED BERM PROHIBITS BMP

CUT SLOPE PROHIBITS BMP

BMP HERE WOULD PRODUCE NEGLIGIBLE DISCONNECTION DUE TO RT 17 OFF RAMP CROSS-SLOPE NOT PITCHED TOWARDS THIS AREA, AND ROUTE 17 MAINLINE HAVING A SIDE-SLOPE GREATHER THAN 4:1

LEGEND

- BMP PERVIOUS DRAINAGE AREA
- DISCONNECTED IMPERVIOUS AREA - EXISTING
- DISCONNECTED IMPERVIOUS AREA - ADDED
- PROPOSED DCIA
- DISCONNECTED IMPERVIOUS AREA - REMOVED

GENERAL NOTES

1. EXISTING CONDITIONS HAVE SANDY SOIL FOR MINIMUM 10' DEPTH - ENGINEERED SOIL AND UNDERDRAIN NOT REQUIRED DUE TO THIS PRESENCE OF INFILTRATABLE SOIL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/4/2022

DESIGNER/DRAFTER: WJPG

CHECKED BY: SH

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\HW_MSH_0082-0316_PLN-MS4.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
RECONFIGURATION OF THE ROUTE 17 ON-RAMP TO ROUTE 9 NORTHBOUND

TOWN: MIDDLETOWN

DRAWING TITLE: MS4 BMP 4 PLAN

PROJECT NO. 0082-0316

DRAWING NO. MS4-04

SHEET NO.

BMP 1 - Proposed - WQF / WQF Calculations

Natural Dispersion - **DOES NOT MEET SHEET FLOW WIDTH REQUIREMENTS BUT PARTIAL CREDIT GIVEN BASED OFF OF PERCENTAGE OF WIDTH PRESENT**

PROJECT	0082-0316	PREPARED BY	WJPG
DATE	7/13/2022	CHECKED BY	
SUBJECT	MS4 Calculations		

WATER QUALITY VOLUME (WQV) CALCULATION

Drainage Area to BMP (A) =	1.52	acres	66330.00
=	0.00238	square miles	

BMP DRAINAGE AREA

Drainage Area	*Impervious Area*	
Disconnected - Existing	0.32	14114.00
Disconnected - Added	0.17	7206.00
Disconnected - Removed	0.02	996.00
Total Impervious	0.47	

Design Precipitation (P) =	1	inch
% Impervious Cover (I) =	31	
Volumetric Runoff Coefficient (R) =	0.326	

WQV =	**0.041**	**ac-ft**
	1801	**cu-ft**

DC2 WQV Retained* =	**0.005**	**ac-ft**	*50% Credit for Nat Dispersion (-25% for not meeting width)
	225	**cu-ft**	

DC3 WQV Treated =**	**0.005**	**ac-ft**	**50% Credit for Nat Dispersion (-25% for not meeting width)
	225	**cu-ft**	

WATER QUALITY FLOW (WQF) CALCULATION

RUNOFF CURVE NUMBER (CN)

Runoff Depth (Q) =	0.326	inches
CN =	90	Figure 2-1 (SWQM)

TIME OF CONCENTRATION (Tc), 10 minute minimum

Tc =	10	min
Tc =	0.17	hours

Initial Abstraction (I_a) =	0.222	Table 4-1 (SWQM)
I_a/P Calculation =	0.222	
Unit Peak Discharge (q_u) =	530	Exhibit 4-111 (SWQM)

WQF =	**0.41**	**cfs**

1/2 WQF =	**0.21**	**cfs**

BMP 2 - Proposed - WQF / WQF Calculations

Natural Dispersion

PROJECT	0082-0316	PREPARED BY	WJPG
DATE	7/13/2022	CHECKED BY	
SUBJECT	MS4 Calculations		

WATER QUALITY VOLUME (WQV) CALCULATION

Drainage Area to BMP (A) =	0.72	acres	31443.00
=	0.00113	square miles	

BMP DRAINAGE AREA

Drainage Area	*Impervious Area*	
Disconnected - Existing	0.04	1832.00
Disconnected - Added	0.10	4388.00
Disconnected - Removed	0.04	1832.00
Total Impervious	0.10	

Design Precipitation (P) =	1	inch
% Impervious Cover (I) =	14	
Volumetric Runoff Coefficient (R) =	0.176	

WQV =	**0.011**	**ac-ft**
	460	**cu-ft**

DC2 WQV Retained* =	**0.005**	**ac-ft**	*50% Credit for Nat Dispersion
	230	**cu-ft**	

DC3 WQV Treated =**	**0.005**	**ac-ft**	**50% Credit for Nat Dispersion
	230	**cu-ft**	

WATER QUALITY FLOW (WQF) CALCULATION

RUNOFF CURVE NUMBER (CN)

Runoff Depth (Q) =	0.176	inches
CN =	85	Figure 2-1 (SWQM)

TIME OF CONCENTRATION (Tc), 10 minute minimum

Tc =	10	min
Tc =	0.17	hours

Initial Abstraction (I_a) =	0.353	Table 4-1 (SWQM)
I_a/P Calculation =	0.353	
Unit Peak Discharge (q_u) =	410	Exhibit 4-111 (SWQM)

WQF =	**0.08**	**cfs**

1/2 WQF =	**0.04**	**cfs**

BMP 3 - Proposed - WQF / WQF Calculations

Grass Channel

PROJECT	0082-0316	PREPARED BY	WJPG
DATE	7/13/2022	CHECKED BY	
SUBJECT	MS4 Calculations		

WATER QUALITY VOLUME (WQV) CALCULATION

Drainage Area to BMP (A) =	1.34	acres	58261.00
=	0.00209	square miles	

BMP DRAINAGE AREA

Drainage Area	*Impervious Area*	
Disconnected - Existing	0.06	2419.00
Disconnected - Added	0.55	23855.00
Disconnected - Removed	0.02	782.00
Total Impervious	0.59	

Design Precipitation (P) =	1	inch
% Impervious Cover (I) =	44	
Volumetric Runoff Coefficient (R) =	0.444	

WQV =	**0.049**	**ac-ft**
	2155	**cu-ft**

DC2 WQV Retained* =	**0.000**	**ac-ft**	*0% Credit
	0	**cu-ft**	

DC3 WQV Treated =**	**0.007**	**ac-ft**	**15% Credit for Nat Dispersion
	323	**cu-ft**	

WATER QUALITY FLOW (WQF) CALCULATION

RUNOFF CURVE NUMBER (CN)

Runoff Depth (Q) =	0.444	inches
CN =	93	Figure 2-1 (SWQM)

TIME OF CONCENTRATION (Tc), 10 minute minimum

Tc =	10	min
Tc =	0.17	hours

Initial Abstraction (I_a) =	0.151	Table 4-1 (SWQM)
I_a/P Calculation =	0.151	
Unit Peak Discharge (q_u) =	570	Exhibit 4-111 (SWQM)

WQF =	**0.53**	**cfs**

1/2 WQF =	**0.26**	**cfs**

BMP 4 - Proposed - WQF / WQF Calculations

Dry Water Quality Swale

PROJECT	0082-0316	PREPARED BY	WJPG
DATE	7/13/2022	CHECKED BY	
SUBJECT	MS4 Calculations		

WATER QUALITY VOLUME (WQV) CALCULATION

Drainage Area to BMP (A) = **0.65** acres 28493.00 s.f.
= 0.00102 square miles

BMP DRAINAGE AREA

Drainage Area	*Impervious Area*
Disconnected	**0.24**
Total Impervious	0.24

10333 s.f.

Design Precipitation (P) = 1 inch
% Impervious Cover (I) = 36
Volumetric Runoff Coefficient (R) = 0.376

WQV = 0.021 ac-ft
894 cu-ft

DC2 WQV Retained* = 0.010 ac-ft
447 cu-ft

*50% Credit

DC3 WQV Treated = 0.005 ac-ft**
223 cu-ft

**25% Credit

WATER QUALITY FLOW (WQF) CALCULATION

RUNOFF CURVE NUMBER (CN)

Runoff Depth (Q) = 0.376 inches
CN = 91 Figure 2-1 (SWQM)

TIME OF CONCENTRATION (Tc), 10 minute minimum

Tc = **10** min
Tc = 0.17 hours

Initial Abstraction (I_a) = 0.198 Table 4-1 (SWQM)
I_a/P Calculation = 0.198
Unit Peak Discharge (q_u) = **540** Exhibit 4-111 (SWQM)

WQF = 0.21 cfs

1/2 WQF = 0.10 cfs

Appendix E – Construction Site Environmental Inspection Report (CSEIR)

State of Connecticut
Department of Transportation
Construction Site Environmental Inspection Report

This Form Must Be Completed At Least Once A Week And Within Twenty Four (24) Hours Of The End Of A Storm Event That Is 0.1 inches Or Greater

General Information			
Project Number		**Date**	
Permit Number(s)		**Location**	
		Phone No.	
Project Engineer		**Chief Inspector**	
Contractor			
Describe present phase of construction/activities that are occurring			

Type of Inspection:
☐ Weekly ☐ Pre-storm event ☐During storm event ☐ Post-storm event

Weather Information
Has there been a storm event since the last inspection? ☐Yes ☐No **If yes, provide:**
Storm Start Date & Time: Storm Duration (hrs): Type and Approximate Amount of Precipitation (in):
Weather at time of this inspection? ☐ Clear ☐Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snowing ☐High Winds Temperature:

Site-specific BMPs

- *Number the structural and non-structural BMPs on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map for reference with you during your inspections.*

BMP Maintenance							
	BMP or Observation Site and Location	**BMPs Installed ?**	**BMP Maintenance Required?**	**Remedial Action Required and Date Contractor was Notified *ALL REMEDIAL ACTIONS MUST BE COMPLETED WITHIN 24 HOURS***	**Date Fixed**	**Photo Taken ?**	**Repeat Failure?**
1		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No
2		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No
3		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No

Are there any sediment discharges to a regulated area occurring or have any occurred since the last inspection? ☐Yes ☐No

If yes, contact the District Environmental Coordinator immediately.

Describe the discharge including location, time identified, and the approximate amount of sediment. (on back)

Environmental Inspector: _____

Signature: _____ **Date:** _____

Reviewed by: _____

Signature: _____ **Date:** _____

Appendix F - Notice of Termination Form: Non-Solar Projects

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities
Notice of Termination Form: Non-Solar Projects

This Notice serves as a request to terminate the below listed permit as well as any applicable Letter(s) of Credit.

Part I: Permittee Information

The below information is required in accordance with Section 6(b) of the General Permit.

1. Permit Number: GSN _____
2. Registrant: _____
3. Site Address: _____
   City/Town: _____ State: _____ Zip Code: _____
4. Date of completion of construction: _____
   Date all storm drainage structures were cleared of construction sediment and debris: _____
   Beginning and Ending Dates of post-construction inspections: _____
   Date of final stabilization inspection(s)*: _____
   Qualified Inspector who conducted the Final Stabilization Inspection: (This person must sign Part III) _____
5. Check the post-construction activity(ies)** at the site (check all that apply):

☐ Industrial ☐ Residential ☐ Capped Landfill

☐ Commercial ☐ Solar Array ☐ Other: _____

* The Final Stabilization Inspection must occur at least one full growing season after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

** If the post-construction activity involves solar arrays, the Department may require that the "Solar Projects: Notice of Termination Form" be used. Any questions regarding the necessity of such a form for the project can be sent via email to DEEP.StormwaterStaff@ct.gov.

Locally Approvable Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Approvable Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(i) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / District Representative

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional / a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

Locally Exempt Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Exempt Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(ii) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional

State Agency Projects Must Complete the following Part II - (Attach additional sheets as needed)

Part II: State Agency Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(iii) of the General Permit.

Certification by a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency

"I hereby certify that I am a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature	Date
Printed Name	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

All Projects Must Complete the following Part III - *(Attach additional sheets as needed)*

Part III: Final Stabilization Inspection Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by a Qualified Inspector

"I hereby certify that I am a qualified inspector as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that the site has been stabilized, as defined in Section 2 of the general permit, for a period of no less than one full growing season following the cessation of construction activities. I further certify that there is no active erosion or sedimentation present on site and no disturbed areas remain exposed. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Inspector	Date
Printed Name of Qualified Inspector	Title

All Projects Must Complete the following Part IV - *(Attach additional sheets as needed)*

Part IV: Permittee Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by the Permittee

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Printed Name of Permittee	Title

All Projects Must Complete the following Part V - *(Attach additional documentation as needed)*

Part V: Additional Submittals

The following attachments are required to be submitted along with the Notice of Termination Form:

☐ Post-Construction Inspection Report (must contain photos with time stamps)

☐ Final Stabilization Inspection Report (must contain photos with time stamps)

Complete and submit this form in accordance with the general permit (DEEP-WPED-GP-015) to ensure the proper handling of the termination. Print or type unless otherwise noted.

Submit this Notice of Termination Form to the address below, as well as via email to DEEP.StormwaterStaff@ct.gov:

WATER PERMITTING AND ENFORCEMENT DIVISION/STORMWATER GROUP
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127