

Commonwealth of Massachusetts

Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker Governor

Karyn E. Polito Lieutenant Governor Bethany A. Card Secretary

Martin Suuberg Commissioner

AUG 1 5 2022

Town of Wellfleet c/o Ridley and Associates, Inc. Attn: Carole Ridley 115 Kendrick Road Harwich, MA 02645

RE: ISSUANCE OF CHAPTER 91 WATERWAYS LICENSE

Waterways License Application No. W21-5992, License No. 15441 Town of Wellfleet, Herring River, Chequessett Neck Road Bridge, Wellfleet

Dear Sir or Madam,

The Department of Environmental Protection hereby issues the above-referenced Waterways License, enclosed, authorizing you to perform certain activities pursuant to M.G.L. c. 91, the Public Waterfront Act and its regulations 310 CMR 9.00. <u>Any change in use or alteration of any structure or fill not authorized by this license may render this license void.</u>

This License is not final until all administrative appeal periods from this License have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed. The appeal period is for twenty-one (21) days. No work shall be undertaken until the License has become final and has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property

RECORDING OF THE LICENSE

This License must be recorded at the Registry of Deeds or, if registered land, with the Land Registration Office within sixty (60) days from the date of license issuance. In the case of recorded land, the License shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the project is located. In the case of the registered land, the License shall be noted on the Land Court Certificate of Title of the owner of the land upon which the project is located. Failure to record this license within sixty (60) days of the date of issuance will render this license void pursuant to 310 CMR 9.18.

A Waterways License Recordation Notice Form has been enclosed for your use in notifying the Department of the recording information for this License. <u>Failure to notify the Department of the recording of this license</u> is a violation of 310 CMR 9.00 and is subject to enforcement action by the Department.

ISSUANCE OF CHAPTER 91 WATERWAYS LICENSE Waterways License Application No. W21-5992, License No. 15441 Town of Wellfleet, Herring River, Chequessett Neck Road Bridge, Wellfleet

REQUEST CERTIFICATE OF COMPLIANCE

Pursuant to 310 CMR 9.19, once the proposed project is completed you must file a Request for a Certificate of Compliance form, BRP WW05, within sixty (60) days of completion but in no event later than five (5) years from the License's issuance date. The license for any project for which such a request is not filed and certificate issued may be revoked pursuant to 310 CMR 9.26.

NOTICE OF APPEAL RIGHTS

Who has the right to appeal?

The following persons shall have the right to an adjudicatory hearing concerning this decision by the Department to grant or deny a license or permit, in accordance with 310 CMR 9.17(1): (a) an applicant who has demonstrated property rights in the lands in question, or which is a public agency; (b) any person aggrieved by the decision of the Department to grant a license or permit who has submitted written comments within the public comment period; (c) ten (10) residents of the Commonwealth who, pursuant to M.G.L. c. 30A, § 10A, have submitted comments within the public comment period with at least 5 of the 10 residents residing in the municipality(s) in which the license or permitted activity is located. The appeal shall clearly and specifically state the facts and grounds for the appeal and the relief sought, and each appealing resident shall file an affidavit stating the intent to be part of the group and to be represented by its authorized representative; (d) the municipal official in the affected municipality who has submitted written comments within the public comment period; and (e) CZM, for any project identified in 310 CMR 9.13(2) (a) for CZM participation or, in an Ocean Sanctuary, if it has filed a notice of participation within the public comment period.

How can I request an adjudicatory hearing?

A person requesting an adjudicatory hearing must submit a "Notice of Claim" to the Department, with a copy of the MassDEP Transmittal Form and including the detail specified below, within twenty-one (21) days of the date of issuance of this decision. The MassDEP Fee Transmittal Form is available at the following website: https://www.mass.gov/doc/adjudicatory-hearing-fee-transmittal-form/download. The Notice of Claim must be made in writing and sent by certified mail or hand delivery to:

Case Administrator MassDEP One Winter Street, 2nd Floor Boston, MA 02108

A copy of the complete Notice of Claim must be sent at the same time by certified mail or hand delivery to: (1) the applicant, (2) the municipal official of the city or town where the project is located, and (3) the issuing office of the MassDEP, which in this case is located at:

MassDEP Waterways Regulation Program 20 Riverside Drive Lakeville, MA 02347

The MassDEP Fee Transmittal Form and a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Mass. Department of Environmental Protection Commonwealth Master Lockbox P.O. Box 4062

ISSUANCE OF CHAPTER 91 WATERWAYS LICENSE

Waterways License Application No. W21-5992, License No. 15441

Town of Wellfleet, Herring River, Chequessett Neck Road Bridge, Wellfleet

Boston, Massachusetts 02211

What information must be included in the hearing request?

Pursuant to 310 CMR 9.17(3), any Notice of Claim requesting an adjudicatory hearing must include the following information:

- (a) the MassDEP Waterways Application File Number;
- (b) the complete name, address, fax number and telephone number of the applicant;
- (c) the address of the project;
- (d) the complete name, address, fax number, and telephone number of the party filing the request and, if represented by counsel, the name, address, fax number, and phone number of the attorney;
- (e) if claiming to be a person aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found in 310 CMR 9.02;
- (f) a clear statement that a formal adjudicatory hearing is being requested;
- (g) a clear statement of the facts which are the grounds for the proceedings, the specific objections to the MassDEP's written decision, and the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written decision; and
- (h) a statement that a copy of the request has been sent to: the applicant and the municipal official of the city or town where the project is located.

Dismissal of request

The request for appeal will be dismissed if the filing fee is not paid, unless the appellant is exempt or is granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Please feel free to contact Cally Harper of the Wetlands and Waterways Program, (508) 946-2815 or cally.harper@mass.gov, if you have any questions pertaining to the Chapter 91 License.

Sincerely,

Brendan C. Mullaney Environmental Analyst

Wetlands and Waterways Program

cc: w/enc.

Daniel J. Padien, Waterways Program Chief, DEP Boston

Office of Coastal Zone Management

Wellfleet Harbormaster

Wellfleet Conservation Commission

Town of Wellfleet

Cape Cod National Seashore

Cally Harper Department of Environmental Protection Wetlands & Waterways Program 20 Riverside Drive Lakeville, MA 02347

RE: Waterways License Application No. W21-5992, License No. 15541

Herring River, Wellfleet, Barnstable County

Dear Ms. Harper:

This is to notify you that the above referenced Waterways license was recorded with the appropriate Registry of Deeds / Land Court for this project location and to provide your office with the following recordation information.

Date	e of Recordation:				
Cou	unty Registry of Deeds:				
Boo	ok number	and page number(s)			
Lan	d Court:				
Lan	d Court Lot #	Plan #			
Cert	tificate Document Num	iber			
We will comple	l notify your office in ted.	writing of the date th	e authorized we	ork or change in use	is
Sincere	ly,				
		Chapte	r 91 Waterway	s Licensee	

LICENSE VOID
IF NOT RECORDED
WITHIN 60 DAYS
OF ISSUANCE

The Commonwealth of Massachusetts



No. 15541

₩hereas, Town of Wellfleet

of -7 Wellfleet -- in the County of -- Barnstable -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- remove a portion of an existing dike and three-bay culvert structure, construct a temporary bypass bridge and construct and maintain a permanent bridge, including associated adjustable tide gates, pedestrian access improvements, stone armor embankment slope protection, utilities, canoe and kayak portage steps, channel bottom protection, and stormwater management facilities, and perform improvement dredging --

and has submitted plans of the same; and whereas due notice of said application, and of the time and place fixed for a hearing thereon, has been given, as required by law, to the -- Board of Selectmen -- of the -- Town of Wellfleet. --

NOW, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

-- Town of Wellfleet --, subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- remove a portion of an existing dike and three-bay culvert structure, construct a temporary bypass bridge and construct and maintain a permanent bridge, including associated adjustable tide gates, pedestrian access improvements, stone armor embankment slope protection, utilities, canoe and kayak portage steps, channel bottom protection, and stormwater management facilities, and perform improvement dredging --

in and over the waters and filled tidelands of -- Herring River -- at -- Chequessett Neck Road Bridge -- in the -- Town of Wellfleet -- and in accordance with the locations shown and details indicated on the accompanying DEP License Plan No. 15541 (39 sheets).

License No. 15541 Page 2

The structures hereby authorized shall be limited to the following use(s): infrastructure crossing facility and ecological restoration.

This license is issued for an unlimited term in accordance with 310 CMR 9.15(1)(c).

Special Waterways Conditions:

- 1. In accordance with any license condition, easement, or other public right of lateral passage that exists in the area of the subject property lying between the high and low water marks, the Licensee shall allow the public in the exercise of such rights to pass freely over and under all structures within such intertidal area. Nothing in this condition shall be construed as preventing the Licensee from excluding the public from portions of said structure(s) or property not intended for lateral passage.
- 2. The Licensee shall comply with all conditions associated with the proposed dredging and excavation for the bridge replacement and river channel improvements as referenced in the original and first Amended 401 Water Quality Certification (Transmittal No. X287602 (Dredging) and X287603 (Fill/Excavation)), issued on September 29, 2021 and March 30, 2022, to the Town of Wellfleet and the US National Park Service, Cape Cod National Seashore.
- 3. The temporary bridge and bypass roadway approach, as shown on License Plan Sheets 7-8, shall be removed in its entirety from jurisdictional areas immediately following the completion of the new bridge. All removed structures shall be properly disposed of in conformance with all local, state and federal laws.
- 4. All work authorized herein shall be completed within five (5) years of the date of license issuance. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department, thirty (30) days prior to the expiration of said construction period, a written request to extend the period and provides an adequate justification for said extension.
- 5. Within sixty (60) days of completion of the licensed project, the Licensee shall request, in writing, that the Department issue a Certificate of Compliance in accordance with 310 CMR 9.19. The request shall be accompanied by a certification by a registered professional engineer licensed in the Commonwealth that the project was completed in accordance with the License.

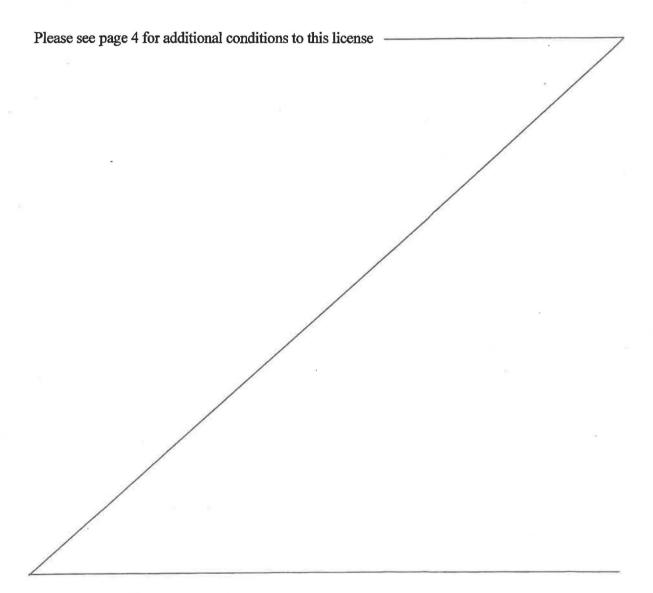
Special Dredge Conditions:

- 1. Dredging of approximately 6,060 cubic yards of sediment shall be performed by mechanical methods.
- 2. In order to protect diadromous fish species' passage, foraging and/or spawning habitat and the habitat of Winter Flounder and American Oyster, a combined Time of Year (TOY) restriction for all species prohibits all in water, silt producing activities between February 1st and June 30th and September 1st to November 15th of any year.

License No. 15541 Page 3

3. Dredge material shall be dewatered on-site. The Applicant's contractor shall provide a final dewatering plan prior no later than 21 days prior to commencement of dredging activity to MassDEP for review and written approval.

- 4. Future maintenance dredging is not authorized under this License.
- 5. After completion of the work authorized, the Licensee shall furnish to the Department a suitable plan showing the depths at mean low water over the area dredged within 90 days of completion of dredging.



Duplicate of said plan, number 15541 is on file in the office of said Department, and original of said plan accompanies this License, and is to be referred to as a part hereof.

STANDARD WATERWAYS LICENSE CONDITIONS

- Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.
- 2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee <u>prior</u> to the commencement of any activity or use authorized pursuant to this License.
- 3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this Waterways License void.
- 4. This Waterways License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This license may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.
- 5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.
- 6. Nothing in this Waterways License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof.
- 7. This Waterways License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, G.L. Chapter 131, s.40.
- 8. This Waterways License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the MassDEP.
- 9. This License authorizes structure(s) and/or fill on:

shall allow the public to use and to pass freely	public easement that exists by law on private tidelands, the licensee upon the area of the subject property lying between the high and low g, navigation, and the natural derivatives thereof.
X Commonwealth Tidelands. The Licensee	shall not restrict the public's right to use and to pass freely, for any

A Commonwealth Tidelands. The Eleensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.

___ a Great Pond of the Commonwealth. The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

___ Navigable River and Streams. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, in the waterway.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this license.

10. Unless otherwise expressly provided by this license, the licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

STANDARD WATERWAYS DREDGING CONDITIONS

- 1. This Waterways License is issued subject to all applicable federal, state, county, and municipal laws, ordinances, by-laws, and regulations, including but not limited to, a valid Order of Conditions issued pursuant to the Wetlands Protection Act, M.G.L. Chapter 131, s.40. In particular, this issuance is subject to the provisions of Sections 52 to 56, inclusive of Chapter 91 of the General Law and its Regulations 310 CMR 9.40(5), which provides, in part, that the transportation and dumping of dredge material shall be done under the supervision of the Department, and, when required, the Licensee shall provide at his/her expense a dredge inspector approved by the Department.
- 2. This Waterways Permit is issued upon the express condition that dredging and transportation and disposal of dredge material shall be in strict conformance with the Water Quality Certification issued by the Department of Environmental Protection.
- 3. All subsequent maintenance dredging, and transport and disposal/reuse of dredged material during the term of this License shall conform to the standards and conditions applied to the original dredging operation performed under this License.
- 4. After completion of the work hereby authorized, the Licensee shall furnish to the Department a suitable plan showing the depths at mean low water over the area dredged. Dredging under this License shall be conducted so as to cause no unnecessary obstruction of the free passage of vessels, and care shall be taken to cause no shoaling. If, however, any shoaling is caused, the Licensee shall, at his/her expense, remove the shoal areas. The Licensee shall pay all costs associated with such work. Nothing in this License shall be construed to impair the legal rights of any person, or to authorize dredging on land not owned by the Licensee without consent of the owner(s) of such property.
- 5. The Licensee shall assume and pay all claims and demands arising in any manner from the work authorized herein, and shall save harmless and indemnify the Commonwealth of Massachusetts, its officers, employees, and agents from all claims, suits, damages, costs and expenses incurred by reason thereof.
- 6. The Licensee shall, at least three days prior to the commencement of any dredging in tide water, give written notice to the Department of the location and amount of the proposed work, and or the time at which work is expected to begin.
- 7. Whosoever violates any provision of this License shall be subject to a fine of \$25,000 per day for each day such violation occurs or continues, or by imprisonment for not more than one year, or both such fine and imprisonment; or shall be subject to civil penalty not to exceed \$25,000 per day for each day such violation occurs or continues.

The amount of tide-water displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said -- Town of Wellfleet -- by paying into the Treasury of the Commonwealth -- zero dollars and zero cents (\$0.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department. (0 cy = \$0.00) Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded within 60 days from the date hereof, in the Registry of Deeds for the County of Barnstable.

IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this 15 day of hands the year two thousand twenty-two.

Program Chief

Department of Environmental Protection

Commissioner

THE COMMONWEALTH OF MASSACHUSETTS

This license is approved in consideration of the payment into the treasury of the Commonwealth by the said -- Town of Wellfleet --

of the further sum of -- zero dollars and zero cents (\$0.00) --

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON,

Approved by the Governor.

Governor

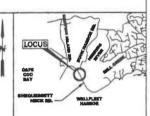
6130 177



SHEET INDEX

PAGE

LOCUS & INDEX PLAN 1
LEGEND 2
EXISTING CONDITIONS PLAN NO. 1-2 5-6
PROPOSED CONDITIONS PLAN NO. 1-2 5-6
TEMPORARY BYPASS BRIDGE PLAN NO. 1-2 7-8
DETAIL SHEET NO. 1-31 9-39

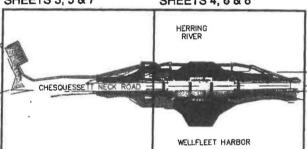


SITE VICINITY SCALE: 1" = 6000"



SHEETS 3, 5 & 7

SHEETS 4, 6 & 8



SCALE IN FEET SCALE: 1" = 200' 0 200 INDEX PLAN

SCALE: 1" = 200'



LOCUS & INDEX PLAN

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET
TO LICENSE AND MAINTAIN THE
HERRING RIVER RESTORATION PROJECT - CHEQUESSETT
NECK ROAD BRIDGE AND WATER ACCESS FACILITY

CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,
BARNSTABLE COUNTY, MA.

BARNSTABLE COUN'
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021

SHEET: 1 OF 39

LICENSE PLAN NO. 15541

Approved by Department of Environmental Protection of Massachusetts Aug 1 5 2022

Sho Ahr

*

6/20/2



LEGEND		LEGEND	
t	PROPERTY BOUNDARY	LOD	LIMIT OF DISTURBANCE
	EDGE OF CHANNEL/BANK	10	PROPOSED CONTOUR
	HIGH TIDE LINE	× −3.0	PROPOSED SPOT ELEVATION
	APPROX. MEAN HIGH WATER BOUNDARY	-	PROPOSED GUARDRAIL
	APPROX. HISTORIC MEAN HIGH WATER BOUNDARY	ACEC	AREA OF CRITICAL ENVIRONMENTAL CONCERN
***************************************	APPROX. MEAN LOW WATER BOUNDARY		SALT MARSH
	APPROX. HISTORIC MEAN LOW WATER BOUNDARY		EXISTING STONE ARMOR SLOPE PROTECTION TO BE REMOVED AND REINSTALLED
	100-YEAR FLOODPLAIN BOUNDARY		
	SPECIAL FLOOD HAZARD BOUNDARY	20200	VEGETATED SOIL-FILLED STONE
	EXISTING CONTOUR (AERIAL)	52000	ARMOR SLOPE AND TOE PROTECTION
	EXISTING CONTOUR (GROUND SURVEY)	1555555	SOIL-FILLED STONE ARMOR SLOPE
	SPOT ELEVATION (GROUND SURVEY)		AND CHANNEL BED PROTECTION (VEGETATED ON SLOPES)
	EDGE OF PAVEMENT	(* * · · · · · · · · · · · · · · · · ·	MARSH AREA RESTORATION
	CAPE COD PAVEMENT BERM		(MHHW TO MLW)
	GUARDRAIL		
	OVERHEAD UTILITY	NOTES:	

- A PLAN VIEW OF THE TEMPORARY BYPASS BRIDGE IS SHOWN ON SHEETS NO. 7 AND 8.
- 2. THE APEX OF THE PROPOSED BRIDGE SPANS AT FULL RESTORATION (ALL GATES AND PANELS REMOVED) IS SHOWN ON DETAIL SHEETS NO. 2 THRU 6. THE PROPOSED CHANNEL DEPTH CAN BE SEEN ON DETAIL SHEETS NO. 30 AND 31.
- 1836 COUNTY LAYOUT WAS COMPILED AND ALIGNED WITH MONUMENTS FOUND IN THE FIELD LOCATION IS APPROXIMATE.

EXISTING TIDE TABLE FOR THE
WELLFLEET HARBOR AND HERRING RIVER:
HTL EL=7.07 (WELLFLEET HARBOR) / 0.44 (HERRING RIVER)
MHW EL=4.84 (WELLFLEET HARBOR) / 0.24 (HERRING RIVER)
MLW EL=4.47 (WELLFLEET HARBOR) / -2.2 (HERRING RIVER)

CATCH BASIN

UTILITY POLE

RIM ELEVATION=X.X(NAVD88) INVERT=X.X(NAVD88)

EXISTING STONE ARMOR

TIDE TABLE NOTES:

TIDAL ELEVATIONS IN TABLE ABOVE WERE OBTAINED FROM THE "HERRING RIVER HYDRODYNAMIC MODELING FINAL COMPREHENSIVE REPORT," PREPARED BY THE WOODS HOLE GROUP, DATED JUNE 2012. THE HISTORIC MHW AND MLW BOUNDARIES ON THE RIVER SIDE OF THE CHEQUESSETT NECK ROAD EMBANKMENT WERE OBTAINED FROM DIGITAL SHAPFFILES PROVIDED BY THE NATIONAL PARK SERVICE. THE BOUNDARIES WERE ADJUSTED IN THE IMMEDIATE VICINITY OF PROJECT AREA TO BETTER CORRELATE TO TOPOGRAPHICAL INFORMATION OBTAINED FROM ACTUAL SURVEY DATA.

LEGEND

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHI

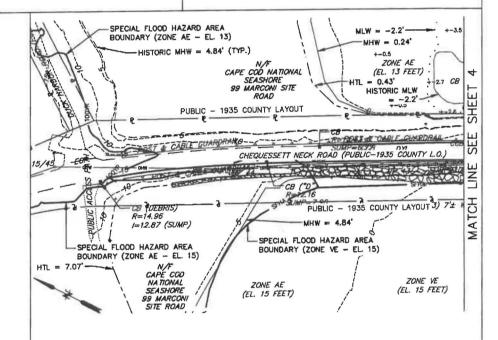
SHEET: 2 OF 39



LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection

C/30/22 DATE

REGISTERED PROFESSIONAL ENGINEER



SCALE IN FEET SCALE: 1" = 70' 70

EXISTING CONDITIONS PLAN No. 1 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

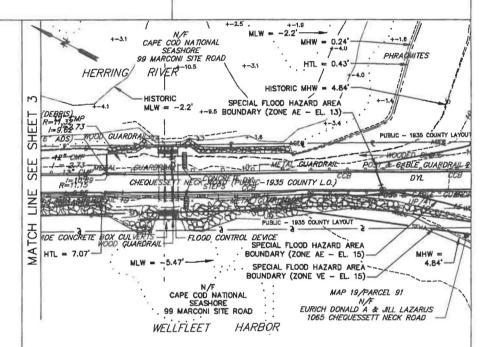
BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROMDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021

SHEET: 3 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection

6/26/52 DATE

REGISTERED PROFESSIONAL ENGINEER



	DOWNSTREAM		
NORTH	CENTER	SOUTH CULVERT APRON EL= -5.45	
CULVERT APRON EL=-5.40	CULVERT APRON EL= -5.25		
	UPSTREAM		
NORTH	CENTER	SOUTH	
CULVERT APRON EL=-4.31	CULVERT APRON EL= -4.14	CULVERT APRON	



SCALE IN FEET SCALE: 1" = 70'



EXISTING CONDITIONS PLAN No. 2

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVO88
DATE: MARCH 23, 2021
SHE

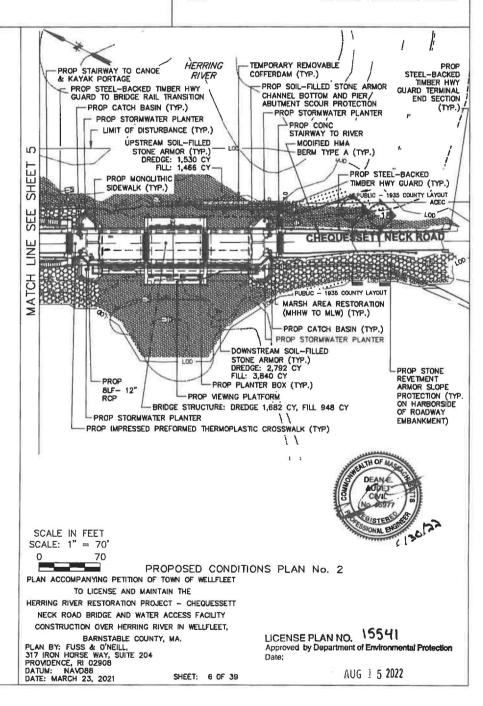
SHEET: 4 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection

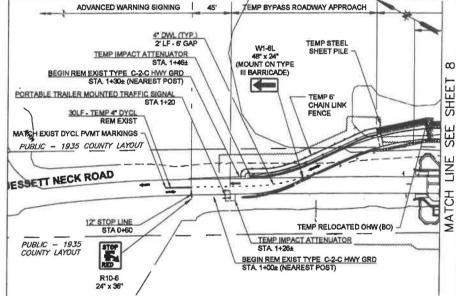
I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. REGISTERED PROFESSIONAL ENGINEER PROP. SOIL-FILLED STONE ARMOR SLOPE PROTECTION (TYP.) PROP STEEL-BACKED TIMBER HWY GUARDRAIL (TYP.) HERRING RIVER PROP 5' WIDE PERMEABLE GRAVEL WALKWAY ADJACENT TO PARKING SPACES UPSTREAM CANOE &
KAYAK PORTAGE STEPS
AND PILE-SUPPORTED
BOARDWALK
DREDGE: 15 CY
FILL: 122 CY PROP PILE SUPPORTED PRECAST CONCRETE BOARDWALK SYSTEM BELOW FUTURE MHW - TYP. 9 PROP ACCESSIBLE
PERMEABLE GRAVEL PARKING PROP F&G SHEET LOT AND DRIVEWAY (TYP.) PUBLIC - 1935 COUNTY LAYOUT SEE CHEQUESSETT NECK ROAD LINE - LOD MATCH PUBLIC 1935 COUNTY LAYOUT PROP ACCESSIBLE PERMEABLE PUBLIC ACCESS PATH ABOVE MHW (5% LONGITUDINAL SLOPE-MAX.)-LIMIT OF DISTURBANCE (TYP.) PROP STEEL-BACKED TIMBER HWY GUARD TERMINAL END SECTION (TYP.) PROP. STONE REVETMENT ARMOR SLOPE PROTECTION (TYP.) MARSH AREA RESTORATION (MHHW TO MLW) (TYP.) PROP STAIRWAY TO CANOE & KAYAK PORTAGE-DOWNSTREAM CANOE & KAYAK PORTAGE STEPS
DREDGE: 44 CY
FILL: 170 CY SCALE IN FEET SCALE: 1" = 70' PROPOSED CONDITIONS PLAN No. 1 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROWDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021 Approved by Department of Environmental Protection Date: AUG 1 5 2022 SHEET: 5 OF 39

DATE

REGISTERED PROFESSIONAL ENGINEER







NOTES:

- A TEMPORARY SINGLE-LANE BYPASS ROUTE AND BRIDGE WILL BE CONSTRUCTED TO DIVERT TRAFFIC AROUND THE WORK AREAZONE. THIS TEMPORARY BYPASS ROUTE WILL BE CONSTRUCTED ON THE EASTERN (HERRING RIVER) SIDE OF CHEQUESSETT NECK ROAD. THE BRIDGE WILL CONSIST OF PREFABRICATED MODILAR STEEL COMPONENTS THAT WILL SPAN APPROXIMATELY 190 FEET ACROSS THE HERRING RIVER IN ORDER TO MINIMIZE CONSTRUCTION IMPACTS. TEMPORARY SHEETING WILL BE INSTALLED TO FORM THE EMBANKMENTS THAT WILL SERVE AS THE BRIDGE'S NORTHBOUND AND SOUTHBOUND APPROACHES AND ABUTHBRITS. THE LAYOUT OF THE BYPASS ROUTE WAS DESIGNED TO ACCOMMODATE THE TURNING MOVEMENTS OF A WB-62 VEHICLE. THE TEMPORARY BRIDGE AND ROADWAY WILL BE DESIGNED AND CONSTRUCTED TO SUPPORT A HL-83 LOAD RATING.
- TO SUPPORT A HL-32 LOAD KATING.

 DUE TO THE RELATIVELY LOW-TRAFFIC VOLUMES, IT WAS DETERMINED THAT A ONE-LANE SIGNALIZED ALTERNATING
 TWO-WAY TRAFFIC SETUP WOULD BE ADEQUATE IN REGULATING TRAFFIC FLOW DURING CONSTRUCTION. SINCE
 CHEQUESSETT NECK ROAD IS A TWO LANE ROADWAY (WITH ONE LANE IN EXCH DIRECTION), STOP BARS WILL BE PROVIDED AT
 THE ENTRANCES TO THE BYPASS ROUTE FROM BOTH DIRECTIONS ALONG WITH PRE-TIMED PORTABLE TRAFFIC SIGNALS.
 THE TEMPORARY SINGLE-LANE BYPASS ROUTE AND BRIDGE SHALL BE SUBJECT TO FINAL DESIGN BY THE CONTRACTOR AND
 IS EXPECTED TO CONSIST OF 3-5 PILE BENTS WITH 4-8 PILES PER BENT SPACED APPROXIMATELY S-10 FEET APART. THE PILE
 BENTS ARE EXPECTED TO BE SPACED APPROXIMATELY 30 TO 80 FEET APART. THE MAXIMUM TEMPORARY BRIDGE DECK
 ELEVATION IS EXPECTED TO BE APPROXIMATE EL. 15'.

SCALE IN FEET SCALE: 1" = 70' 0 70

TEMPORARY BYPASS BRIDGE PLAN No. 1

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.

PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROMDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021

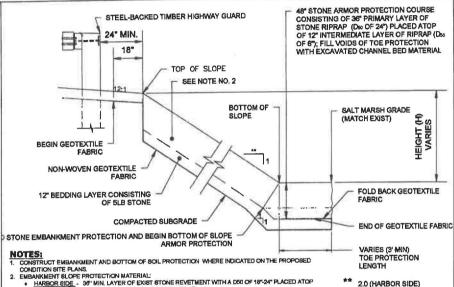
SHEET: 7 OF 39

LICENSE PLAN NO. \554\
Approved by Department of Environmental Protection

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/36/52 DATE REGISTERED PROFESSIONAL ENGINEER TEMP BYPASE BRIDGE TEMP BY PASS ROADWAY APPROACH WORK ZONE TEMP UTILITY POLE (BO) (TYP.) HERRING RIVER TEMP RELOCATED OHW TEMP HMA PVMT (TYP.) W1-6L 48" x 24" (MOUNT ON TYPE III BARRICADE) PORTABLI TRAILER TEMP PREFABRICATED BRIDGE MOUNTED TRAFFIC SIGNAL STA 7+85 TEMP 5' HMA WALK (TYP.) FET TEMP PEDESTRIAN BRIDGE T SEE LINE 111 1111 MATCH PUBLIC - 1935 COUNTY LAYOUT TEMP IMPACT ATTENUATOR STA 7+65 TEMP IMPACT ATTENUATOR
STA 7+73
END REM EXIST TYPE C-2-C HWY GRD
STA 7+80± (NEAREST POST) END REM EXIST TYPE C-2-C HWY GRD STA. 8+00± (NEAREST POST) 12 STOP LINE STA 8+30 SCALE IN FEET SCALE: 1" = 70' a 70 TEMPORARY BYPASS BRIDGE PLAN No. 2 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. \ \ 554 \ \ Approved by Department of Environmental Protection BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROVIDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021 AUG 1 5 2022 SHEET: 8 OF 39

6/20/12

REGISTERED PROFESSIONAL ENGINEER



- 1. CONSTRUCT EMBANKMENT AND BOILLOWN OF CONDITION SITE PLANS.
 2. EMBANKMENT BLOPE PROTECTION MATERIAL:
 3. HARBOR SIDE 36" MINI. LAYER OF EASIST STONE REVETMENT WITH A DS0 OF 18"24" PLACED ATOP A 12" LAYER OF 16 IB BEDDING STONE.
 3. RIVER SIDE 35" LAYER OF VEGETATED, SOIL-PILLED STONE EMBANKMENT SLOPE PROTECTION OF LAYER OF 5 ILS STONE (WITH EXCEPTION TO LEVEL BEACH AREA AS REFLECTED ON GRADING PLANS THAT SHALL RECEIVE 35" MINI. LAYER OF EXISTING STONE DEVETMENT). 3. TOE PROTECTION MATERIAL:

 38" THICK PRIMARY LAYER SHALL CONSIST OF STONE RIPRAP WITH A D50 = 18" TO 24".

 12" THICK INTERNEDIATE LAYER SHALL CONSIST OF STONE RIPRAP WITH A D50 = 4" TO 6".

 12" THICK STONE BEDDING LAYER CONSISTING OF 6 LB STONES.

EMBANKMENT AND BOTTOM OF SLOPE PROTECTION DETAIL

NOT TO SCALE



1.5 (RIVER SIDE)
WITH EXCEPTION TO
3H:1V SLOPE AREAS
ADJOINING PROPOSED

CANOE & KAYAK PORTAGE STEPS AS REFLECTED ON GRADING PLANS

DETAIL SHEET No. 1.

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

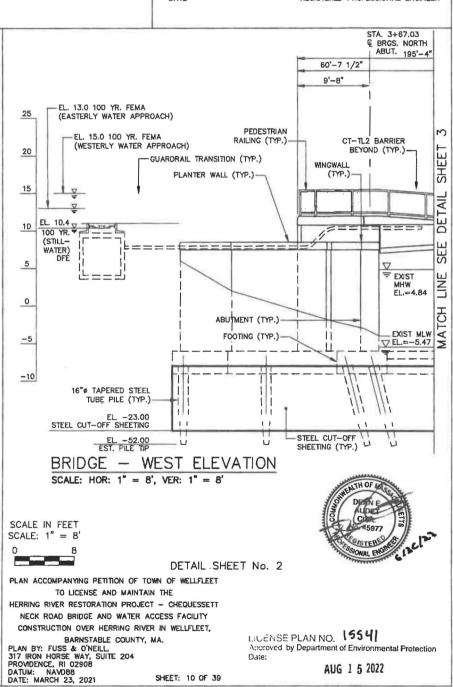
BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 JRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE

SHEET: 9 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

6/36/32 DATE





I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/30/22 REGISTERED PROFESSIONAL ENGINEER STA. 4+20.03 © PIER 1 195'-4" EL 13.0 100 YR. FEMA (EASTERLY WATER APPROACH) -2'-0 1/2" EL 15.0 100 YR. FEMA (WESTERLY WATER APPROACH) PEDESTRIAN RAILING (TYP.)-EL. 10.4 100 YR. (STILLWATER) DFE 4 SHEET -CT--TL2 BARRIER BEYOND (TYP.) DETAIL EXIST MHW EL.=4.84 ELEV.= 8.00 AT APEX (TYP.) PIER (TYP.) MATCH ▼ EXIST MLW EL.=-5.47 FOOTING (TYP.)-16"¢ TAPERED STEEL TUBE PILE (TYP.) DETAIL SHEET No. 3

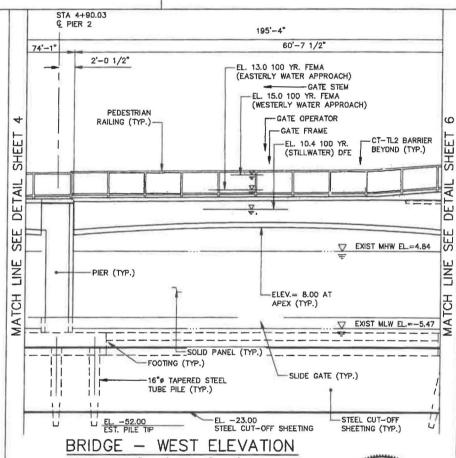
60'-7 1/2" GATE STEM (TYP.)-GATE OPERATOR (TYP.)-EET 동 DETAIL SEE LINE MATCH - SLIDE-GATE (TYP.)-SOLID PANEL (TYP.) STEEL CUT-OFF SHEETING (TYP.) STEEL CUT-OFF SHEETING EL. -52.00 U BRIDGE - WEST ELEVATION SCALE: HOR: 1" = 8', VER: 1" = 8' SCALE IN FEET SCALE: 1" = 8' PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE Approved by Department of Environmental Protection Date: AUG 1 5 2022

SHEET: 11 OF 39

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/20/22 DATE REGISTERED PROFESSIONAL ENGINEER 195'-4" 74'-1" VIEWING PLATFORM EL. 13.0 100 YR. FEMA (EASTERLY WATER APPROACH) S 2 GATE STEM (TYP.)-EL. 15.0 100 YR. FEMA (WESTERLY WATER APPROACH) SHEET SHEET PEDESTRIAN RAILING (TYP.)-GATE OPERATOR (TYP.)
—GATE FRAME (TYP.) EL. 10.4 100 YR. (STILLWATER) DFE -CT-TL2 BARRIER BEYOND (TYP.) DETAIL DETAIL SEE SFE Z EXIST MHW EL.=4.84 MATCH -ELEV.= 8.00 AT APEX (TYP.) MATCH EXIST MLW EL .= FOOTING (TYP.)-SLIDE-FLAP COMBINATION 16" TAPERED STEEL TUBE PILE (TYP.) SLIDE GATE (TYP.) GATE (TYP.) STEEL CUT-OFF SHEETING (TYP.) EL. -23.00 STEEL CUT-OFF SHEETING EL. -52.00 L BRIDGE - WEST ELEVATION SCALE: HOR: 1" = 8', VER: 1" = 8' SCALE IN FEET SCALE: 1" = 8" DETAIL SHEET No. 4 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection AUG 1 5 2022 SHEET: 12 OF 39

6130/32





SCALE: HOR: 1" = 8', VER: 1" = 8'

SCALE IN FEET SCALE: 1" = 8'



DETAIL SHEET No. 5

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY

CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, BARNSTABLE COUNTY, MA.

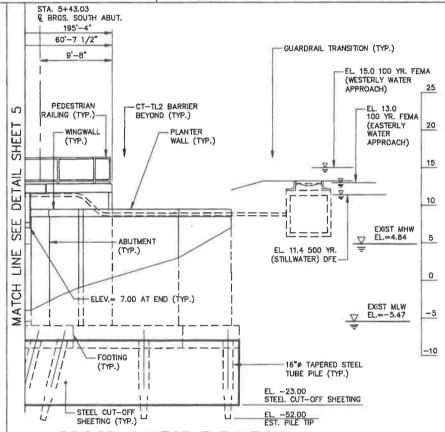
BARNSTABLE COUN PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROVIDENCE, RI 02908 DATUM: NAVOB8 DATE: MARCH 23, 2021

SHEET: 13 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

6/3E/12 DATE

REGISTERED PROFESSIONAL ENGINEER



BRIDGE - WEST ELEVATION SCALE: HOR: 1" = 8', VER: 1" = 8'

SCALE IN FEET SCALE: 1" = 8'





PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE

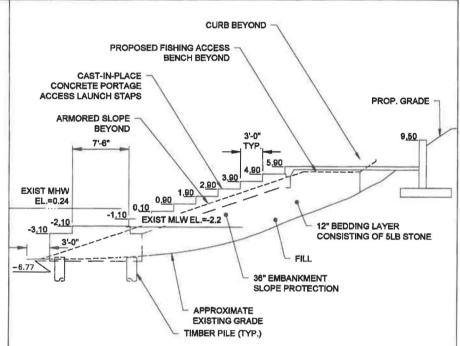
SHEET: 14 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/36/42 DATE REGISTERED PROFESSIONAL ENGINEER PROPOSED BRIDGE EXIST MLW EL = -22 EXIST MHW EL=0.24 6" STEP (TYP.) ELEVATION OF PORTAGE SCALE: 1" = SIDES CUSTOM PRECAST TRAFFIC GUARDRAIL TRANSITION (BEYOND) ထ္ PROP RIP-RAP SIMILAR, CONCRETE STEPS EAST SIDE SHOWN) STRUCTURE STEEL-BACKED TIMBER
TRAFFIC GUARDRAIL
BEYOND 42" HIGH STEEL GUARDRAIL W/ RAILING -6" (TYP. CAST-IN-PLACE CONCRETE PORTAGE ACCESS LAUNCH STEPS TIMBER PILE (TYP.) SCALE IN FEET SCALE: DETAIL SHEET No. 7 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL.
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHE Date: AUG 1 5 2072 SHEET: 15 OF 39

5/30/12 DATE





SECTION OF PORTAGE STRUCTURE LAUNCH STEPS (BOTH SIDES SIMILAR, EAST SIDE SHOWN)

SCALE: 1" = 8'

SCALE IN FEET SCALE: 1" = 8'





DETAIL SHEET No. 8

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT

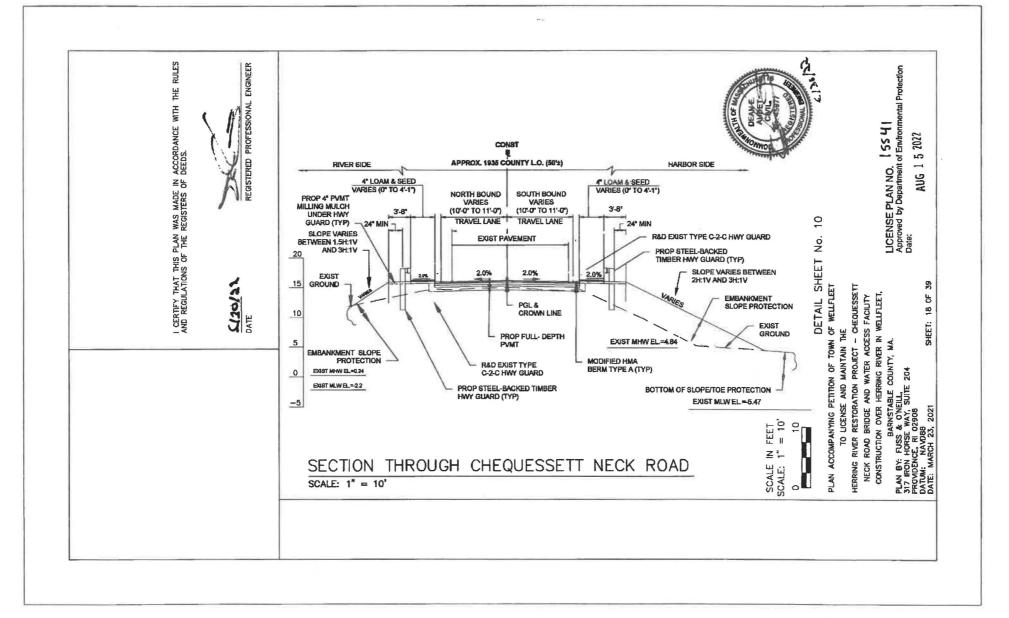
NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROMDENCE, RI 02908 DATUM: NAVDBB DATE: MARCH 23, 2021

SHEET: 16 OF 39

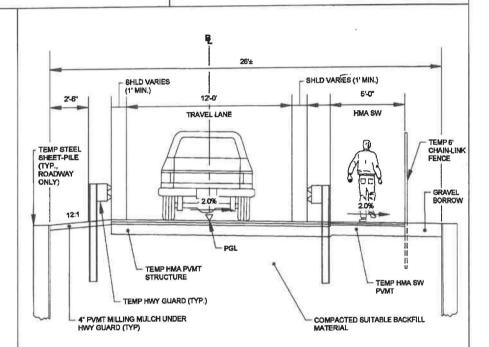
LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection
Date:

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. C130/27 REGISTERED PROFESSIONAL ENGINEER DATE 0 G to 5 20 PROP 4" PVMT MILLING MULCH UNDER HWY GUARD (TYP) SCALE: 1" = 10" SECTION PROP STEEL-BACKED EXIST GROUND R&D EXIST TYPE C-2-C HWY GUARD RIVER SIDE BOTTOM OF SLOPE/TOE PROTECTION THROUGH CHEQUESSETT EXIST MHW EL. =0.24 EXIST MLW EL -- 2.2 VARIES (EXIST TO 10'-0") EMBANKMENT SLOPE PROTECTION APPROX. 1936 COUNTY LO. [50'1] TRAVEL LANE TR MODIFIED HWA BERM TYPE A (TYP) PROP FULL-DEPTH
PVMT TRAVEL LANE VARIES (EXIST TO 10-0") NECK ROAD EMBANKMENT SLOPE PROTECTION BOTTOM OF SLOPE/TOE PROTECTION R&D EXIST TYPE C-2-C HWY GUARD PROP STEEL-BACKED TIMBER HWY GUARD (TYP) HARBOR SIDE EXIST MLW EL =-5.47 EXIST NIHW EL=4.84 SCALE IN FEET SCALE: 1" = 10 = 10' 10 DETAIL SHEET No. 9 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN . THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET. LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHI Approved by Department of Environmental Protection AUG 1 5 2022 SHEET: 17 OF 39



L/W/XX DATE





TEMPORARY BYPASS BRIDGE AND ROADWAY TYPICAL SECTION

SCALE: 1" = 4"



SCALE IN FEET SCALE: 1" = 4" 0

DETAIL SHEET No. 11 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT

NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET.

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHI

SHEET: 19 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection Date:

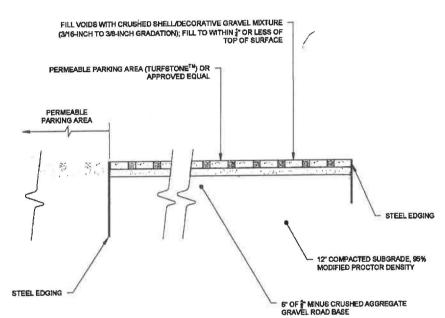
I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 4126/33 DATE REGISTERED PROFESSIONAL ENGINEER 30 EDGE OF EXIST PVMT 20 EXIST GROUND SHEET 100-YR NFIP FLOOD ELEV.=13.0 (NAVD 88) 10 DETAIL PROP TEMP STEEL SHEET PILES (TYP.) SEE EXIST MEAN HIGH WATER ELEV.=0.24 EXIST MEAN LOW WATER ELEV.=-2.20 LINE MATCH NAVD 88 BASE ELEV -10.00 12.41 12.73 12.7 12.1 TEMPORARY BYPASS BRIDGE AND ROADWAY PROFILE No. 1 SCALE: HOR: 1" = 40'; VER: 1"= 8' HOR. SCALE IN FEET 0 8 VER. SCALE IN FEET DETAIL SHEET No. 12 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection Date: AUG 1 5 2022 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHE SHEET: 20 OF 39

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/20/22 REGISTERED PROFESSIONAL ENGINEER DATE PROP TEMPORARY BRIDGE SPAN 12 SHEET SHEET 0.65% TOO-YR NAP FLOOD ELEV.=13.0 (NAVD 88) DETAIL SEE EXIST MEAN HIGH WATER ELEV .- 0.24 (NAVD 88) EXIST MEAN LOW WATER ELEV .=-2.20 (NAVD 88) MATCH EXIST, CHANNEL BOTTOM 14.03 14.35 14.68 -2.6 13.06 -5.9 TEMPORARY BYPASS BRIDGE: AND ROADWAY +50 +50 50 PROFILE No. 2 SCALE: HOR: 1" = 40'; VER: 1"= 8' HOR, SCALE IN FEET 0 VER. SCALE IN FEET DETAIL SHEET No. 13 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE Approved by Department of Environmental Protection
Date: ALIC 1 5 2022 AUG 1 5 2022 SHEET: 21 OF 39

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/20/17 DATE REGISTERED PROFESSIONAL ENGINEER L.P. ELEV = 15.23 L.P. STA = 5+85 PVI STA = 6+10.00 PVI ELEV = 15.39 A.D. = 1.85% K = 27.04 50' VC EDGE OF EXIST PVMT 30 EXIST GROUND HSD = 2375.4' ELEV: 16.01 PVC: 5+85 20 SHEET 100-YR NFIP FLOOD ELEV .= 13.0 (NAVD 88) 10 DETAIL PROP TEMP STEEL SHEET PILES (TYP.) SEE EXIST MEAN HIGH WATER ELEV .= 0.24 (NAVD 88) 0 LINE EXIST MEAN LOW WATER ELEV .=- 2.20 (NAVD 88) MATCH -10 15.00 6.9 20.2 TEMPORARY BYPASS BRIDGE AND ROADWAY PROFILE No. 3 SCALE: HOR: 1" = 40'; VER: 1"= 8' HOR. SCALE IN FEET 40 0 8 VER. SCALE IN FEET DETAIL SHEET No. 14 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE Approved by Department of Environmental Protection Date: AUG 1 5 2022 SHEET: 22 OF 39

6/30/22 DATE





PERMEABLE PUBLIC ACCESS WALKWAY FROM DUCK HARBOR ROAD PARKING AREA (ABOVE FUTURE MHHW)

NOT TO SCALE



DETAIL SHEET No. 15

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET
TO LICENSE AND MAINTAIN THE
HERRING RIVER RESTORATION PROJECT - CHEQUESSETT
NECK ROAD BRIDGE AND WATER ACCESS FACILITY
CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

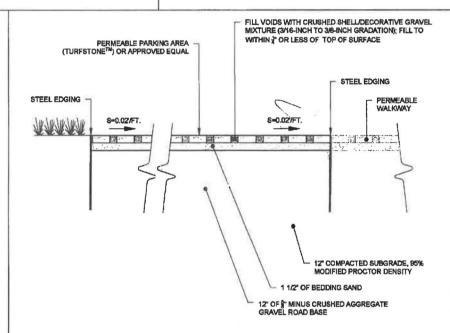
BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHI

SHEET: 23 OF 39

LICENSE PLAN NO. 1554 |
Approved by Department of Environmental Protection Date:

6/30/12

REGISTERED PROFESSIONAL ENGINEER



PERMEABLE PARKING AREA AT DUCK HARBOR ROAD

NOT TO SCALE



DETAIL SHEET No. 16

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE

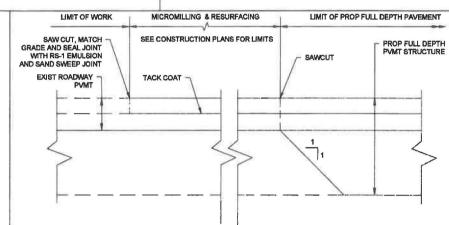
SHEET: 24 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6(30/17 DATE REGISTERED PROFESSIONAL ENGINEER 9'-0" O.C. (TYP.) 12" SOLID WHITE REFLECTIVE CROSSWALK BORDER (ON EACH SIDE OF CROSSWALK) STAMPED ASPHALT
CROSSWALK (CONSISTING OF
INTERCONNECTED
PREFORMED THERMOPLASTIC
PAVEMENT MATERIAL AS
MANUFACTURED BY
TRAFFICSCAPES OR
APPROVED EQUAL) WITH
HERRINASDONE STAMPING
PATTERN AND STAMDARD
BORDER (COLOR OF
NON-REFLECTIVE PAINT SHALL
BE SELECTED BY THE OWNER) DECORATIVE STAMPED ASPHALT CROSSWALK NOT TO SCALE DETAIL SHEET No. 17 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY . CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & ONEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE Approved by Department of Environmental Protection Date: AUG 1 5 2022 SHEET: 25 OF 39

6/30/27

REGISTERED PROFESSIONAL ENGINEER



PROPOSED HMA PAVEMENT MATCHING DETAIL

NOT TO SCALE MILL PYMT TO A NEAT LINE, SAW CUT, MATCH GRADE AND SEAL JOINT WITH RS-1 EMULSION AND SAND SWEEP JOINT NEW PAVEMENT SURFACE MILL 13/" OF EXIST ASPHALT & OVERLAY W/ 13/" HMA SURFACE COURSE MATERIAL IN (1) LAYER TO THE LIMITS SHOWN ON THE CONSTRUCTION PLAN EXIST ROADWAY PVMT -

PROPOSED MILLING AT PAVEMENT MATCH DETAIL NOT TO SCALE



DETAIL SHEET No. 18

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT

TACK COAT

NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, BARNSTABLE COUNTY, MA.

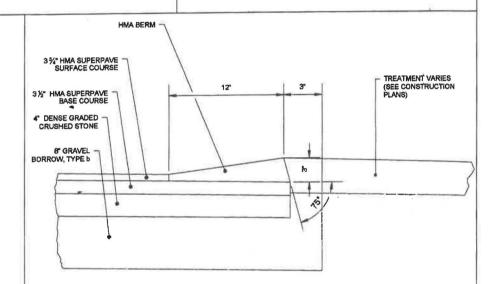
BARNSTABLE COUN PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROVIDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021

SHEET: 26 OF 39

LICENSE PLAN NO. 1554 Approved by Department of Environmental Protection Date:

_(30/1)

REGISTERED PROFESSIONAL ENGINEER



MODIFIED HOT MIX ASPHALT BERM TYPE A NOT TO SCALE



DETAIL SHEET No. 19

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

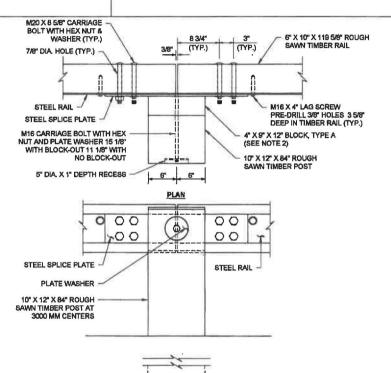
DARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 (RON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE

SHEET: 27 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection
Date:

6(30/22 DATE

REGISTERED PROFESSIONAL ENGINEER



ELEVATION POST CONNECTION

STEEL-BACKED PERMANENT TIMBER GUARDRAIL TYPE A & TYPE B PLAN VIEW

NOT TO SCALE



DETAIL SHEET No. 20

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

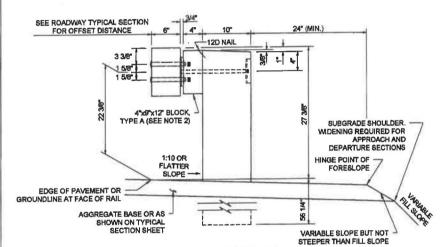
BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHI

SHEET: 28 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection
Date:

C(36/22 DATE

REGISTERED PROFESSIONAL ENGINEER



TYPICAL GUARDRAIL CROSS SECTION

STEEL-BACKED PERMANENT TIMBER GUARDRAIL TYPE A & TYPE B SECTION VIEW

NOT TO SCALE



DETAIL SHEET No. 21

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SH

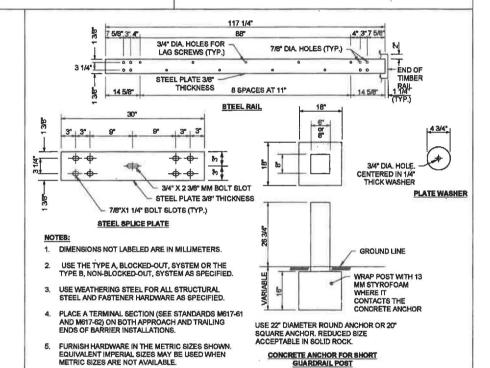
SHEET: 29 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

6120/12



REGISTERED PROFESSIONAL ENGINEER



STEEL-BACKED PERMANENT TIMBER GUARDRAIL TYPE A & TYPE B DETAILS

NOT TO SCALE



DETAIL SHEET No. 22

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

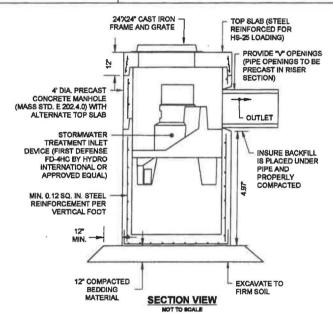
BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROVIDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021

SHEET: 30 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

6/36/12 DATE





PERFORMANCE REQUIREMENTS:

- STORMWATER TREATMENT INLET DEVICE SHALL BE FIRST DEFENSE FD-4HC BY HYDRO INTERNATIONAL OR APPROVED EQUAL.
- IN ORDER TO BE CONSIDERED EQUAL, THE DEVICE MUST BE CAPABLE OF PROVIDING 44% TSS REMOVAL FOR FLOWS UP TO 1.5 CFS.

STORMWATER TREATMENT INLET STRUCTURE

NOT TO SCALE



DETAIL SHEET No. 23

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET
TO LICENSE AND MAINTAIN THE
HERRING RIVER RESTORATION PROJECT — CHEQUESSETT
NECK ROAD BRIDGE AND WATER ACCESS FACILITY

CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,
BARNSTABLE COUNTY, MA.

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHI

SHEET: 31 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection Date:

6/36/22 DATE

REGISTERED PROFESSIONAL ENGINEER

STRUCTURE NOTES:

- FRAME TO BE FOUR FLANGE 0MASS4000002 AS MANUFACTURED BY EAST JORDAN CO. OR APPROVED EQUAL. FRAME HEIGHT SHALL NOT EXCEED 4-INCHES.
- GRATE SHALL BE OMA552000043, ADA COMPLIANT AS MANUFACTURED BY EAST JORDAN CO. OR APPROVED EQUAL.
- FRAME & GRATE SHALL BE ASTM-A48 CLASS 35B GRAY IRON, HEAVY DUTY.
- STEEL REINFORCEMENT SHALL BE INSTALLED AT MIN. 0.12 SQ. IN. PER VERTICAL FOOT AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM, PLACED ACCORDING TO AASHTO DESIGNATION M199.
- CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI TYPE II CEMENT PER ASTM C-478. THE STRUCTURE SHALL BE REINFORCED TO WITHSTAND AN H320-44 LOADING, SHIPLAP JOINTS SHALL BE SEALED WITH BUTYL RUBBER MASTIC SEALANT CONFORMING TO ASTM C990.
- CATCH BASIN DESIGN SHALL CONFORM TO ASTM C-478 FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS." THE BASE SECTION OF THE STRUCTURE SHALL CONSIST OF ONE POUR MONOLITHIC PRECAST BASE SECTION.
- JOINTS SHALL BE SEALED USING BUTYL RUBBER JOINT SEALANT PER ASTM C-990 & AASHTO M-198.
- NON-SHRINK GROUT OR HYDRAULIC CEMENT CONFORMING TO ASTM C 585 SHALL BE USED TO PROVIDE A WATER TIGHT SEAL IN THE LIFT HOLES, ANY DRAIN HOLES, AND AROUND THE CONCRETE KNOCK-OUTS FOR THE INLEFT AND OUTLET PIPES.
- THE STORMWATER TREATMENT INLET DEVICE SHALL BE BE CROSS-LINKED POLYETHYLENE (XLPE) AND/OR TYPE 304 STAINLESS STEEL OR CARBON STEEL POWDER COATED IN ACCORDANCE WITH ASTM A7754. ALL COMPONENTS SHALL BE DESIGNED TO WITHSTAND NORMAL LOADINGS ASSOCIATED WITH FADD NORMAL LOADINGS ASSOCIATED WITH FADD REAL CAPITY OF THE STAILLAND, AND NORMAL OPERATION OF THE

STORMWATER TREATMENT INLET STRUCTURE NOTES NOT TO SCALE



DETAIL SHEET No. 24

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHEI

SHEET: 32 OF 39

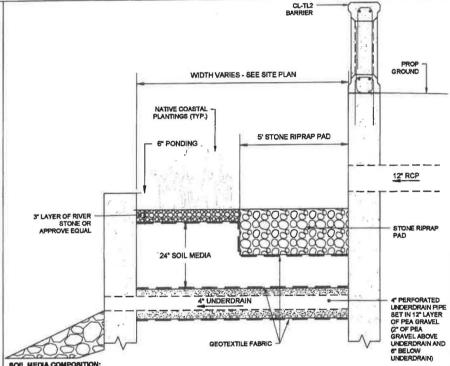
LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection

6/36/32

DATE



REGISTERED PROFESSIONAL ENGINEER



SOIL MEDIA COMPOSITION:

THE SOIL MEDIA SHALL CONSIST OF THE FOLLOWING MIXTURE OF SAND, TOPSOIL/LOAM, AND WELL-AGED, WELL-AERATED, LEAF COMPOST (OR APPROVED EQUIVALENT): 50%-50% SAND, 20%-30% TOPSOIL, AND 20%-30% COMPOST.

STORMWATER FILTER SECTION

NOT TO SCALE



DETAIL SHEET No. 25

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

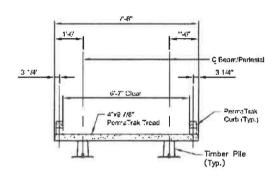
BARNSTABLE COUNTY, MA. PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROVIDENCE, RI 02908 DATUM: NAVDB8 DATE: MARCH 23, 2021

SHEET: 33 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection Date:

606/22

REGISTERED PROFESSIONAL ENGINEER



TYPICAL SECTION - PRECAST CONCRETE BOARDWALK ON TIMBER PILES

NOT TO SCALE



DETAIL SHEET No. 26

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET
TO LICENSE AND MAINTAIN THE
HERRING RIVER RESTORATION PROJECT - CHEQUESSETT
NECK ROAD BRIDGE AND WATER ACCESS FACILITY
CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

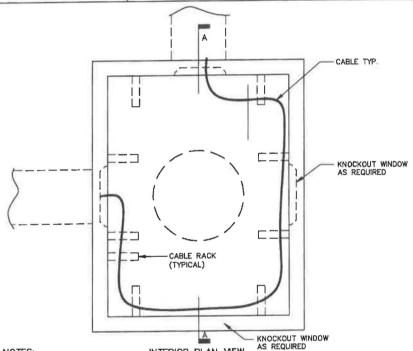
BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHE

SHEET: 34 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:







NOTES:

INTERIOR PLAN VIEW

- THE FRAME AND COVER ASSEMBLY SHALL BE MANUFACTURED WITH BOLTS AND GASKETS IN ORDER TO PROVIDE A WATERTIGHT SEAL.
- NON-SHRINK GROUT OR HYDRAULIC CEMENT CONFORMING TO ASTM C 595 SHALL BE USED TO PROVIDE A WATER TIGHT SEAL IN ANY LIFT HOLES AND AROUND CONCRETE KNOCK-OUTS AT DUCT BANK CONNECTIONS.
- STRUCTURE JOINTS SHALL BE SEALED USING BUTYL RUBBER JOINT SEALANT PER ASTM C-990 & AASHTO M-198.

TYPICAL ELECTRICAL MANHOLE PLAN VIEW

NOT TO SCALE



DETAIL SHEET No. 27

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

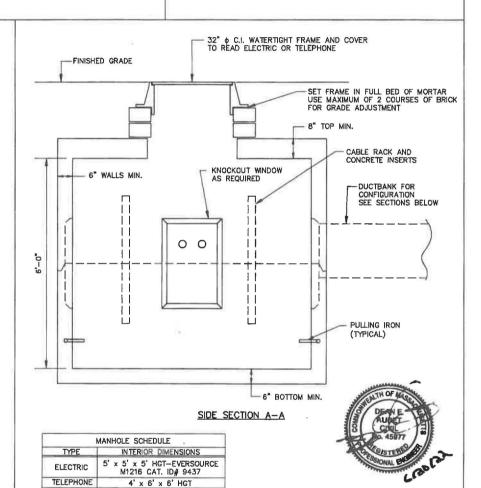
BARNSTABLE COUNTY, MA. BARNSTABLE COUN'
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVO88
DATE: MARCH 23, 2021

SHEET: 35 OF 39

LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection

6120127 DATE

REGISTERED PROFESSIONAL ENGINEER



TYPICAL ELECTRICAL MANHOLE DETAIL SECTION VIEW

NOT TO SCALE

DETAIL SHEET No. 28

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET

TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

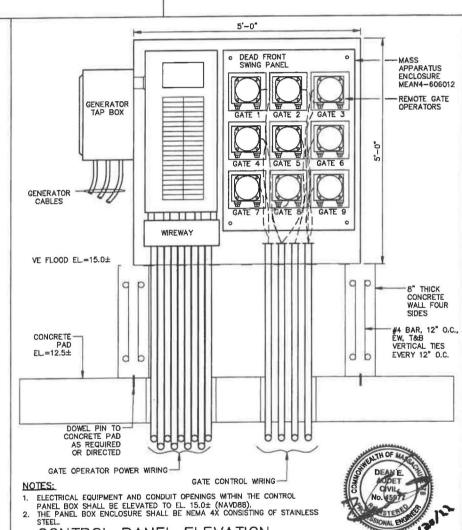
BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021 SHE

SHEET: 36 OF 39

LICENSE PLAN NO. 15541
Approved by Department of Environmental Protection Date:

6130127 DATE





CONTROL PANEL ELEVATION

NOT TO SCALE

DETAIL SHEET No. 29

PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE

HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET,

BARNSTABLE COUNTY, MA.

PLAN BY: FUSS & O'NEILL, 317 IRON HORSE WAY, SUITE 204 PROMDENCE, RI 02908 DATUM: NAVD88 DATE: MARCH 23, 2021

SHEET: 37 OF 39

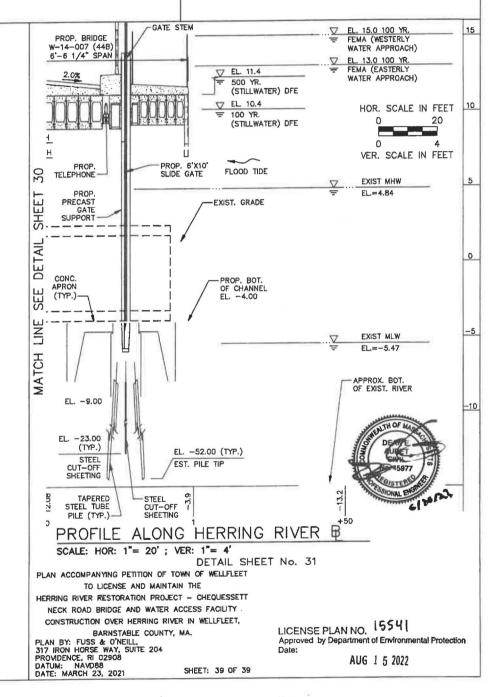
LICENSE PLAN NO. 15541 Approved by Department of Environmental Protection Date:

I CERTIFY THAT THIS PLAN WAS MADE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS. 6/36h REGISTERED PROFESSIONAL ENGINEER DATE CONSTRUCTION B ▼ EL. 15.0 100 YR.

▼ FEMA (WESTERLY

WATER APPROACH) 15 HOR. SCALE IN FEET -PROP. ELECTRIC PGL EL. 13.0 100 YR. FEMA (EASTERLY WATER APPROACH) ▽ EL. 11.4 = 500 YR 500 YR. DFE VER. SCALE IN FEET ▽ EL. 10.4 10 (STILLWATER) DFE EL. 8.00 TOP OF ARC EL. 7.00 BOT. OF ARC EBB TIDE 31 SHEET EXIST. CULVERTS DETAIL EXIST MHW EL.=0.24 SEE EXIST MLW EL.=-2.2 LINE -5 MATCH -10 NAVD 88 BASE EL. -15.00 -15.3 PROFILE ALONG HERRING RIVER SCALE: HOR: 1"= 20'; VER: 1"= 4" DETAIL SHEET No. 30 PLAN ACCOMPANYING PETITION OF TOWN OF WELLFLEET TO LICENSE AND MAINTAIN THE HERRING RIVER RESTORATION PROJECT - CHEQUESSETT NECK ROAD BRIDGE AND WATER ACCESS FACILITY CONSTRUCTION OVER HERRING RIVER IN WELLFLEET, LICENSE PLAN NO. 15541 BARNSTABLE COUNTY, MA.
PLAN BY: FUSS & O'NEILL,
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
DATUM: NAVD88
DATE: MARCH 23, 2021
SHO Approved by Department of Environmental Protection Date: AUG 1 5 2022 SHEET: 38 OF 39

6/36/21 DATE REGISTERED PROFESSIONAL ENGINEER



7-1

