

Connecticut Department of Energy and Environmental Protection License*

Certificate of Permission

Licensee(s):	District of Chapman Beach c/o Paul McGill
Licensee Address(s):	PO Box 356 Westbrook, CT 06498
License Number(s):	202207043-COP
Municipality:	Westbrook
Project Description:	Groin retention and repair for flood & erosion control
Project Address/Location:	Chapman Ave
Waters:	Long Island Sound
Authorizing CT Statute(s) and/or Federal Law:	CGS Section 22a-359 to 363g; CGS Section 22a-90 to 112
Applicable Regulations of CT State Agencies:	22a-426-1 to 9
Agency Contact:	Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019
License Expiration:	Five (5) years from the date of issuance of this license.
Project Site Plan Set:	<i>Groin Restorations</i> , Five (5) pages of plans prepared by Docko Inc., page 1 dated 01/08/09, pages 2 – 5 dated 09/2/21, last revised on 09/22/22.
License Enclosures:	LWRD General Conditions; LWRD Compliance Certification Form; Land Record Filing; LWRD Work Commencement Form; Site Plan Set

*Connecticut's Uniform Administrative Procedure Act defines License to include, "the whole or part of any agency permit, certificate, approval, registration, charter or similar form of permission required by law . . ."

Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application # 202207043 and as depicted on any site plan sheets / sets cited herein:

1. **Groin B:** Remove existing 76' x 3' concrete groin,
 - a. Construct a 76' groin consisting of 19' of concrete and 57' of timber with a landward top elevation of 9.25 NAVD88 and a waterward top elevation of 3.4' NAVD88,
 - b. Construct a 6' wide X 18" high concrete support base along the total length of the concrete section of the groin,
 - c. Place 4 CY of salvaged scour stone over 150 square feet,
 - d. Install a marker pile at the waterward end of the groin,
 - e. Install 4' wide removable pedestrian access steps,
2. **Groin C:** Remove an existing 90' X 3-5' concrete groin and stone,
 - a. Construct a 90' groin consisting of 22' of concrete and 68' of timber with a landward top elevation of 6.83 NAVD88 and a waterward top elevation of 2.9' NAVD88,
 - b. Construct a 6' wide X 18" high concrete support base along the total length of the concrete section of the groin,
 - c. Place 5 CY of salvaged scour stone over 200 square feet,
 - d. Install a marker pile at the waterward end of the groin,
 - e. Install 4' wide removable pedestrian access steps,
3. **Groin D:** Remove an existing 88' x 3' concrete groin and stone,
 - a. Construct an 88' groin consisting of 22' of concrete and 66' of timber with a landward top elevation of 7.15 NAVD88 and a waterward top elevation of 2.6' NAVD88,
 - b. Construct a 6' wide X 18" high concrete support base along the total length of the concrete section of the groin,
 - c. Place 5 CY of salvaged scour stone over 200 square feet,
 - d. Install a marker pile at the waterward end of the groin,
 - e. Install 4' wide removable pedestrian access steps,
4. **Groin E:** Remove an existing 82' x 4' concrete groin and stone,
 - a. Construct an 82' groin consisting of 50' of concrete pinned to ledge beneath and about 32' of timber with a landward top elevation of 6.60 NAVD88 and a waterward top elevation of 2.6' NAVD88.
 - b. Place 5 CY of salvaged scour stone over 100 square feet,
 - c. Install a marker pile at the waterward end of the groin,
 - d. Install 4' wide removable pedestrian access steps.

Failure to comply with the terms and conditions of this license shall subject the Licensee and / or the Licensee's contractor(s) to enforcement actions and penalties as provided by law.

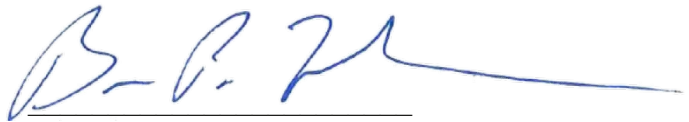
This license is subject to the following Terms and Conditions:

1. **License Enclosure(s) and Conditions.** The Licensee shall comply with all applicable terms and conditions as may be stipulated within the License Enclosure(s) listed above.
2. At no time shall the Licensee allow concrete to discharge into Long Island Sound.
3. The Licensee shall install pedestrian access stairs over the groins as follows:
 - a. such pedestrian access shall be installed at the location of mean high water and shall be maintained to ensure that the access stair bottoms remain in contact with the beach sand below;
 - b. such pedestrian access shall be installed year round, except that the access stairs may be removed from the groins during any period where coastal storms are forecast to impact the address that is the subject of this license, provided said removal and subsequent reinstallation activities begin no earlier than 48 hours before, and end no later than 48 hours after the durational period of any given coastal storm event;
 - c. the pedestrian access shall be maintained for the life of the groin; and
 - d. installation of the pedestrian access shall be completed on the work completion date for the activities authorized herein.
4. On or before (a) ninety (90) days after completion of the work authorized herein, or (b) upon expiration of the work completion date or any authorized one-year extension thereof, whichever is earlier, the Licensee shall submit to the Commissioner "as built" plans prepared and sealed by a licensed engineer, licensed surveyor or licensed architect, as applicable, of the work area showing all contours, bathymetries, tidal datums and structures.

Issued under the authority of the Commissioner of Energy and Environmental Protection on:

November 3, 2022

Date



Brian P. Thompson
Division Director
Land & Water Resources Division

LWRD General Conditions

- 1. Land Record Filing (for *Structures Dredging & Fill, Tidal Wetlands, Certificate of Permission, and Long Island Sound General Permit Licenses only*).** The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to DEEP.LWRDRegulatory@ct.gov no later than sixty (60) days after license issuance. If a Land Record Filing form is not enclosed and the work site is not associated with an upland property, no filing is required.
- 2. Contractor Notification.** The Licensee shall give a copy of the license and its attachments to the contractor(s) who will be carrying out the authorized activities prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Licensee's contractor(s) shall conduct all operations at the site in full compliance with the license and, to the extent provided by law, may be held liable for any violation of the terms and conditions of the license. At the work site, the contractor(s) shall, whenever work is being performed, have on site and make available for inspection a copy of the license and the authorized plans.
- 3. Work Commencement¹.** Not later than two (2) weeks prior to the commencement of any work authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov, on the Work Commencement Form attached hereto, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.
 - For water diversion activities authorized pursuant to 22a-377(c)-1 of the Regulations of Connecticut State Agencies, the Licensee shall also notify the Commissioner in writing two weeks prior to initiating the authorized diversion.
 - For emergency activities authorized pursuant Connecticut General Statutes Section 22a-6k, the Licensee shall notify the Commissioner, in writing, of activity commencement at least one (1) day prior to construction and of activity completion no later than five (5) days after conclusion.
- 4. For Coastal Licenses Only - License Notice.** The Licensee shall post the first page of the License in a conspicuous place at the work area while the work authorized therein is undertaken.
- 5. Unauthorized Activities.** Except as specifically authorized, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be

¹ The Work Commencement condition and the need for a Work Commencement Form is not applicable to Flood Management Certification approvals.

deposited, placed or stored in any wetland or watercourse on or off-site. The Licensee may not conduct work within wetlands or watercourses other than as specifically authorized, unless otherwise authorized in writing by the Commissioner. Tidal wetlands means “wetland” as defined by section 22a-29 and “freshwater wetlands and watercourses” means “wetlands” and “watercourses” as defined by section 22a-38.

- 6. Management of Materials.** Any materials removed from the site shall be managed in accordance with all federal, state, and local requirements, including Chapter 446K Water Pollution Control, Chapter 445 Hazardous Waste, and Chapter 446d Solid Waste of the Connecticut General Statutes.
- 7. Unconfined Instream Work.** Unless otherwise noted in a condition of the license, the following conditions apply to projects in non-coastal waters:

 - Unconfined instream work is limited to the period June 1 through September 30.
 - Confinement of a work area by cofferdam techniques using sand bag placement, sheet pile installation (vibratory method only), portadam, or similar confinement devices is allowed any time of the year. The removal of such confinement devices is allowed any time of the year.
 - Once a work area has been confined, in-water work within the confined area is allowed any time of the year.
 - The confinement technique used shall completely isolate and protect the confined area from all flowing water. The use of silt boom/curtain or similar technique as a means for confinement is prohibited.
- 8. For State Actions Only - Material or Equipment Storage in the Floodplain.** Unless approved by a Flood Management Exemption, the storage of any materials at the site which are buoyant, hazardous, flammable, explosive, soluble, expansive, radioactive, or which could in the event of a flood be injurious to human, animal or plant life, below the elevation of the five-hundred (500) year flood is prohibited. Any other material or equipment stored at the site below said elevation by the Licensee or the Licensee's contractor must be firmly anchored, restrained or enclosed to prevent flotation. The quantity of fuel stored below such elevation for equipment used at the site shall not exceed the quantity of fuel that is expected to be used by such equipment in one day. In accordance with the licensee's Flood Contingency Plan, the Licensee shall remove equipment and materials from the floodplain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the Licensee's responsibility to obtain such warnings when flooding is anticipated.
- 9. Temporary Hydraulic Facilities for Water Handling.** If not reviewed and approved as a part of the license application, temporary hydraulic facilities shall be designed by a qualified professional and in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, the *2004 Connecticut Stormwater Quality Manual*, or the *Department of Transportation's ConnDOT Drainage Manual*, as applicable. Temporary hydraulic facilities may include channels, culverts or bridges which are required for haul roads, channel relocations, culvert installations, bridge construction, temporary roads, or detours.

- 10. Excavated Materials.** Unless otherwise authorized, all excavated material shall be staged and managed in a manner which prevents additional impacts to wetlands and watercourses.
- 11. Best Management Practices.** The Licensee shall not cause or allow pollution of any wetlands or watercourses, including pollution resulting from sedimentation and erosion. In constructing or maintaining any authorized structure or facility or conducting any authorized activity, or in removing any such structure or facility, the Licensee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. For purposes of the license, “pollution” means “pollution” as that term is defined by CGS section 22a-423. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation’s *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.
- 12. In-Water Work Vessel Staging and Storage. (for Structures Dredging & Fill, Tidal Wetlands, Certificate of Permission, and Long Island Sound General Permit Licenses only).** For any barge, vessel, skiff or floating work platform (“work vessels”) utilized in the execution of the work authorized herein, the Licensee shall ensure that such work vessels:
- do not rest on, or come in contact with, the substrate at any time, unless specifically authorized in the license.
 - are not stored over intertidal flats, submerged aquatic vegetation or tidal wetland vegetation or in a location that interferes with navigation. In the event any work vessel is grounded, no dragging or prop dredging shall occur to free it.
- 13. Work Site Restoration.** Upon completion of any authorized work, the Licensee shall restore all areas impacted by construction, or used as a staging area or accessway in connection with such work, to their condition prior to the commencement of such work.
- 14. Inspection.** The Licensee shall allow any representative of the Commissioner to inspect the project location at reasonable times to ensure that work is being or has been conducted in accordance with the terms and conditions of this license.
- 15. Change of Use. (Applies only if a use is specified within the License “Project Description”)**
- a. The work specified in the license is authorized solely for the purpose set forth in the license. No change in purpose or use of the authorized work or facilities as set forth in the license may occur without the prior written approval of the Commissioner. The Licensee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this license, request permission from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.
 - b. A change in the form of ownership of any structure authorized herein from a rental/lease commercial marina to a wholly-owned common interest community or dockominium may constitute a change in purpose as specified in paragraph (a) above.
- 16. De Minimis Alteration.** The Licensee shall not deviate from the authorized activity without

prior written approval from the Commissioner. The Licensee may request a de minimis change to any authorized structure, facility, or activity. A de minimis alteration means a change in the authorized design, construction or operation that individually and cumulatively has minimal additional environmental impact and does not substantively alter the project as authorized.

- For diversion activities authorized pursuant to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, a de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.

17. Extension Request. The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to DEEP.LWRDRegulatory@ct.gov at least thirty (30) days prior to the license expiration. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. The Commissioner may extend the expiration date of this license for a period of up to one year, in order for the Licensee to complete the authorized activities. It shall be at the Commissioner's sole discretion to grant or deny such request. No more than three (3) one-year extensions will be granted under this license.

18. Compliance Certification. Not later than 90 days after completion of the authorized work, the Licensee shall prepare and submit to DEEP.LWRDRegulatory@ct.gov, the attached Compliance Certification Form. Such Compliance Certification shall be completed, signed, and sealed by the Licensee and a Connecticut Licensed Design Professional. If non-compliance is indicated on the form, or the Commissioner has reason to believe the activities and/or structures were conducted in non-compliance with the license, the Commissioner may require the Licensee to submit as-built plans as a condition of this license.

19. Maintenance. The Licensee shall maintain all authorized structures or work in optimal condition or shall remove such structures or facility and restore the affected waters to their pre-work condition. Any such maintenance or removal activity shall be conducted in accordance with applicable law and any additional approvals required by law.

20. No Work After License Expiration. Work conducted after the license expiration date is a violation of the license and may subject the licensee to enforcement action, including penalties, as provided by law.

21. License Transfer. The license is not transferable without prior written authorization of the Commissioner. A request to transfer a license shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Licensee's obligations under the license shall not be affected by the passage of title to the license site to any other person or municipality until such time as a transfer is approved by the Commissioner.

22. Document Submission. Any document required to be submitted to the Commissioner under the license or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

DEEP.LWRDRegulatory@ct.gov or

Regulatory Section
Land & Water Resources Division
Department of Energy and Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127
860-424-3019

- 23. Date of Document Submission.** The date of submission to the Commissioner of any document required by the license shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under the license, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in the license, the word “day” as used in the license means calendar day. Any document or action which is required by the license to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.
- 24. Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under the license shall be signed by the Licensee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: “I have personally examined and am familiar with the information submitted in this document and all attachments and 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, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense.”
- 25. Accuracy of Documentation.** In evaluating the application for the license, the Commissioner has relied on information and data provided by the Licensee and on the Licensee’s representations concerning site conditions, design specifications and the proposed work, including but not limited to representations concerning the commercial, public or private nature of the work or structures, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, the license may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.
- 26. Limits of Liability.** In granting the license, the Commissioner has relied on all representations of the Licensee, including information and data provided in support of the Licensee’s application. Neither the Licensee’s representations nor the issuance of the license shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.
- 27. Reporting of Violations.** In the event that the Licensee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this license or of any document incorporated into the license, the Licensee shall immediately notify the

agency contact specified within the license and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the agency contact, the Licensee shall provide, for the agency's review and written approval, a report including the following information:

- a. the provision(s) of the license that has been violated;
- b. the date and time the violation(s) was first observed and by whom;
- c. the cause of the violation(s), if known;
- d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;
- e. if the violation(s) has not ceased, the anticipated date when it will be corrected;
- f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and
- g. the signatures of the Licensee and of the individual(s) responsible for actually preparing such report.

If the violation occurs outside of normal business hours, the Licensee shall contact the Department of Energy and Environmental Protection Emergency Dispatch at 860-424-3333. The Licensee shall comply with any dates which may be approved in writing by the Commissioner.

- 28. Revocation/Suspension/Modification.** The license may be revoked, suspended, or modified in accordance with applicable law.
- 29. Other Required Approvals.** License issuance does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, state and local law.
- 30. Rights.** The license is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
- 31. Condition Conflicts.** In the case where a project specific special condition listed on the license differs from, or conflicts with, one of the general conditions listed herein, the project specific special condition language shall prevail. It is the licensee's responsibility to contact the agency contact person listed on the license for clarification if needed prior to conducting any further regulated activities.



Compliance Certification Form

The following certification must be signed by the licensee working in consultation with a Connecticut-licensed design professional and must be submitted to the address indicated at the end of this form within ninety (90) days of completion of the authorized work.

1. Licensee Name: <u>District of Chapman Beach c/o Paul McGill</u>	
DEEP License Number(s): <u>202207043-COP</u>	
Municipality in which project is occurring: <u>Westbrook</u>	
2. Check one:	
(a) ☐ "I certify that the final site conditions and / or structures are in general conformance with the approved site plans". Identify and describe any deviations and attach to this form.	
(b) ☐ "The final site conditions and / or structures are not in general conformance with the approved site plans. The enclosed "as-built" plans note the modifications".	
3. "I understand that any false statement in this certification is punishable as a criminal offence under section 53a-157b of the General Statutes and under any other applicable law."	
_____ Signature of Licensee	_____ Date
_____ Name of Licensee (print or type)	
_____ Signature of CT-Licensed Design Professional	_____ Date
_____ Name of CT-Licensed Design Professional (print or type)	
_____ Professional License Number (if applicable)	Affix Stamp Here [Stamp Area]
- As-built plans shall include: elevations or tidal datums, as applicable, and structures, including any proposed elevation views and cross sections included in the approved license plans. Such as-built plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut. - The Licensee will be notified by staff of the Land and Water Resources Division (LWRD) if further compliance review is necessary. Lack of response by LWRD staff does not imply compliance. Submit this completed form to : DEEP.LWRDRegulatory@ct.gov or Regulatory Section Department of Energy and Environmental Protection Land & Water Resources Division 79 Elm Street Hartford, CT 06106-5127	

Land Record Filing*

To: DO NOT FILE

Signature and

NOTE: Due to the electronic delivery of this license and the legal requirement to have a live signature on this document, the “Land Record Filing” as detailed in General Condition #1 will be sent to the Licensee via U.S. Mail for the Licensee to file with the city/town clerk.

Date:

Subject: _____
License # _____

If you have any questions pertaining to this matter, please contact the Land & Water Resources Division at 860-424-3019.

~~Return to:~~

~~Land & Water Resources Division
State of Connecticut
Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106-5127~~

*The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to the Commissioner no later than sixty (60) days after license issuance.



LWRD Work Commencement Form

To: DEEP.LWRDRegulatory@ct.gov or
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Licensee Name: District of Chapman Beach c/o Paul McGill

Municipality in which the project is occurring: Westbrook

DEEP License No(s): 202207043-COP

CONTRACTOR(s):

1 Name: _____
Address: _____
Telephone: _____
E-mail: _____

2 Name: _____
Address: _____
Telephone: _____
E-mail: _____

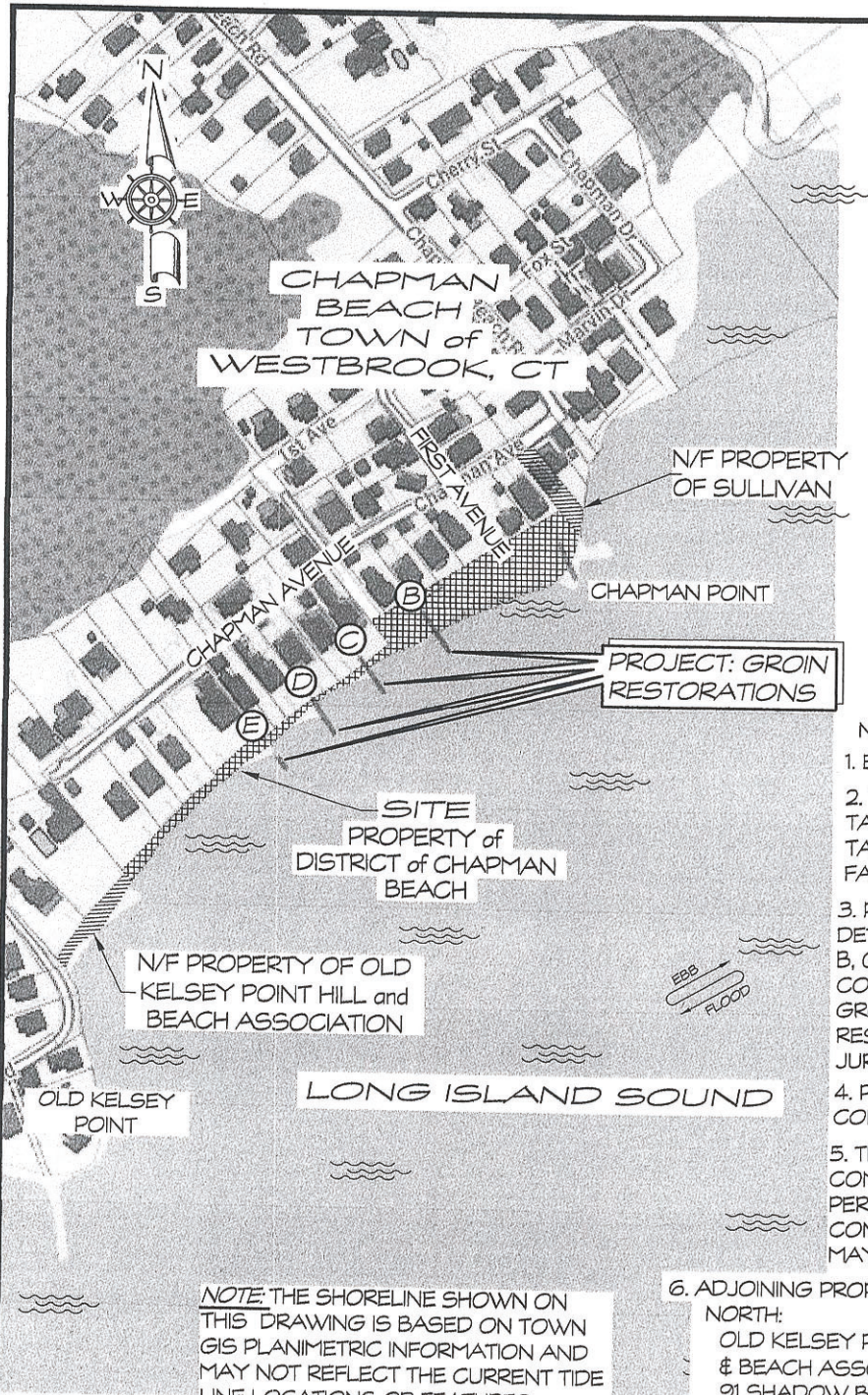
3 Name: _____
Address: _____
Telephone: _____
E-mail: _____

Date Contractor(s) received a copy
of the license and approved plans: _____

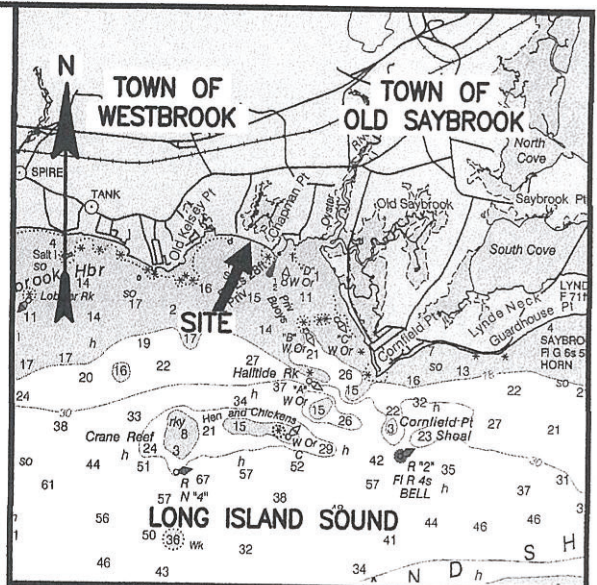
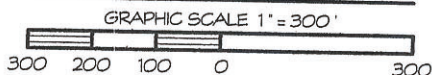
EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

LICENSEE: _____
(Signature) (Date)



OVERALL PLAN



LOCATION MAP

REFERENCE
CHART : 13214
GRAPHIC SCALE
IN YARDS

NOTES:

1. ELEVATION DATUM IS NAVD '88.
2. TIDE DATA IS TAKEN FROM 2022 NOAA TIDE TABLES REFERENCE : DUCK ISLAND ROADS. CJL IS TAKEN FROM THE COASTAL JURISDICTIONAL LINE FACT SHEET : WESTBROOK
3. PROJECT DESCRIPTION: REMOVE AND REPLACE FOUR DETERIORATED CONCRETE AND STONE GROINS; GROIN B, GROIN C, GROIN D AND GROIN E WITH NEW COMPOSITE CONCRETE AND WOOD PILE AND TIMBER GROINS, LANDWARD AND WATERWARD OF THEIR RESPECTIVE MEAN HIGH WATER AND COASTAL JURISDICTION LINES.
4. PROJECT PURPOSE: TO RESTORE LONGSTANDING CONCRETE BEACH PROTECTION GROINS.
5. THESE APPLICATION DRAWINGS REPRESENT A COMPILATION OF SURVEYS FOR ENVIRONMENTAL PERMIT PURPOSES. THEY ARE NOT CONSTRUCTION CONTRACT DOCUMENTS. A TOWN BUILDING PERMIT MAY BE REQUIRED.

6. ADJOINING PROPERTY OWNERS:

NORTH:

OLD KELSEY POINT HILL
& BEACH ASSOCIATION
91 SHADOW BROOK ESTATES
SOUTH HADLEY, MA 01075

EAST:

KENNETH J & KEITH JOHN SULLIVAN
21 GOLF ST
NEWINGTON, CT 06111

PROJECT: **GROIN RESTORATIONS**

LOCATION: CHAPMAN BEACH - TOWN OF WESTBROOK

NEW LONDON COUNTY, CONNECTICUT

WATERWAY: LONG ISLAND SOUND

DATE: JANUARY 8, 2009

APPLICANT: DISTRICT OF CHAPMAN
BEACH

AGENT: SHEET 1 OF 5

DOCKO, INC.

Keith B. Nelson, PE

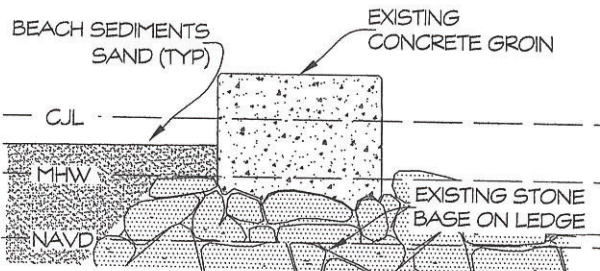
Mystic, CT 06355

860 572 8939

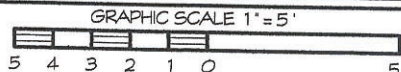
EMAIL: office@docko.com



DWG 21-07-3189



GROIN D TYPICAL SECTION



TOP OF GROIN AT RETAINING WALL EL 6.8±

TOP OF GROIN AT RETAINING WALL EL 9.25±

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

TOP OF GROIN AT RETAINING WALL EL 7.2±

CONCRETE RETAINING WALL

TOP OF GROIN AT RETAINING WALL EL 6.6±

GROIN D STONE & CONCRETE ON STONE GROIN 50±CY OVER 400±SF END EL 1.7±

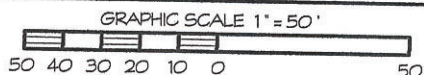
EXISTING STONE GROIN, 300±SF TO BE REMOVED & RESET AS SCOUR STONE ALONG TOE OF NEW GROIN

GROIN E STONE & CONCRETE 20±CY OVER 150±SF 25±LF X 4-FT WIDE END EL 1.7±

EXISTING STONE GROIN, 800±SF TO BE REMOVED & RESET AS SCOUR STONE ALONG TOE OF NEW GROIN

SCATTERED STONE

EXISTING CONDITIONS



GROIN B CONCRETE ON STONE GROIN 76±LF X 3-FT WIDE 50±CY OVER 500±SF END EL 2.5±

GROIN C CONCRETE ON STONE GROIN 90±LF X 3-5-FT WIDE 50±CY OVER 500±SF END EL 2.0±

EXISTING STONE GROIN, 200±SF TO BE REMOVED AND RESET AS SCOUR PROTECTION

MOORING BUOY 145 4.3

MOORING BUOY "LAGAVA" 4.2

NOTE: USE SURPLUS STONE FROM ENDS OF GROINS C, D, & E AS SCOUR PROTECTION ON GROIN D

NOTE: NO OSPREY POLES WERE OBSERVED WITHIN 500-FT OF THE SITE

SURVEY by JAMES BERNARDO LAND SURVEYING LLC
ELEVATIONS ARE BASED ON NAVD 1988

PROJECT: GROINS RESTORATION

LOCATION: CHAPMAN BEACH - TOWN of WESTBROOK
MIDDLESEX COUNTY, CONNECTICUT

WATERWAY: LONG ISLAND SOUND
DATE: SEPTEMBER 2, 2021
APPLICANT: DISTRICT OF CHAPMAN BEACH

AGENT: SHEET 2 OF 5

DOCKO, INC.

Keith B. Nelson, PE

Mystic, CT 06355

860 572 8939

EMAIL: office@docko.com

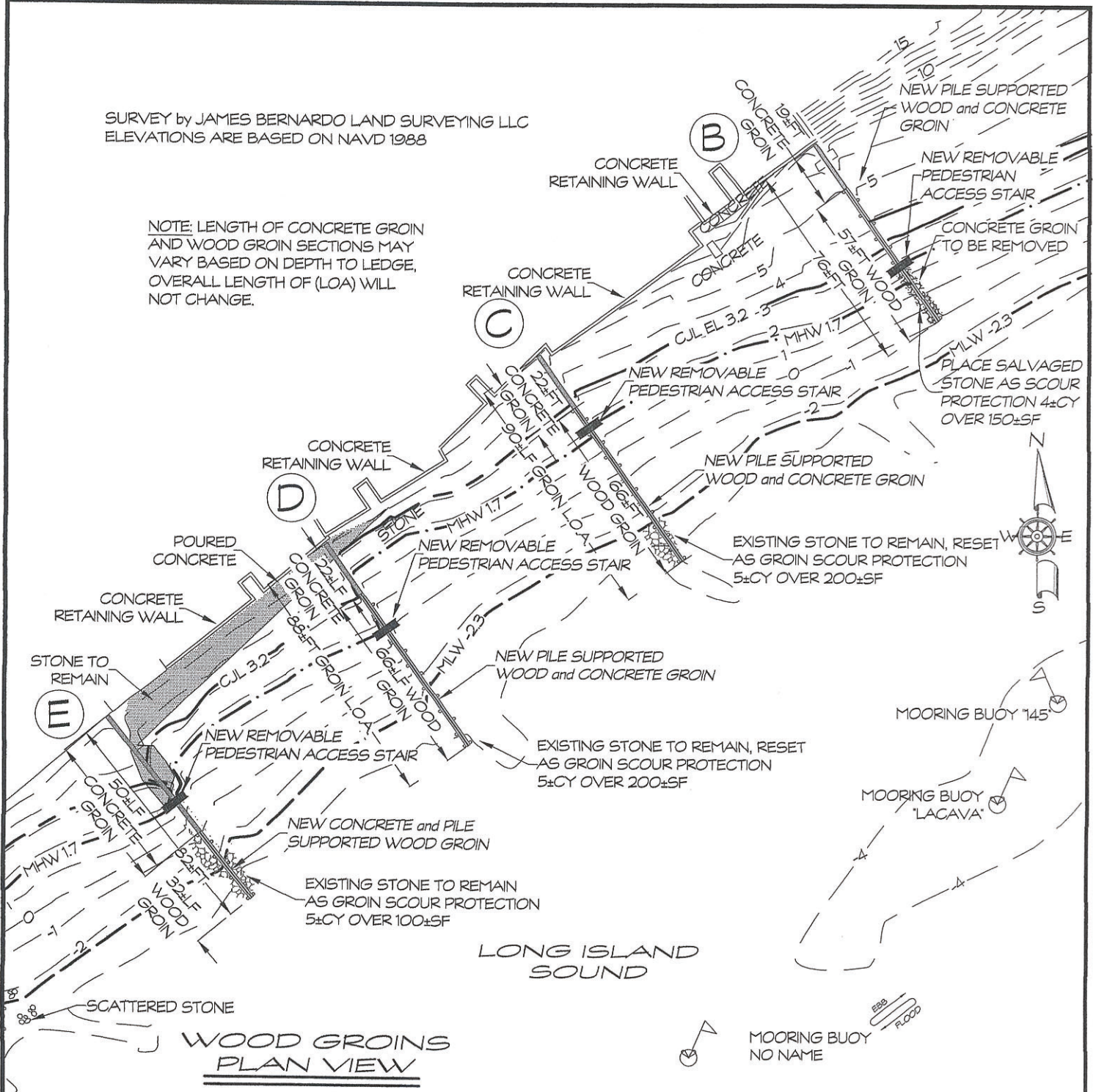


DWG 21-07-3189

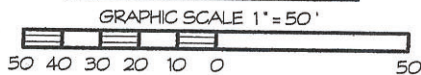


SURVEY by JAMES BERNARDO LAND SURVEYING LLC
ELEVATIONS ARE BASED ON NAVD 1988

NOTE: LENGTH OF CONCRETE GROIN
AND WOOD GROIN SECTIONS MAY
VARY BASED ON DEPTH TO LEDGE,
OVERALL LENGTH OF (LOA) WILL
NOT CHANGE.



WOOD GROINS PLAN VIEW



REVISED 9-22-22 DEEP
NOTE & STONE PROTECTION
QUANTITIES



PROJECT: GROINS RESTORATION

LOCATION: CHAPMAN BEACH - TOWN of WESTBROOK

MIDDLESEX COUNTY, CONNECTICUT

WATERWAY: LONG ISLAND SOUND

DATE: SEPTEMBER 2, 2021

APPLICANT: CHAPMAN BEACH ASSOC.

AGENT: SHEET 3 OF 5

DOCKO, INC.

Keith B. Neilson, PE

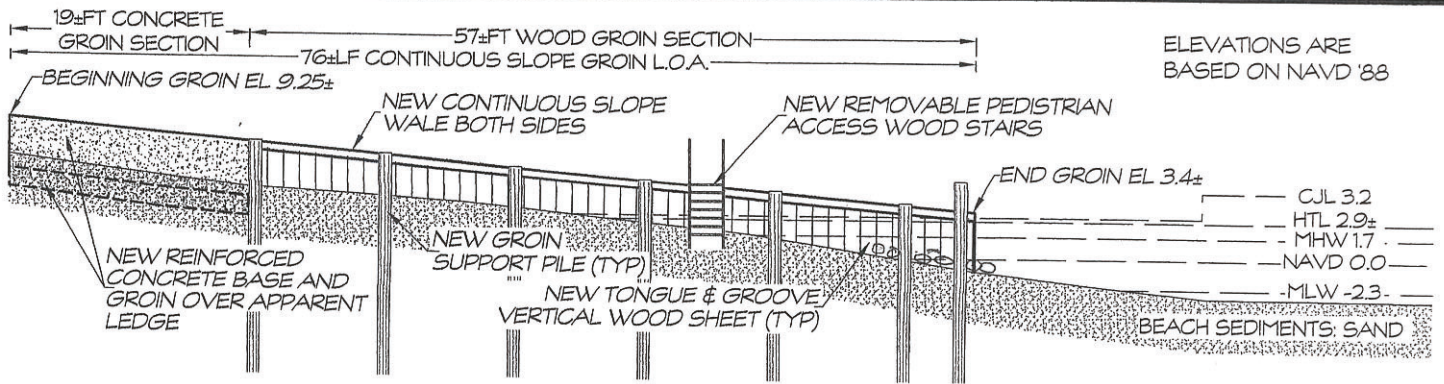
Mystic, CT 06355

860 572 8939 FAX 860 572 7569

EMAIL: office@docko.com

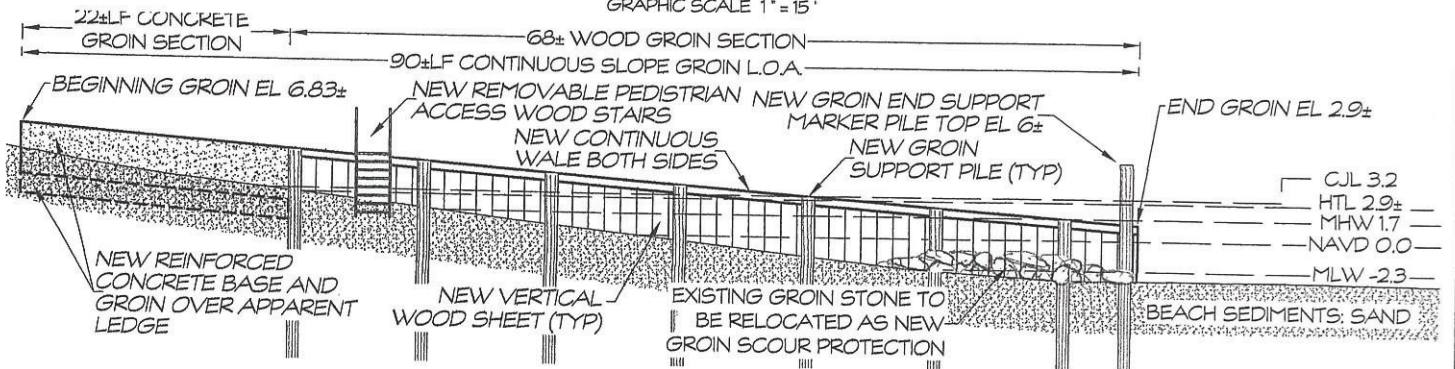


DWG 21-07-3189



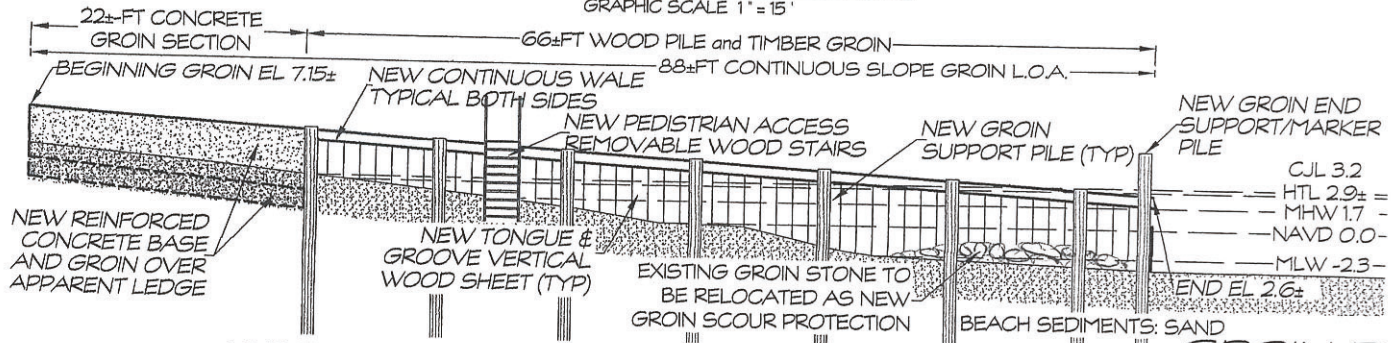
GROIN B PROFILE

GRAPHIC SCALE 1" = 15'



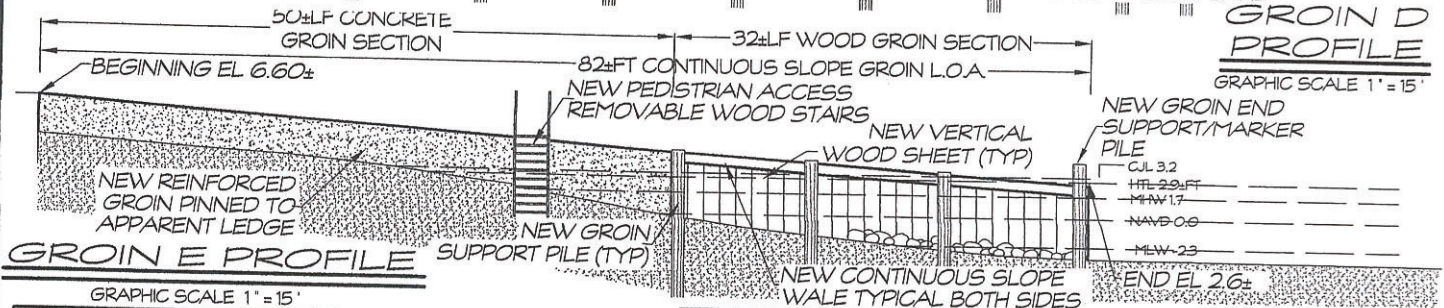
GROIN C PROFILE

GRAPHIC SCALE 1" = 15'



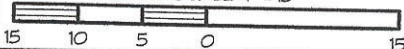
GROIN D PROFILE

GRAPHIC SCALE 1" = 15'



GROIN E PROFILE

GRAPHIC SCALE 1" = 15'



REVISED 9-19-22 DEEP CONTINUOUS SLOPE GROIN SLOPES AND BEGINING ELEV.

PROJECT: GROINS RESTORATION

LOCATION: CHAPMAN BEACH - TOWN of WESTBROOK
MIDDLESEX COUNTY, CONNECTICUT

WATERWAY: LONG ISLAND SOUND

DATE:

SEPTEMBER 2, 2021

APPLICANT:

CHAPMAN BEACH ASSOC.

AGENT:

SHEET 4 OF 5

DOCKO, INC.

Keith B. Nellson, PE

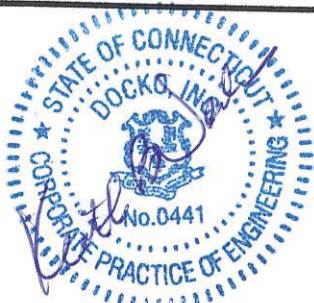
Mystic, CT 06355

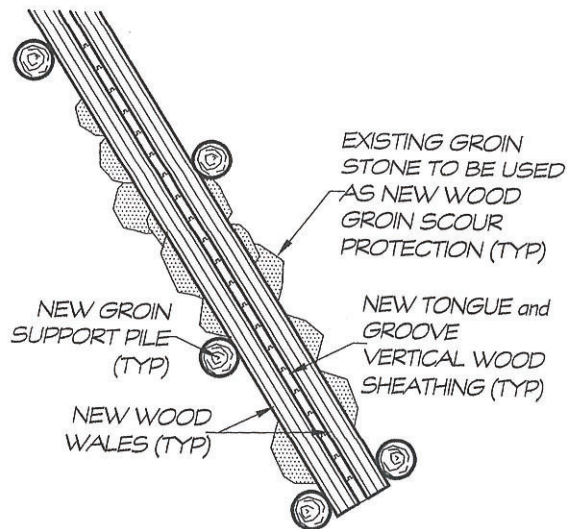
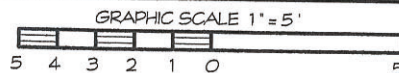
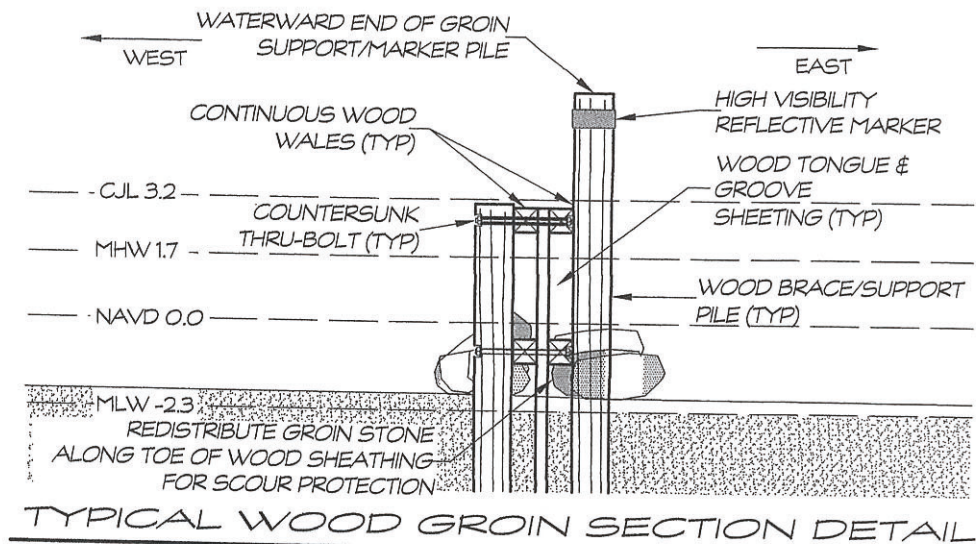
860 572 8939 FAX 860 572 7569

EMAIL: office@docko.com

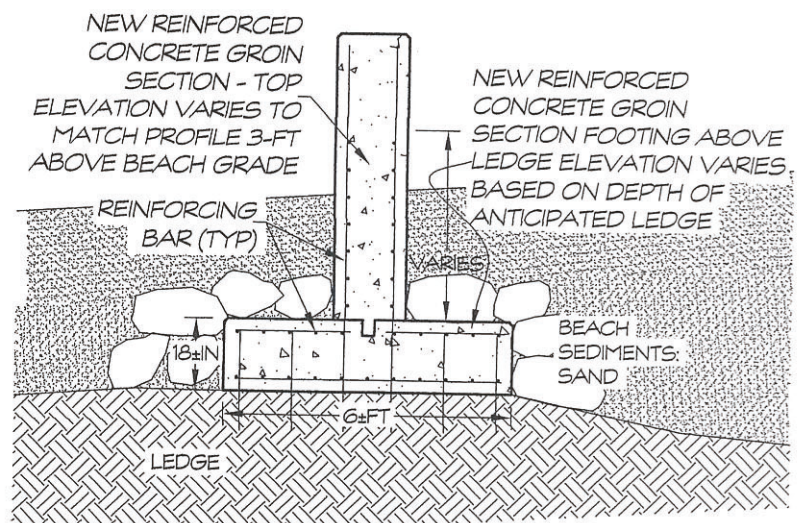
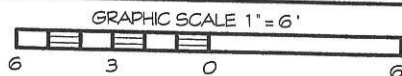


DWG 21-07-3189

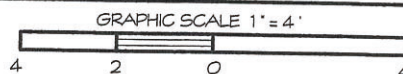




TYPICAL WOOD GROIN PLAN DETAIL



TYPICAL REINFORCED CONCRETE GROIN SECTION



PROJECT: GROINS RESTORATION

LOCATION: CHAPMAN BEACH - TOWN of WESTBROOK
MIDDLESEX COUNTY, CONNECTICUT

WATERWAY: LONG ISLAND SOUND

DATE: SEPTEMBER 2, 2021

APPLICANT: CHAPMAN BEACH ASSOC.

AGENT: SHEET 5 OF 5

DOCKO, INC.

Keith B. Nelson, PE

Mystic, CT 06355

860 572 8939 FAX 860 572 7569

EMAIL: office@docko.com



DWG 21-07-3189

