



**US Army Corps
of Engineers**
Philadelphia District

Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390
ATTN: CENAP-OP-R

Public Notice

Public Notice No. Date

CENAP-OP-R-2016-847-35

Application No. File No.

In Reply Refer to:
REGULATORY BRANCH

This District has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

The purpose of this notice is to solicit comments and recommendations from the public concerning issuance of a Department of the Army permit for the work described below.

APPLICANT: New Jersey Department of Transportation
Office of Maritime Resources
P.O. Box 600
Trenton, New Jersey 08625-0600
Attn: Ms. Genevieve Clifton

WATERWAY: Beaver Dam Creek North, Beaver Dam Creek South, Bay Head Channel, Green Cove Channel, Upper Metedeconk River and Winter Yacht Basin Channels.

LOCATION: Upper Barnegat Bay at Beaver Dam Creek North (#53) channel located in Pt. Pleasant and Brick Townships, Beaver Dam Creek South (#54) channel located in Brick Township, Bay Head (#57) channel located in Bay Head Borough, Green Cove (#58) channel located in Brick Township, Upper Metedeconk River (#59) channel located in Brick Township and Winter Yacht Basin (#61) channel located in Brick Township, Ocean County, New Jersey. Approximately 138,837 cyd of sand and silt material will be hydraulically dredged from the six channels and placed as restorative fill at the Dredged Hole #18 located in Mantoloking Borough, Ocean County, New Jersey.

ACTIVITY: The applicant proposes to hydraulically dredge accumulated sediment from within portions of the waterways listed above (See enclosures E1-24). The applicant has requested a 10-year maintenance dredging permit.

Maintenance dredging shall consist of hydraulic dredging of approximately one hundred thirty eight thousand eight hundred thirty seven cubic yards (~138,837 yds³) of sediment comprised of sand and silt, from approximately eight thousand six hundred sixty eight linear feet (~8,868') of Beaver Dam Creek North, eight thousand six hundred ninety one linear feet (~8,691') of Beaver Dam Creek South, eight hundred seventy eight linear feet (~878') of Bay Head channel, eight hundred ninety one linear feet (~891') of Green Cove channel, four thousand seven hundred thirty two linear feet (~4,792') of Upper Metedeconk River channel and

seven hundred twelve linear feet (~712') of Winter Yacht Basin channel. The project depth in the Beaver Dam Creek North, Beaver Dam Creek South, Bay Head, Green Cove and Winter Yacht Basin Channels is five feet below mean low water (-5' MLW), plus one foot (1') of allowable overdredge. The channel design width is typically one hundred feet (100') with narrower portions down to fifty feet (50') at the upper ends of Beaver Dam Creek North and South. The project depth in the Upper Metedeconk Channel is six feet below mean low water (-6 MLW), plus one foot (1') of allowable overdredge. The channel design width of this channel is also one hundred feet (100'). Channel side slopes of all channels will be 3:1.

Maintenance dredging of Beaver Dam Creek was last authorized by the State of New Jersey Department of Environmental Protection (NJDEP) in 1988. Dredged material was placed into several shoreline a confined disposal facilities in Berkeley Township that are no longer available for use. There is no known historical record of maintenance dredging within the other State navigation channels advertised in this public notice. However, the material to be removed was deposited by Superstorm Sandy and needs to be removed for the restoration of navigability of an existing navigation channel. No new excavation is proposed.

Material will be hydraulically dredged and transported via pipeline for use as restorative fill at the dredged hole #18 in Mantoloking Borough, Ocean County. The dredge pipeline to the placement site will be floating except at channel crossings where it will be submerged to avoid a hazard or hindrance to navigation. The pipeline shall be marked as per USCG regulations. A restoration plan for dredged hole #18 has been prepared and submitted to this office. A full copy is available upon request. The purpose of placing the sediment within the dredged hole is to return elevations of the current dredge hole to match the surrounding area. By returning elevations to pre-dredged hole conditions, submerged aquatic vegetation could re-colonize the site and eliminate anoxic water quality conditions associated with deep dredged hole.

PURPOSE: The applicant's stated purpose is to restore the existing navigation channel to authorized project depth thus providing safe navigation for both commercial and recreational vessels currently using the channels, and the beneficial use of the dredged material.

A preliminary review of this application indicates that the proposed work will not effect threatened and endangered species. While Atlantic Sturgeon (*Acipenser oxyrinchus*), Kemp's ridley sea turtle (*Lepidochelys kempii*), loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*) and hawksbill sea turtle (*Eretmochelys imbricate*) are possibly in the vicinity, due to the water depths and boating activity, these species are not likely present.

The decision whether to issue a permit will be based on an evaluation of the activity's probable impact including its cumulative impacts on the public interest. The decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the work must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production,

mineral needs and welfare of the people. A Department of the Army permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Comments on the proposed work should be submitted, in writing, within 30 days to the District Engineer, U.S. Army Corps of Engineers, Philadelphia District, Wanamaker Building, 100 Penn Square East, Philadelphia, Pennsylvania 19107-3390.

Review of the National Register of Historic Places indicates that no registered properties or properties listed as eligible for inclusion therein are located within the permit area of the work. The permit area has been so extensively modified and previously dredged that little likelihood exists for the proposed project to impact a historic property.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act 1996 (Public Law 104-267), requires all Federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely effect Essential Fish Habitat (EFH). A preliminary assessment of the species listed in the "Guide to Essential Fish Habitat Designations in the Northeastern United States, Volume IV: New Jersey and Delaware", dated March 1999, indicates that the project would result in an adverse effect to EFH. In order to avoid or minimize impacts to EFH species from the dredging, specifically Winter Flounder (*Pseudopleuronectes americanus*), the USACE is recommending no in-water work will be authorized between January 1st and May 31st of any given year. Additionally, due to the proximity of the dredging and deposition of dredged material, additional seasonal restrictions may be necessary to protect surrounding submerged aquatic vegetation. As the process proceeds any additional impacts will be reviewed more extensively as more information becomes available.

In accordance with Section 307(c) of the Coastal Zone Management Act of 1972, applicants for Federal Licenses or Permits to conduct an activity affecting land or water uses in a State's coastal zone must provide certification that the activity complies with the State's Coastal Zone Management Program. The applicant has stated that the proposed activity complies with and will be conducted in a manner that is consistent with the approved State Coastal Zone Management (CZM) Program. No permit will be issued until the State has concurred with the applicant's certification or has waived its right to do so. Comments concerning the impact of the proposed and/or existing activity on the State's coastal zone should be sent to this office, with a copy to the State's Office of Coastal Zone Management.

In accordance with Section 401 of the Clean Water Act, a Water Quality Certificate is necessary from the State government in which the work is located. Any comments concerning the work described above which relate to Water Quality considerations should be sent to this office with a copy to the State.

The evaluation of the impact of the work described above on the public interest will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act.

Any person may request, in writing, to the District Engineer, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state in writing, with particularity, the reasons for holding a public hearing.

Additional information concerning this permit application may be obtained by calling Mr. Michael Hayduk at (215) 656-5822, via email at michael.h.hayduk@usace.army.mil or writing this office at the above address.

Edward E. Bonner
Chief, Regulatory Branch



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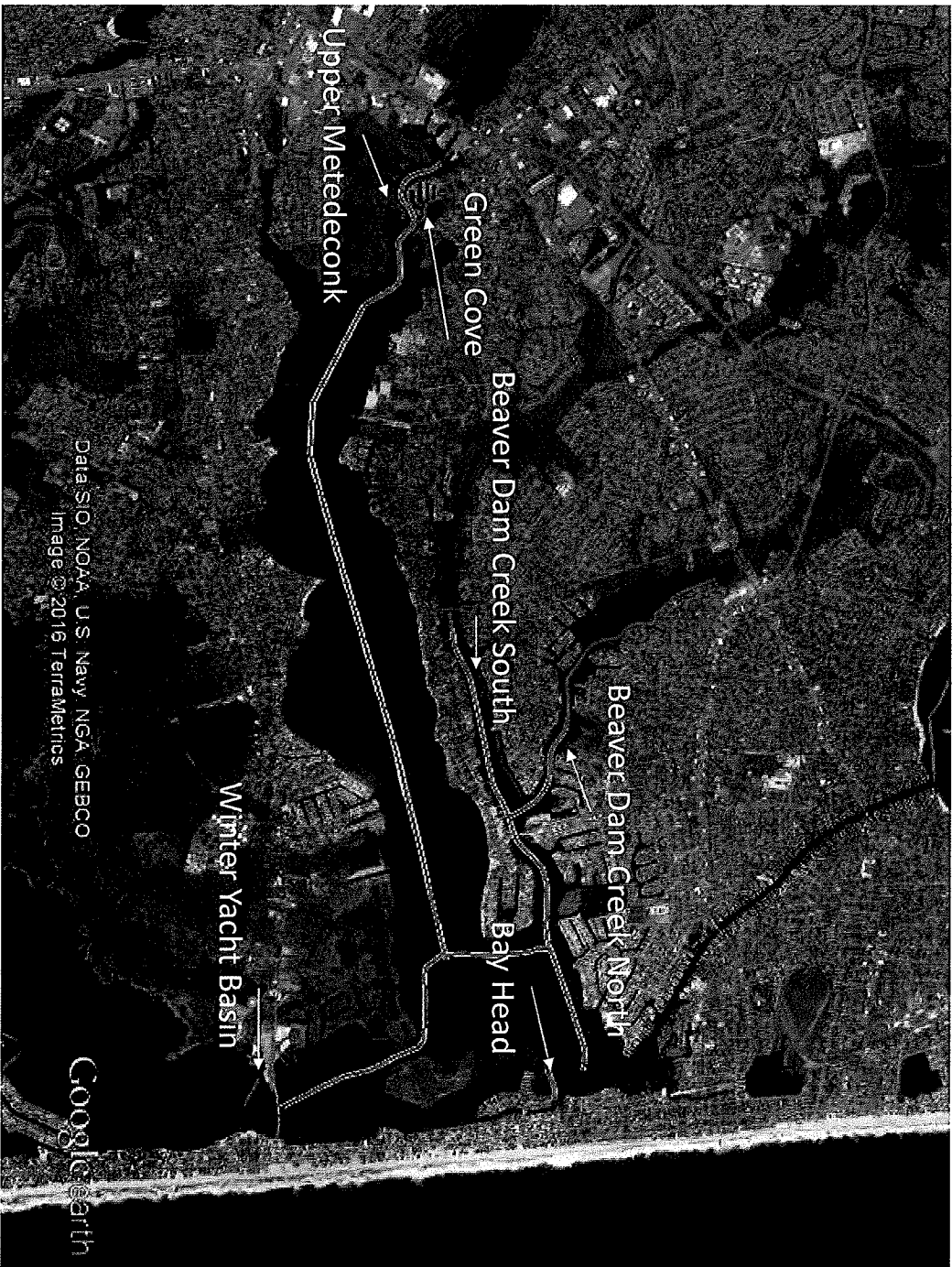
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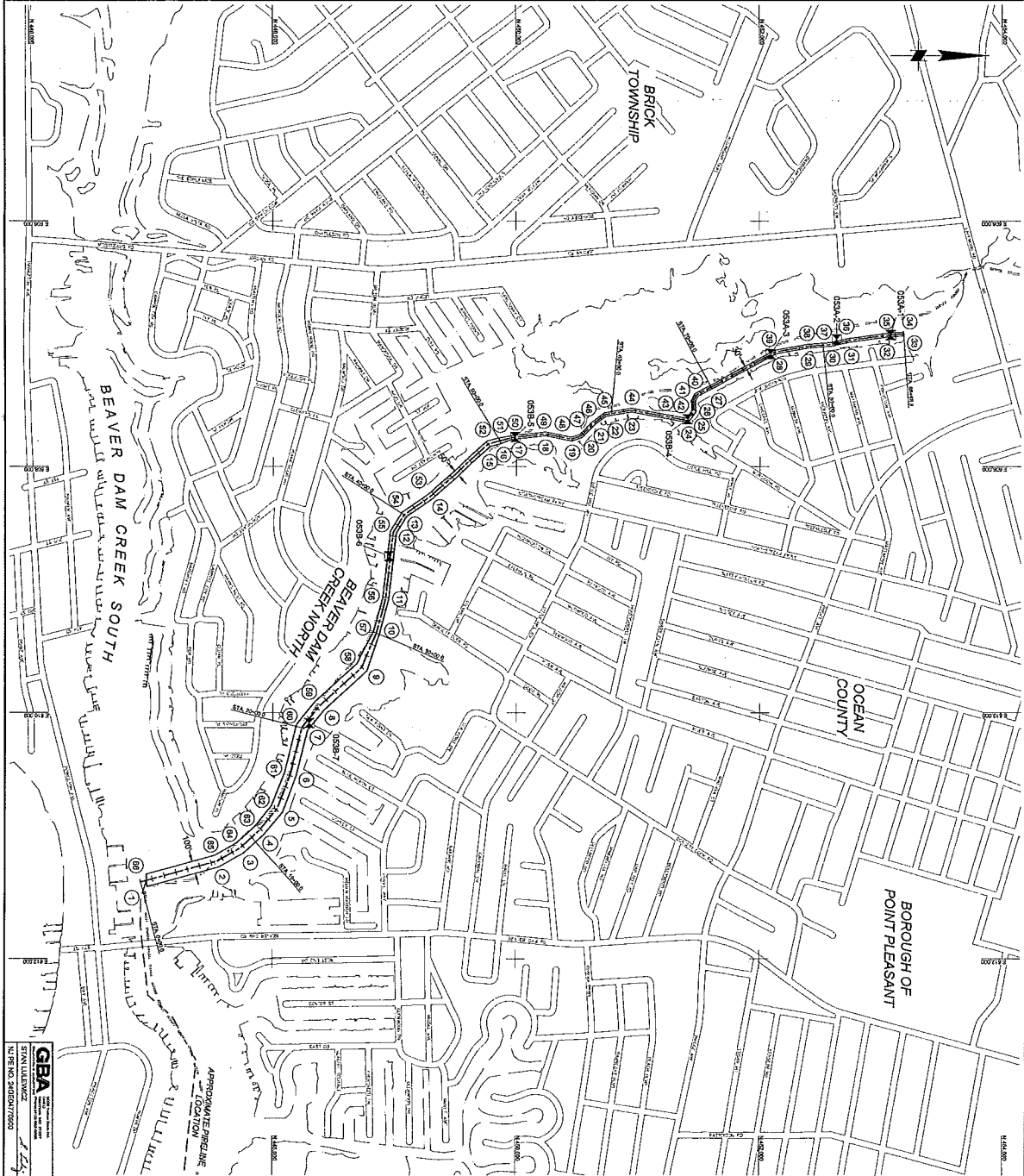
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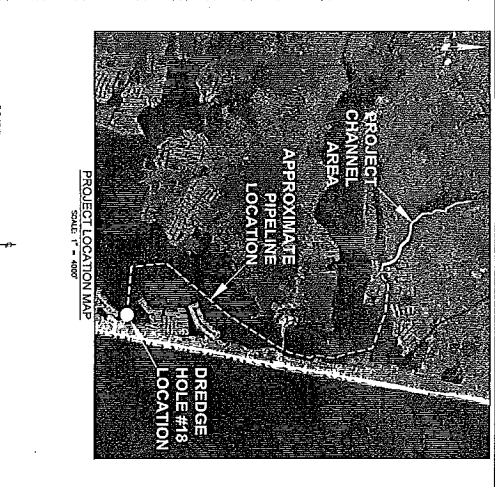
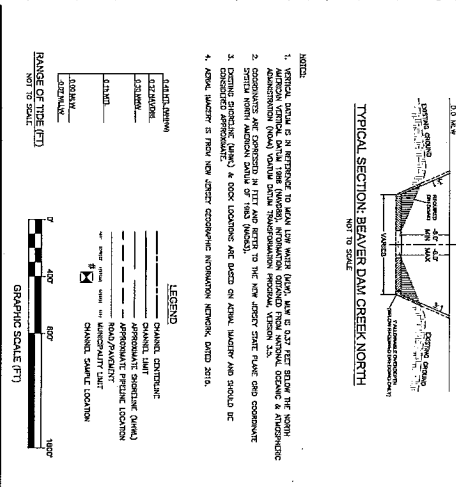
A handwritten signature in cursive script, appearing to read "Edward E. Bonner".

Edward E. Bonner
Chief, Regulatory Branch





CEBA CIVIL ENGINEERING & ARCHITECTURE 1000 ROUTE 130, SUITE 100 FREEHOLD, NJ 07728 TEL: 732-329-7700 FAX: 732-329-7701 WWW.CEBA-INC.COM	
DATE	APPROVED
REV	DESCRIPTION
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NOTES:

- VERTICAL SCALE IS IN RELATION TO HORIZONTAL SCALE. VERTICAL SCALE IS 1" = 10' HORIZONTAL SCALE IS 1" = 100'.
- CONSTRUCTION OF THIS PROJECT IS TO BE IN ACCORDANCE WITH THE NEW JERSEY STATE FLUKE DREDGE CODE.
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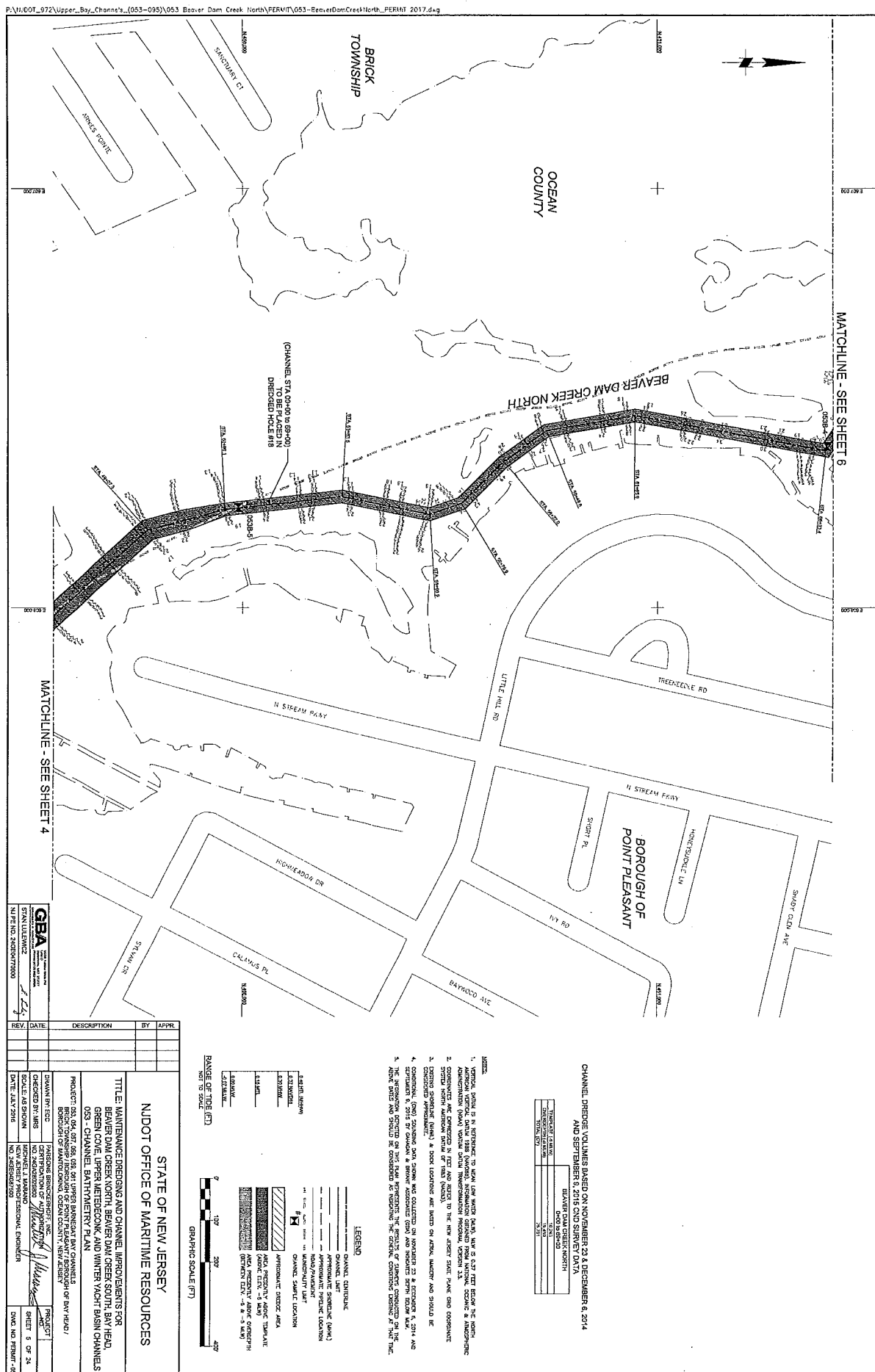
BEAVER DAM CREEK NORTH CHANNEL		
POINT	Easting	Northing
1	447550.1	617348.3
2	447550.1	617348.3
3	447550.1	617348.3
4	447550.1	617348.3
5	447550.1	617348.3
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POINT	Easting	Northing
61	447550.1	617348.3
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105	447550.1	617348.3
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120	447550.1	617348.3

STATE OF NEW JERSEY NJDOT OFFICE OF MARITIME RESOURCES	
TITLE: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER MIDDLECOCK, AND WINTER YACHT BASIN CHANNELS 053 - CHANNEL GEOMETRY & SAMPLING COORDINATE TABLES	
PROJECT: 603.04, 607.08, 608.01, 609.01, 610.01, 611.01, 612.01, 613.01, 614.01, 615.01, 616.01, 617.01, 618.01, 619.01, 620.01, 621.01, 622.01, 623.01, 624.01, 625.01, 626.01, 627.01, 628.01, 629.01, 630.01, 631.01, 632.01, 633.01, 634.01, 635.01, 636.01, 637.01, 638.01, 639.01, 640.01, 641.01, 642.01, 643.01, 644.01, 645.01, 646.01, 647.01, 648.01, 649.01, 650.01, 651.01, 652.01, 653.01, 654.01, 655.01, 656.01, 657.01, 658.01, 659.01, 660.01, 661.01, 662.01, 663.01, 664.01, 665.01, 666.01, 667.01, 668.01, 669.01, 670.01, 671.01, 672.01, 673.01, 674.01, 675.01, 676.01, 677.01, 678.01, 679.01, 680.01, 681.01, 682.01, 683.01, 684.01, 685.01, 686.01, 687.01, 688.01, 689.01, 690.01, 691.01, 692.01, 693.01, 694.01, 695.01, 696.01, 697.01, 698.01, 699.01, 700.01, 701.01, 702.01, 703.01, 704.01, 705.01, 706.01, 707.01, 708.01, 709.01, 710.01, 711.01, 712.01, 713.01, 714.01, 715.01, 716.01, 717.01, 718.01, 719.01, 720.01, 721.01, 722.01, 723.01, 724.01, 725.01, 726.01, 727.01, 728.01, 729.01, 730.01, 731.01, 732.01, 733.01, 734.01, 735.01, 736.01, 737.01, 738.01, 739.01, 740.01, 741.01, 742.01, 743.01, 744.01, 745.01, 746.01, 747.01, 748.01, 749.01, 750.01, 751.01, 752.01, 753.01, 754.01, 755.01, 756.01, 757.01, 758.01, 759.01, 760.01, 761.01, 762.01, 763.01, 764.01, 765.01, 766.01, 767.01, 768.01, 769.01, 770.01, 771.01, 772.01, 773.01, 774.01, 775.01, 776.01, 777.01, 778.01, 779.01, 780.01, 781.01, 782.01, 783.01, 784.01, 785.01, 786.01, 787.01, 788.01, 789.01, 790.01, 791.01, 792.01, 793.01, 794.01, 795.01, 796.01, 797.01, 798.01, 799.01, 800.01, 801.01, 802.01, 803.01, 804.01, 805.01, 806.01, 807.01, 808.01, 809.01, 810.01, 811.01, 812.01, 813.01, 814.01, 815.01, 816.01, 817.01, 818.01, 819.01, 820.01, 821.01, 822.01, 823.01, 824.01, 825.01, 826.01, 827.01, 828.01, 829.01, 830.01, 831.01, 832.01, 833.01, 834.01, 835.01, 836.01, 837.01, 838.01, 839.01, 840.01, 841.01, 842.01, 843.01, 844.01, 845.01, 846.01, 847.01, 848.01, 849.01, 850.01, 851.01, 852.01, 853.01, 854.01, 855.01, 856.01, 857.01, 858.01, 859.01, 860.01, 861.01, 862.01, 863.01, 864.01, 865.01, 866.01, 867.01, 868.01, 869.01, 870.01, 871.01, 872.01, 873.01, 874.01, 875.01, 876.01, 877.01, 878.01, 879.01, 880.01, 881.01, 882.01, 883.01, 884.01, 885.01, 886.01, 887.01, 888.01, 889.01, 890.01, 891.01, 892.01, 893.01, 894.01, 895.01, 896.01, 897.01, 898.01, 899.01, 900.01, 901.01, 902.01, 903.01, 904.01, 905.01, 906.01, 907.01, 908.01, 909.01, 910.01, 911.01, 912.01, 913.01, 914.01, 915.01, 916.01, 917.01, 918.01, 919.01, 920.01, 921.01, 922.01, 923.01, 924.01, 925.01, 926.01, 927.01, 928.01, 929.01, 930.01, 931.01, 932.01, 933.01, 934.01, 935.01, 936.01, 937.01, 938.01, 939.01, 940.01, 941.01, 942.01, 943.01, 944.01, 945.01, 946.01, 947.01, 948.01, 949.01, 950.01, 951.01, 952.01, 953.01, 954.01, 955.01, 956.01, 957.01, 958.01, 959.01, 960.01, 961.01, 962.01, 963.01, 964.01, 965.01, 966.01, 967.01, 968.01, 969.01, 970.01, 971.01, 972.01, 973.01, 974.01, 975.01, 976.01, 977.01, 978.01, 979.01, 980.01, 981.01, 982.01, 983.01, 984.01, 985.01, 986.01, 987.01, 988.01, 989.01, 990.01, 991.01, 992.01, 993.01, 994.01, 995.01, 996.01, 997.01, 998.01, 999.01, 1000.01	
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NOTES:
 1. COORDINATES ARE GIVEN IN FEET AND INCHES TO THE NEW JERSEY STATE PLANE, NAD 83 COORDINATE SYSTEM.
 2. SPECIAL NORTH AMERICAN DATUM OF 1983 (NAD83).

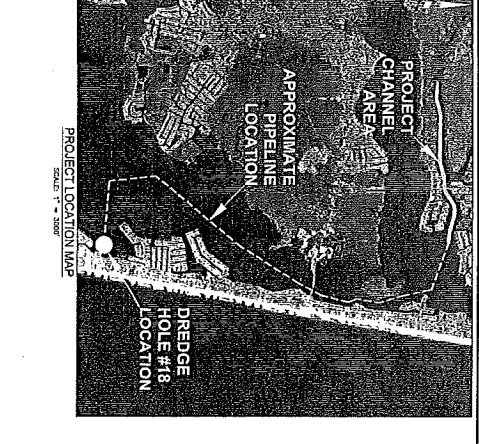
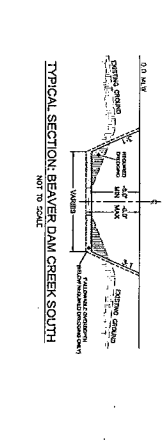




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4	05/14/2014	REVISIONS	JLM	
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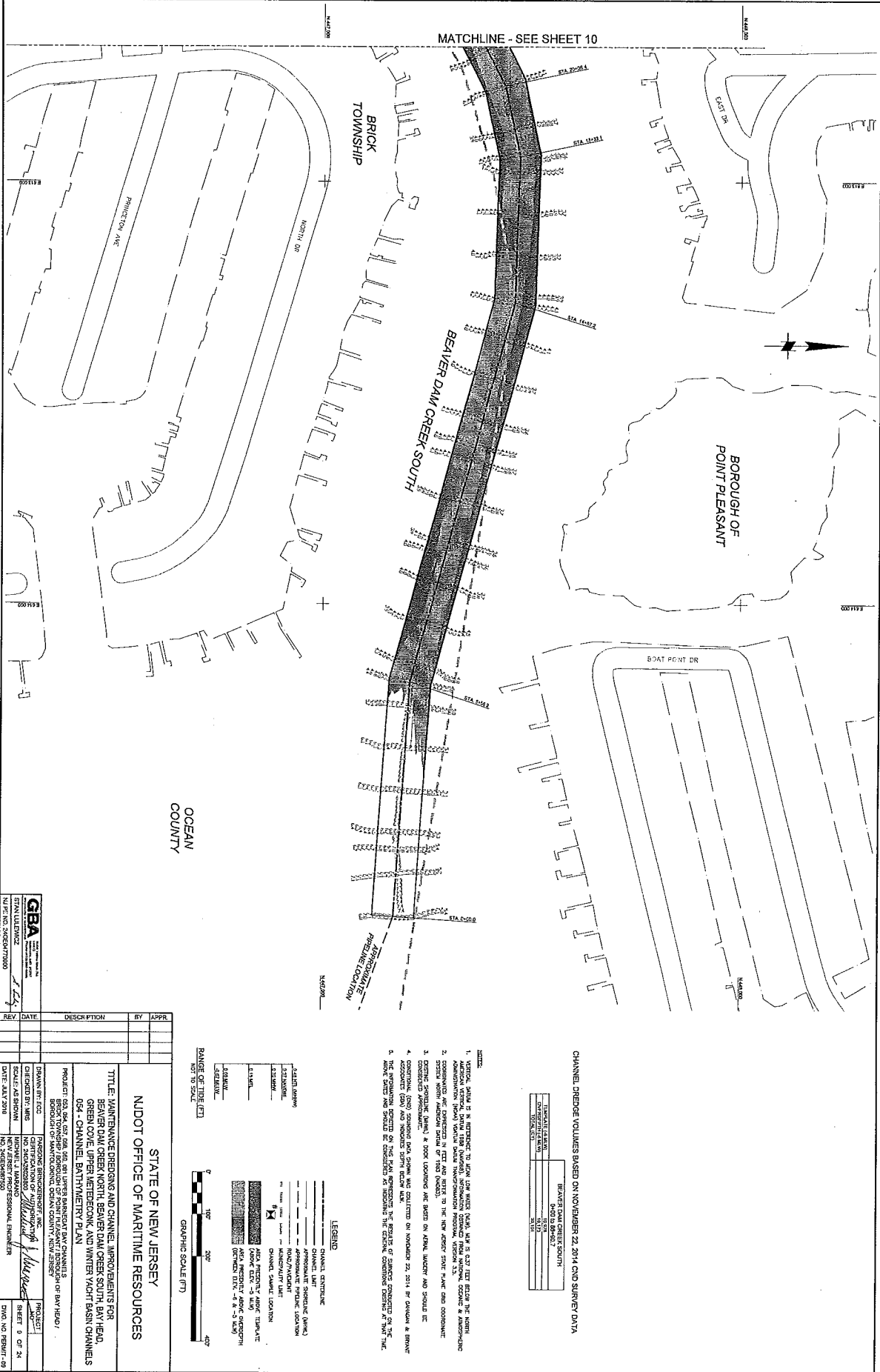


1. VERTICAL SCALE IS IN REFERENCE TO MEAN LOW WATER (MLW), AND IS 0.17 FEET BELOW THE NORTH DATUM.
2. COORDINATE AND ELEVATION IN FEET AND INCHES TO THE NEW JERSEY STATE PLANE GRID COORDINATE.
3. SPOT ELEVATION MEASURED ON THE SURFACE OF THE DUNE.
4. APPROXIMATELY 10 FEET NEW JERSEY COASTAL DEFENSE NETWORK, DATED 2013.



NOTES:

1. COORDINATES ARE EXPRESSED IN FITT AND RUTER TO THE NEW JERSEY STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).



CHANNEL DREDGE VOLUMES BASED ON NOVEMBER 22, 2014 QND SURVEY DATA

DATE	BY	REVISION
11/22/2014	W. J. BROWN	1. INITIAL DESIGN
11/22/2014	W. J. BROWN	2. REVISED DESIGN
11/22/2014	W. J. BROWN	3. REVISED DESIGN

- NOTES:
1. VERTICAL DRAIN IS IN REFERENCE TO MEAN LOW WATER (MLW), NEW IS 0.27 FEET BELOW THE NORTH AMERICAN VERTICAL DATUM (1988 DATUM). INFORMATION OBTAINED FROM NATIONAL DATUMS & HORIZONTAL DATUMS IS BASED ON THE MEAN LOW WATER (MLW) DATUM.
 2. COORDINATES ARE EXPRESSED IN FEET AND INCHES TO THE NEAREST TENTH OF AN INCH.
 3. DISTANCE WITHIN BRACKETED (INCHES) & DECIMAL FEET ARE BASED ON MEAN, WATER AND SHOULD BE USED FOR CONSTRUCTION PURPOSES.
 4. COORDINATE (X,Y) SHOWING DATA POINT WAS COLLECTED ON NOVEMBER 22, 2014 BY SURVEY & BROWN ASSOCIATES, INC. AND SHOULD BE USED FOR CONSTRUCTION PURPOSES.
 5. THE PROPOSED DREDGE VOLUMES ARE BASED ON THE RESULTS OF SURVEY CONDUCTED ON THE DATE SHOWN AND SHOULD BE USED FOR CONSTRUCTION PURPOSES.

LEGEND

CHANNEL CENTERLINE	CHANNEL CENTERLINE
CHANNEL LIMIT	CHANNEL LIMIT
APPROXIMATE SHORELINE (DUNE)	APPROXIMATE SHORELINE (DUNE)
APPROXIMATE SHORELINE (WATER)	APPROXIMATE SHORELINE (WATER)
CHANNEL CENTERLINE	CHANNEL CENTERLINE
CHANNEL LIMIT	CHANNEL LIMIT
CHANNEL CENTERLINE	CHANNEL CENTERLINE
CHANNEL LIMIT	CHANNEL LIMIT
CHANNEL CENTERLINE	CHANNEL CENTERLINE
CHANNEL LIMIT	CHANNEL LIMIT

RANGE OF TIDE (FT)
NOT TO SCALE
GRAPHIC SCALE (FT)



REV	DATE	DESCRIPTION	BY	APPR
1	11/22/2014	INITIAL DESIGN	W. J. BROWN	
2	11/22/2014	REVISED DESIGN	W. J. BROWN	
3	11/22/2014	REVISED DESIGN	W. J. BROWN	

PROJECT: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER METEORIC, AND WINTER YACHT BASIN CHANNELS 054 - CHANNEL, BATHYMETRY PLAN

STATE OF NEW JERSEY
NJDOT OFFICE OF MARITIME RESOURCES

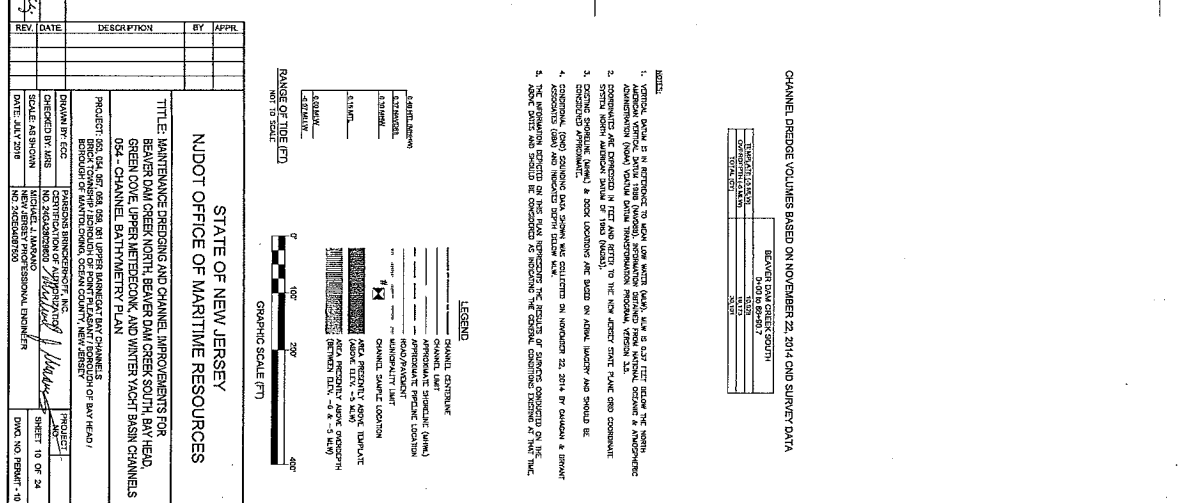
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CHECKED BY: W. J. BROWN
DATE: 11/22/2014
NO. 1000000000

PROJECT: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER METEORIC, AND WINTER YACHT BASIN CHANNELS 054 - CHANNEL, BATHYMETRY PLAN

DESIGNED BY: W. J. BROWN
CHECKED BY: W. J. BROWN
DATE: 11/22/2014
NO. 1000000000

PROJECT: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER METEORIC, AND WINTER YACHT BASIN CHANNELS 054 - CHANNEL, BATHYMETRY PLAN

DESIGNED BY: W. J. BROWN
CHECKED BY: W. J. BROWN
DATE: 11/22/2014
NO. 1000000000



[illegible]

CHANNEL DREDGE VOLUMES BASED ON NOVEMBER 22, 2014 CND SURVEY DATA

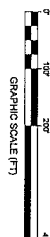
BEAVER DAM CREEK SOUTH	
0+00 to 85+80.7	
TERMINATE (S.M.W.)	10.829
CONDUIT (H. (S.M.W.))	19.172
TOTAL (CY)	30.001

NOT

- [illegible]

LEGEND

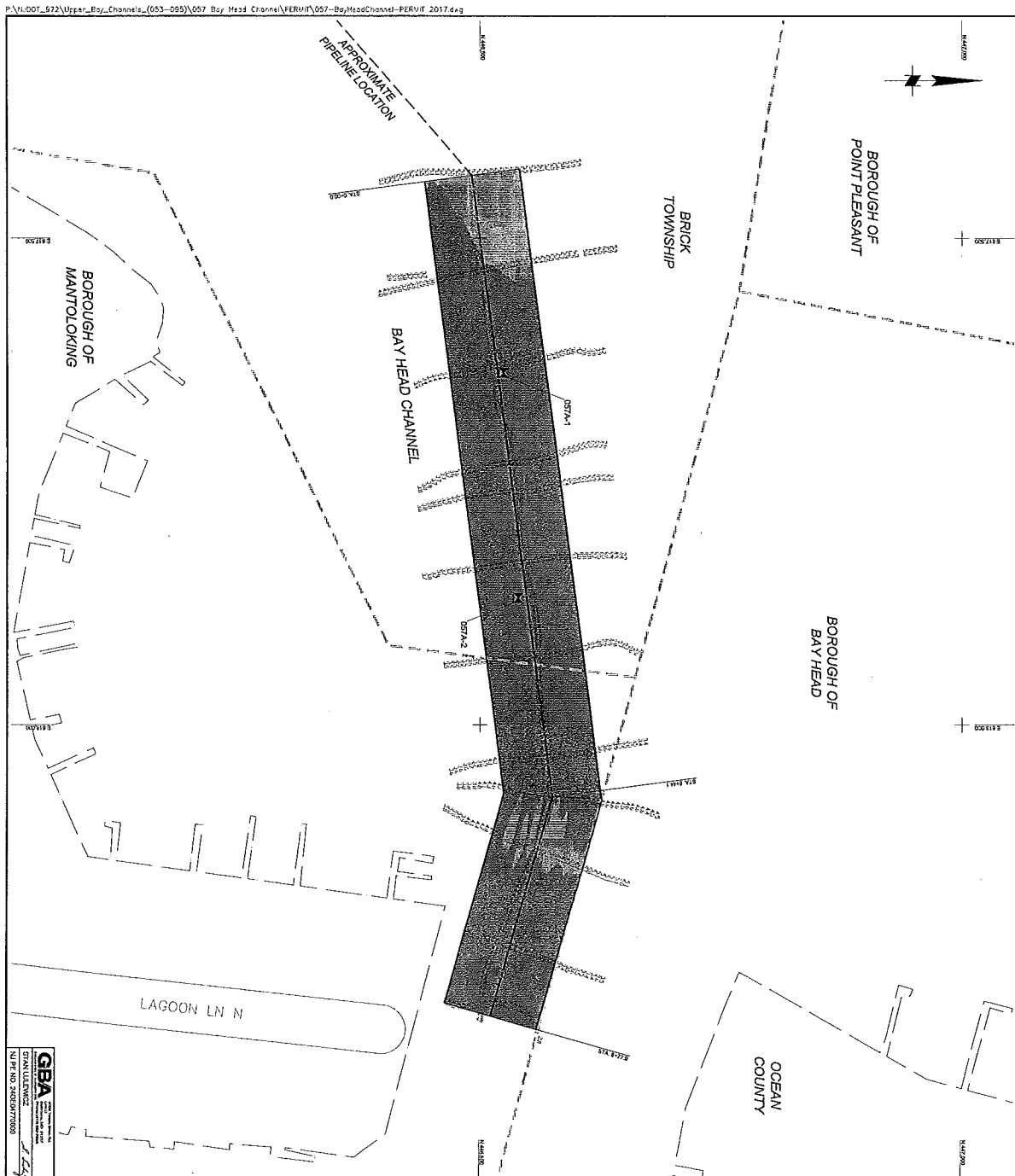
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RANGE OF TIDE (FT)
NDT TO SCALE

STATE OF NEW JERSEY
NJDOT OFFICE OF MARITIME RESOURCES

TITLE: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER METEDECONEK, AND WINTER YACHT BASIN CHANNELS. 054 - CHANNEL BATHYMETRY PLAN

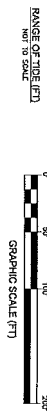
GBA <small>GENERAL BUILDING CONTRACTORS ASSOCIATION</small> <small>1000 N. 17th St., Suite 1000</small> <small>Phoenix, AZ 85016</small> <small>Phone: 602/442-4600</small> <small>Fax: 602/442-4601</small> <small>Web: www.gbainc.org</small>	DRAWN BY: EOC CHECKED BY: MMS SCALE: AS SHOWN DATE: JULY 2010	HARDING BROOKSHOF, INC. CERTIFICATE OF <u>MEMBERSHIP</u> NO. <u>20080000000000000000</u> <u>Michael</u> MICHAEL A. HARRARD PROFESSIONAL ENGINEER NO. <u>20080000000000000000</u>	PRODUCT PROJECT SHEET 12 OF 24 DWG. NO. PERMIT-
	STAFF WITNESS N. P. NO. 200800070000 REV. DATE:	DATE:	DATE:

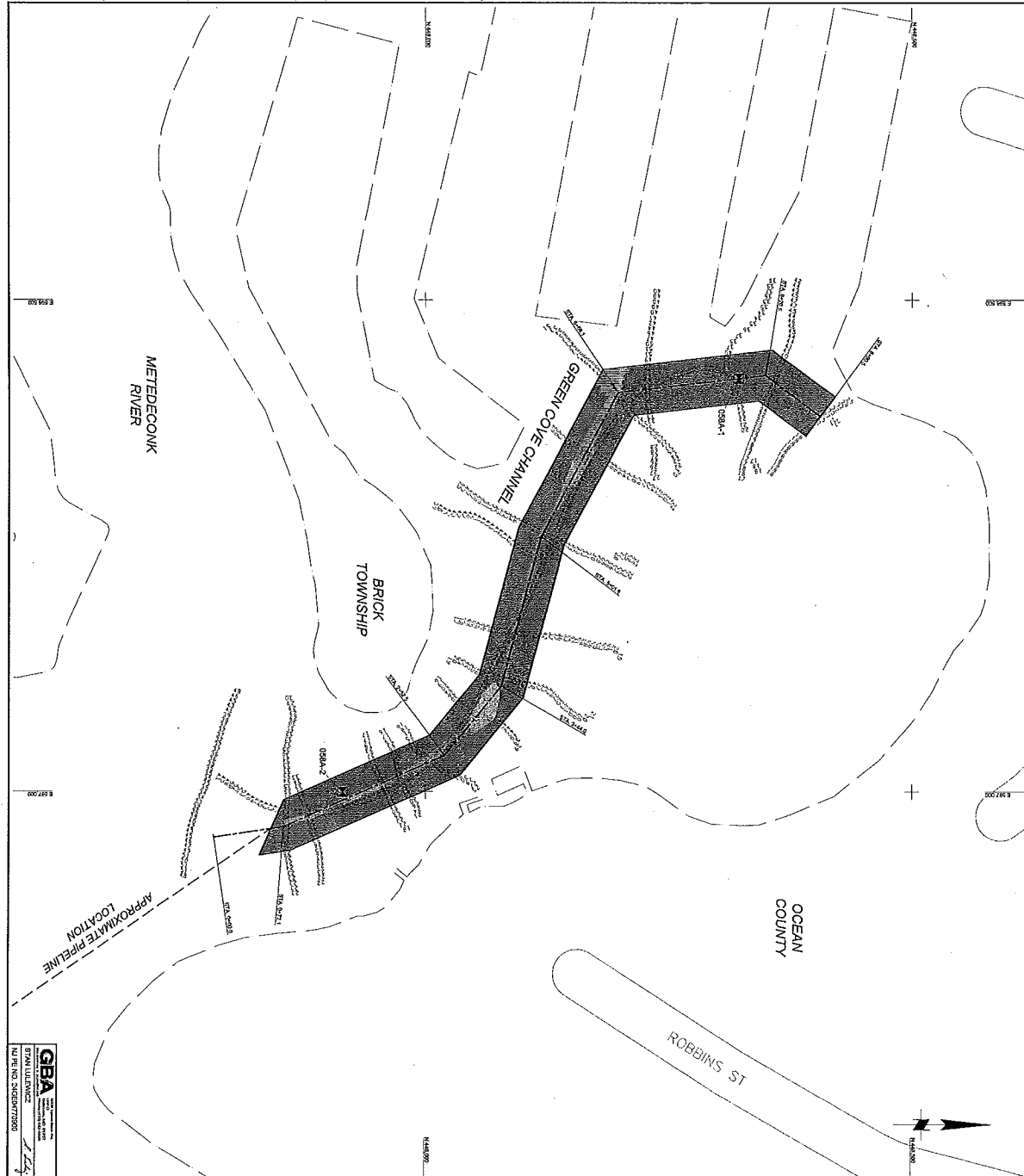


CHANNEL DREDGE VOLUMES BASED ON NOVEMBER 22, 2014 CND SURVEY DATA

IL MORTGAGE LOAN W/	3.207
OUTSTANDING BALANCE	3.443
TOTAL (CY)	6.650

- [illegible]

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CHANNEL DREDGE VOLUMES BASED ON SEPTEMBER 9, 2015 CND SURVEY DATA

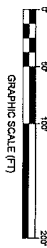
	1,422
LIQUATE (14.4M)	1,422
COARPH (4.6M)	1,915
TOTAL (CV)	3,335

1. VERTICAL SCALE IS REFERRED TO AS LOW WATER MARK, AND IS 0.25 FEET BELOW THE HIGHEST AVERAGE LOW WATER MARK OF THE YEAR.
2. VERTICAL SCALE IS REFERRED TO AS HIGH WATER MARK, AND IS 0.25 FEET ABOVE THE HIGHEST AVERAGE HIGH WATER MARK OF THE YEAR.
3. CONCENTRATIONS ARE PRESENTED IN LITR AND REFERS TO THE NEW AERIAL PHOTO PLATE COORDINATE SYSTEM FROM AERIAL PHOTO OF THIS CHANNEL.
4. DOTTED SYMBOL INDICATES A ROCK OUTCROPPING. THE DOTS ON AERIAL MAPS AND SHOULD BE USED TO CORRELATE CHANNEL AND AERIAL PHOTO.
5. CHANNEL (AND) CHANNEL BANK SPOTS ARE COLLECTED AT SEPTENNIALS, 0.15 IN CHANNEL & SPOTS AT SEPTENNIALS (AND) INDICATED SPOTS (LAWN MARK).
6. ACCORDING (AND) INDICATED SPOTS (LAWN MARK).
7. THE INFORMATION SHOULD BE USED TO INDICATE THE CHANNEL COORDINATE OF THE NEW AERIAL PHOTO AND SHOULD BE USED TO INDICATE THE CHANNEL COORDINATE OF THE NEW AERIAL PHOTO.

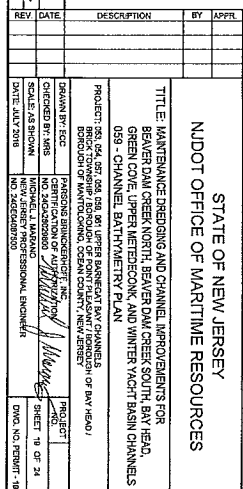
LEGEND

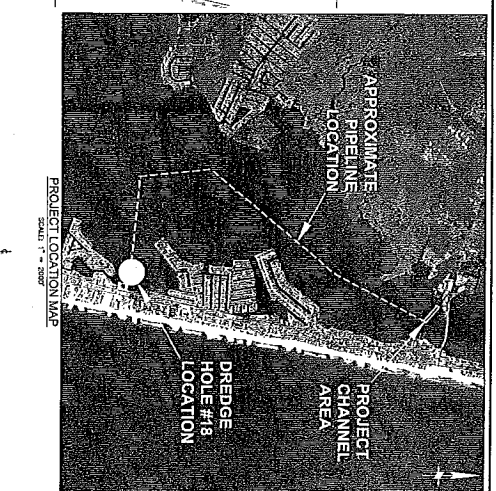
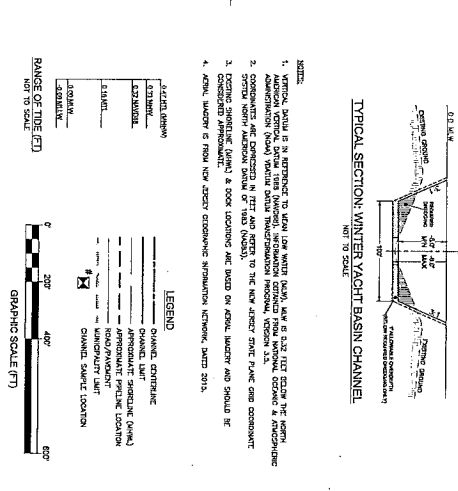
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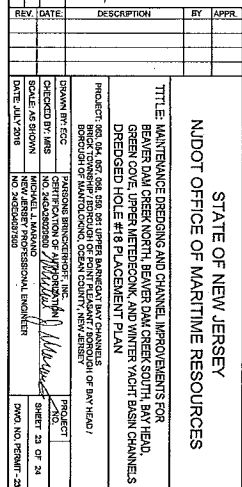
RANGE OF TIDE (F.T.) NOT TO SCALE



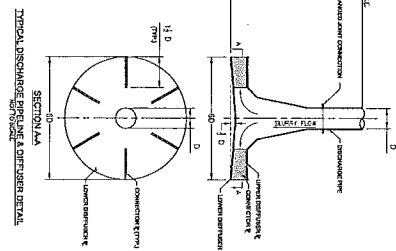
| REV | DATE | DESCRIPTION | BY | APPR. |
|-----|------|---|----|-------|
| | | <p>TITLE: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR
 BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD,
 GREEN COVE, UPPER METEORIC, AND WINTER WORTH BASIN CHANNELS
 038 - CHANNEL BATHYMETRIC PLANT</p> <p>PROJECT NO. 034, 037, 038, 040, 041 UPPER BARRETT AND BAY CHANNELS
 LOCATION: BEAVER DAM CREEK, GREEN COVE, WINTER WORTH BASIN
 JURISDICTION: MAINTENANCE, GREEN COUNTY, NEW JERSEY</p> <p>DESIGNED BY: CCS
 CHECKED BY: MS
 DULLE S. BROWN
 DATE: MAY 1978</p> <p>DRAWN BY: CCS
 CHECKED BY: MS
 MORGAN J. KAMM
 NEW JERSEY PROFESSIONAL ENGINEER
 NO. 46340383</p> <p>PARSONS BRINCKERHOFF, INC.
 CORPORATION OF NEW JERSEY
 1000 JEROME AVENUE
 NEW YORK, N.Y. 10017
 <i>Morgan J. Kamm</i></p> <p>SHEET NO. 1
 SHEET 1 OF 24
 DWS NO. PERMIT 16</p> | | |



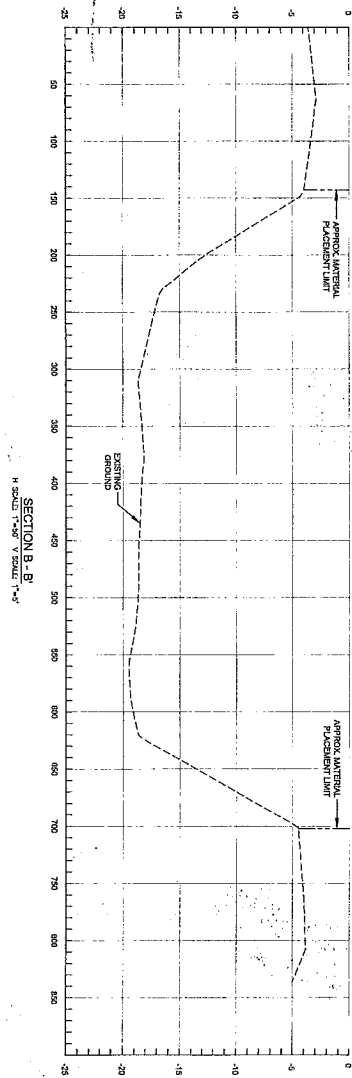
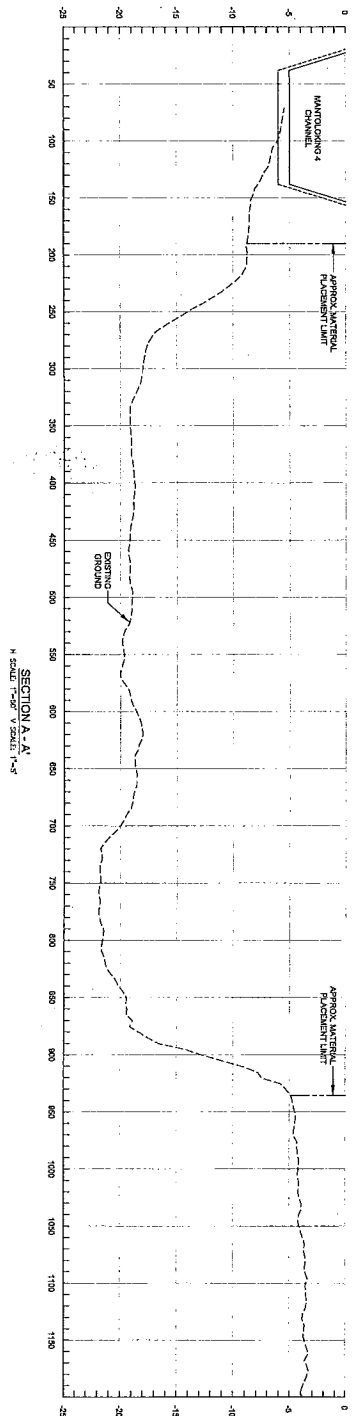
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| ELEVATION (MMV) | STORAGE (CY) |
|-----------------|--------------|
| -24 to -22 | 103 |
| -22 to -20 | 2,202 |
| -20 to -18 | 9,306 |
| -18 to -16 | 16,600 |
| -16 to -14 | 19,800 |
| -14 to -12 | 21,700 |
| -12 to -10 | 22,600 |
| -10 to -8 | 25,700 |
| -8 to -6 | 25,600 |
| -6 to -4 | 36,600 |
| TOTAL (CY) | 175,200 |



1. VERTICAL DATUM IS IN REFERENCE TO MEAN LOW WATER QUAY, M.L.W. IS 8.17 FEET BELOW THE SPENT AIRPORT VERTICAL DATUM.
2. HORIZONTAL DATUM IS IN REFERENCE TO THE CENTER OF GRAVITY OF THE SPENT AIRPORT VERTICAL DATUM TRANSFORMATION PROGRAM.
3. DIMENSIONS ARE DIMENSIONS OF RECT AND NOT THE KNOT, JERSEY DUNE, AND CONVENTRY SPICAL NORTH.
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LEGEND

--- EXISTING GROUND (DREDGED HOLE 18)

--- APPROXIMATE CHANNEL DREDGING LIMIT

--- APPROXIMATE MATERIAL PLACEMENT LIMIT

RANGE OF THE FED

100' TO 1000'

| REV. | DATE | DESCRIPTION | BY | APPR. |
|------|------|-------------|----|-------|
| | | | | |
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| STATE OF NEW JERSEY
NJDOT OFFICE OF MARITIME RESOURCES | |
| TITLE: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR
BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD,
GREEN COVE, UPPER WATERCOURSE, AND WINTER YACHT BASIN CHANNELS
DREDGED HOLE #18 CROSS SECTIONS | |
| PROJECT NO. 053-095-001
DESIGNATION OF PROJECT: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER WATERCOURSE, AND WINTER YACHT BASIN CHANNELS
BOROUGH OF HANCOCK, OCEAN COUNTY, NEW JERSEY | DESIGNED BY: EDC
CHECKED BY: JMS
SCALE: AS SHOWN
DATE: JULY 2016 |
| DESIGNED BY: EDC
CHECKED BY: JMS
SCALE: AS SHOWN
DATE: JULY 2016 | PROJECT NO. 053-095-001
DESIGNATION OF PROJECT: MAINTENANCE DREDGING AND CHANNEL IMPROVEMENTS FOR BEAVER DAM CREEK NORTH, BEAVER DAM CREEK SOUTH, BAY HEAD, GREEN COVE, UPPER WATERCOURSE, AND WINTER YACHT BASIN CHANNELS
BOROUGH OF HANCOCK, OCEAN COUNTY, NEW JERSEY |