



US Army Corps
of Engineers®
New England District

PUBLIC NOTICE

Date: May 4, 2004
Comment Period Ends: June 3, 2004
File Number: NAE -2004-382
File Number: NAE -2004-383
File Number: NAE -2004-386
In Reply Refer To: Zina Cassulo-Henderson
Or by e-mail: zina.d.cassulo@usace.army.mil

The City of Bristol, Department of Parks & Recreation, at 111 North Main Street, in Bristol, Connecticut, has requested three Corps of Engineers permits under Section 404 of the Clean Water Act to discharge fill while excavating sediments from Page Park Pond, Rockwell Park Pond, and the Upper and Lower Memorial Park Ponds. These ponds will be temporarily drained and fill will be placed for construction access to facilitate excavation of sediment. The project will improve the storage capacity of the ponds, and protect the Pequabuck River from heavy sediment loads caused by urban activities such as winter sanding and salting. The excavation will also restore open water habitat, create enhanced shallow water habitat, and restore the overall aesthetic quality of the ponds. The work areas are located at Page Park Pond off of Page Park Road, Rockwell Park Pond off Jacob Street, and at the Memorial Boulevard Park Ponds off of the south side of Memorial Avenue. The excavation descriptions on each of the municipal ponds are listed below and shown on the attached plans.

1. NAE-2004-382 Page Park Pond

The work will consist of the construction of a permanent access road consisting of 2' gravel (50CY) placed along the west side of the pond to facilitate maintenance of a sediment forebay formed from intermediate rip-rap. A stone weir will also be placed to form a sediment forebay at the south entrance to the pond. The weir will be constructed of 23 cubic yards of intermediate rip-rap. A total of approximately one thousand cubic yards of sediment will be excavated over 1.69 acres of the pond.

This project is located on the USGS Bristol quadrangle sheet at UTM coordinates 41 41 7.42 N and 072 55 47.43 W.

2. NAE-2004-383 Rockwell Park Pond

The work will consist of the construction of a stone weir on the northwest side of the pond that will form a sediment forebay. The weir will consist of 28 cubic yards of intermediate rip-rap. A temporary low flow sediment trap may be placed in the pond low point if the current low level outlet structure is found to be in non-working condition, it will be constructed of 10 cubic yards of modified rip-rap. A total of one thousand, two hundred and thirty cubic yards will be excavated over 1.31 acres of the pond.

This project is located on the USGS Meriden CT quadrangle sheet at UTM coordinates 41 40 30.68 N and 072 57 41.36 W.

3. NAE-2004-386 Upper & Lower Memorial Park Pond

The work will consist of the construction of temporary control berms consisting of 5 cubic yards of ¾" gravel and 7.5 cubic yards of modified rip-rap. A permanent access drive will be placed in the Pond bottom on the west side of the lower pond to facilitate future maintenance excavation. Approximately forty-eight hundred cubic yards of sediment will be excavated over 2.75 acres of the pond.

This project is located on the USGS Meriden CT quadrangle sheet at UTM coordinates 041 36 55.28 N, 072 51 20.90 W.

Upon completion the excavated materials from the ponds will be placed in an upland location, the disturbed areas will be stabilized, and refilling of the ponds to their pre-existing water levels will be done.

In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. Comments should be submitted in writing by the above date. If you have any questions, please contact Zina Cassulo-Henderson (978) 318-8382, (800) 343-4789 or (800) 362-4367, if calling from within Massachusetts.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

SEE NEXT PAGE FOR
DETAILS OF EVALUATION
FACTORS



Robert J. DeSista
Chief, Permits & Enforcement Branch
Regulatory Division

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

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also 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, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 as amended.

Based on his initial review, the District Engineer has determined that the proposed work will not impact properties listed in, or eligible for listing in, the National Register of Historic Places.

Pursuant to the Endangered Species Act, the District Engineer is hereby requesting that the appropriate Federal Agency provide comments regarding the presence of and potential impacts to listed species or its critical habitat.

The following authorizations have been applied for, or have been, or will be obtained:

- (X) Permit, License or Assent from State.
- (X) Permit from Local Wetland Agency or Conservation Commission.
- (X) Water Quality Certification in accordance with Section 401 of the Clean Water Act.

The States of Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island have approved Coastal Zone Management Programs. Where applicable the applicant states that any proposed activity will comply with and will be conducted in a manner that is consistent with the approved Coastal Zone Management Program. By this Public Notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.



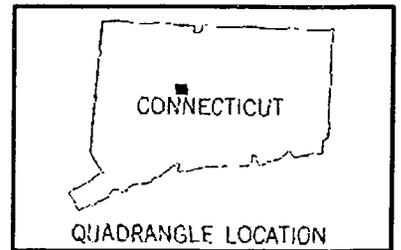
SCALE = 1:24000

SITE LOCATION

NAE-2004-382

MAP REFERENCE

THIS MAP WAS PREPARED FROM THE
 FOLLOWING 7.5 MINUTE SERIES
 TOPOGRAPHIC MAP: BRISTOL,
 CONNECTICUT 1986, PHOTOREVISED 1984



SCALE:	
HORZ:	1" = 200'
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DATUM:	
HORZ:	
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GRAPHIC SCALE	



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 860.648.2469

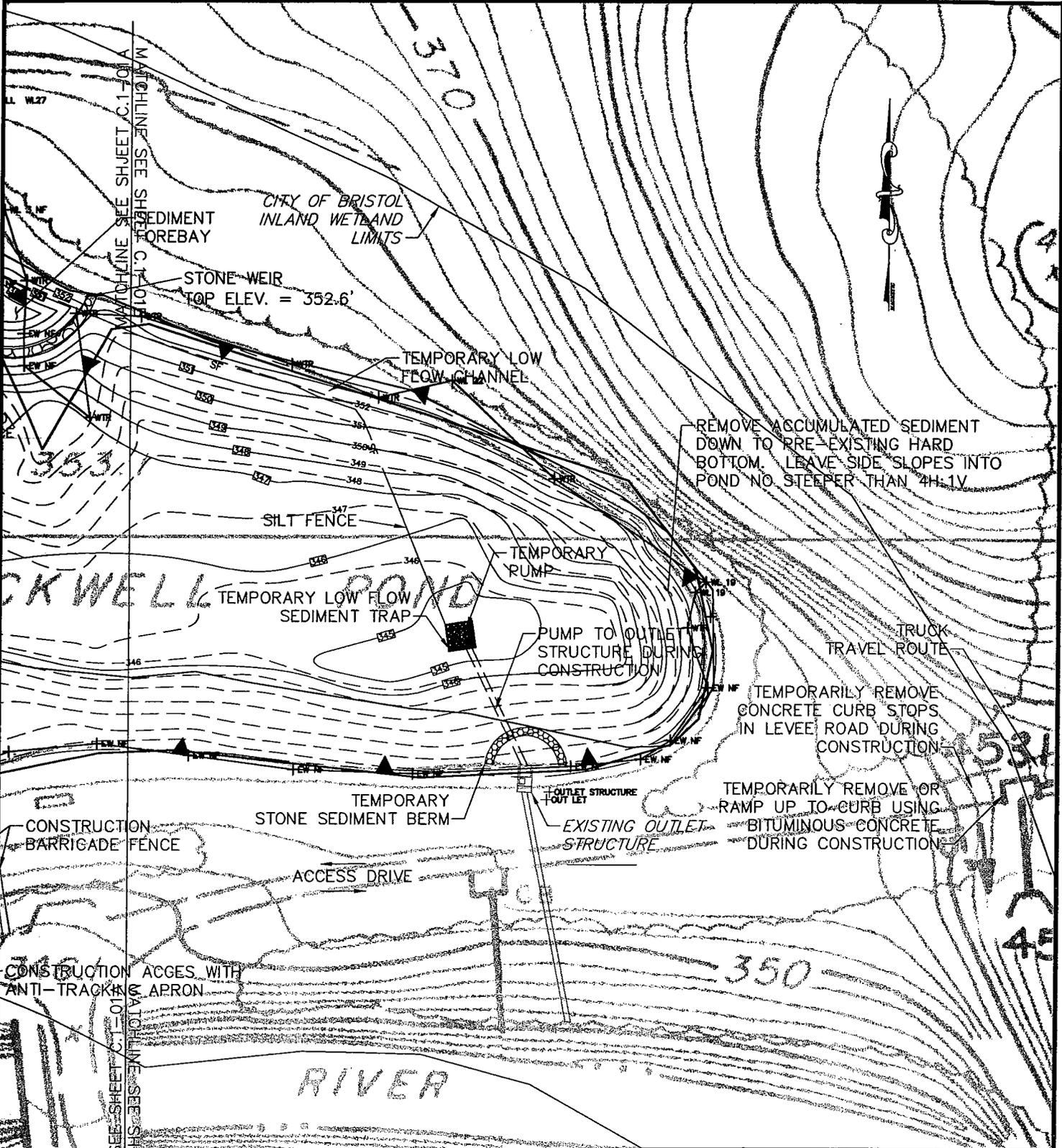
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SITE LOCATION MAP
ROCKWELL PARK POND
CITY OF BRISTOL

BRISTOL

CONNECTICUT

PROJ. No.: 200326A10
 DATE: JANUARY 2004



REMOVE ACCUMULATED SEDIMENT DOWN TO PRE-EXISTING HARD BOTTOM. LEAVE SIDE SLOPES INTO POND NO STEEPER THAN 4H:1V.

TEMPORARILY REMOVE CONCRETE CURB STOPS IN LEVEE ROAD DURING CONSTRUCTION.

TEMPORARILY REMOVE OR RAMP UP TO CURB USING BITUMINOUS CONCRETE DURING CONSTRUCTION.

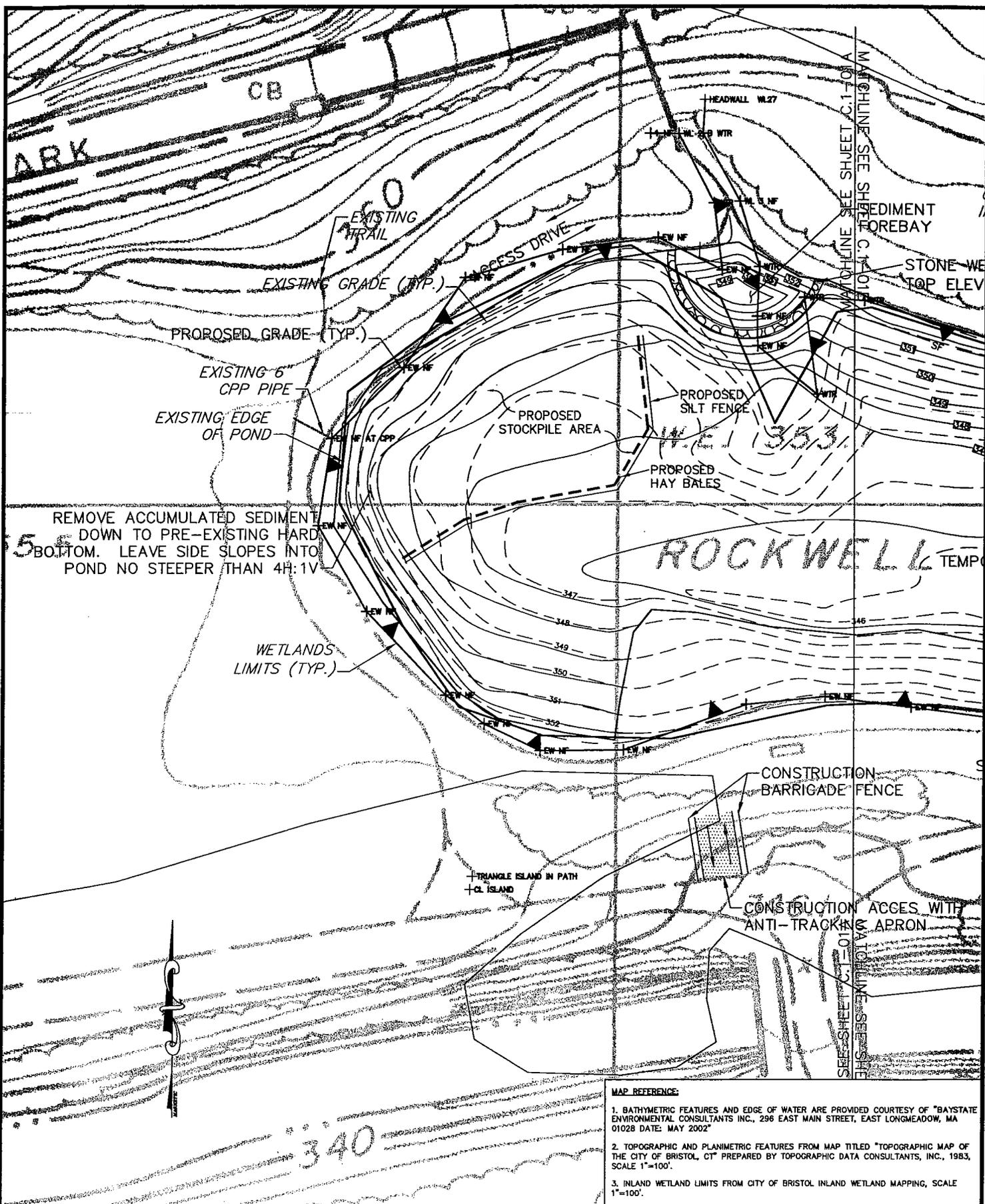
- MAP REFERENCE:**
- BATHYMETRIC FEATURES AND EDGE OF WATER ARE PROVIDED COURTESY OF "BAYSTATE ENVIRONMENTAL CONSULTANTS INC., 296 EAST MAIN STREET, EAST LONGMEADOW, MA 01028 DATE: MAY 2002"
 - TOPOGRAPHIC AND PLANIMETRIC FEATURES FROM MAP TITLED "TOPOGRAPHIC MAP OF THE CITY OF BRISTOL, CT" PREPARED BY TOPOGRAPHIC DATA CONSULTANTS, INC., 1983, SCALE 1"=100'.
 - INLAND WETLAND LIMITS FROM CITY OF BRISTOL INLAND WETLAND MAPPING, SCALE 1"=100'.
 - EXCAVATION SHALL NOT CONTINUE BEYOND HARD BOTTOM.

SCALE:	
HORIZ.:	1" = 50'
VERT.:	
DATUM:	
HORIZ.:	
VERT.:	
GRAPHIC SCALE	

f
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CITY OF BRISTOL
 DREDGE PLAN
 ROCKWELL PARK POND RESTORATION
 BRISTOL CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004
 C.1-01A



REMOVE ACCUMULATED SEDIMENT
DOWN TO PRE-EXISTING HARD
BOTTOM. LEAVE SIDE SLOPES INTO
POND NO STEEPER THAN 4H:1V

- MAP REFERENCE:**
1. BATHYMETRIC FEATURES AND EDGE OF WATER ARE PROVIDED COURTESY OF "BAYSTATE ENVIRONMENTAL CONSULTANTS INC., 296 EAST MAIN STREET, EAST LONGMEADOW, MA 01028 DATE: MAY 2002"
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SCALE:

HORIZ.: 1" = 50'

VERT.:

DATUM:

HORIZ.:

VERT.:

GRAPHIC SCALE

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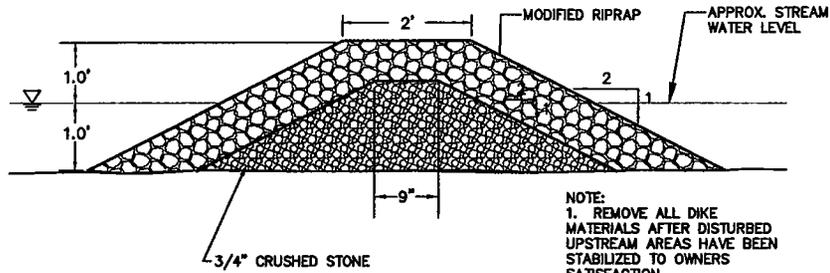
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CITY OF BRISTOL
DREDGE PLAN
ROCKWELL PARK POND RESTORATION

BRISTOL CONNECTICUT

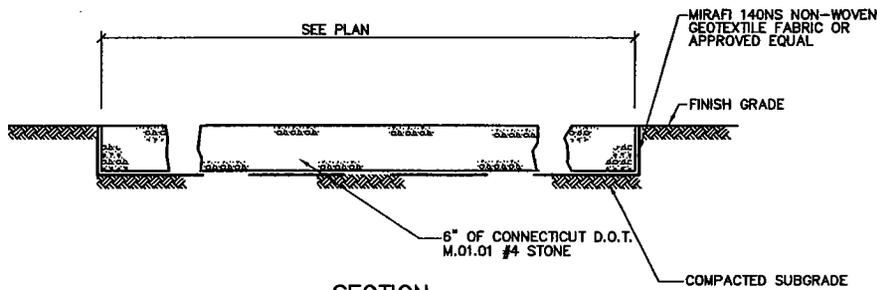
PROJ. No.: 02002725.A10
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C.1-01B

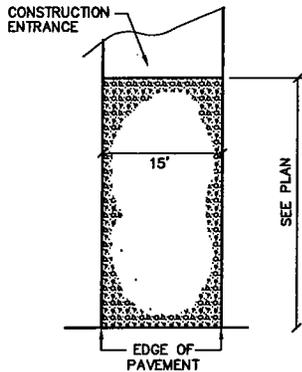


NOTE:
 1. REMOVE ALL DIKE MATERIALS AFTER DISTURBED UPSTREAM AREAS HAVE BEEN STABILIZED TO OWNERS SATISFACTION.
 2. ADJUST BERM ELEVATION TO RETAIN SEDIMENT AND PREVENT FLOODING

TEMPORARY STONE SEDIMENT CONTROL BERM
 N.T.S.



SECTION



LOCATION PLAN

ACCESS DRIVE / ANTI-TRACKING APRON
 N.T.S.

NOTES:
 1.) MAINTAIN ANTI-TRACKING PAVEMENT IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
 2.) ANY PAVED AREAS, ADJACENT TO ANTI-TRACKING APRON SHALL BE SWEEPED DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.

SCALE:	HORZ.: NTS
	VERT.:
DATUM:	HORZ.:
	VERT.:
GRAPHIC SCALE	



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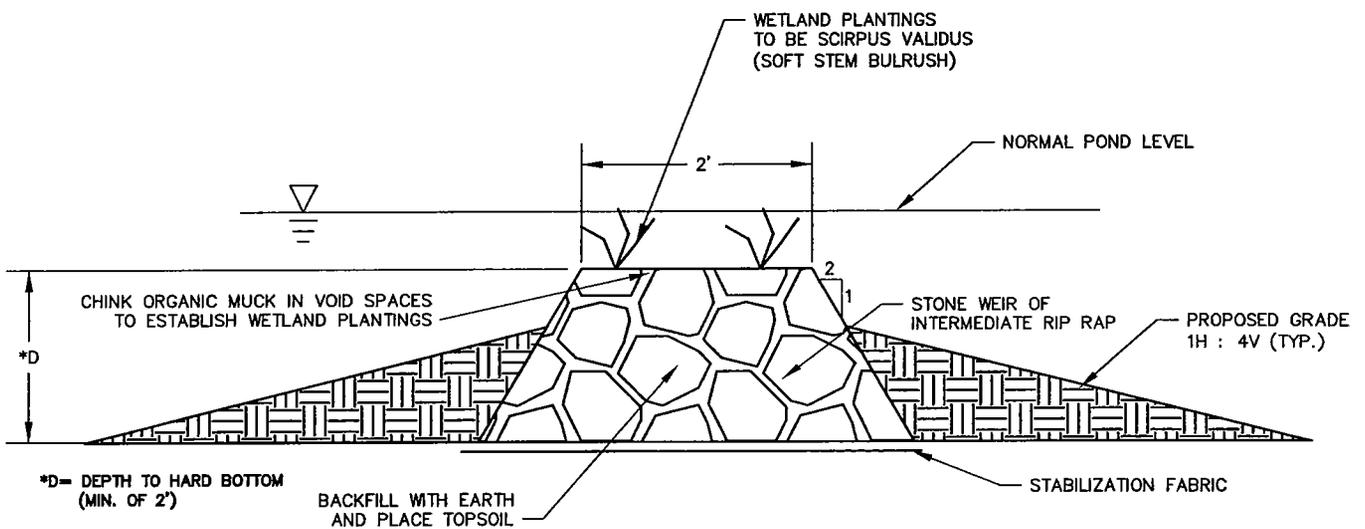
CITY OF BRISTOL
 CONSTRUCTION DETAILS
 ROCKWELL PARK POND RESTORATION

BRISTOL

CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004

C.5-01A



ELEVATION
STONE WEIR
N.T.S.

SCALE:	HORIZ.: NTS
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	HORIZ.:
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GRAPHIC SCALE	



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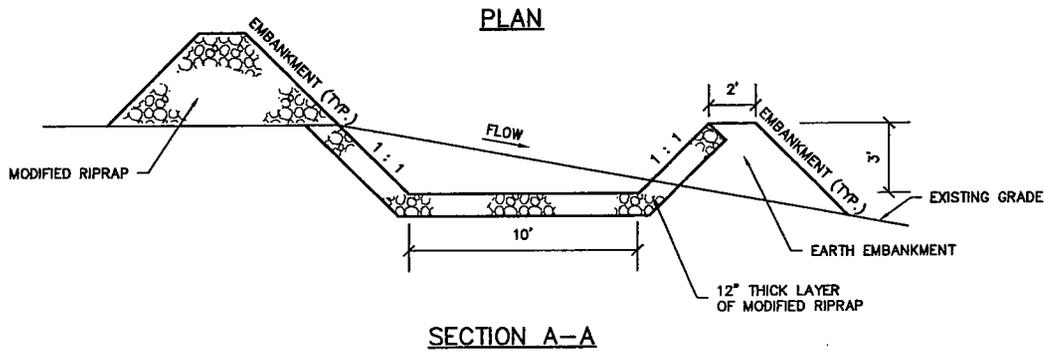
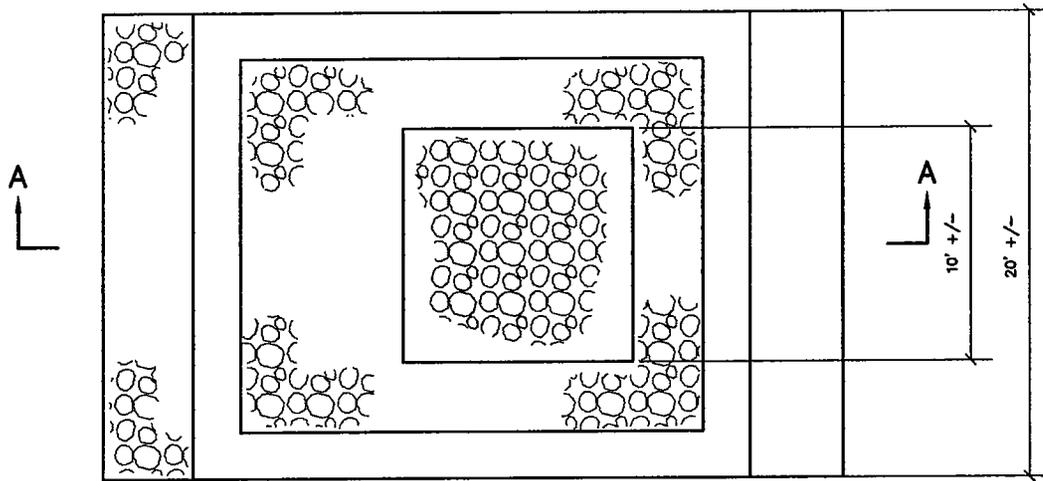
CITY OF BRISTOL
CONSTRUCTION DETAILS
ROCKWELL PARK POND RESTORATION

BRISTOL

CONNECTICUT

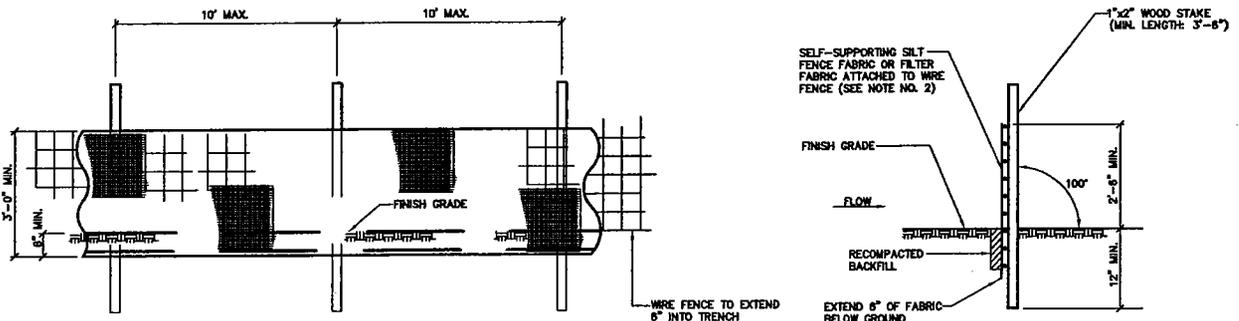
PROJ. No.: 02002725.A10
DATE: JANUARY 2004

C.5-01B



LOW FLOW SEDIMENT TRAP

SCALE: NTS



NOTES:

- 1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
- 2.) SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 POUNDS STEEL / LIN. FT.) THE MINIMUM POST LENGTH SHALL BE 5'-0".
- 3.) SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

SILT FENCE

N.T.S.

SCALE:	HORIZ.: NTS
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DATUM:	
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	VERT.:
GRAPHIC SCALE	



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CITY OF BRISTOL
 CONSTRUCTION DETAILS
 ROCKWELL PARK POND RESTORATION

BRISTOL

CONNECTICUT

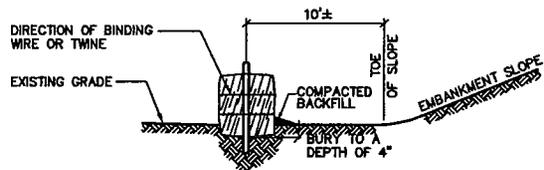
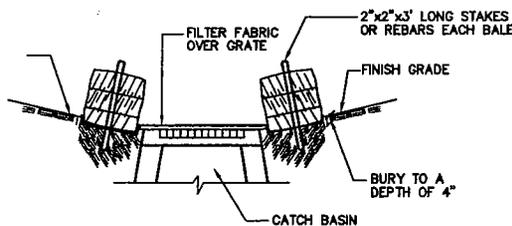
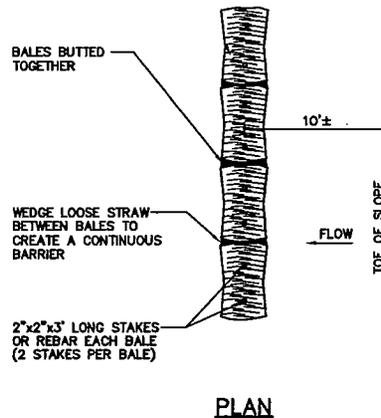
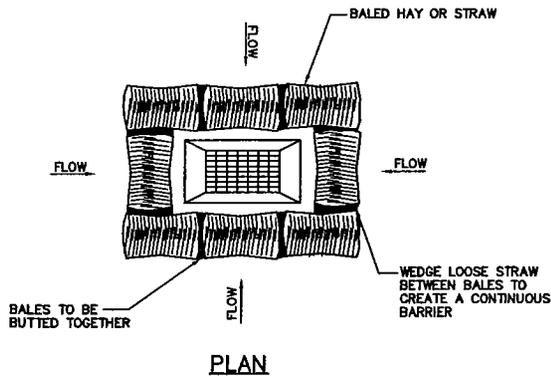
PROJ. No.: 02002725A10
 DATE: JANUARY 2004

C.5-02A

EROSION & SEDIMENT CONTROL NOTES

1. Erosion and sediment control measures will be installed prior to stump removal and construction. The Construction Entrance will be installed before construction traffic into and out of project area begins. Stabilization of all degraded and soil stockpile areas will be initiated and maintained during all phases of construction.
2. All erosion and sediment control measures will be constructed in accordance with standards and specifications of the "Guidelines for Soil Erosion and Sediment Control" regulations. All erosion control measures are to be maintained and upgraded, as required, to achieve proper sediment control during construction. All grade benches shall be kept free of sediment during all phases of development.
3. Additional control measures will be installed during the construction period, if deemed necessary by the Owner or Agents of the Municipality.
4. Catch basins will be protected with hay bale filters throughout the construction period until all disturbed areas are thoroughly stabilized. Filter fabric should be installed under grate opening until pavement is in place and lawn established.
5. Areas to be left bare before finished grading and seeding is achieved, shall receive a temporary seeding of Perennial Rye grass applied to a rate of 2 lbs./1,000 sq. ft. at a depth of 1/2 inch. Limestone (equivalent to be 50 percent calcium plus magnesium oxide) shall be applied as seedbed preparation at a rate of 90 lbs./1,000 sq. ft. Planting seasons shall be March 1 to June 15 and August 1 to October 1. Where grass predominates, fertilize according to a soil test at a minimum application rate of 1 lb. of nitrogen per 1,000 sq. ft.
6. Areas to be left bare before finish grading and seeding outside of planting seasons shall receive an air-dried wood chip mulch, free of coarse matter, treated with 12 lbs. nitrogen per ton, applied at a rate of 185-275 lbs./1,000 sq. ft.
7. If final grading is to be delayed for more than thirty (30) days after land disturbances cease, temporary vegetation or mulch shall be used to stabilize soils.
8. An erosion control line (hay bale check or filter fabric) shall be established about ten (10') feet from toe of slope of proposed fill areas prior to beginning fill installation. Stabilization of slopes in fill areas (using mulch or grass) shall be initiated within thirty (30) days of commencement of fill installation.

9. Stabilization of slopes in cut areas (using mulch or grass) and the installation of control line (hay bale check or filter fabric) at the toe of slope shall be initiated within thirty (30) days of commencement of cut.
10. Sediment removed from control structures will be disposed of in a manner which is consistent with the intent of the plan. All hay bales or silt fence retaining sediment over 1/2 their height shall have the sediment removed and all damaged erosion controls removed and replaced.
11. The Contractor will be assigned the responsibility for implementing this Erosion and Sediment Control Plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, and notifying the proper Municipal agency of any transfer of this responsibility. The Owner shall be responsible for conveying a copy of the Erosion and Sediment Control Plan if the title to the land is transferred.
12. A Soil Scientist or Professional Engineer shall be secured to verify in the field that the controls required by this plan are properly installed and maintained. The inspections of such facilities shall be not less frequently than weekly and within forty-eight (48) hours of any significant rainfall. Following these inspections, a written report shall be prepared, informing the Owner or his agent not less frequently than weekly and the governing municipality not less frequently than monthly of observations, maintenance, and corrective activities undertaken.
13. Stockpiles of soil shall be surrounded by a sediment barrier. Soil stockpiles to be left bare for more than fifteen (15) days shall be stabilized with temporary vegetation or mulch. If soil stockpiles are to remain for more than sixty (60) days, filter fabric shall be used in place of haybales. Side slopes shall not exceed 2:1.
14. The Contractor shall be responsible to control dust and wind erosion throughout the life of his Contract. Dust control shall include, but is not limited to, sprinkling of water on exposed soils and haul roads. Contractor shall control dust to prevent a hazard to traffic on adjacent roadways.
15. Hay bales shall be used only as a temporary measure. Where control measures will be required for longer than sixty (60) days, filter fabric shall be used.



HAY BALES
N.T.S.

HAY BALES
N.T.S.

SCALE:	
HORZ.:	NTS
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DATUM:	
HORZ.:	
VERT.:	
GRAPHIC SCALE	

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CITY OF BRISTOL
CONSTRUCTION DETAILS
 ROCKWELL PARK POND RESTORATION
 BRISTOL CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004

C.5-02B



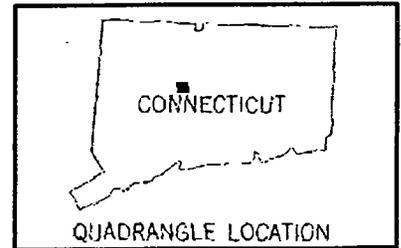
SCALE = 1:24000

SITE LOCATION

NAE-2004-383

MAP REFERENCE

THIS MAP WAS PREPARED FROM THE FOLLOWING 7.5 MINUTE SERIES TOPOGRAPHIC MAP: BRISTOL, CONNECTICUT 1966, PHOTOREVISED 1984



QUADRANGLE LOCATION

SCALE:	
HORZ.:	1" = 2000'
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DATUM:	
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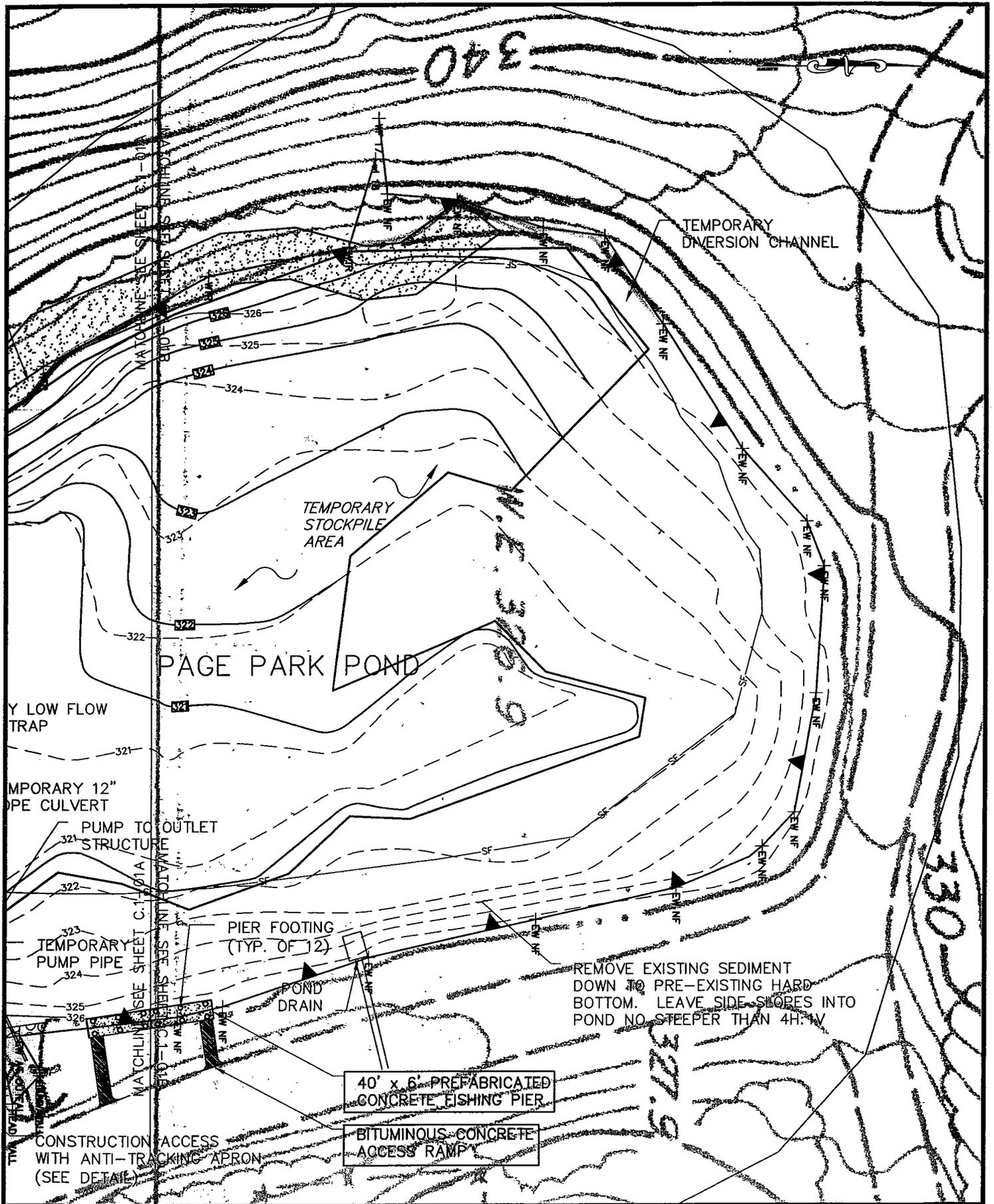
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SITE LOCATION MAP
DEWITT PAGE PARK POND
CITY OF BRISTOL

BRISTOL

CONNECTICUT

PROJ. No.: 2002728A10
 DATE: JANUARY 2004



SCALE:	
HORZ.:	1" = 40'
VERT.:	
DATUM:	
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CITY OF BRISTOL
 DREDGE PLAN
 PAGE PARK POND RESTORATION

PROJ. No.: 02002725.A10
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C.1-01A

12" THICK, 2" ANGULAR STONE
PERMANENT ACCESS ROAD GRADED
AT 2% SLOPE TOWARD POND

REMOVE EXISTING SEDIMENT
DOWN TO PRE-EXISTING HARD
BOTTOM. LEAVE SIDE SLOPES INTO
POND NO STEEPER THAN 4H:1V

SEDIMENT FOREBAY

STONE WEIR
ELEV. = 326.3'

PROPOSED
CONTOUR (TYP.)

TEMPORARY
DIVERSION CHANNEL

EXISTING
CONTOUR (TYP.)

FAHRENHEIT PARK DECK

WETLANDS
LIMITS (TYP.)

CITY OF BRISTOL
INLAND WETLAND
LIMITS

WE.
326.9

TEMPORARY LOW FLOW
SEDIMENT TRAP

TEMPORARY 12" HDPE CULVERT

PUMP TO OUTLET
STRUCTURE

TEMPORARY
PUMP PIPE

PROPOSED TEMPORARY
STONE SEDIMENT
CONTROL BERM.

PIER P
(TYP.)

CONSTRUCTION ACCESS
WITH ANTI-TRACKING APRON
(SEE DETAIL)

CONSTRUCTION
BARRICADE FENCE (TYP.)
(SEE DETAIL)

PAGE P

MATCHLINE SEE SHEET C.1-01A
MATCHLINE SEE SHEET C.1-01B
MATCHLINE SEE SHEET C.1-01A
MATCHLINE SEE SHEET C.1-01B

326
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SCALE:	
HORZ.:	1" = 40'
VERT.:	
DATUM:	
HORZ.:	
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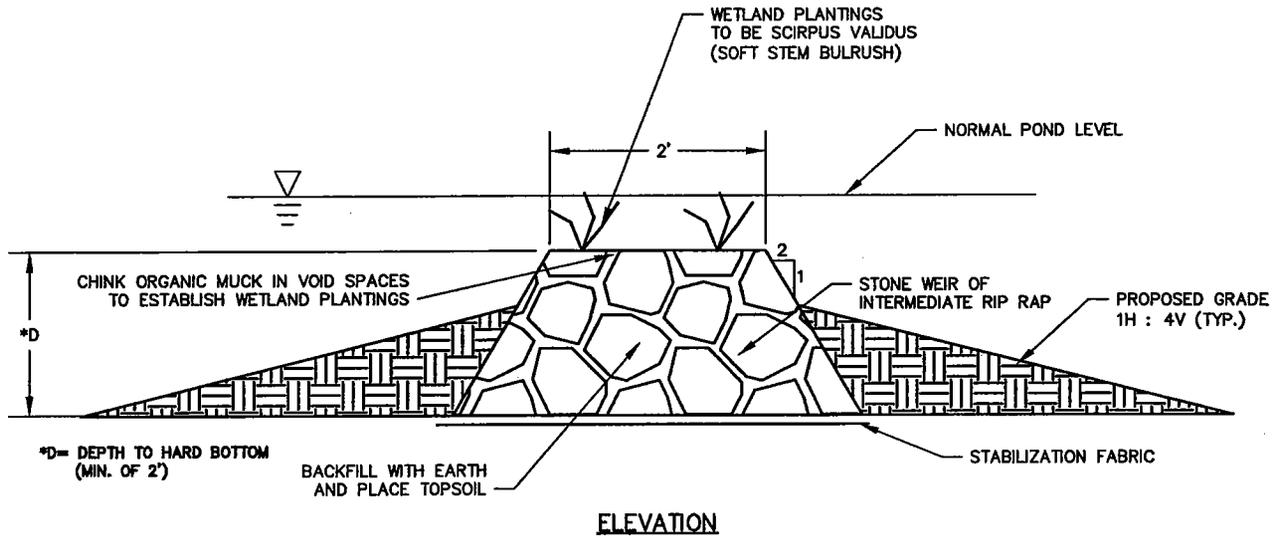
CITY OF BRISTOL
DREDGE PLAN
PAGE PARK POND RESTORATION

BRISTOL

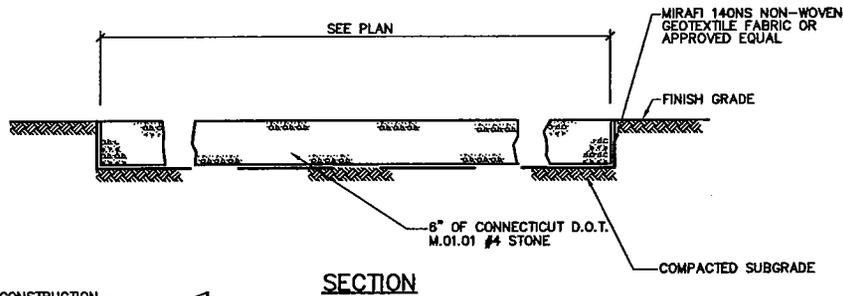
CONNECTICUT

PROJ. No.: 02002725.A10
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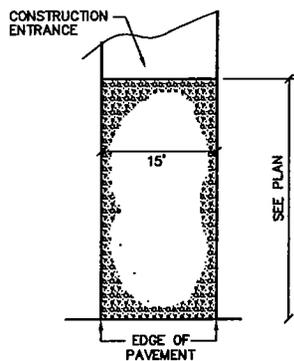
C.1-01B



ELEVATION
STONE WEIR
 N.T.S.



SECTION



LOCATION PLAN

ACCESS DRIVE /ANTI-TRACKING APRON
 N.T.S.

NOTES:

- 1.) MAINTAIN ANTI-TRACKING PAVEMENT IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
- 2.) ANY PAVED AREAS, ADJACENT TO ANTI-TRACKING APRON SHALL BE SWEEPED DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.

SCALE:	
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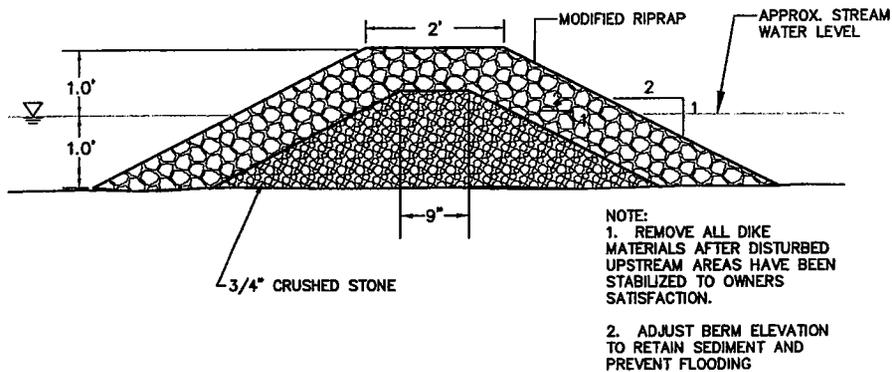
CITY OF BRISTOL
 CONSTRUCTION DETAILS
 PAGE PARK POND RESTORATION

BRISTOL

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C.5-01A

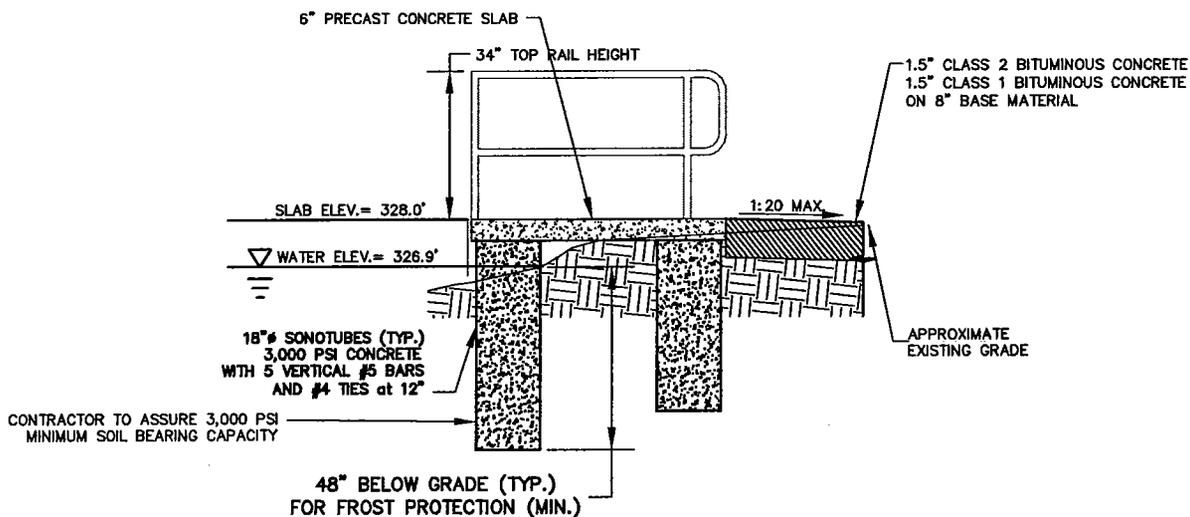


TEMPORARY STONE SEDIMENT CONTROL BERM

N.T.S.

NOTES:

- 1) RAILING DESIGNED TO SOBA '96 STANDARD
- 2) 34" TOP RAIL HEIGHT
- 3) 16" CENTER RAIL HEIGHT
- 4) VERTICAL SUPPORTS TO BE MINIMUM OF 4' APART
- 5) RAILING TO BE BUILT IN 7' SECTIONS WITH A 9" GAP BETWEEN SECTIONS
- 6) BUILDING CODE MODIFICATION REQUIRED



ELEVATION

FISHING PIER DETAIL

N.T.S.

SCALE:	
HORZ.:	
VERT.:	
DATUM:	
HORZ.:	
VERT.:	
GRAPHIC SCALE	



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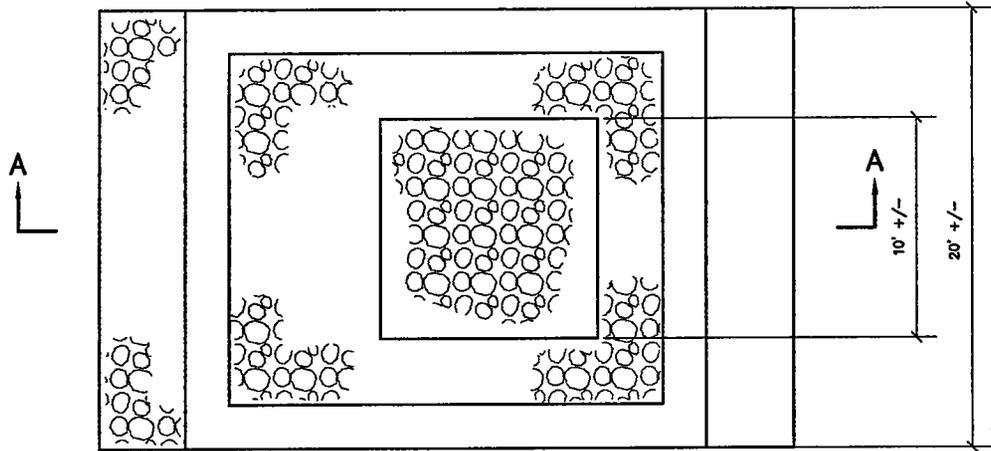
CITY OF BRISTOL
CONSTRUCTION DETAILS
 PAGE PARK POND RESTORATION

BRISTOL

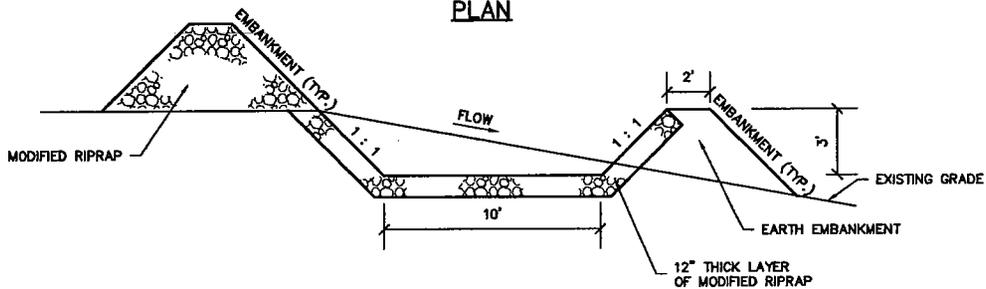
CONNECTICUT

PROJ. No.: 02002725-A10
 DATE: JANUARY 2004

C.5-01B



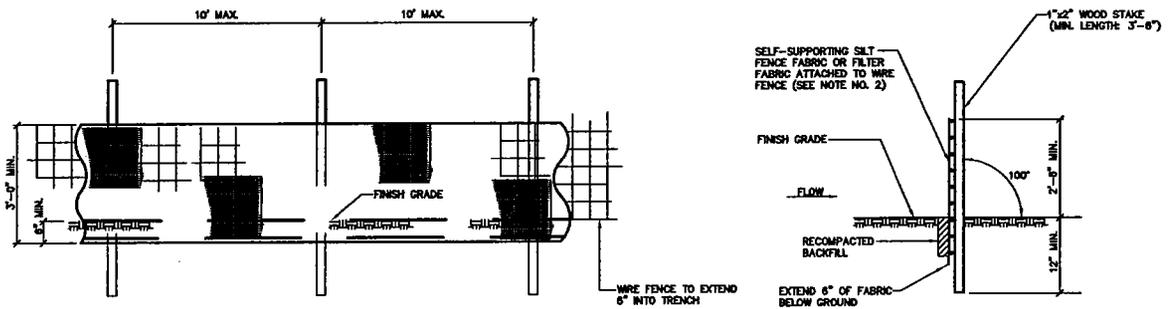
PLAN



SECTION A-A

LOW FLOW SEDIMENT TRAP

SCALE: 1"=5'



ELEVATION

SECTION

NOTES:

- 1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
- 2.) SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (3.5 POUNDS STEEL / LIN. FT.) THE MINIMUM POST LENGTH SHALL BE 5'-0".
- 3.) SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

SILT FENCE

N.T.S.

SCALE:	HORZ.: NTS
	VERT.:
DATUM:	
	HORZ.:
	VERT.:
GRAPHIC SCALE	



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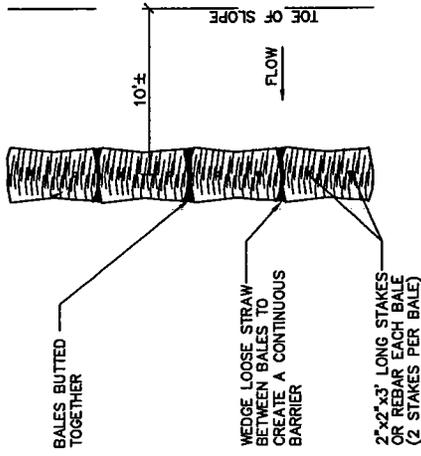
CITY OF BRISTOL
 EROSION CONTROL DETAILS
 PAGE PARK POND RESTORATION

BRISTOL

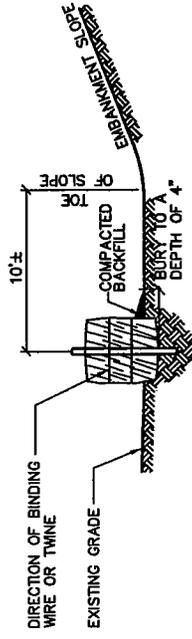
CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004

C.5-02A



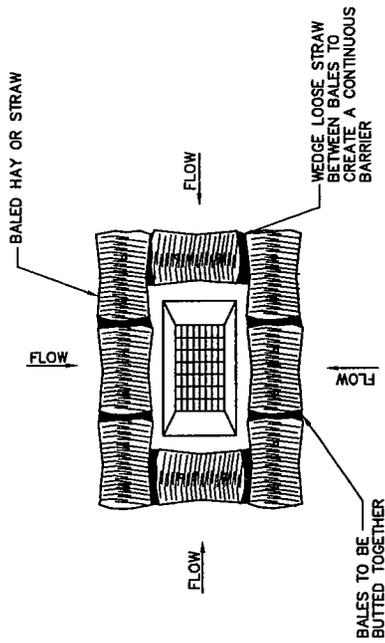
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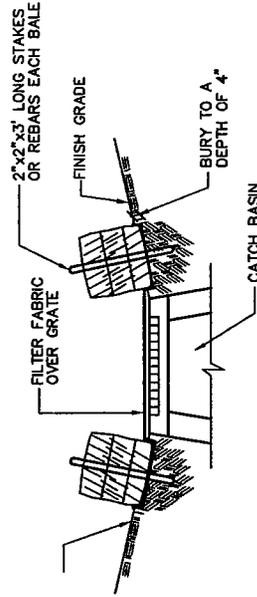
SECTION AT TOE OF SLOPE

HAY BALES

N.T.S.



PLAN



SECTION AT LOW POINT

HAY BALES

N.T.S.

PROJ. No.: 2002725A10
DATE: JANUARY 2004

C.5-02B

CITY OF BRISTOL
EROSION CONTROL DETAILS
PAGE PARK POND RESTORATION

CONNECTICUT

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SCALE:	HORIZ: N.T.S.
	VERT: _____
DATUM:	HORIZ: _____
	VERT: _____
GRAPHIC SCALE	



0 10

EROSION & SEDIMENT CONTROL NOTES

1. Erosion and sediment control measures will be installed prior to stump removal and construction. The Construction Entrance will be installed before construction traffic into and out of project area begins. Stabilization of all regraded and soil stockpile areas will be initiated and maintained during all phases of construction.
2. All erosion and sediment control measures will be constructed in accordance with standards and specifications of the "Guidelines for Soil Erosion and Sediment Control" regulations. All erosion control measures are to be maintained and upgraded, as required, to achieve proper sediment control during construction. All grade benches shall be kept free of sediment during all phases of development.
3. Additional control measures will be installed during the construction period, if deemed necessary by the Owner or Agents of the Municipality.
4. Catch basins will be protected with hay bale filters throughout the construction period until all disturbed areas are thoroughly stabilized. Filter fabric should be installed under grate opening until pavement is in place and lawn established.
5. Areas to be left bare before finished grading and seeding is achieved, shall receive a temporary seeding of Perennial Rye grass applied to a rate of 2 lbs./1,000 sq. ft. at a depth of 1/2 inch. Limestone (equivalent to be 50 percent calcium plus magnesium oxide) shall be applied as seedbed preparation at a rate of 90 lbs./1,000 sq. ft. Planting seasons shall be March 1 to June 15 and August 1 to October 1. Where grass predominates, fertilize according to a soil test at a minimum application rate of 1 lb. of nitrogen per 1,000 sq. ft.
6. Areas to be left bare before finish grading and seeding outside of planting seasons shall receive an air-dried wood chip mulch, free of course matter, treated with 12 lbs. nitrogen per ton, applied at a rate of 185-275 lbs./1,000 sq. ft.
7. If final grading is to be delayed for more than thirty (30) days after land disturbances cease, temporary vegetation or mulch shall be used to stabilize soils.
8. An erosion control line (hay bale check or filter fabric) shall be established about ten (10') feet from toe of slope of proposed fill areas prior to beginning fill installation. Stabilization of slopes in fill areas (using mulch or grass) shall be initiated within thirty (30) days of commencement of fill installation.
9. Stabilization of slopes in cut areas (using mulch or grass) and the installation of control line (hay bale check or filter fabric) at the toe of slope shall be initiated within thirty (30) days of commencement of cut.
10. Sediment removed from control structures will be disposed of in a manner which is consistent with the intent of the plan. All hay bales or silt fence retaining sediment over 1/2 their height shall have the sediment removed and all damaged erosion controls removed and replaced.
11. The Contractor will be assigned the responsibility for implementing this Erosion and Sediment Control Plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, and notifying the proper Municipal agency of any transfer of this responsibility. The Owner shall be responsible for conveying a copy of the Erosion and Sediment Control Plan if the title to the land is transferred.
12. A Soil Scientist or Professional Engineer shall be secured to verify in the field that the controls required by this plan are properly installed and maintained. The inspections of such facilities shall be not less frequently than weekly and within forty-eight (48) hours of any significant rainfall. Following these inspections, a written report shall be prepared, informing the Owner or his agent not less frequently than weekly and the governing municipality not less frequently than monthly of observations, maintenance, and corrective activities undertaken.
13. Stockpiles of soil shall be surrounded by a sediment barrier. Soil stockpiles to be left bare for more than fifteen (15) days shall be stabilized with temporary vegetation or mulch. If soil stockpiles are to remain for more than sixty (60) days, filter fabric shall be used in place of haybales. Side slopes shall not exceed 2:1.
14. The Contractor shall be responsible to control dust and wind erosion throughout the life of his Contract. Dust control shall include, but is not limited to, sprinkling of water on exposed soils and haul roads. Contractor shall control dust to prevent a hazard to traffic on adjacent roadways.
15. Hay bales shall be used only as a temporary measure. Where control measures will be required for longer than sixty (60) days, filter fabric shall be used.

SCALE:	HORZ: NTS
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DATUM:	HORZ:
	VERT.:
	
GRAPHIC SCALE	



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CITY OF BRISTOL
 EROSION CONTROL DETAILS
 PAGE PARK POND RESTORATION

BRISTOL

CONNECTICUT

PROJ. No.: 02002725-A10
 DATE: JANUARY 2004

C.5-02C



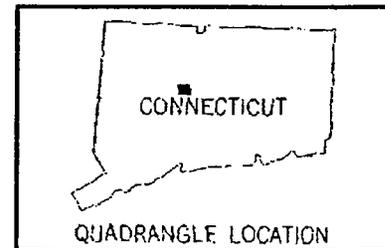
SCALE = 1:24000

SITE LOCATION

NAE-2004-386

MAP REFERENCE

THIS MAP WAS PREPARED FROM THE FOLLOWING 7.5 MINUTE SERIES TOPOGRAPHIC MAP: BRISTOL, CONNECTICUT 1966, PHOTOREVISED 1984



SCALE:	
HORIZ.:	1" = 2000'
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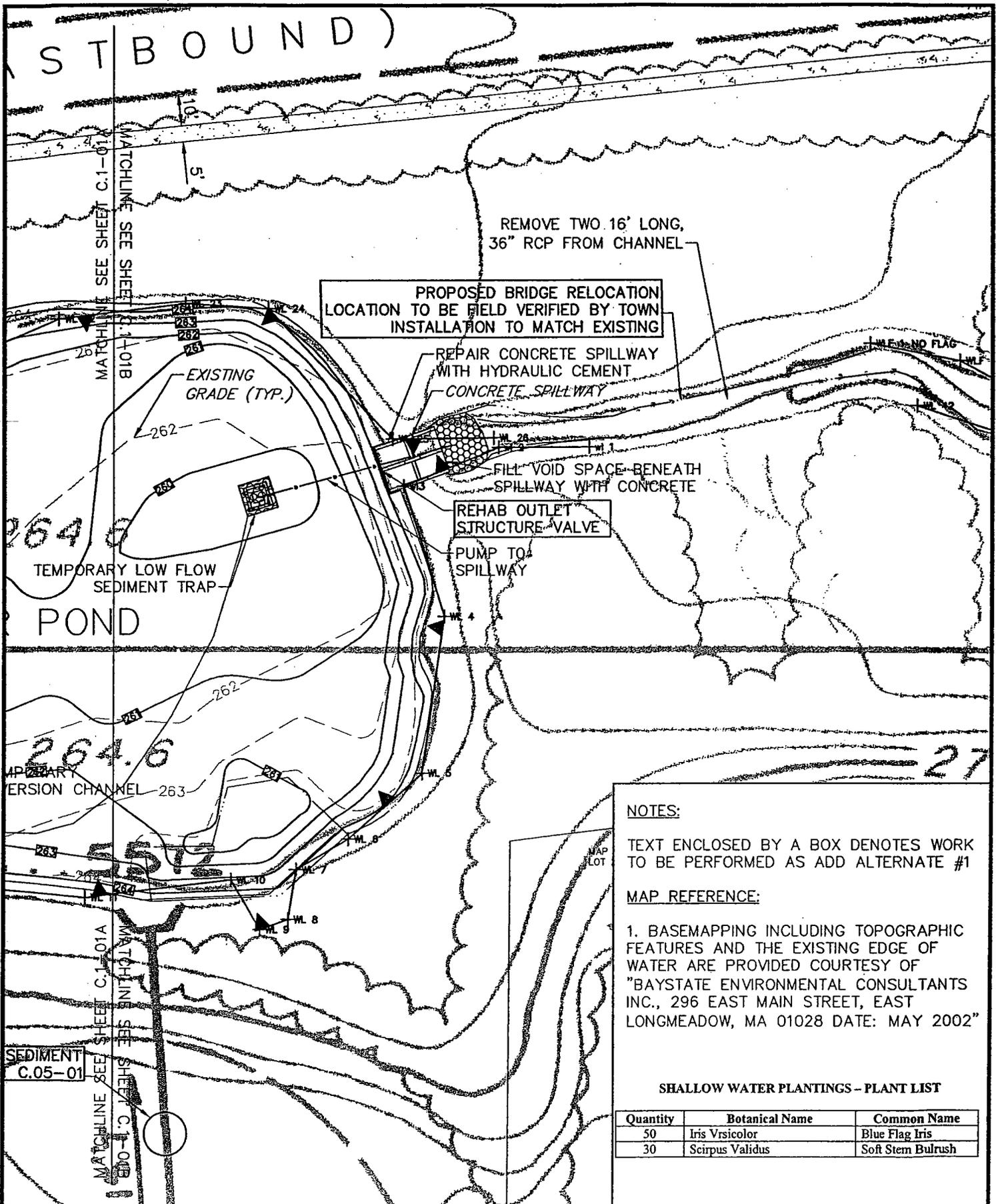
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SITE LOCATION MAP
 MEMORIAL BOULEVARD PARK PONDS
 CITY OF BRISTOL

BRISTOL

CONNECTICUT

PROJ. No.: 2002725-A10
 DATE: JANUARY 2004



NOTES:

TEXT ENCLOSED BY A BOX DENOTES WORK TO BE PERFORMED AS ADD ALTERNATE #1

MAP REFERENCE:

1. BASEMAPPING INCLUDING TOPOGRAPHIC FEATURES AND THE EXISTING EDGE OF WATER ARE PROVIDED COURTESY OF "BAYSTATE ENVIRONMENTAL CONSULTANTS INC., 296 EAST MAIN STREET, EAST LONGMEADOW, MA 01028 DATE: MAY 2002"

SHALLOW WATER PLANTINGS - PLANT LIST

Quantity	Botanical Name	Common Name
50	Iris Versicolor	Blue Flag Iris
30	Scirpus Validus	Soft Stem Bulrush

SCALE:

HORZ: 1" = 40'

VERT:

DATUM:

HORZ:

VERT:

GRAPHIC SCALE

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CITY OF BRISTOL

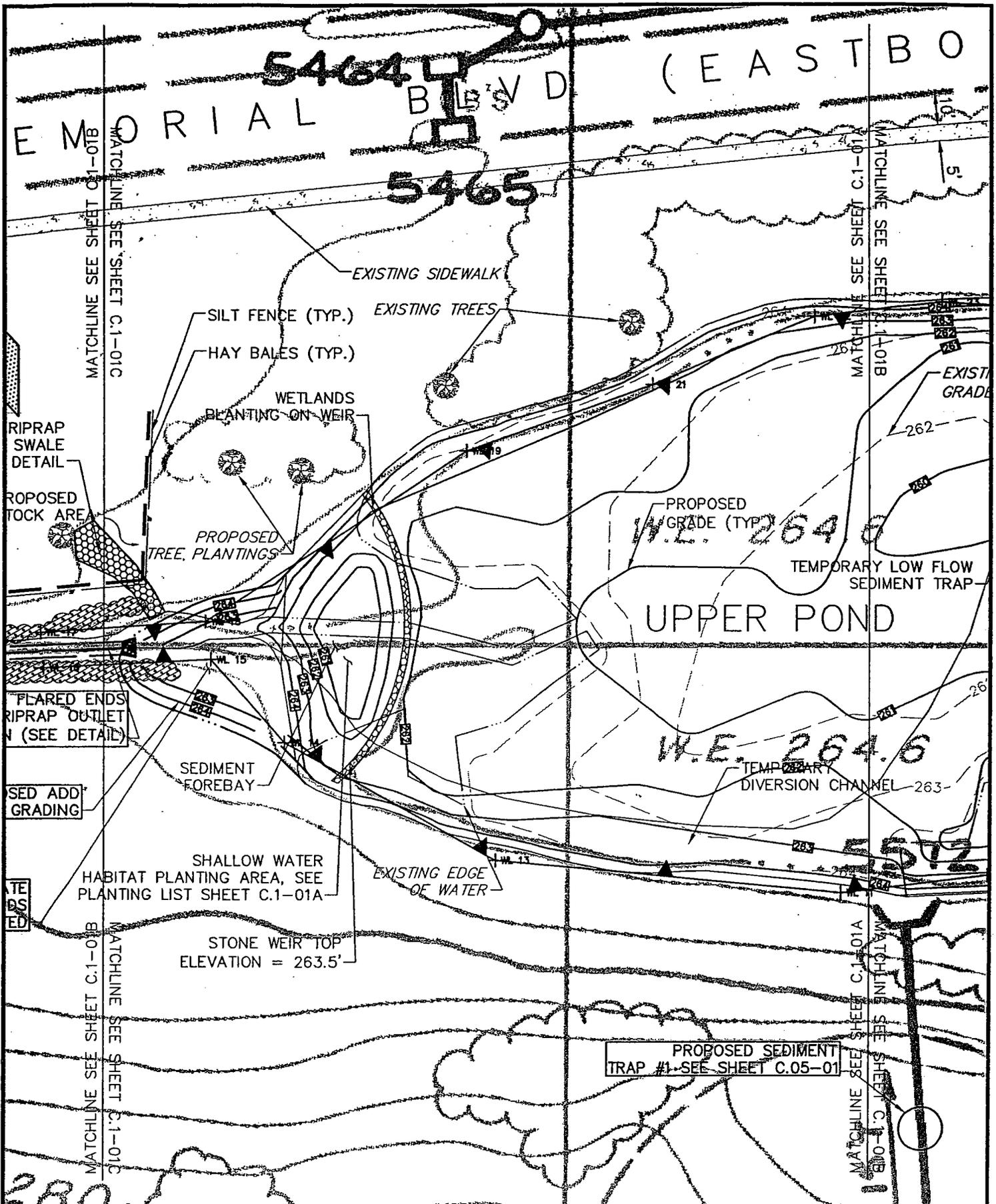
UPPER MEMORIAL POND - DREDGE PLAN

MEMORIAL BLVD. PARK PONDS RESTORATION

BRISTOL CONNECTICUT

PROJ. No.: 2002725.A10
 DATE: JANUARY 2004

C.1-01A



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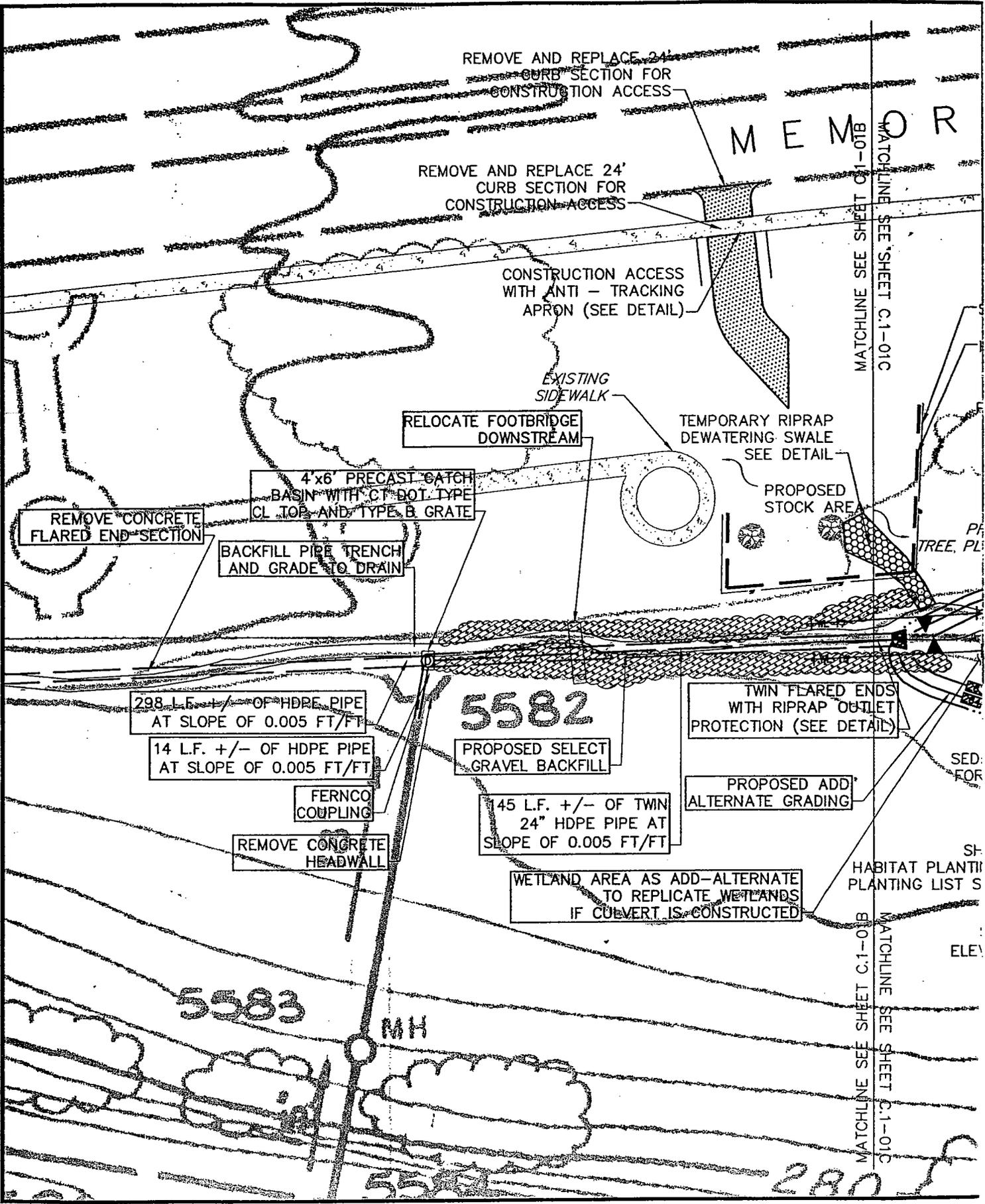
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 GRAPHIC SCALE

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 UPPER MEMORIAL POND - DREDGE PLAN
 MEMORIAL BLVD. PARK PONDS RESTORATION
 BRISTOL CONNECTICUT

PROJ. No: 2002725A10
 DATE: JANUARY 2004
 C.1-01B

USWORLD
 MS VIEWPERS 2
 LMANUPPER.RISC



MEMOR

REMOVE AND REPLACE 24" CURB SECTION FOR CONSTRUCTION ACCESS

REMOVE AND REPLACE 24" CURB SECTION FOR CONSTRUCTION ACCESS

CONSTRUCTION ACCESS WITH ANTI-TRACKING APRON (SEE DETAIL)

EXISTING SIDEWALK

RELOCATE FOOTBRIDGE DOWNSTREAM

TEMPORARY RIPRAP DEWATERING SWALE (SEE DETAIL)

PROPOSED STOCK AREA

REMOVE CONCRETE FLARED END SECTION

4'x6' PRECAST CATCH BASIN WITH CT DOT TYPE CL TOP AND TYPE B GRATE

BACKFILL PIPE TRENCH AND GRADE TO DRAIN

298 L.F. +/- OF HDPE PIPE AT SLOPE OF 0.005 FT/FT

14 L.F. +/- OF HDPE PIPE AT SLOPE OF 0.005 FT/FT

FERNCO COUPLING

REMOVE CONCRETE HEADWALL

5582

PROPOSED SELECT GRAVEL BACKFILL

145 L.F. +/- OF TWIN 24" HDPE PIPE AT SLOPE OF 0.005 FT/FT

TWIN FLARED ENDS WITH RIPRAP OUTLET PROTECTION (SEE DETAIL)

PROPOSED ADD ALTERNATE GRADING

WETLAND AREA AS ADD-ALTERNATE TO REPLICATE WETLANDS IF CULVERT IS CONSTRUCTED

5583

MH

WATCHLINE SEE SHEET C.1-01C

WATCHLINE SEE SHEET C.1-01C

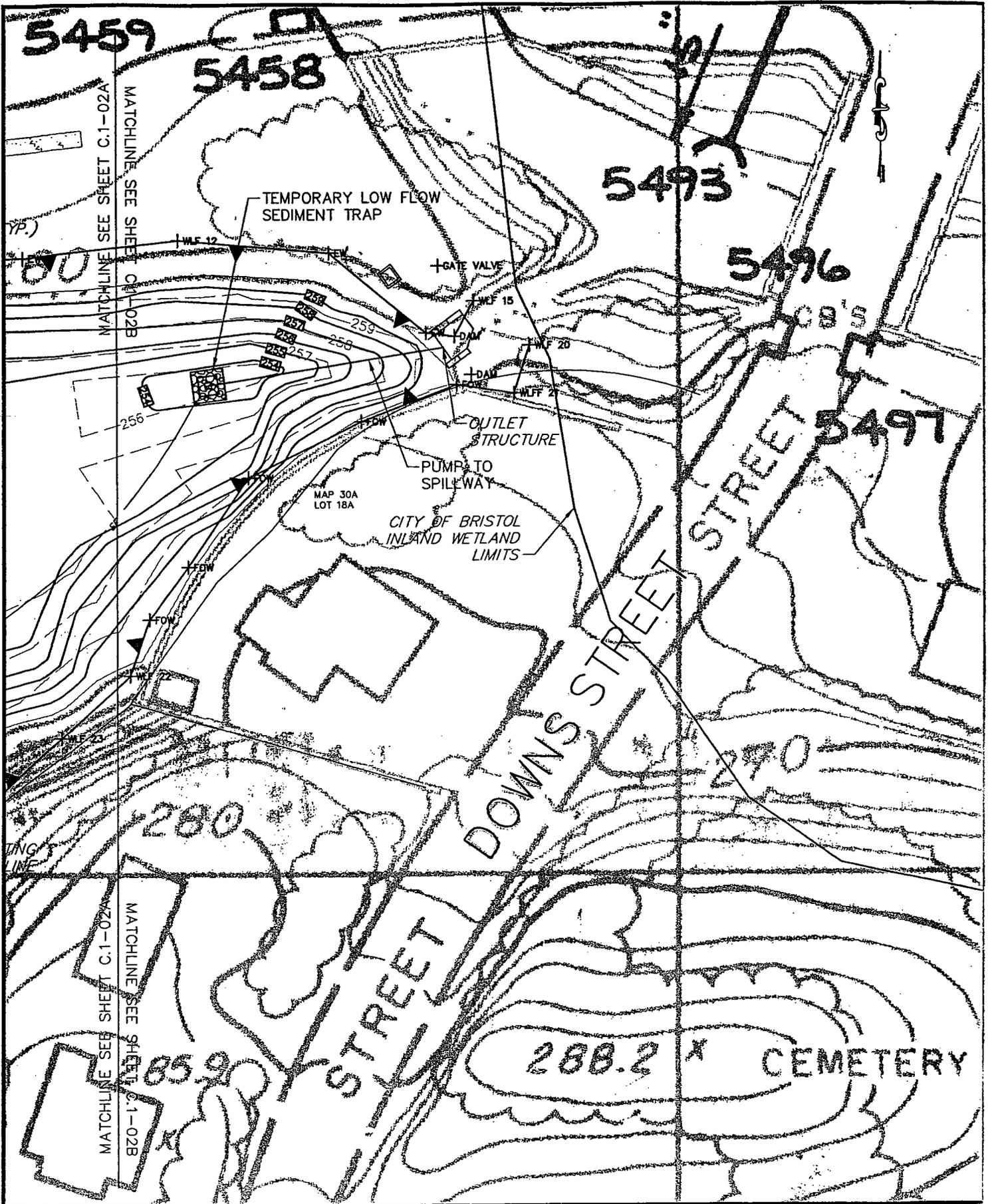
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GRAPHIC SCALE	

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 MEMORIAL BLVD. PARK PONDS RESTORATION
 BRISTOL CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004
C.1-01C

U.S. WORLD MAP VIEWER 3 LAMARCA 403C CTB:



SCALE:	
HORZ:	1" = 40'
VERT:	
DATUM:	
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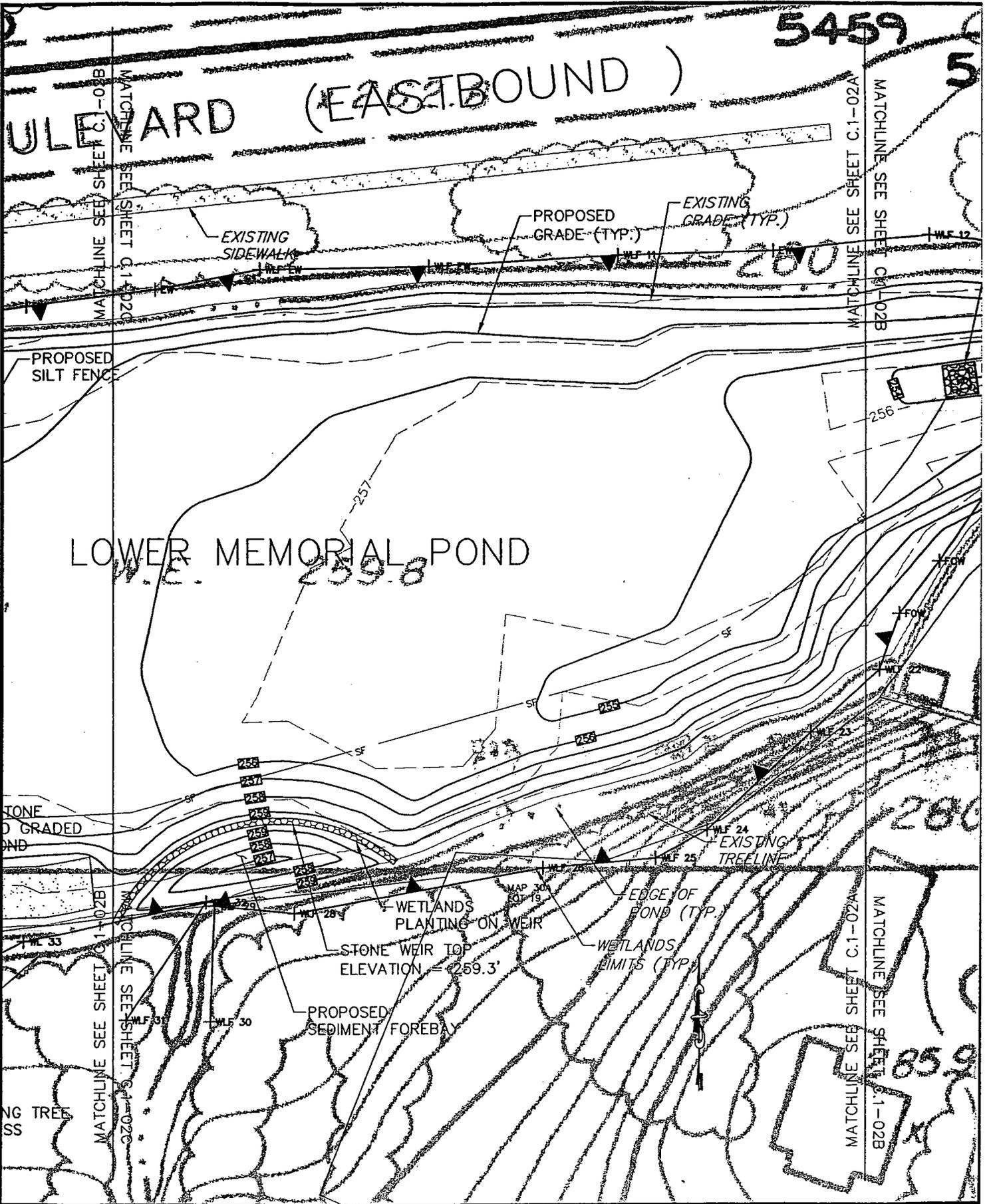
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CITY OF BRISTOL
 LOWER MEMORIAL POND - DREDGE PLAN
 MEMORIAL BLVD. PARK PONDS RESTORATION
 BRISTOL CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004

C.1-02A

USGS WORLD DATA CENTER
 MS VIEWFLOWER 1
 MANFLOWER GISC
 CTB



SCALE:	
HORIZ:	1" = 40'
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 MEMORIAL BLVD. PARK PONDS RESTORATION

BRISTOL

CONNECTICUT

PROJ. No.: 02002725.A10
 DATE: JANUARY 2004

C.1-02B

UCS:WORLD MS VIEWLOWER 2 LMAN:LOWER 03SC CTB:

MEMORIAL 5460

BOULEVARD

MEMORIAL

REMOVE AND REPLACE 24" CURB SECTION FOR CONSTRUCTION ACCESS

CONSTRUCTION ACCESS WITH ANTI-TRACKING APRON (SEE DETAIL)

REMOVE AND REPLACE 25' OF CONCRETE SIDEWALK AFTER ALL HEAVY VEHICLE CONSTRUCTION IS COMPLETE

PROPOSED CONSTRUCTION BARRICADE FENCE (TYP.)

PROPOSED SILT FENCE

10" MAPLE

18" MAPLE

24" MAPLE

18" MAPLE

STOCKPILE AREA

LOWER

TEMPORARY TWIN 18" HDPE PIPES FOR CONSTRUCTION ACCESS (MIN. 18" OF COVER)

TEMPORARY DIVERSION CHANNEL

12" DEEP, 2" ANGULAR STONE SF PERMANENT ACCESS ROAD GRADED AT 2% SLOPE TOWARD POND

WLF 1 NO FLAG
WLF 2 NO FLAG

WLF 3

WLF 4

WLF 5

WLF 6

WLF 7

WLF 8

WLF 9

WLF 10

WLF 11

WLF 12

WLF 13

WLF 14

WLF 15

WLF 16

WLF 17

WLF 18

WLF 19

WLF 20

WLF 21

WLF 22

WLF 23

WLF 24

WLF 25

WLF 26

WLF 27

WLF 28

WLF 29

WLF 30

WLF 31

WLF 32

WLF 33

MAP 30A LOT 25

MAP 30A LOT 24

MAP 30A LOT 23

MAP 30A LOT 20

270

274.6

CITY OF BRISTOL

LOWER MEMORIAL POND - DREDGE PLAN
MEMORIAL BLVD. PARK PONDS RESTORATION

PROJ. No.: 02002725.A10
DATE: JANUARY 2004

C.1-02C

SCALE:
 HORZ.: 1" = 40'
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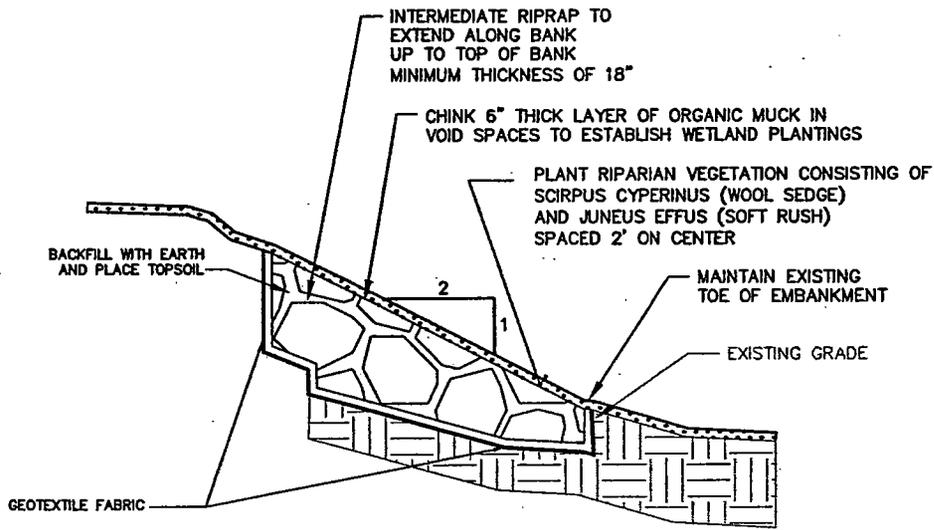
CONNECTICUT

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MS VIEW LOWER 3

MATCHLINE SEE SHEET C.1-02B

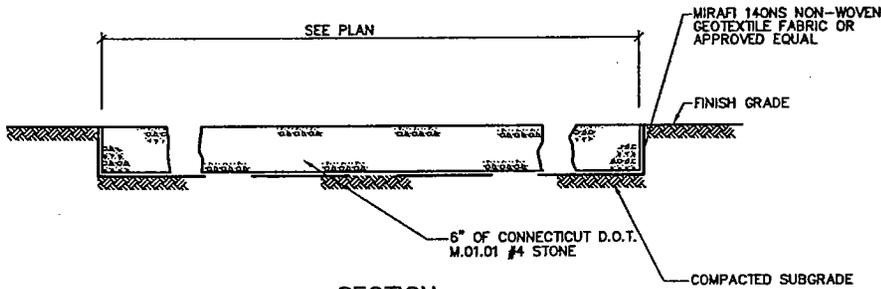
MATCHLINE SEE SHEET C.1-02C

MATCHLINE SEE SHEET C.1-02B
MATCHLINE SEE SHEET C.1-02C

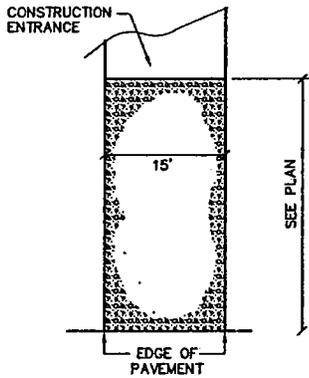


EMBANKMENT STABILIZATION

N.T.S.



SECTION



LOCATION PLAN

ACCESS DRIVE / ANTI-TRACKING APRON

N.T.S.

NOTES:

- 1.) MAINTAIN ANTI-TRACKING PAVEMENT IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
- 2.) ANY PAVED AREAS, ADJACENT TO ANTI-TRACKING APRON SHALL BE SWEEP DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.

LUCS WORLD | VIS VIEW/ROCKWELL | LUMANN/ROCKWELL 905C

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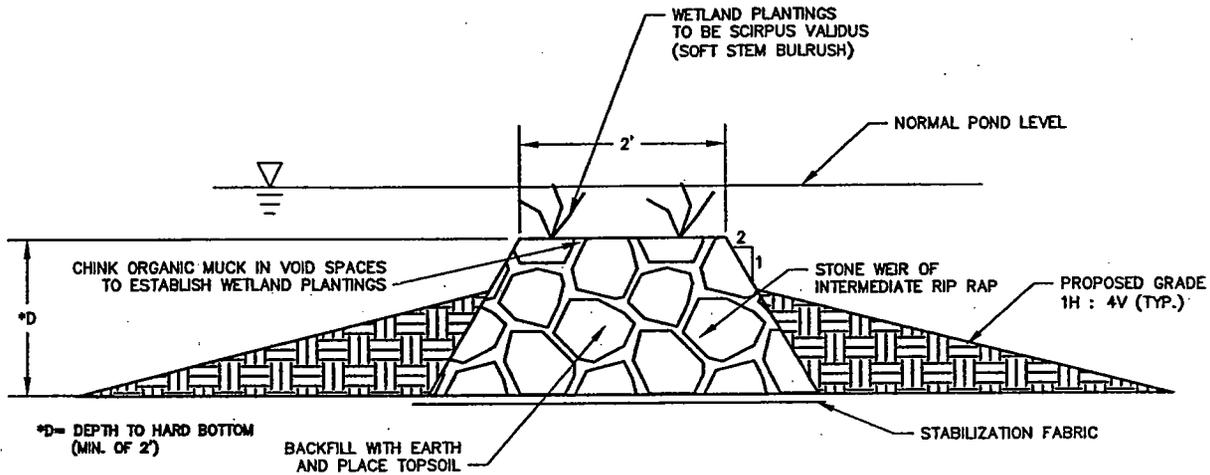


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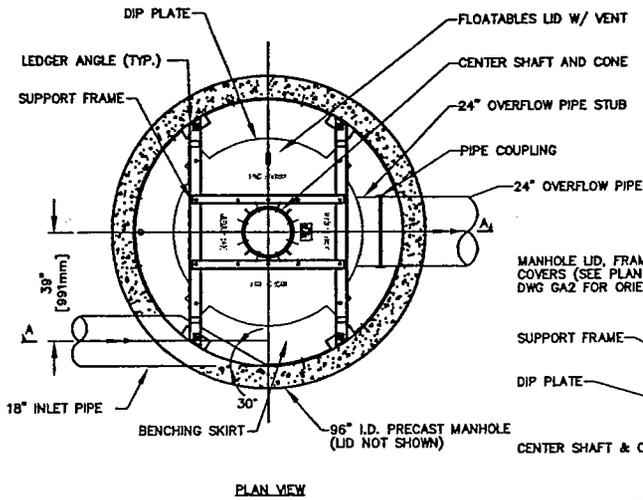
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CONSTRUCTION DETAILS
 MEMORIAL BLVD. PARK PONDS RESTORATION
 BRISTOL CONNECTICUT

PROJ. No.: 02002725A10
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ELEVATION
STONE WEIR
N.T.S.



HYDRAULIC PARAMETERS

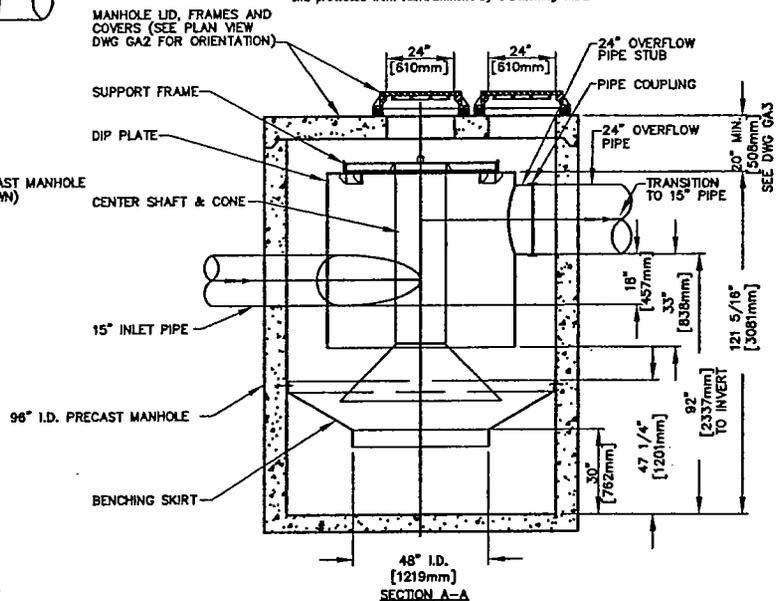
DEPTH OF FLOW IN OVERFLOW PIPE AT 7.0 cfs	11	INCHES
DEPTH OF FLOW IN OVERFLOW PIPE AT 15.0 cfs	19	INCHES
ESTIMATED HEADLOSS* AT 7.0 cfs	9	INCHES
ESTIMATED HEADLOSS* AT 15.0 cfs	23	INCHES

* HEADLOSS IS DEFINED AS THE DIFFERENCE BETWEEN STATIC WATER LEVEL AT THE INLET OF THE DOWNSTREAM DEFENDER TO THE FREE WATER SURFACE IN THE OVERFLOW PIPE, ASSUMING FREE DISCHARGE.

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

1. Performance objectives: To remove 90% of all particles greater than 150 micron (100 mesh) with specific gravity of 2.85 at the design flow listed below, based on a particle size gradation similar to typical D.O.T. road sand having greater than 20% of all particles finer than 300 microns. Additionally, the treatment chamber must be capable of removing greater than 50% of all particles in the range of 300-425 microns at the peak capacity flow rate listed below.
2. Design flow: 7.0 cfs
3. Peak capacity: 15.0 cfs
4. Sediment Storage capacity: 4.85 Cu. yd.
5. Oil storage capacity: 525 Gal.
6. Sediment shall be stored in a zone that is isolated from the main flow path and protected from reentrainment by a benching skirt.



SECTION A-A
SEDIMENT TRAP
N.T.S.

SCALE:

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DATUM:

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GRAPHIC SCALE



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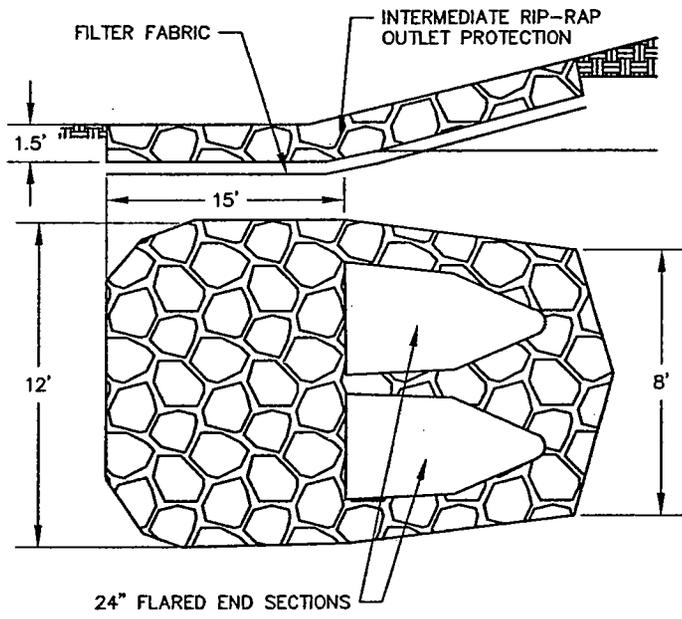
BRISTOL

CONNECTICUT

PROJ. No. 02002725A10
DATE: JANUARY 2004

C5-01B

UCS:WORLD
WAS VIEWER/CANVIEW 2
LUMANN-ROCKWELL 3/03/CB

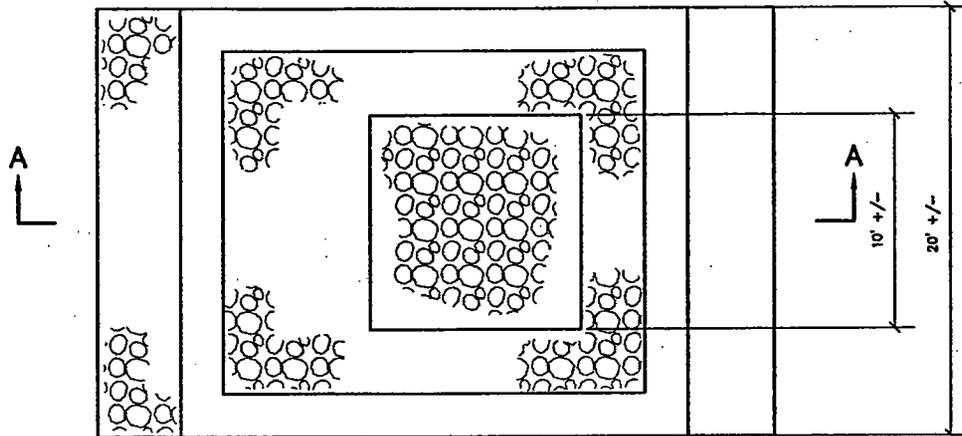


RIP-RAP OUTLET PROTECTION

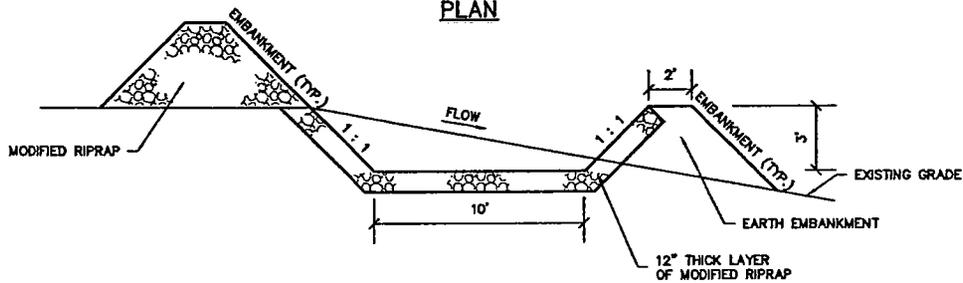
N.T.S.

UC3:WORLD
 MS VIEW/ROCKWELL 2
 CTB:
 LMAN/ROCKWELL 90SC

<p>SCALE:</p> <p>HORZ.: NTS</p> <p>VERT.:</p> <p>DATUM:</p> <p>HORZ.:</p> <p>VERT.:</p> <p>0</p> <p>GRAPHIC SCALE</p>	 <p>FUSS & O'NEILL DESIGN/BUILD SERVICES, LLC 146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 860.546.2469</p> <p>www.FandO.com</p>	<p>CITY OF BRISTOL</p> <p>CONSTRUCTION DETAILS</p> <p>MEMORIAL BLVD. PARK PONDS RESTORATION</p> <p>BRISTOL CONNECTICUT</p>	<p>PROJ. No.: 02002725.A10</p> <p>DATE: JANUARY 2004</p> <p style="font-size: 24pt; font-weight: bold;">C5-01C</p>
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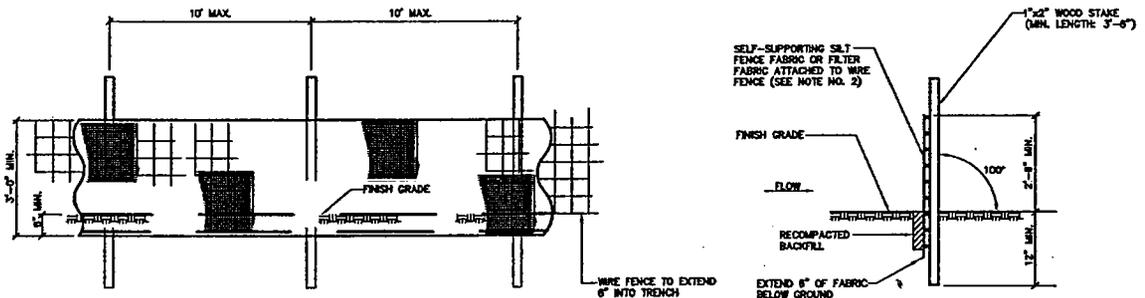
PLAN



SECTION A-A

LOW FLOW SEDIMENT TRAP

SCALE: 1"=5'



ELEVATION

SECTION

NOTES:

- 1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
- 2.) SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 POUNDS STEEL / LIN. FT.) THE MINIMUM POST LENGTH SHALL BE 5'-0".
- 3.) SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

SILT FENCE

N.T.S.

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CITY OF BRISTOL
 EROSION CONTROL DETAILS
 MEMORIAL BLVD. PARK PONDS RESTORATION

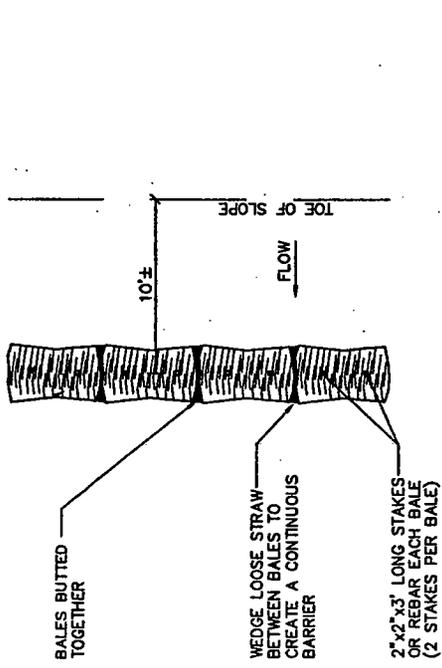
BRISTOL

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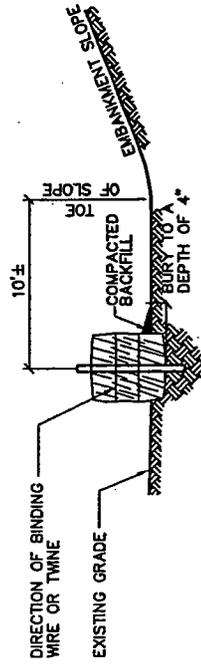
PROJ. No.: 02002725A10
 DATE: JANUARY 2004

C.5-02A

UCS:WORLD
 MS VIEW/ROCKWELL 1
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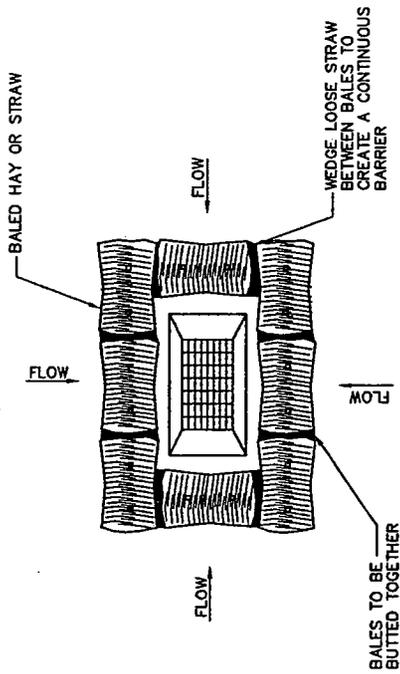


PLAN

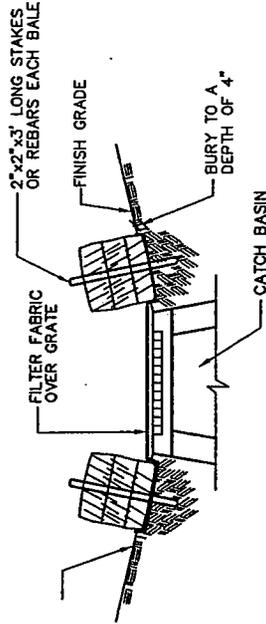


SECTION AT TOE OF SLOPE

HAY BALES
N.T.S.



PLAN



SECTION AT LOW POINT

HAY BALES
N.T.S.

PROJ. NO: 2002725-A10
DATE: JANUARY 2004

C.5-02B

CITY OF BRISTOL
EROSION CONTROL DETAILS
MEMORIAL BLVD. PARK PONDS RESTORATION

FUSS & O'NEILL INC. Consulting Engineers
148 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
860.648.2400



SCALE:	HORZ: N.T.S.
	VERT: N.T.S.
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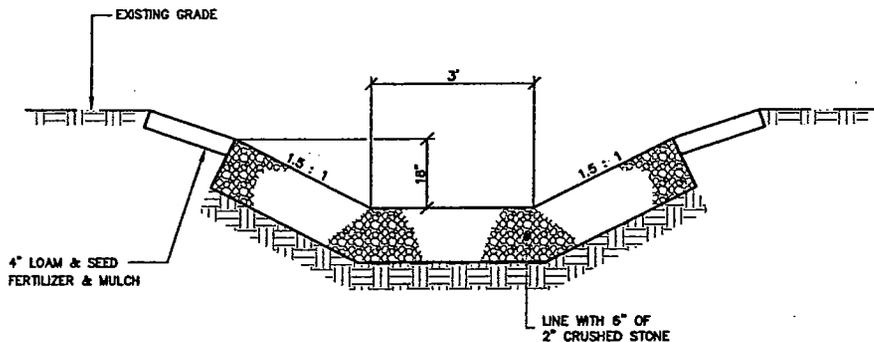
CONNECTICUT

RP15701

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EROSION & SEDIMENT CONTROL NOTES

1. Erosion and sediment control measures will be installed prior to stump removal and construction. The Construction Entrance will be installed before construction traffic into and out of project area begins. Stabilization of all regraded and soil stockpile areas will be initiated and maintained during all phases of construction.
2. All erosion and sediment control measures will be constructed in accordance with standards and specifications of the "Guidelines for Soil Erosion and Sediment Control" regulations. All erosion control measures are to be maintained and upgraded, as required, to achieve proper sediment control during construction. All grade benches shall be kept free of sediment during all phases of development.
3. Additional control measures will be installed during the construction period, if deemed necessary by the Owner or Agents of the Municipality.
4. Catch basins will be protected with hay bale filters throughout the construction period until all disturbed areas are thoroughly stabilized. Filter fabric should be installed under grate opening until pavement is in place and lawn established.
5. Areas to be left bare before finished grading and seeding is achieved, shall receive a temporary seeding of Perennial Rye grass applied to a rate of 2 lbs./1,000 sq. ft. at a depth of 1/2 inch. Limestone (equivalent to be 50 percent calcium plus magnesium oxide) shall be applied as seedbed preparation at a rate of 80 lbs./1,000 sq. ft. Planting seasons shall be March 1 to June 15, and August 1 to October 1. Where grass predominates, fertilize according to a soil test at a minimum application rate of 1 lb. of nitrogen per 1,000 sq. ft.
6. Areas to be left bare before finish grading and seeding outside of planting seasons shall receive an air-dried wood chip mulch, free of coarse matter, treated with 12 lbs. nitrogen per ton, applied at a rate of 185-275 lbs./1,000 sq. ft.
7. If final grading is to be delayed for more than thirty (30) days after land disturbances cease, temporary vegetation or mulch shall be used to stabilize soils.
8. An erosion control line (hay bale check or filter fabric) shall be established about ten (10') feet from toe of slope of proposed fill areas prior to beginning fill installation. Stabilization of slopes in fill areas (using mulch or grass) shall be initiated within thirty (30) days of commencement of fill installation.
9. Stabilization of slopes in cut areas (using mulch or grass) and the installation of control line (hay bale check or filter fabric) at the toe of slope shall be initiated within thirty (30) days of commencement of cut.
10. Sediment removed from control structures will be disposed of in a manner which is consistent with the intent of the plan. All hay bales or silt fence retaining sediment over 1/2 their height shall have the sediment removed and all damaged erosion controls removed and replaced.
11. The Contractor will be assigned the responsibility for implementing this Erosion and Sediment Control Plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, and notifying the proper Municipal agency of any transfer of this responsibility. The Owner shall be responsible for conveying a copy of the Erosion and Sediment Control Plan if the title to the land is transferred.
12. A Soil Scientist or Professional Engineer shall be secured to verify in the field that the controls required by this plan are properly installed and maintained. The inspections of such facilities shall be not less frequently than weekly and within forty-eight (48) hours of any significant rainfall. Following these inspections, a written report shall be prepared, informing the Owner or his agent not less frequently than weekly and the governing municipality not less frequently than monthly of observations, maintenance, and corrective activities undertaken.
13. Stockpiles of soil shall be surrounded by a sediment barrier. Soil stockpiles to be left bare for more than fifteen (15) days shall be stabilized with temporary vegetation or mulch. If soil stockpiles are to remain for more than sixty (60) days, filter fabric shall be used in place of haybales. Side slopes shall not exceed 2:1.
14. The Contractor shall be responsible to control dust and wind erosion throughout the life of his Contract. Dust control shall include, but is not limited to, sprinkling of water on exposed soils and haul roads. Contractor shall control dust to prevent a hazard to traffic on adjacent roadways.
15. Hay bales shall be used only as a temporary measure. Where control measures will be required for longer than sixty (60) days, filter fabric shall be used.



SCALE:	HORZ: NTS
	VERT:
DATUM:	HORZ:
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GRAPHIC SCALE	



FUS & O'NEILL DESIGN/BUILD SERVICES, LLC
146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
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