



33 Waldo Street
Worcester, MA 01608

May 31, 2013

Tel: 508-792-4500
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Wellesley Wetlands Protection Committee
Attn.: Diane Torres, Asst. NRC Director
Natural Resources Commission Office
Wellesley Town Hall
525 Washington Street
Wellesley, MA 02482

www.bscgroup.com

**Re: DEP# 324-565; Request for an Amendment to the Order of Conditions
Academy Brook Restoration Project
Wellesley Country Club, 300 Wellesley Avenue**

Dear Members of the Wetlands Protection Committee:

On behalf of Wellesley Country Club, BSC Group, Incorporated (BSC) is submitting this Request for an Amendment to the Order of Conditions for the Academy Brook Restoration Project. The project was permitted under the Order of Conditions issued on October 11, 2007 and revised on June 16, 2008 by the Wellesley Wetlands Protection Committee (DEP 324-0565). The Order of Conditions was recorded at the Norfolk County Registry of Deeds in Book 25909 Page 214 on July 14, 2008 (attached). The restoration project was completed on Map 32 Lot 2A which is the property of Wellesley Country Club during the winter of 2008/2009.

This request has been prepared in accordance with DEP Wetlands Program Policy 85-4 "Amended Orders" and the Permit Extension Acts of 2010 and 2012. Since the original Order of Conditions was "in effect or existence" during the "tolling period" of the Permit Extension Act (August 15, 2008 through August 15, 2012) the expiration date of the permit has been automatically extended by four years (to October 11, 2014 or June 16, 2015).

Request for a Maintenance Condition

The Wellesley Country Club requests that the Order of Conditions be Amended by adding a condition that allows for periodic maintenance of the restored channel. Since being built in 2008/2009 several reaches (particularly at the upstream end) have continued to be affected by flow/sediment from off-site (photos enclosed). This condition was caused by the Town-installed oversized culvert intended to alleviate upstream flooding conditions. Unfortunately by installing an oversized culvert the problem was exported to the Club's property.

The Club would like to be able to maintain the channel so that it does not degrade to the condition that the project originally addressed. Due to high flows some of the rock check dams (weirs) have moved and need to be re-established. There is a fairly sizeable sediment bar in the first reach of the stream that should be removed to allow for flow/flood capacity.

Engineers
Environmental
Scientists
GIS Consultants
Landscape
Architects
Planners
Surveyors



The second and third reaches and the first in-line pond are beginning to be affected by sedimentation and are losing capacity already. The Club had discussed the need for periodic maintenance in the original filing but there is not a condition in the Order that speaks to it. The Club requests a Condition in Perpetuity that will allow it to maintain the channel to its design capacity and location. Attached are the approved NOI plans which show the configuration of the channel.

Amendment Request Procedure

In accordance with DEP Program Policy 85-4 on May 9th the Wetlands Protection Committee first made a determination that the amendment request represented a change of a relatively minor nature that can be considered as an amendment to the original Final Order of Conditions. Subsequent to that decision the Town provided BSC with a certified abutters' list and BSC prepared and mailed out (certified mail/return receipt requested) a notice to abutters (attached). A Hearing will be held on the matter (currently scheduled for June 20th) and the Committee will vote on the amendment request.

Proposed Work

Reach 1 of the stream was originally designed to slow stream flow coming out of the Town culvert and to allow for some sediment deposition. Portions of the rock check dams (weirs) installed in this reach have moved due to stream flow and need to be re-established using slightly larger rock. Sediment deposited in this reach should be removed before it is transported downstream to deposit in the ponds and culvert. Most of this work can be accomplished during low flow periods in the summer or offseason (November-December). Weir re-establishment and sediment removal could be accomplished by a small backhoe staged on the bank (not in the water). Materials removed would be either beneficially reused on the course or disposed of in an upland location. Some handwork will be required for placing the stones along the weir, and this will require workers in the brook.

Since sediment from this reach would deposit immediately downstream a line of silt fencing or haybales could be placed perpendicular to stream flow downstream of the work zone to help capture the material before it deposited in the inline ponds on the Club's property. The maintenance work envisioned would be completed in one to three days during a dry period, so bypass pumping would not be required. Work would not impact resource areas outside of those areas restored by the original project. The intent is to keep the restored area functioning as designed with a minimum of intervention. If the first reach is maintained it is likely that little will need to be done to downstream reaches. The Applicant is not proposing this work as a regularly scheduled item; rather it will be accomplished on an as-needed basis (likely every 3 to 5 years).

Conclusion and Request

The proposed amendment does not materially change the project or cause additional impact to natural resources. In fact the proposed maintenance condition will allow the restored brook to continue to function and may help prevent the need for more intrusive management of the system in the future. The Wellesley Country Club requests that the Committee find this request to be one which can qualify for an Amendment to the original Order of Conditions. We ask that this issue be heard at your next available meeting.



Sincerely,

Michael J. Toohill, PWS No. 1849
Sr. Environmental Scientist
BSC Group, Inc.

Cc: Martin Ryan – General Manager, Wellesley Country Club
Bill Sansone – Superintendent, Wellesley Country Club

Attach: Abutter Notification and List
Photographs
NOI Plans

**Notification to Abutters Under the
Massachusetts Wetlands Protection Act and the
Wellesley Wetlands Protection Bylaw**

*(this form must be completed and copies sent by certified mail
to all abutters within 300 feet of the site of the project)*

In accordance with the Massachusetts General Laws Chapter 131, Section 40 (the Wetlands Protection Act) and the Wellesley Wetlands Protection Bylaw (Article 44), you are hereby notified of the following:

1. The name of the applicant is: **Wellesley Country Club**
2. The applicant has filed one of the following with the Natural Resources Commission for Wellesley:
 - ☐ A Notice of Intent (Application) seeking permission to remove, fill, dredge, or otherwise alter an area subject to protection under the Wetlands Protection Act and Bylaw.
 - ☒ A request to amend an existing Order of Conditions (DEP File 324-565; "The Academy Brook Restoration Project")
 - ☐ A Notice of Resource Area Delineation seeking to determine the extent of area subject to the Wetlands Protection Act and Bylaw.
3. The address or location of the lot where the activity or delineation is proposed is:
300 Wellesley Avenue
4. The proposed activity is limited to the maintenance of the restored reaches of Academy Brook as it flows through the Club's property downstream of Windsor Road and upstream of Brookside Road.
5. Copies of the above application may be examined at the Wetlands Protection Committee's office, located in the Lower Level of Town Hall, 525 Washington Street, between 8:30 a.m. and 4:00 p.m., Monday through Friday. Copies may be obtained at the office or from the applicant for a fee.
6. Information regarding the date, time, and place of the public hearing may be obtained:
 - a. from the Wetlands Protection Committee's (WPC) website at http://wellesleyma.gov/Pages/WellesleyMA_NRC/wetlands/index or
 - b. by calling the WPC office at 781-431-1019 x 2292 between 8:30 a.m. and 4:00 p.m., Monday through Friday or
 - c. from the applicant's representative.
7. For additional information please contact the WPC's Secretary at 781-431-1019 x2294, or the applicant's representative:
Michael Toohill, BSC Group, 33 Waldo Street, Worcester, MA 01608, 617-896-4519

PLEASE NOTE:

1. Notice of the public hearing, including its date, time, and place, will be published at least five business days in advance in the Wellesley Townsman, Metrowest Daily News, or other regularly circulated local newspaper and will be posted in the Wellesley Town Hall not less than 48 hours before the time of the hearing.
2. For more information about this application, the Wetlands Protection Act, or Wellesley's Wetlands Protection Bylaw please contact the WPC or the Massachusetts Department of Environmental Protection (DEP) Northeast Regional Office at 978-694-3200

Commonwealth of Massachusetts
DCR/MWRA
251 Causeway St.
Boston, MA 02114

White, Robert E
408 Wellesley Ave
Wellesley, MA 02481

Balanda, Francis J, Jr
414 Wellesley Avenue
Wellesley, MA 02481

Murphy, Matthew &
Zizic, Kristine
200 Oakland Street
Wellesley, MA 02481

Murphy, Matthew &
Zizic, Kristine
200 Oakland Street
Wellesley, MA 02482

Town of Wellesley
Water Department
4 Municipal Way
Wellesley, MA 02481

Town of Wellesley
Water Department
4 Municipal Way
Wellesley, MA 02481

Levinsky, Elena
84 Standish Road
Wellesley, MA 02481

Fotiadis, Konstantinos & Efi
182 Oakland Street
Wellesley, MA 02481

McKay, Dennis L & Pace Susan
A
186 Oakland Street
Wellesley, MA 02481

Kelly, Daniel & Patricia
419 Charles River St.
Needham, MA 02492

Trammell, Mary Metzner
Trammell, Talbot W
194 Oakland Street
Wellesley, MA 02481

Gifford, Carl C & Carolyn S
196 Oakland Street
Wellesley, MA 02481

Wellesley Country Club
300 Wellesley Ave
Wellesley, MA 02481

Wellesley Country Club
300 Wellesley Ave
Wellesley, MA 02481

Sagan, Robert M & Helen B
392 Wellesley Avenue
Wellesley, MA 02481

Doyle, Vida A
396 Wellesley Avenue
Wellesley, MA 02481

Kumar, Vinay &
Chandhok, Bela
400 Wellesley Avenue
Wellesley, MA 02481

Commonwealth of Massachusetts
DCR/MWRA
251 Causeway St.
Boston, MA 02114

Galligan, E William
18 Grantland Road
Wellesley, MA 02481

Becker, Edward D & Kathleen A
144 Oakland Street
Wellesley, MA 02481

Brown, Peter R & Deborah Robi
148 Oakland St.
Wellesley, MA 02481

Foster, D Thorp & Trina P
150 Oakland Street
Wellesley, MA 02481

Richardson, John M &
Sibley, Ellen
152 Oakland Street
Wellesley, MA 02481

Napier, Dennis Jr, Trustee
Napier Family Trust
162 Oakland Street
Wellesley, MA 02481

Fragasso, Philip M &
Robert, Laura M
166 Oakland Street
Wellesley, MA 02481

Tung, Raymond K & Bakke L
170 Oakland Street
Wellesley, MA 02481

Fraser, F Lester & Nancy L,
Trustees
Archibald Gahen Nominee Trust
178 Oakland St.
Wellesley, MA 02481

McKenzie, Esther H, Trustee
Esther H McKenzie Liv Trust
Agrmnt
85 Standish Road
Wellesley, MA 02481

Tuff, Geoffrey S & Martha
79 Standish Road
Wellesley, MA 02481

McNulty, Richard & Jane
179 Oakland Street
Wellesley, MA 02481

Furie, Bruce & Barbara C
175 Oakland Street
Wellesley, MA 02481

Marsh, George E & Merrilyn D
167 Oakland Street
Wellesley, MA 02481

Landers, David O & Laurel F
161 Oakland Street
Wellesley, MA 02481

Barrack, William P &
Barrack, Katherine W
151 Oakland Street
Wellesley, MA 02481

Roberts, Kenneth D. &
Caroline D.
72 Windsor Road
Wellesley, MA 02481

Turano, Anthony, Jr & Ursula
R
58 Lincoln Road
Wellesley, MA 02481

Prague & Somerville Trustees
Parizeau Wellesley Realty
Trust
60 State Street
Boston, MA 02109

Savarese, James & Eileen R
69 Windsor Road
Wellesley, MA 02481

Young, Michael & Debra
66 Windsor Road
Wellesley, MA 02481

Town of Wellesley
Tax Title
525 Washington St.
Wellesley, MA 02482

Roberts, Caroline D
72 Windsor Road
Wellesley, MA 02481

Roberts, Kenneth D & Caroline
D
72 Windsor Road
Wellesley, MA 02481

Prague & Somerville, Trustees
Parizeau Wellesley Realty
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60 State Street
Boston, MA 02109

Connelly, Thomas H & Cynthia
M
65 Lincoln Road
Wellesley, MA 02481

Ayoub, George A &
Anis, Nadine Wafik
61 Lincoln Road
Wellesley, MA 02481

Kahn, Richard D, Trustee
L57 Realty Trust
57 Lincoln Road
Wellesley, MA 02481

Rahaman, Soroya M
8 Lincoln Circle
Wellesley, MA 02481

Gates, Matthijs A & Anne-
Marie
10 Lincoln Circle
Wellesley, MA 02481

Wellesley Country Club
300 Wellesley Ave
Wellesley, MA 02481

Commonwealth of Massachusetts
DCR/MWRA
251 Causeway St.
Boston, MA 02114

Town of Wellesley
Natural Resources Commission
525 Washington St.
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Teschke, Jeffrey J &
Christina A
7 Lincoln Circle
Wellesley, MA 02481

Gold, Joshua P & Rebecca P
39 Inverness Road
Wellesley, MA 02481

Adams, John F, Jr &
Stimmermacher, Jane
3 Lincoln Circle
Wellesley, MA 02481

Richardson, Lynford M &
Richardson, Rosemarie B
65 Windsor Road
Wellesley, MA 02481

Young, Michael J & Debra
66 Windsor Road
Wellesley, MA 02481

Ryan, Susan E
29 Lincoln Road
Wellesley, MA 02481

Fenton, Colin P & Audrey M
20 Inverness Road
Wellesley, MA 02481

Smith, Timothy William &
Smith, Mary Kathryn
6 Lincoln Road
Wellesley, MA 02481

Houston, Bruce J &
Molloy, Amy L
12 Lincoln Road
Wellesley, MA 02481

Holding, William B, Jr &
Pamela R
24 Lincoln Road
Wellesley, MA 02481

Asnis, Peter & Brooke
30 Lincoln Road
Wellesley, MA 02481

Der, Kenneth & Pearl
38 Lincoln Road
Wellesley, MA 02481

Starr, Ian M & Natalie
42 Lincoln Road
Wellesley, MA 02481

Boyle, Jeffrey H & Regina M
46 Lincoln Road
Wellesley, MA 02481

Prague & Somerville, Trustees
Parizeau Wellesley Realty
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Boston, MA 02109

Costello, John
25 Lincoln Road
Wellesley, MA 02481

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525 Washington St.
Wellesley, MA 02482

Corsini, Russell V, Jr &
Corsini, Althea H, Trustees
19 Lincoln Road
Wellesley, MA 02481

Flynn, Keenan S
15 Lincoln Road
Wellesley, MA 02481

Smith, Amie Witten
11 Lincoln Road
Wellesley, MA 02481

Lamoureux, Robert R &
Saber, Nina F
7 Lincoln Road
Wellesley, MA 02481

Keiser, Thomas C & Victoria
Rigsby
38 Inverness Road
Wellesley, MA 02481

Polcari, Gerald A, Trustee
Kandahar Inverness Nominee
Trust
44 Inverness Road
Wellesley, MA 02481

Town of Wellesley
Natural Resources Department
525 Washington St.
Wellesley, MA 02482

Francis, Jonathan H & Roberta
165 Forest Street
Wellesley, MA 02481

Woodward, Craig M & Julia
161 Forest Street
Wellesley, MA 02481

Parker, Randy J & Caren B,
Trstes
Randy J Parker 1994 Trust
134 Abbott Road
Wellesley, MA 02481

Kaiser, William S
23 Inverness Road
Wellesley, MA 02481

Davitt, George &
Ceremsak, Linda A
140 Abbott Road
Wellesley, MA 02481

Gilbert-Bono, Elizabeth A,
Trstee
139 Abbott Road Realty Trust
139 Abbott Road
Wellesley, MA 02481

Marx, Alexander R & Melissa S
164 Forest St.
Wellesley, MA 02481

LaPoint, Kathleen M
155 Forest Street
Wellesley, MA 02481

Ahern, Thomas P &
Bernier, Nichole
5 Hewins Farm Road
Wellesley, MA 02481

Laxminarain, Prattipati &
Narain, Charu
3 Hewins Farm Road
Wellesley, MA 02481

Frechette, Peter & Eleanor F
1 Hewins Farm Road
Wellesley, MA 02481

Vaccaro, Karen E
280 Wellesley Avenue
Wellesley, MA 02481

Costa, Robert A & Anna Maria
173 Forest Street
Wellesley, MA 02481

Aldrich, Hope
169 Forest Street
Wellesley, MA 02481

Babson College
Shelley Kaplan
231 Forest Street
Babson Park, MA 02457



Photo 1 Sedimentation immediately downstream of Town culvert in Reach 1



Photo 2 Sedimentation and weir displacement immediately downstream of Town culvert in Reach 1



Photo 3 Sedimentation and weir displacement immediately downstream of Town culvert in Reach 1



Photo 4 Sediment point bar upstream of first culvert in Reach 1



			REQUEST FOR AN AMMENDMENT TO THE ORDER OF CONDITIONS DEP 324-565 ACADEMY BROOK RESTORATION PROJECT WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS
PHOTOGRAPHER	DATE	CHECKED	PROJECT NO.
MJT	7-30-2012		89514.03



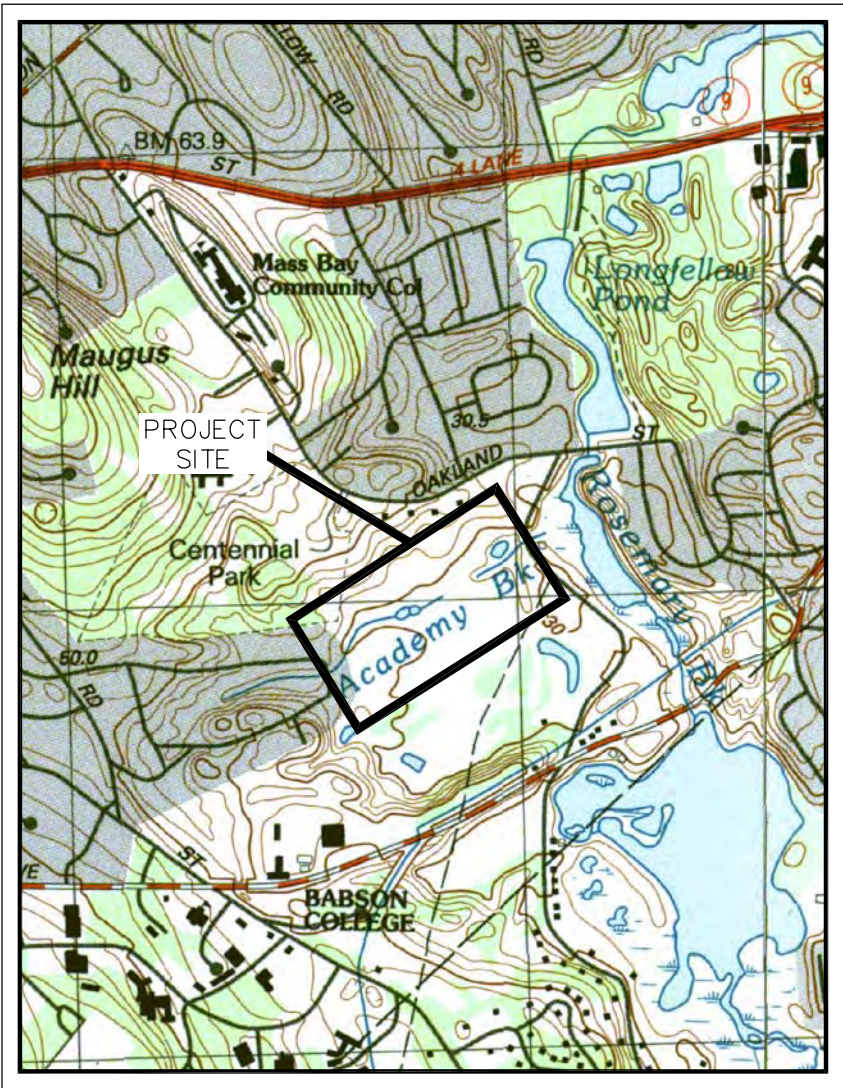
Photo 5 Sediment in Reach 2



Photo 6 Pond in Reach 4

			REQUEST FOR AN AMMENDMENT TO THE ORDER OF CONDITIONS DEP 324-565 ACADEMY BROOK RESTORATION PROJECT WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS
PHOTOGRAPHER	DATE	CHECKED	PROJECT No.
MJT	7-30-2012		89514.03

WELLESLEY COUNTRY CLUB ACADEMY BROOK STREAM RESTORATION



OWNER:
Wellesley Country Club
294 Wellesley Avenue
Wellesley, Massachusetts 02481



ENGINEER:
ENSR Corporation
2 Technology Park Drive
Westford, MA 01886



LIST OF DRAWINGS

- G-1 Title Sheet
- G-2 General Notes
- G-3 Existing Conditions
- G-4 Existing Conditions
- C-1 Grading Plan
- C-2 Grading Plan
- C-3 Riparian Enhancement Areas
- C-4 Details

DRAWING NUMBER: G-1		SHEET NUMBER: 1 of 8	
TITLE SHEET ACADEMY BROOK STREAM RESTORATION WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS 02481			
SCALE: AS SHOWN	DATE: 09/06/2007	PROJECT NUMBER: 10313-003	
ENSR AECOM			
2 TECHNOLOGY PARK DRIVE WESTFORD, MASSACHUSETTS 01886 PHONE: (978) 569-3000 FAX: (978) 569-3100 WEB: HTTP://WWW.ENSR.COM			
DESIGNED BY: JSA	DRAWN BY: JSA	CHECKED BY: MT	APPROVED BY: JSA
NO.:	DESCRIPTION:	DATE:	BY:
A	REVISED PER AGENT COMMENTS	9/13/07	
B	ADDITION OF GRAPHIC SCALE	12/11/07	
C	REDUCTION TO 11x17	12/26/07	
REVISIONS			

FILENAME: J:\NSP\Projects\100\300 to 399\10313 Wellesley Country Club\10313-Academy Brook\Working\JSA\WDC_02004_4.dwg

LEGEND

EXISTING		PROPOSED
	CONTOUR – MINOR	99
	CONTOUR – MAJOR	100
	WETLANDS	
	200 FOOT RIVER FRONT AREA	
	100 FOOT RIVER FRONT AREA	
	100 FOOT WETLAND BUFFER ZONE	
	TOP OF BANK	
	TREE LINE	
	SITE PHOTOGRAPHS	

EROSION CONTROL NOTES

- CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN MASSACHUSETTS (HEREAFTER REFERRED TO AS MA GUIDELINES).
- PRIOR TO THE START OF CONSTRUCTION, HAY BALES AND SILTATION FENCING SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AND AT, OR JUST BELOW, THE LIMITS OF POTENTIAL DISTURBANCE, AS SHOWN ON THE PLANS.
- THE WETLAND PROTECTION COMMITTEE (WPC) AGENT WILL BE INFORMED IN WRITING WHEN INSTALLATION OF THE EROSION CONTROLS IS COMPLETE AND WILL INSPECT THE CONTROLS WITHIN 3 BUSINESS DAYS OF RECEIVING WRITTEN NOTIFICATION . NO WORK SHALL PROCEED UNTIL THE CONSERVATION COMMISSION OR ITS AGENT HAS INSPECTED AND APPROVED THE INSTALLATION OF THE EROSION BARRIERS.
- THE WPC AGENT WILL BE NOTIFIED AT LEAST 2 BUSINESS DAYS BEFORE SITE PREPARATION AND CONSTRUCTION WORK BEGINS.
- AT A MINIMUM, THE HAY BALES AND SILTATION FENCING SHALL BE INSPECTED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT. SEDIMENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN THE SEDIMENT REACHES A DEPTH OF 6 INCHES OR HALF THE HEIGHT OF THE SILT FENCE, WHICHEVER IS LESS. THE REMOVED SEDIMENT SHALL BE REGRADED ONTO THE SITE.
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED BY AUGUST 15 OF THE YEAR OF THE CONSTRUCTION, THE CONTRACTOR SHALL GRADE AND SMOOTH THESE AREAS AND PLANT THEM WITH TEMPORARY SEEDING, IN ACCORDANCE WITH MA GUIDELINES.
- FOLLOWING SEED BED PREPARATION, A PREMIUM GRADE GRASS SEED MIXTURE, APPROVED BY OWNER, SHALL BE APPLIED TO DISTURBED AREAS.
- HAY MULCH SHALL BE APPLIED TO THE NEW SEEDING TO HASTEN GERMINATION AND TO PROTECT THE NEW SEEDBEDS FROM EROSION DURING THE ESTABLISHMENT PERIOD. THE MULCH APPLICATION RATE SHALL BE 1.5 TO 2 TONS PER ACRE.
- SILT FENCE BARRIERS SHALL REMAIN IN PLACE UNTIL SEEDINGS HAVE BECOME AT LEAST 75% ESTABLISHED AND THEN REMOVED. NO EROSION CONTROL MAY BE REMOVED WITHOUT THE APPROVAL OF THE WPC OR ITS AGENT. THE AREA DISTURBED BY REMOVAL SHALL BE FINE GRADED, AND SEEDED WITH PERMANENT GRASS MIXTURE AS DESCRIBED ABOVE.
- MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, A VISUAL INSPECTION SHALL BE MADE OF ALL INSTALLED EROSION CONTROL MEASURES AND REPAIRS SHALL BE CONDUCTED TO ENSURE THEIR CONTINUING FUNCTION AS DESIGNED. FOLLOWING THE FINAL SEEDING, THE SITE SHALL BE INSPECTED EVERY THIRTY DAYS UNTIL THE SEEDINGS HAVE BEEN 95% ESTABLISHED. IF EROSION OCCURS BEFORE THE SEEDINGS HAVE BECOME ESTABLISHED OR IF THERE ARE AREAS WHERE GROWTH IS INSUFFICIENT, THESE AREAS SHALL BE REGRADED AND RESEEDD AS REQUIRED, AND FOLLOW-UP INSPECTIONS SHALL BE MADE.

GENERAL NOTES

- THESE CONSTRUCTION DRAWINGS ARE ONLY A COMPONENT OF THE CONTRACT DOCUMENTS FOR THE WELLESLEY COUNTRY CLUB ACADEMY BROOK STREAM RESTORATION PROJECT. THE CONTRACT DOCUMENTS FOR THIS PROJECT CONSIST OF THE CONSTRUCTION DRAWINGS, BID DOCUMENTS AND TECHNICAL SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIREMENTS AND FOR PERFORMING ALL ACTIVITIES AS IDENTIFIED IN ANY AND ALL OF THE CONTRACT DOCUMENT COMPONENTS.
- ALL REFERENCED DATUM ON THE CONSTRUCTION DRAWINGS IS IN NGVD 29.
- ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE SUBJECT TO EROSION (EITHER NEWLY FILLED OR EXCAVATED), ALL AREAS USED FOR CONTRACTOR STAGING AND ALL SOIL STOCKPILE AREAS ARE TO BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE WORK AREA BOTH DURING AND AFTER THE HOURS OF CONSTRUCTION AND UNTIL THE SITE IS RESTORED. SECURITY MEASURES MAY INCLUDE TEMPORARY CONSTRUCTION FENCING, SIGNS AND, IF NECESSARY, BARRICADES TO LIMIT SITE ACCESS. ADDITIONAL MEASURES MAY BE INSTALLED AT THE DIRECTION OF THE ENGINEER IN ORDER TO ENSURE A SAFE WORKING ENVIRONMENT.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION RELATED ACTIVITIES WITH THE WELLESLEY COUNTRY CLUB'S GOLF COURSE SUPERINTENDENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PROPERTY LINES, VERTICAL DATUM, AND LOCATIONS OF UTILITIES, AND OTHER EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE PRIOR TO PERFORMING ANY EXCAVATION/REGRADEING ACTIVITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF ANY TEMPORARY UTILITIES REQUIRED TO FACILITATE CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO: ELECTRICITY, WATER, TELEPHONE/FAX, ETC.
- THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF ALL ENVIRONMENTAL PERMITS ISSUED FOR THIS PROJECT. REFER TO THE SPECIFICATIONS FOR FURTHER INFORMATION REGARDING PERMITS.

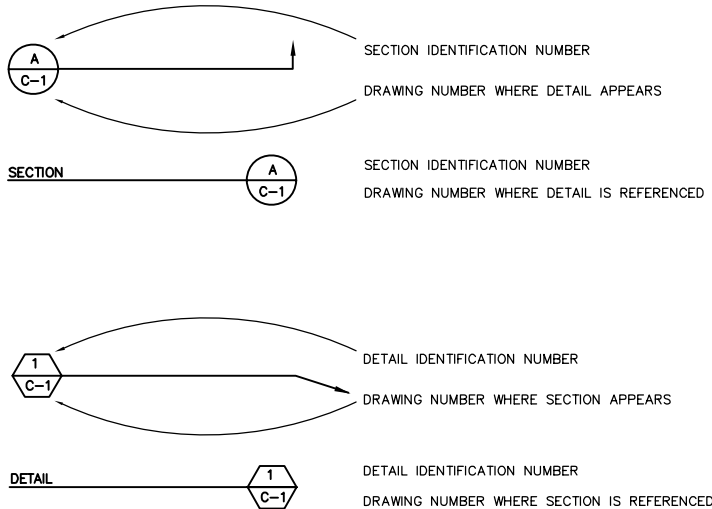
CONSTRUCTION SCENARIO AND SCHEDULE

ACADEMY BROOK STREAM RESTORATION IS PROPOSED TO BE CONSTRUCTED IN AN UPSTREAM TO DOWNSTREAM FASHION BEGINNING IN THE LATE FALL OF 2007 WHILE STREAMFLOW IS LOW. WORK IS PROPOSED TO BE "IN THE DRY", SO A SERIES OF TEMPORARY COFFERDAMS OR WEIRS IS PROPOSED TO ALLOW A REACH TO BE DEWATERED AND WORKED ON. A TEMPORARY COFFERDAM OR BLOCKAGE OF AN UPSTREAM CULVERT WOULD PREVENT STREAMFLOW FROM ENTERING THE CONSTRUCTION ZONE, AND A MUD PUMP WOULD BE PLACED UPSTREAM OF THE BLOCKAGE. STREAM FLOW WOULD BE BYPASS PUMPED TO THE NEXT REACH DOWNSTREAM. THE TWO PONDS WOULD BE USED AS SEDIMENTATION BASINS, AND THE POND DREDGING WOULD BE ACCOMPLISHED AFTER THE BANK WORK ON THE STREAM SEGMENTS HAD BEEN COMPLETED AND STABILIZED. FOLLOWING POND DREDGING AND POND BANK RESTORATION THE THREE RIPARIAN IMPROVEMENT AREAS WOULD BE CONSTRUCTED AND PLANTED.

THE FOLLOWING IS A SUMMARY OF THE PROPOSED CONSTRUCTION SEQUENCE FOR THE PROJECT:

- INSTALL SEDIMENT & EROSION CONTROLS INCLUDING DREDGED MATERIAL DEWATERING AREA
- INSTALL COFFERDAM, WEIR, AND OR INFLATABLE BLADDERS AS APPROPRIATE TO CONTROL STREAMFLOW IN THE WORK ZONE
- INSTALL PUMPING EQUIPMENT AND DEWATER THE WORK ZONE
- SHAPE THE STREAM BED AND BANKS
- INSTALL SAND, TRAP ROCK, AND RIVER STONE
- INSTALL GEOTEXTILE, LOAM, AND SEED/SOD THE AREA
- REPEAT 2 THROUGH 6 FOR EACH REACH UNTIL REACH 4 (POND 1)
- INSTALL UPSTREAM COFFERDAM AND REMOVE ALL FLASHBOARDS FROM POND 1 CONTROL STRUCTURE TO LOWER WATER SURFACE ELEVATION.
- INSTALL PUMP AROUND EQUIPMENT
- DREDGE POND 1 AND FINE GRADE TO FINAL CONTOURS
- REPEAT STEPS 2 THROUGH 6 FOR REACH 5
- WATER JET CLEAN (AND OR PIG CLEAN) REACH 6
- REPEAT STEPS 2 THROUGH 6 FOR REACH 7 AND CONSTRUCT NEW CHANNEL TO POND 2
- INSTALL UPSTREAM AND DOWNSTREAM COFFERDAMS AND PUMP DOWN POND 2
- DREDGE POND 2 AND FINE GRADE TO FINAL CONTOURS
- FINE GRADE ALL HAUL AREAS AND ESTABLISH WINTER EROSION CONTROLS
- EXCAVATE AND PLANT RIPARIAN ZONES 1 THROUGH 3 (SPRING 2008)
- RE--SPREAD TOPSOIL ON DISTURBED AREAS AND SEED (SPRING 2008)
- CLEAN UP SITE, LEAVE REMAINING EROSION AND SEDIMENTATION DEVICES IN PLACE UNTIL SITE IS FULLY STABILIZED

VIEW MARKERS & IDENTIFICATION



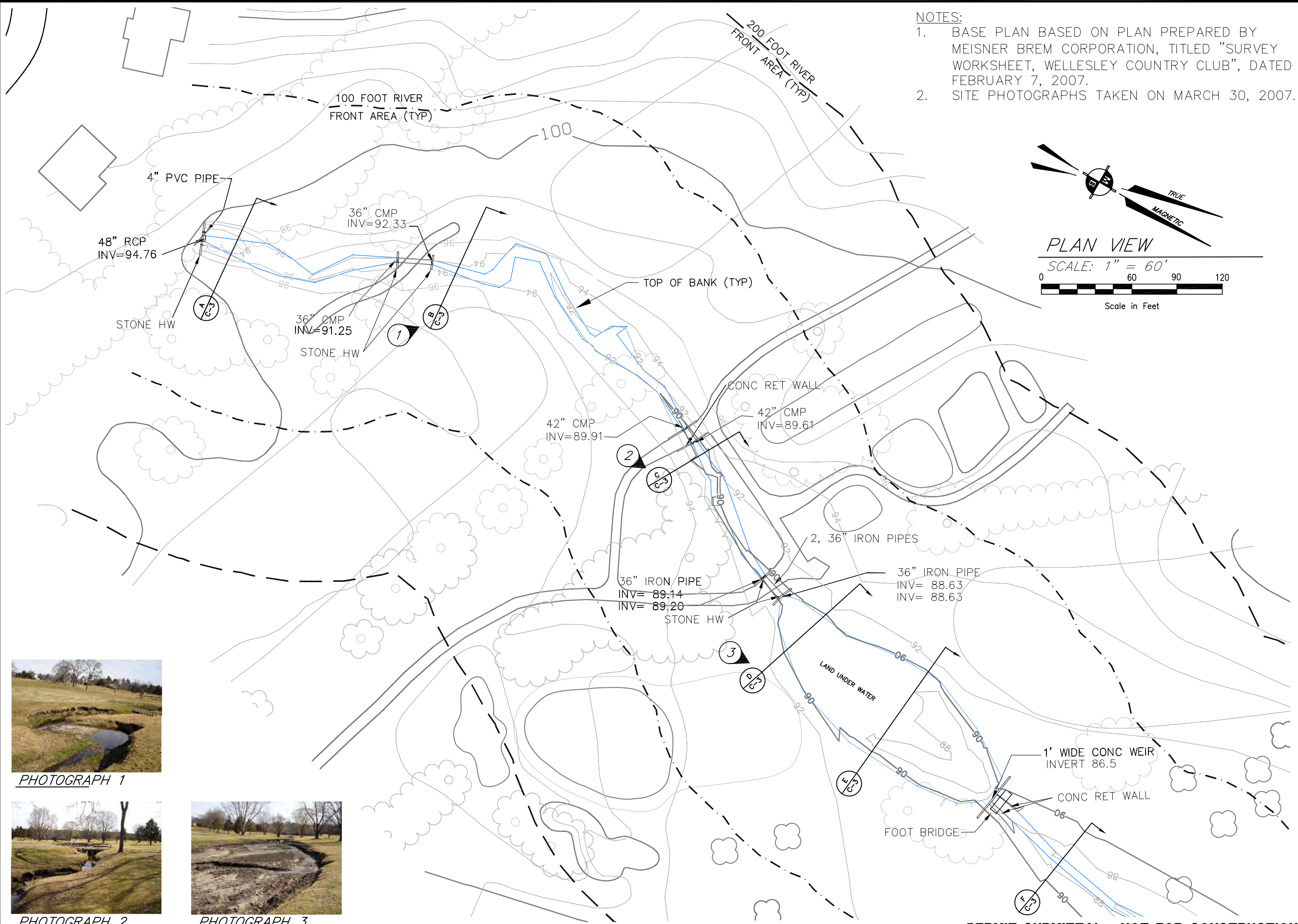
DESIGNED BY: USA		DRAWN BY: USA	
CHECKED BY: MT		APPROVED BY: USA	
NO.:		DATE:	
DESCRIPTION:		BY:	
REVISIONS			
DRAWING NUMBER:			
SHEET NUMBER:			
2 of 8			

GENERAL NOTES ACADEMY BROOK STREAM RESTORATION WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS 02481		PROJECT NUMBER: 10313-003	
SCALE: AS SHOWN		DATE: 09/06/2007	

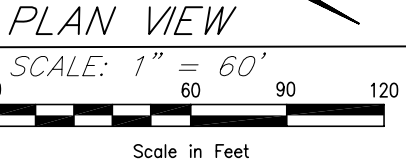
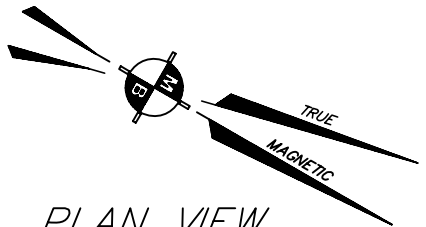
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PERMIT SUBMITTAL - NOT FOR CONSTRUCTION	

2 TECHNOLOGY PARK DRIVE WESTFORD, MASSACHUSETTS 01886 PHONE: (978) 569-3000 FAX: (978) 569-3100 WEB: HTTP://WWW.ENSR.COM	
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FILENAME: J:\ESP\Projects\P100\300 to 399\10313 Wellesley Country Club\10313-006 Academy Brook\Working_JSA\WCC_v2004_4.dwg



- NOTES:
1. BASE PLAN BASED ON PLAN PREPARED BY MEISNER BREM CORPORATION, TITLED "SURVEY WORKSHEET, WELLESLEY COUNTRY CLUB", DATED FEBRUARY 7, 2007.
 2. SITE PHOTOGRAPHS TAKEN ON MARCH 30, 2007.



PHOTOGRAPH 1



PHOTOGRAPH 2



PHOTOGRAPH 3

DESIGNED BY:	NO.:	DESCRIPTION:	DATE:	BY:
JSA	B	ADD SCALE	12/11/07	
JSA	C	REDUCE SIZE	12/26/07	
MT				
JSA				

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ENSR CORPORATION

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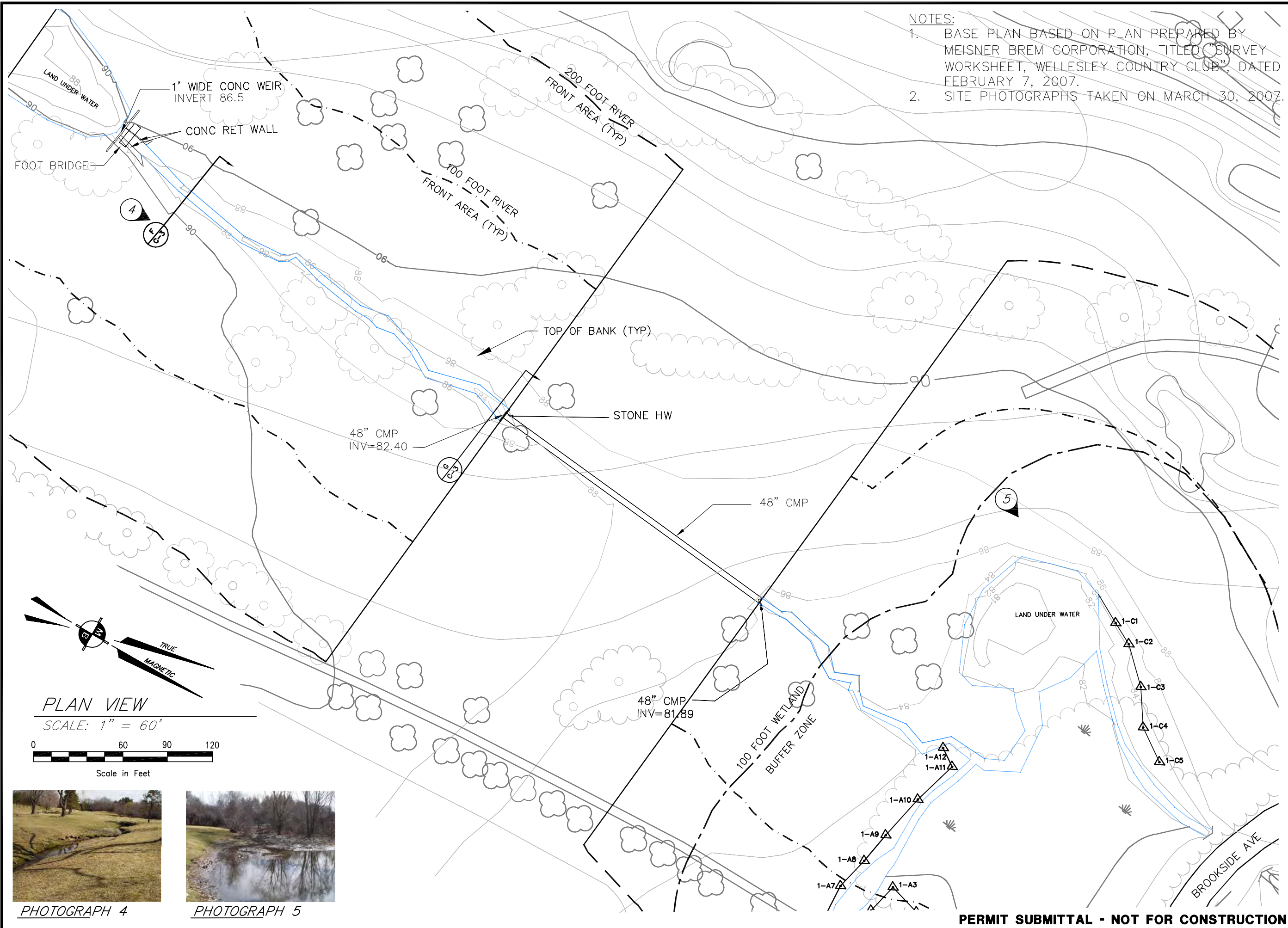
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EXISTING CONDITIONS		
ACADEMY BROOK STREAM RESTORATION		
WELLESLEY COUNTRY CLUB		
WELLESLEY, MASSACHUSETTS 02481		
SCALE: 1" = 60'	DATE: 09/06/07	PROJECT NUMBER: 10313-003

FIGURE NUMBER:
G-3
SHEET NUMBER:
3 of 8

PERMIT SUBMITTAL - NOT FOR CONSTRUCTION

FILENAME: J:\ESP\Projects\B100\300 to 399\10313 Wellesley Country Club\10313-006 Academy Brook\Working_JSA_WCC_v2004_4.dwg



DESIGNED BY:		REVISIONS	
JSA		NO.	DESCRIPTION:
JSA		B	ADD SCALE
JSA		C	REDUCE SIZE
MT		CHECKED BY:	
JSA		APPROVED BY:	
		DATE:	
		12/11/07	
		12/26/07	

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FAX: (978) 589-3100
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EXISTING CONDITIONS		PROJECT NUMBER:	
ACADEMY BROOK STREAM RESTORATION		10313-003	
WELLESLEY COUNTRY CLUB			
WELLESLEY, MASSACHUSETTS 02481			
SCALE:	DATE:	DATE:	DATE:
1" = 60'	09/06/07		

FIGURE NUMBER:	
G-4	
SHEET NUMBER:	
4 of 8	

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> ENSR CORPORATION WESTFORD, MASSACHUSETTS 01886 PHONE: (978) 589-3000 FAX: (978) 589-3100 WEB: HTTP://WWW.ENSR.COM </div> <div style="text-align: center;"> PROPOSED CONDITIONS ACADEMY BROOK STREAM RESTORATION WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS 02481 </div> </div>	
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PROPOSED CONDITIONS
ACADEMY BROOK STREAM RESTORATION
WELLESLEY COUNTRY CLUB
WELLESLEY, MASSACHUSETTS 02481

FIGURE NUMBER:	
C-1	
SHEET NUMBER:	
5 of 8	

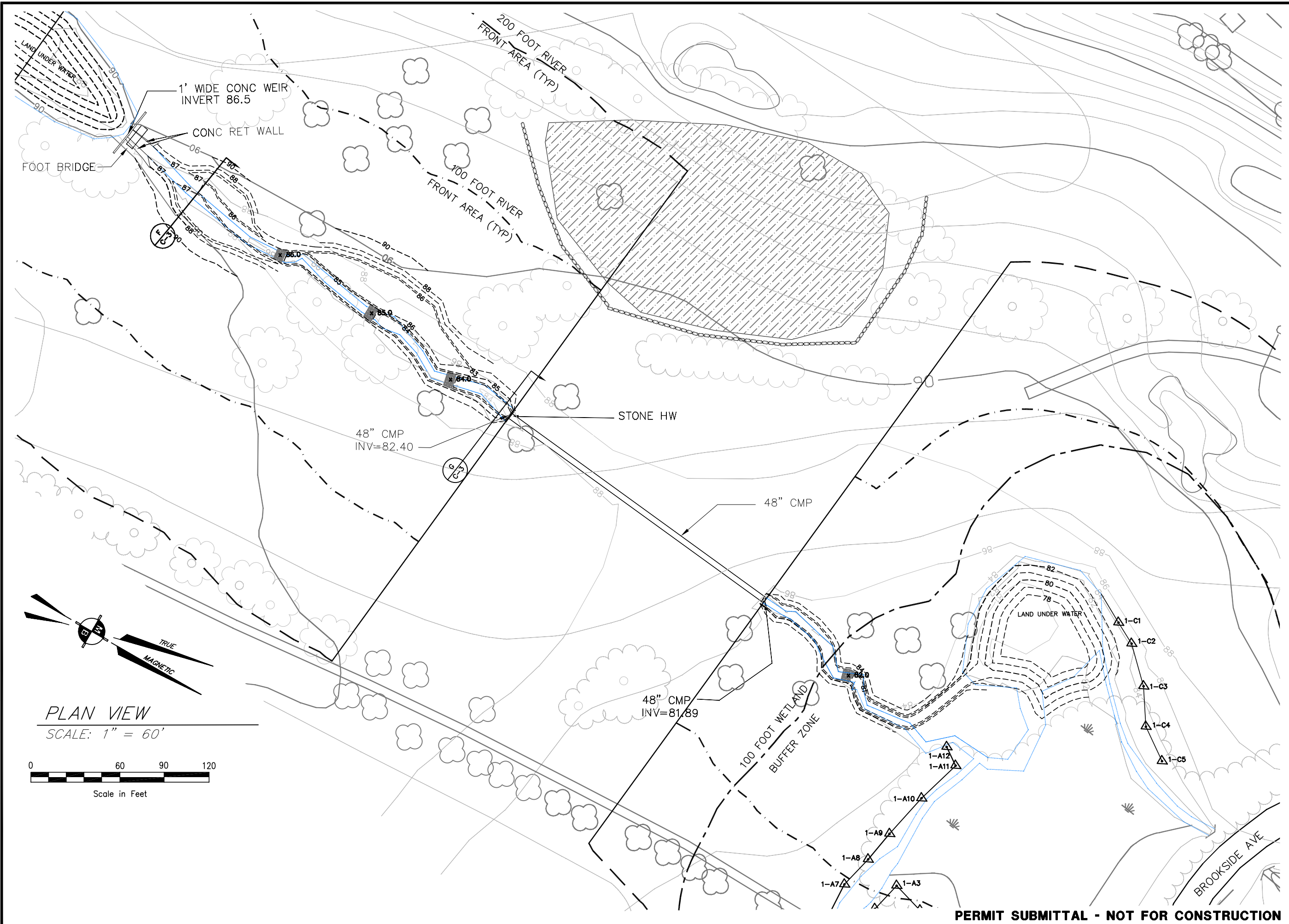
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DRAWN BY:		C REDUCE SIZE	
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CHECKED BY:		MT	
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PROPOSED CONDITIONS
ACADEMY BROOK STREAM RESTORATION
WELLESLEY COUNTRY CLUB
WELLESLEY, MASSACHUSETTS 02481

DESIGNED BY:		JSA	
NO.:		B ADD SCALE	
DRAWN BY:		C REDUCE SIZE	
JSA		12/26/07	
CHECKED BY:		MT	
APPROVED BY:		JSA	

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REVISIONS			
NO.	DESCRIPTION	DATE	BY
B	ADD SCALE	12/11/07	
C	REDUCE SIZE	12/26/07	
DESIGNED BY: JSA			
DRAWN BY: JSA			
CHECKED BY: MT			
APPROVED BY: JSA			

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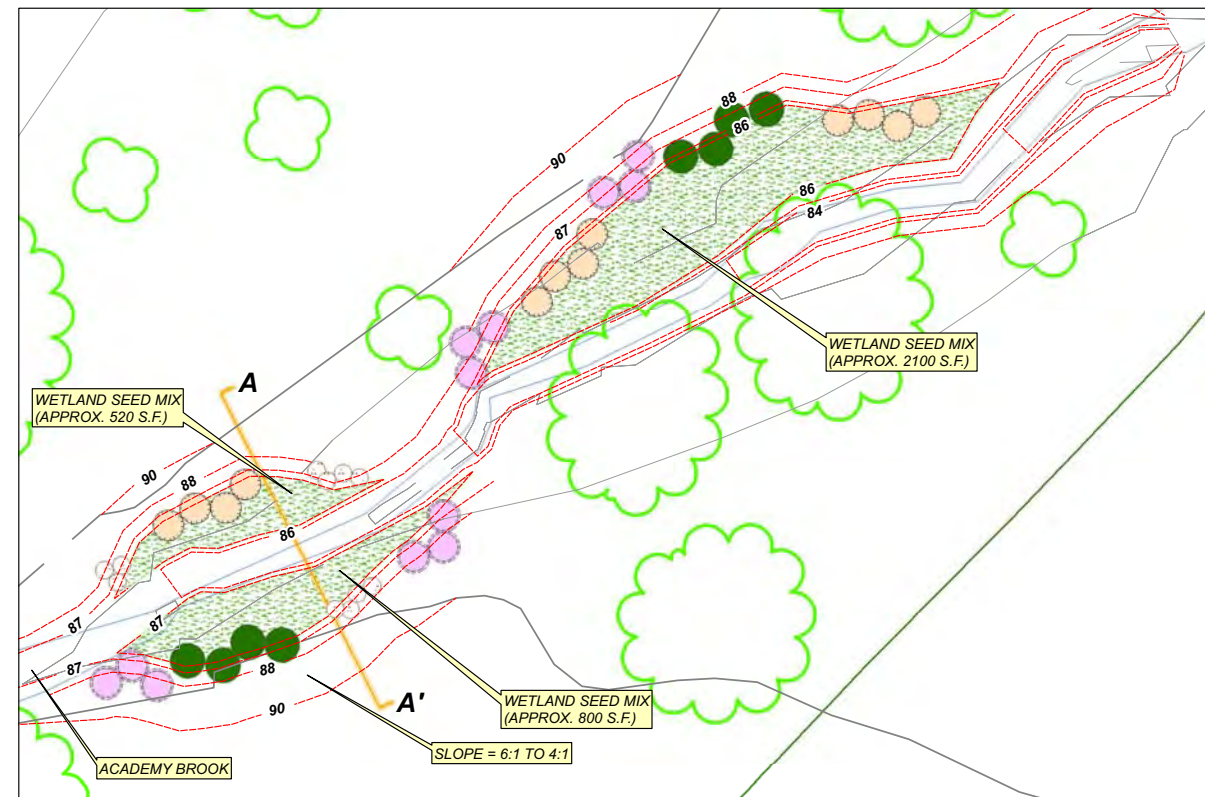
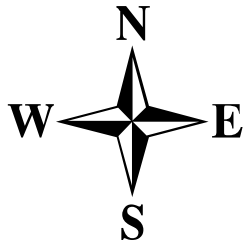
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FAX: (978) 589-3100
WEB: HTTP://WWW.ENSR.AECOM.COM

PROPOSED CONDITIONS			
ACADEMY BROOK STREAM RESTORATION			
WELLESLEY COUNTRY CLUB			
WELLESLEY, MASSACHUSETTS 02481			
SCALE: 1" = 60'	DATE: 09/06/07	PROJECT NUMBER: 10313-003	

FIGURE NUMBER:	
C-2	
SHEET NUMBER:	
6 of 8	

This aerial map shows a golf course layout. A blue line, likely representing a water feature or stream, flows from the bottom left towards the top right. Two specific areas are highlighted with red rectangles and labeled: 'AREA - A' is located in the lower-middle section, and 'AREA - B' is located in the upper-middle section. The map includes various golf course elements such as green fairways, sand traps, and clusters of trees. A road is visible at the top, and a larger body of water is in the bottom right corner.



- Table 2. Herbaceous species to be included in wetland seed mix.

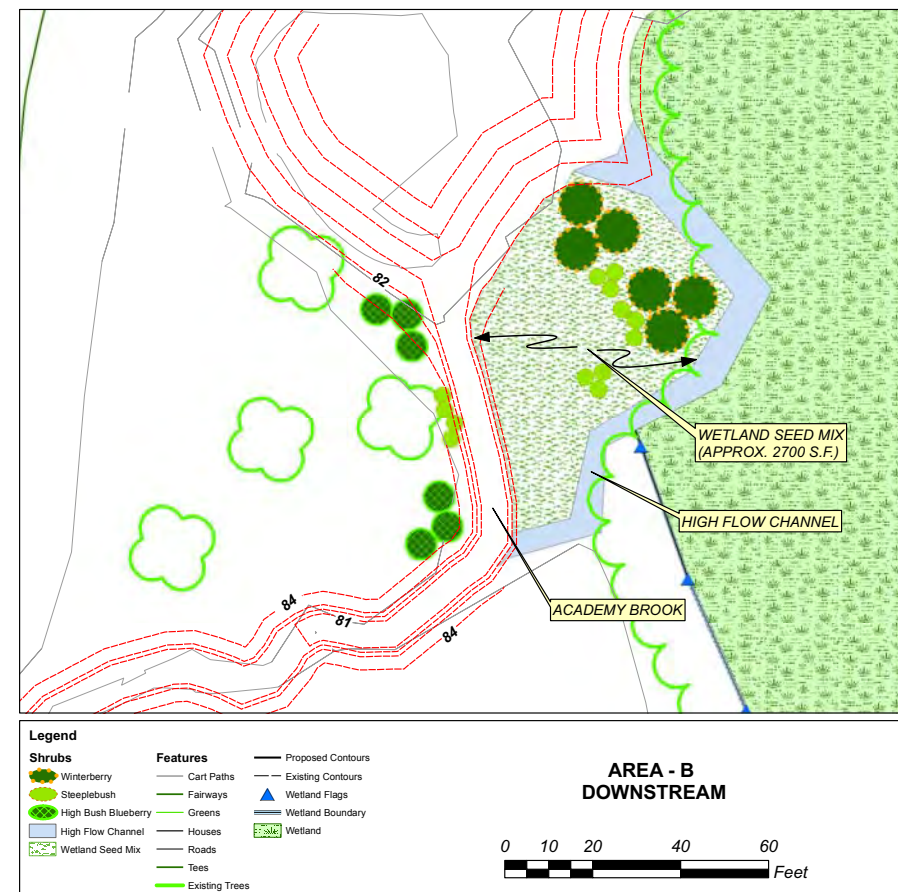
Common Name**	Latin Name	Common Name	Latin Name
Fox Sedge	<i>Carex vulpinoidea</i>	Sensitive Fern	<i>Onoclea sensibilis</i>
Bearded Sedge	<i>Carex comosa</i>	Blue Flag Iris	<i>Iris versicolor</i>
Lurid Sedge	<i>Carex lurida</i>	Woolgrass	<i>Scirpus cyperinus</i>
Soft Rush	<i>Juncus effusus</i>	Spotted Joe Pye weed	<i>Eupatorium maculatum</i>
Grass-leaved Goldenrod	<i>Euthamia graminifolia</i>	Swamp Milkweed	<i>Asclepias incarnata</i>
Boneset	<i>Eupatorium perfoliatum</i>	Monkey Flower	<i>Mimulus ringens</i>
Hop Sedge	<i>Carex lupulina</i>	Soft-Stem Bulrush	<i>Scirpus validus</i>
Blue Vervain	<i>Verbena hastata</i>	Hardstem Bulrush	<i>Scirpus acutus</i>
Nodding Sedge	<i>Carex gynandra</i>	Nodding Bur Marigold	<i>Bidens cernua</i>
Green Bulrush	<i>Scirpus atrovirens</i>	Flat-top Aster	<i>Aster umbellatus</i>

**Seed shall be broadcast over entire wetland mitigation area. An application rate of 18 pounds per acre is recommended for open areas, and 8-12 pounds per acre in areas planted with shrubs. A seed mix containing some or all of the listed species will be acceptable. The New England Wetmix (Wetland Seed Mix) sold by New England Wetland Plants, Inc. contains each of these species. Substitutions shown on the Massachusetts Invasive Species List (<http://www.newfs.org/conserve/invlst.htm>) are not acceptable.

		Mature Size (Feet) ¹	Spacing (Feet)	Total Number of Plants	Size	Hydrology ²
Common Name	Latin Name					
Highbush Blueberry	<i>Vaccinium corymbosum</i>	6-12	6	6	12-18", 1-gallon container or similar	Seasonally inundated or saturated (13-25% of the growing season)
Arrowwood	<i>Viburnum dentatum</i>	6-12	6	12	12-18", 1-gallon container or similar	Seasonally inundated or saturated (13-25% of the growing season)
Winterberry	<i>Ilex verticillata</i>	10-12	6	6	12-18", 1-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Steeplebush	<i>Spirea tomentosa</i>	3-5	4	13	12-18", 1-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Meadowsweet	<i>Spirea latifolia</i>	3-6	4	11	12-18", 1-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Wild Raisin	<i>Viburnum cassinoides</i>	6-10	6	12	12-18", 1-gallon container or similar	Seasonally to regularly inundated or saturated (13-75% of the growing season)
Sweet Pepperbush	<i>Clethra alnifolia</i>	9-10	8	8	12-18", 1-gallon container or similar	Seasonally to regularly inundated or saturated (13-75% of the growing season)
			TOTAL:	68		

^{1,2} Information sources include: Symonds, G. W. 1963. The shrub identification book.; Thunhorst, G.A. 1993. Wetland planting guide for the Northeastern United States.

The diagram is a cross-section of a wetland restoration project. The vertical axis is labeled 'ELEVATION (FT)' and ranges from 85 to 90. The horizontal axis is labeled 'DISTANCE (FT)' and ranges from 40 on the left to 40 on the right, with 0 in the center. A dashed line represents the 'EXISTING GRADE', and a solid line represents the 'PROPOSED GRADE'. The proposed grade is lower than the existing grade in the center, creating a V-shape. A vertical arrow labeled 'ACADEMY BROOK' points to the center of the V. On the left side, a double-headed arrow labeled 'PLANTED SIDESLOPES' spans from distance 30 to 25. Another double-headed arrow labeled 'WETLAND SEED MIX' spans from distance 25 to 0. On the right side, a double-headed arrow labeled 'WETLAND SEED MIX' spans from distance 0 to 25. The diagram shows trees and vegetation on the existing grade and the proposed grade. The proposed grade is shown with a hatched pattern.



DESIGNED BY:		REVISIONS	
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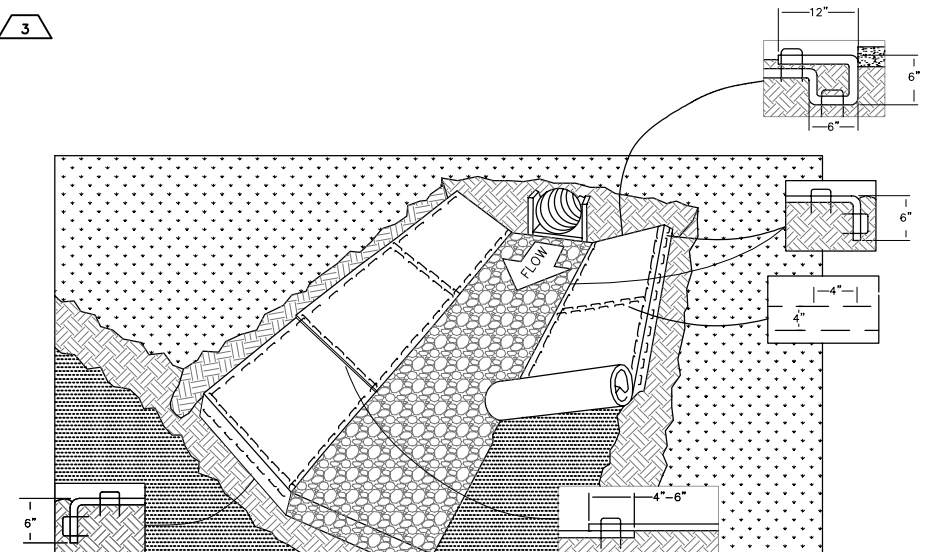
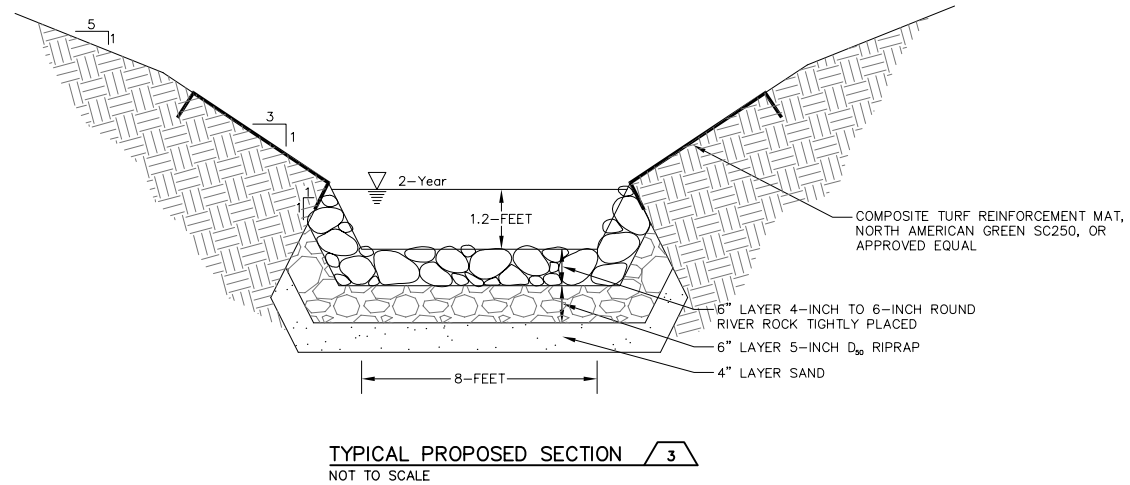
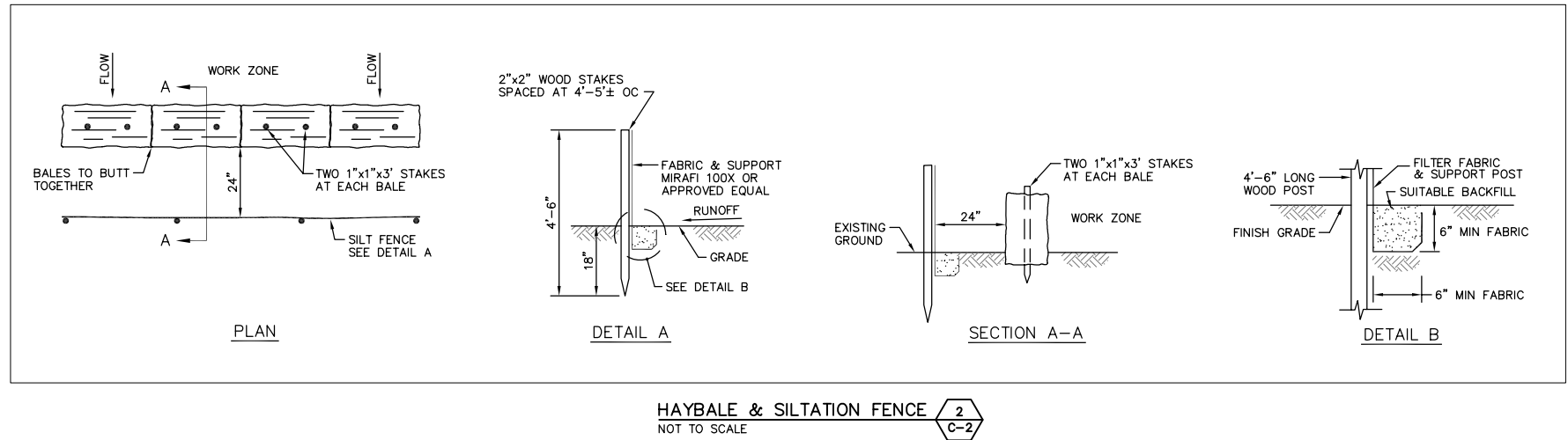
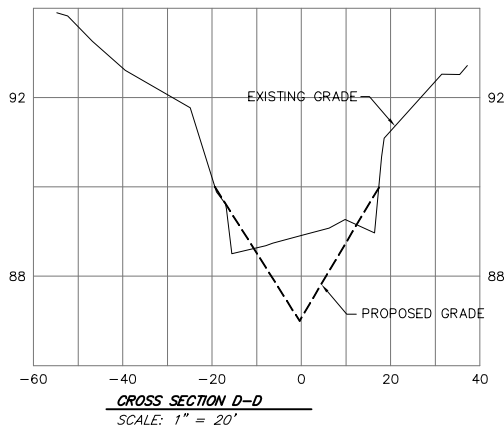
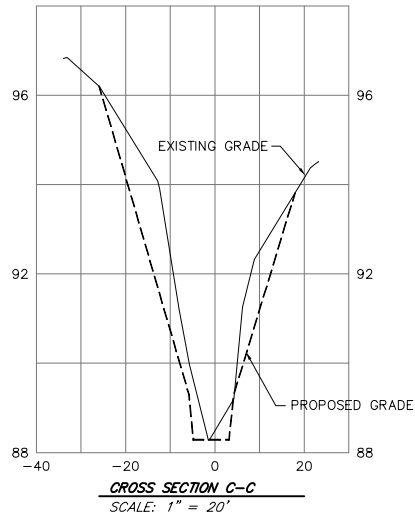
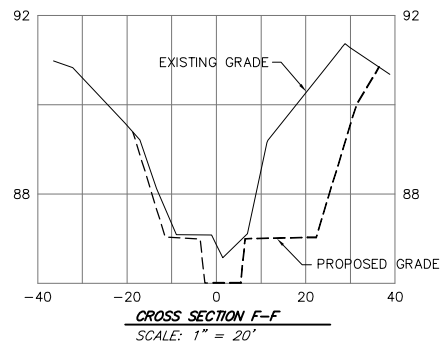
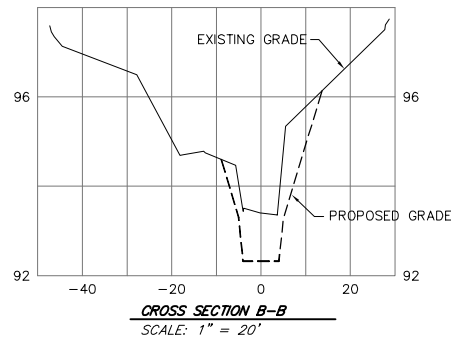
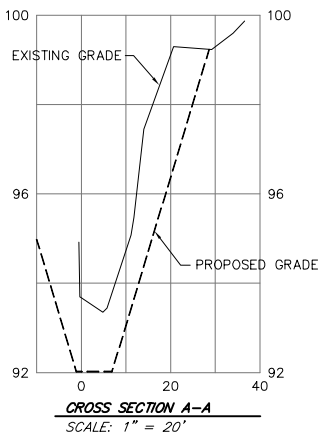
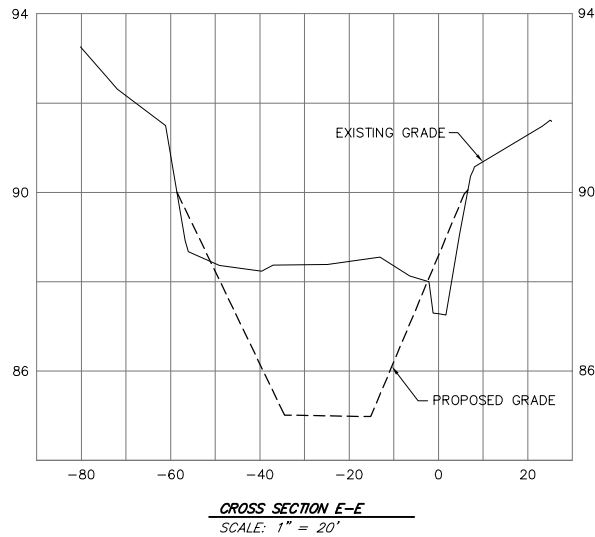
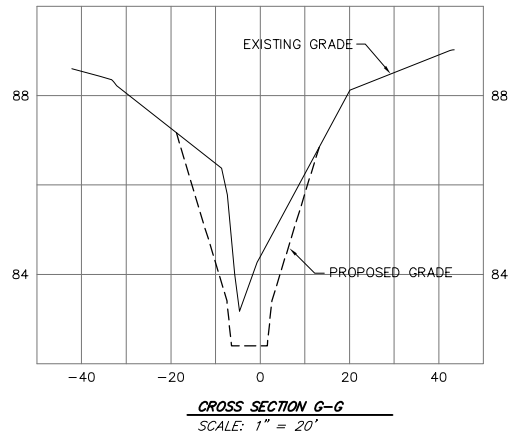
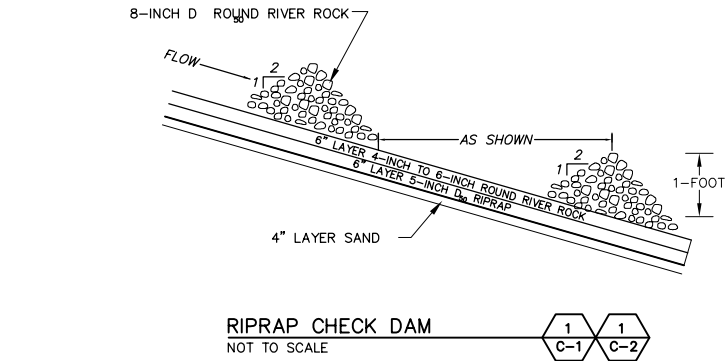
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Westford, MA 01886
Phone: (978) 589-3000
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<p>RIPARIAN ENHANCEMENT AREAS</p> <p>ACADEMY BROOK STREAM RESTORATION WELLESLEY COUNTRY CLUB WELLESLEY, MASSACHUSETTS 02481</p>		
<p>SCALE: AS NOTED</p>	<p>DATE: 09/05/07</p>	<p>PROJECT NUMBER: 10313-006</p>

DRAWING NUMBER:	C-3
SHEET NUMBER:	7 of 8

FILENAME: J:\ESP\Projects\10101301 to 139\10133 Wellesley Club\10133-005 Academy Brook\Academy Brook Working\SA_WC_0204_4.dwg



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT TOP OF CHANNEL BY ANCHORING THE BLANKET IN A 6-INCH DEEP BY 6-INCH WIDE TRENCH WITH APPROXIMATELY 12-INCH OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES APPROXIMATELY 12-INCH APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12-INCH PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES SPACED APPROXIMATELY 12-INCH ACROSS THE WIDTH OF THE BLANKET.
3. ROLL BLANKETS IN THE DIRECTION OF FLOW.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A MINIMUM 4-INCH OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4-INCH APART AND 4-INCH ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP AND BOTTOM OF SLOPE MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12-INCH APART IN A 6-INCH DEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
6. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12-INCH APART IN A 6-INCH DEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.

REINFORCEMENT MAT INSTALLATION
NOT TO SCALE
4

DESIGNED BY:		NO.:		DATE:		BY:	
USA		A		9/13/07			
DRAWN BY:		CHECKED BY:		APPROVED BY:		REVISIONS	
USA		MT		USA			
DESCRIPTION:		REVISED PER AGENT COMMENTS					

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DETAILS
ACADEMY BROOK STREAM RESTORATION
WELLESLEY COUNTRY CLUB
WELLESLEY, MASSACHUSETTS 02481

SCALE: AS SHOWN
DATE: 09/06/2007
PROJECT NUMBER: 10313-003

DRAWING NUMBER:
C-4
SHEET NUMBER:
8 of 8