

NORTH DISTRICT UTILITIES UPGRADE UNIVERSITY OF RHODE ISLAND, KINGSTON CAMPUS



LIST OF DRAWINGS:

COVER SHEET			
CIVIL			
C401	2 OF 6		SUBSTATION LAYOUT PLAN
C402	3 OF 6		SUBSTATION GRADING & PLANTING PLAN
C403	4 OF 6		WETLANDS RESTORATION PLAN
C501	5 OF 6		MISCELLANEOUS DETAILS AND NOTES
C502	6 OF 6		MISCELLANEOUS DETAILS AND SECTION

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED **AUG 28 2008** FILE # **08-0222**
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.

RECEIVED
JUL 11 2008

MARCH 28, 2008 URI FLAGG ROAD SUBSTATION RIDEM WETLAND PRELIMINARY DETERMINATION

Maguire Group Inc.
Architects/Engineers/Planners
225 Chapman Street, 4th Floor
Providence, Rhode Island 02905

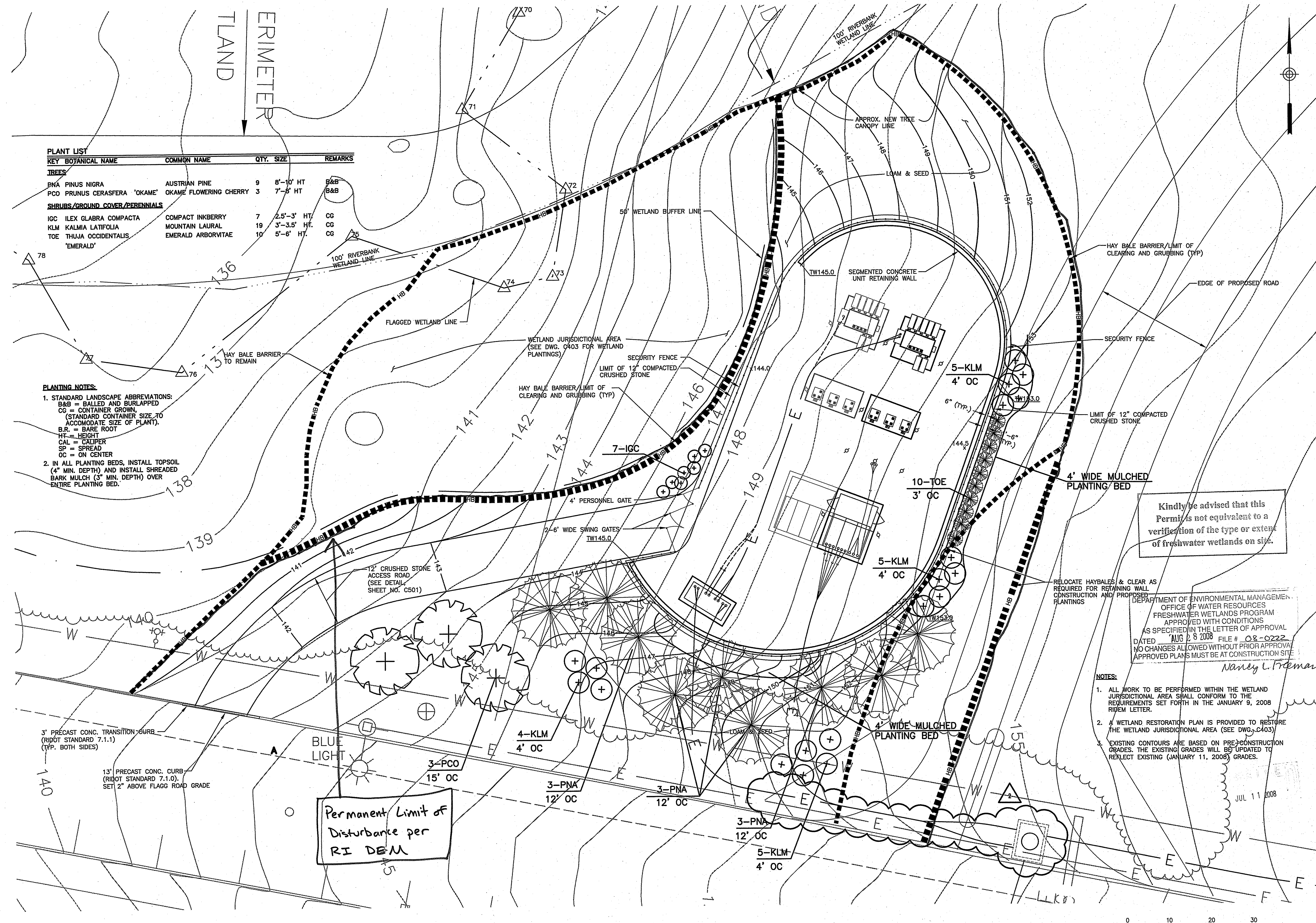
JAMES A. JACKSON, JR.
No. 5708
REGISTERED PROFESSIONAL ENGINEER

3.18.08

DRAWING FILE: H:\Projects\RI-18009-UPU\North_District_Campus\VCAD\Civil\Elec\18009FC402.dwg PLOTTED: May 05, 2008 - 10:08pm BY: Lmazu

KEY BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
TREES				
PNA PINUS NIGRA	AUSTRIAN PINE	9	8'-10' HT	B&B
PCO PRUNUS CERASIFERA 'OKAME'	OKAME FLOWERING CHERRY	3	7'-8' HT	B&B
SHRUBS/GROUND COVER/PERENNIALS				
IGC ILEX GLABRA COMPACTA	COMPACT INKBERRY	7	2.5'-3' HT.	CG
KLM KALMIA LATIFOLIA	MOUNTAIN LAURAL	19	3'-3.5' HT.	CG
TOE THUJA OCCIDENTALIS 'EMERALD'	EMERALD ARBORVITAE	10	5'-6' HT.	CG

- PLANTING NOTES:**
- STANDARD LANDSCAPE ABBREVIATIONS:
 B&B = BALLED AND BURLAPPED
 CG = CONTAINER GROWN (STANDARD CONTAINER SIZE TO ACCOMMODATE SIZE OF PLANT).
 B.R. = BARE ROOT
 HT = HEIGHT
 CAL = CALIPER
 SP = SPREAD
 OC = ON CENTER
 - IN ALL PLANTING BEDS, INSTALL TOPSOIL (4" MIN. DEPTH) AND INSTALL SHREDED BARK MULCH (3" MIN. DEPTH) OVER ENTIRE PLANTING BED.



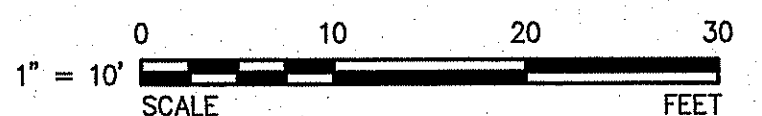
Permanent Limit of Disturbance per RI DEM

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED AUG 28 2008 FILE # 08-0222
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

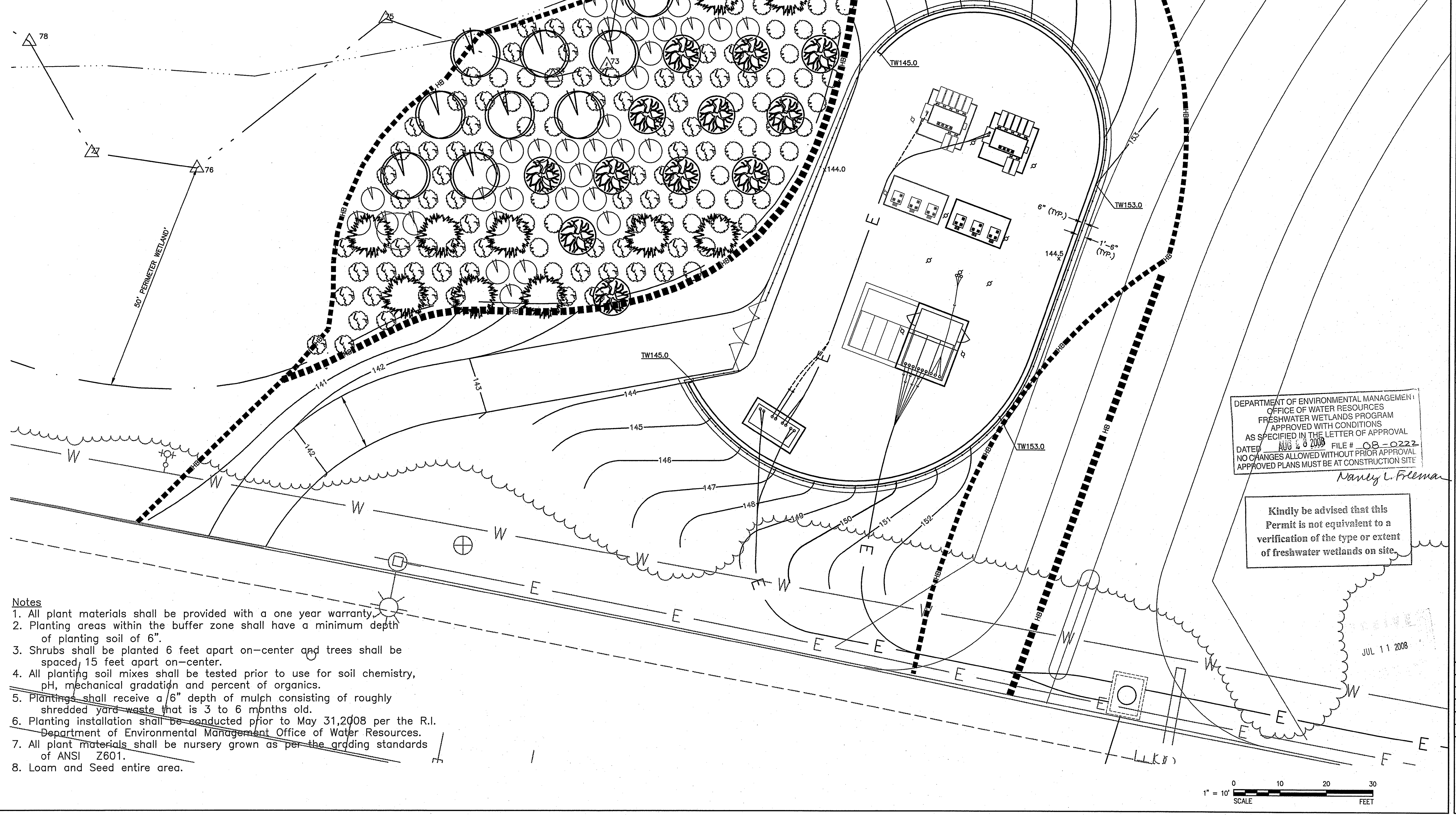
- NOTES:**
- ALL WORK TO BE PERFORMED WITHIN THE WETLAND JURISDICTIONAL AREA SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE JANUARY 9, 2008 RI DEM LETTER.
 - A WETLAND RESTORATION PLAN IS PROVIDED TO RESTORE THE WETLAND JURISDICTIONAL AREA (SEE DWG. C403)
 - EXISTING CONTOURS ARE BASED ON PRE-CONSTRUCTION GRADES. THE EXISTING GRADES WILL BE UPDATED TO REFLECT EXISTING (JANUARY 11, 2008) GRADES.



<p>PROJECT NO.: 18009 DESIGNED BY: JJ DRAWN BY: LM CHK'D BY: DATE: MARCH 28, 2008 SCALE: 1"=10' SHEET NO.:</p>	<p style="text-align: center;">C402</p> <p style="text-align: center;">SHEET 7 OF 6</p>
<p>NORTH DISTRICT UTILITIES UPGRADE UNIVERSITY OF RHODE ISLAND KINGSTON CAMPUS</p>	
<p>SUBSTATION GRADING & PLANTING PLAN</p>	
<p>Maquire Group Inc. Architects/Engineers/Planners 225 Chatham Street Providence, Rhode Island 02905</p>	
<p>RELOCATED PLANTINGS: 5-5-08 ADDED PLANTINGS: 2-12-08 RELOCATED PER AS-BUILT MANHOLE: 1-25-08 SUBSTATION RELOCATION: 1-08</p>	
<p>MARK DATE DESCRIPTION BY APP'D</p>	

DRAWING FILE: N:\Projects\18009-Proj\18009-UR\North\Distric\Compas\ACAD\Civil\Wetland\Wetland\Wetland.dwg PLOTTED: Mar 28, 2008 - 3:01pm By: b5ymb

REPLACEMENT WETLAND PLANTINGS				
Key	Genus & Species/ Common Name	Quantity	Size/ Container	Spacing
Understory Trees				
	Acer rubrum Red Maple	9	10' B&B	15' O.C.
	Betula alleghaniensis Yellow Birch	12	10' B&B	15' O.C.
	Pinus strobus White Pinespen	12	10' B&B	15' O.C.
Shrubs				
	Clethra alnifolia Sweet Pepperbush	25	2'-3' 3 gal.	6' O.C.
	Kalmia latifolia Mountain Laurel	29	2'-3' 3 gal.	6' O.C.
	Vaccinium corymbosum Highbush Blueberry	25	2'-3' 3 gal.	6' O.C.

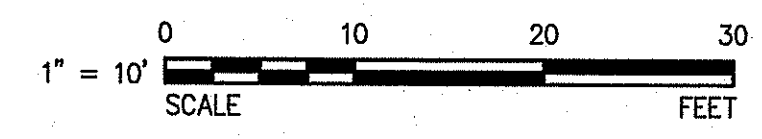


- Notes**
1. All plant materials shall be provided with a one year warranty.
 2. Planting areas within the buffer zone shall have a minimum depth of planting soil of 6".
 3. Shrubs shall be planted 6 feet apart on-center and trees shall be spaced 15 feet apart on-center.
 4. All planting soil mixes shall be tested prior to use for soil chemistry, pH, mechanical gradation and percent of organics.
 5. Plantings shall receive a 6" depth of mulch consisting of roughly shredded yard waste that is 3 to 6 months old.
 6. Planting installation shall be conducted prior to May 31, 2008 per the R.I. Department of Environmental Management Office of Water Resources.
 7. All plant materials shall be nursery grown as per the grading standards of ANSI Z601.
 8. Loam and Seed entire area.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 6 8 2008 FILE # 08-0222
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

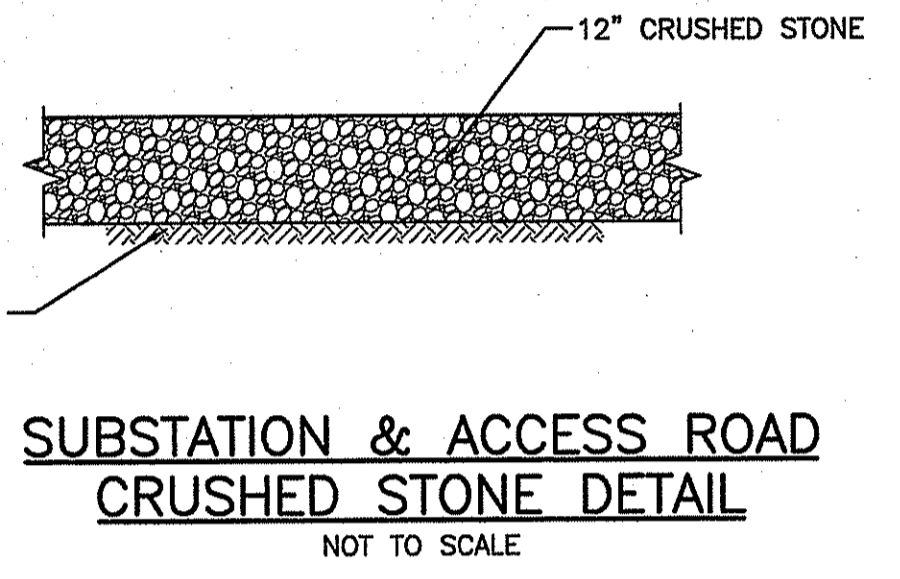
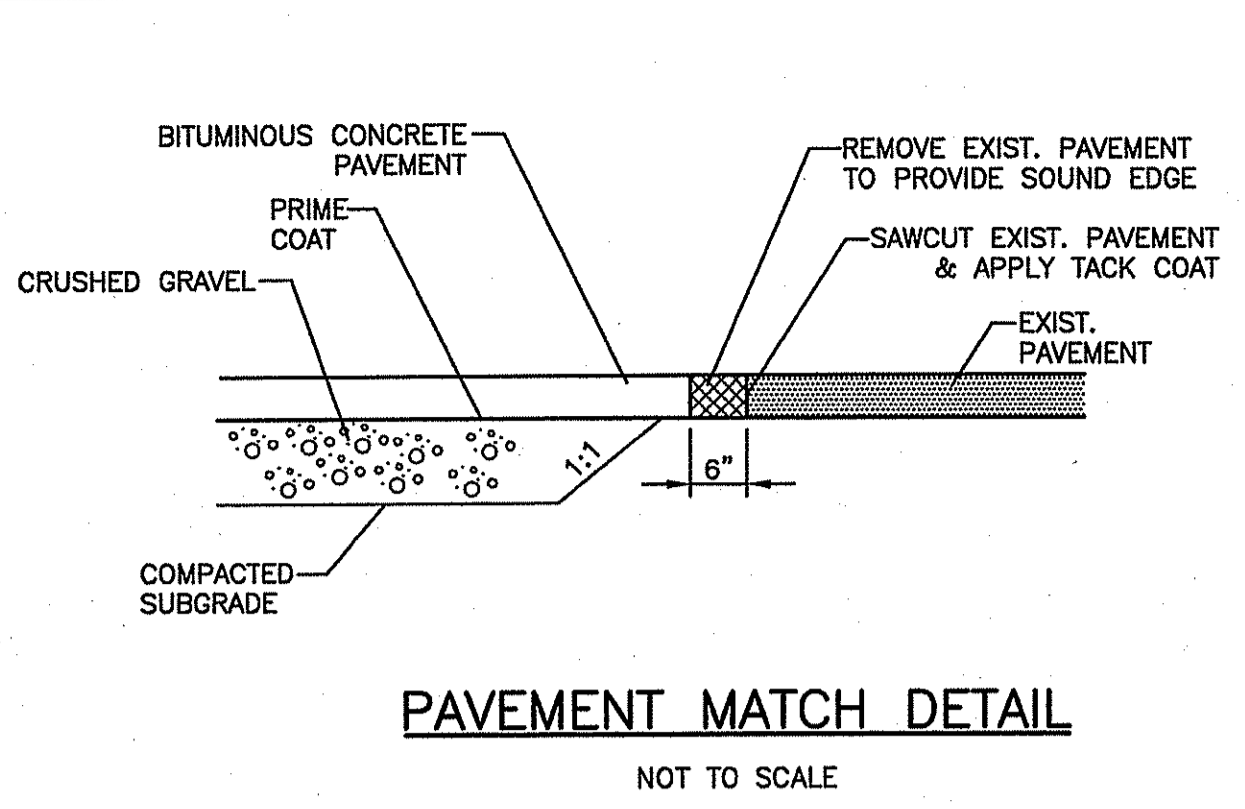
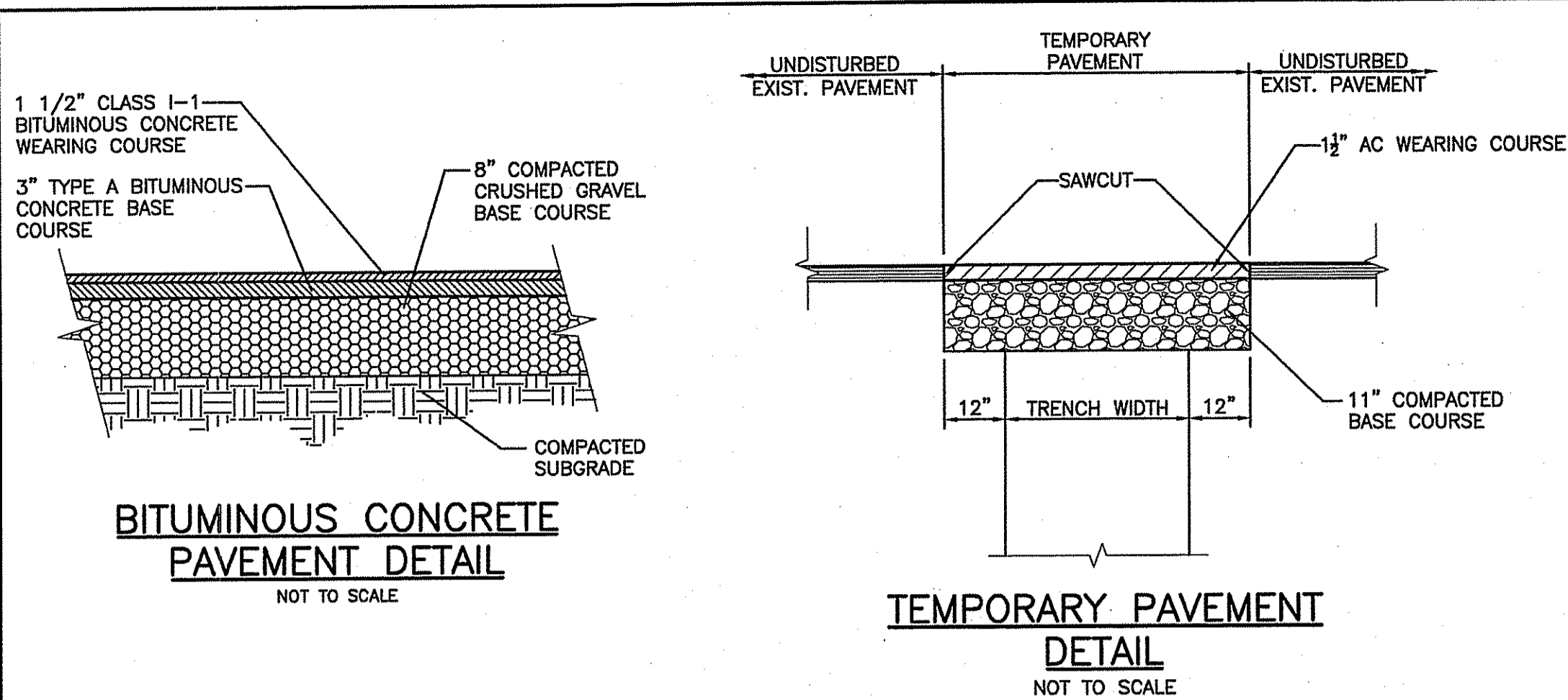
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



<p>Maguire Group Inc. Architects/Engineers/Planners 225 Chapman Street Providence, Rhode Island 02905</p> <p>MAGUIRE GROUP</p>	<p>NORTH DISTRICT UTILITIES UPGRADE UNIVERSITY OF RHODE ISLAND KINGSTON CAMPUS</p> <p>WETLANDS RESTORATION PLAN</p>
<p>PROJECT NO.: 18009 DESIGNED BY: JJ DRAWN BY: COG CHK'D BY: DATE: MARCH 28, 2008 SCALE: 1"=10' SHEET NO.:</p>	
<p>C403</p>	
<p>SHEET 4 OF 6</p>	

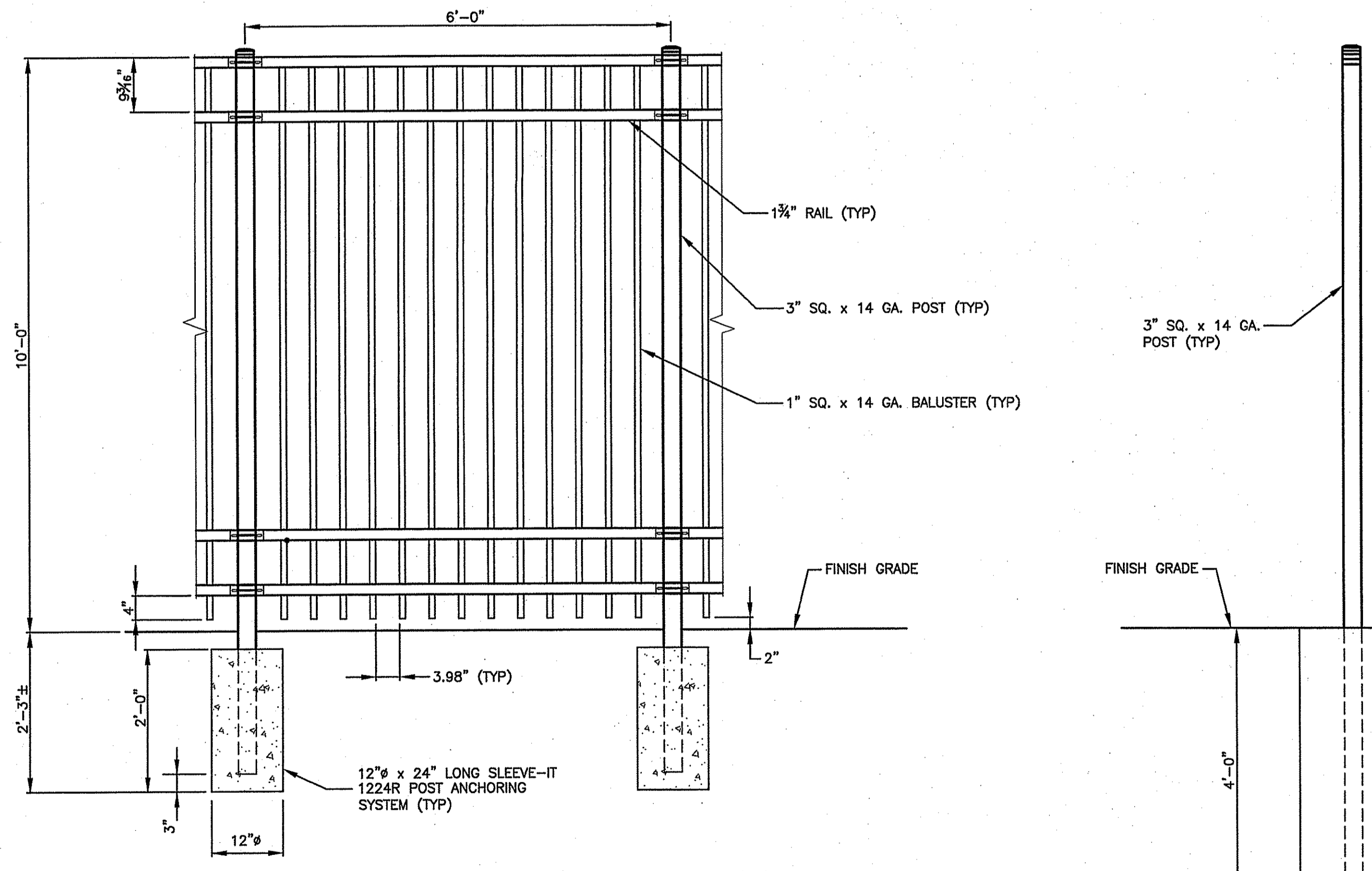
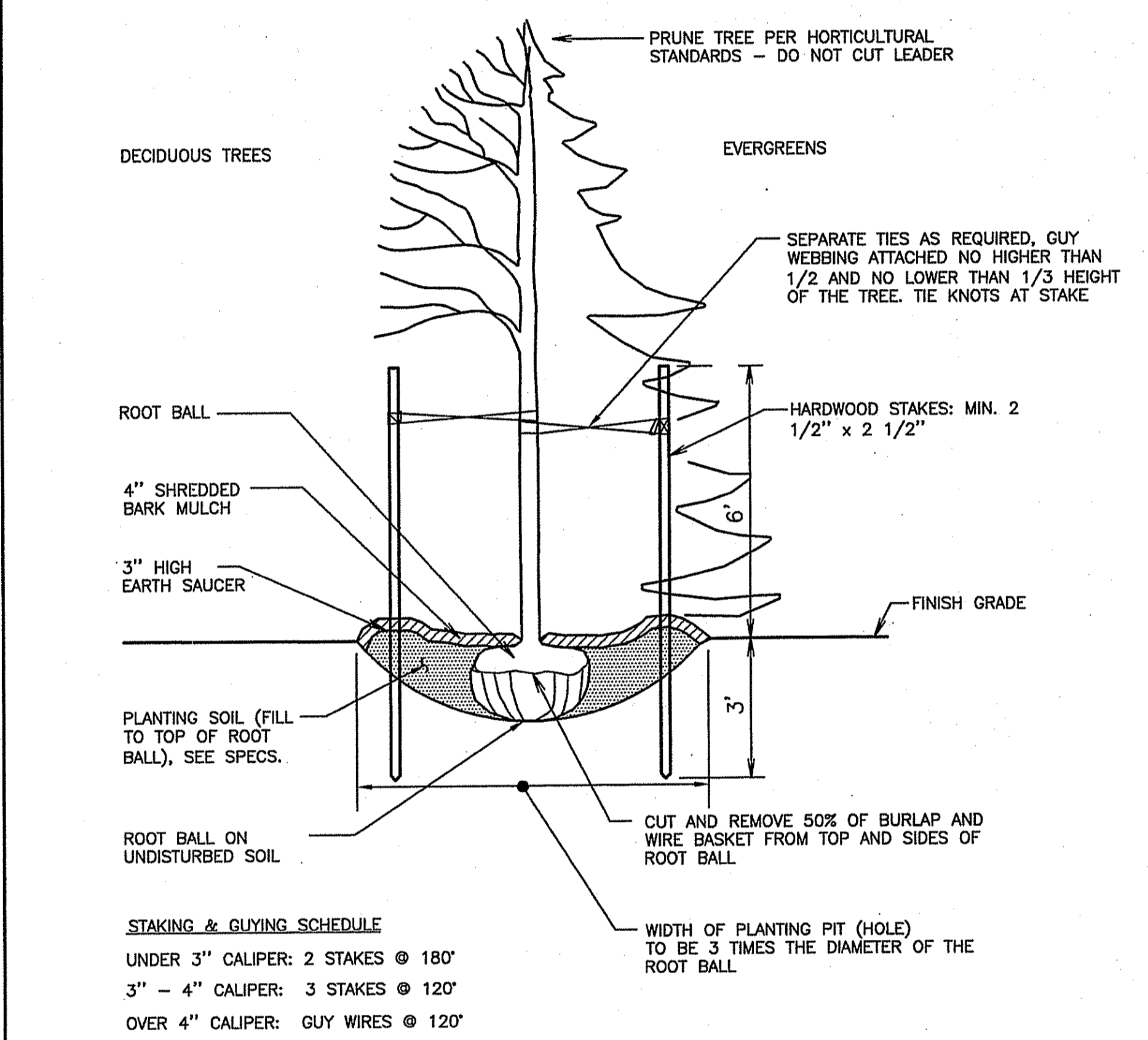
REGISTERED PROFESSIONAL ENGINEER
JAMES A. JACKSON, JR.
No. 10108
3-20-08 WETLANDS RESTORATION
2-12-08 WETLANDS RESTORATION
MARK DATE DESCRIPTION
BY APPD

DRAWING FILE: N:\Projects\URR-Frog\18009-URR-North_District\Computer\A00\CVA\ELEC\18009FC501.dwg PLOTTED: Mar 28, 2008 - 2:52pm BY: Jjacks
 REVIEWED BY: CIVIL INITIALS: DATE: APRR INITIALS: DATE: STRU INITIALS: DATE: PLUM INITIALS: DATE: ELEC INITIALS: DATE: MECH INITIALS: DATE:



- GENERAL PLAN NOTES:**
- LOCATION OF UTILITIES IS APPROXIMATE, BASED ON BEST AVAILABLE RECORDED INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF UTILITIES THROUGH THE "DIG-SAFE" PROGRAM OR THROUGH NOTIFICATION PROCEDURE APPROVED BY THE UNIVERSITY'S REPRESENTATIVE. ANY DAMAGE TO UTILITIES IDENTIFIED ON THE PLANS OR BY THIS VERIFICATION EFFORT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY DAMAGE TO UTILITIES NOT IDENTIFIED THROUGH EITHER OF THESE PROCESSES SHALL BE CORRECTED BY THE UNIVERSITY OR BY THE CONTRACTOR AT THE UNIVERSITY'S EXPENSE.
 - TEMPORARY ROAD CLOSURES SHALL BE COORDINATED THROUGH THE OWNER'S REPRESENTATIVE, WITH AT LEAST ONE WEEK'S NOTICE.
 - CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO EXISTING CONDITIONS, ALL DIMENSIONS, SITE CONDITIONS AND PERTINENT SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS AND DISCREPANCIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
 - THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION AT LEAST 2 WORKING DAYS AND NOT MORE THAN 10 WORKING DAYS, PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
 - CONTRACTOR TO PROVIDE TEMPORARY 6' HIGH CHAINLINK SECURITY FENCING AS REQUIRED FOR SAFETY DURING CONSTRUCTION.
 - CONTRACTOR TO PROVIDE SAFE PEDESTRIAN (INCLUDING EXISTING HANDICAP ACCESS) AND VEHICULAR WARNING AND DIRECTION SIGNS AS NECESSARY. CONTRACTOR SHALL NOT BLOCKADE ANY BUILDING ENTRANCES OR ROADWAYS WITHOUT PRIOR APPROVAL FROM THE UNIVERSITY.
 - CONTRACTOR TO REPAIR ALL WALKS, ROADWAYS, CURBING, ETC., IN KIND, THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES.

- DISPOSAL OF DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
- CONTRACTOR SHALL MAKE EVERY EFFORT TO PRESERVE EXISTING VEGETATION. CONTRACTOR TO PROVIDE TREE AND SHRUB PROTECTION DEVICES AS NECESSARY.
- CONTRACTOR TO PROVIDE INLET AND CURB PROTECTION WITHIN ROADWAYS AND LANDSCAPED AREAS ADJACENT TO AND DOWNGRADIENT FROM PROPOSED CONSTRUCTION FOR SEDIMENTATION CONTROL.
- EXISTING SITE ELEMENTS (BENCHES, SIGNAGE, BIKE RACKS, LIGHTING AND POLE BASES, TRASH RECEPTACLES, ETC.) MAY BE TEMPORARILY RELOCATED AS REQUIRED AND AT THE UNIVERSITY'S DIRECTION AND RE-INSTALLED FOLLOWING THE COMPLETION OF OTHER WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR LOSS, THEFT, AND DAMAGES TO RELOCATED ITEMS. PERMANENT OBJECTS TO REMAIN IN PLACE, UNLESS OTHERWISE DIRECTED.
- ALL PAVEMENT DISTURBED SHALL BE REPAIRED WITH TEMPORARY PAVEMENT ON A DAILY BASIS. PERMANENT PAVEMENT SHALL BE PLACED WITHIN 20 WORKING DAYS.
- ALL EXISTING UTILITIES TO REMAIN, INCLUDING BUT NOT LIMITED TO WATER, SEWER, DRAINAGE, ELECTRIC, TELEPHONE, COMMUNICATION AND STEAM SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE TRAFFIC CONTROLS IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FLAGGERS WHEN WORKING IN AND ADJACENT TO FLAGG ROAD, HEATHMAN ROAD AND GREENHOUSE ROAD.



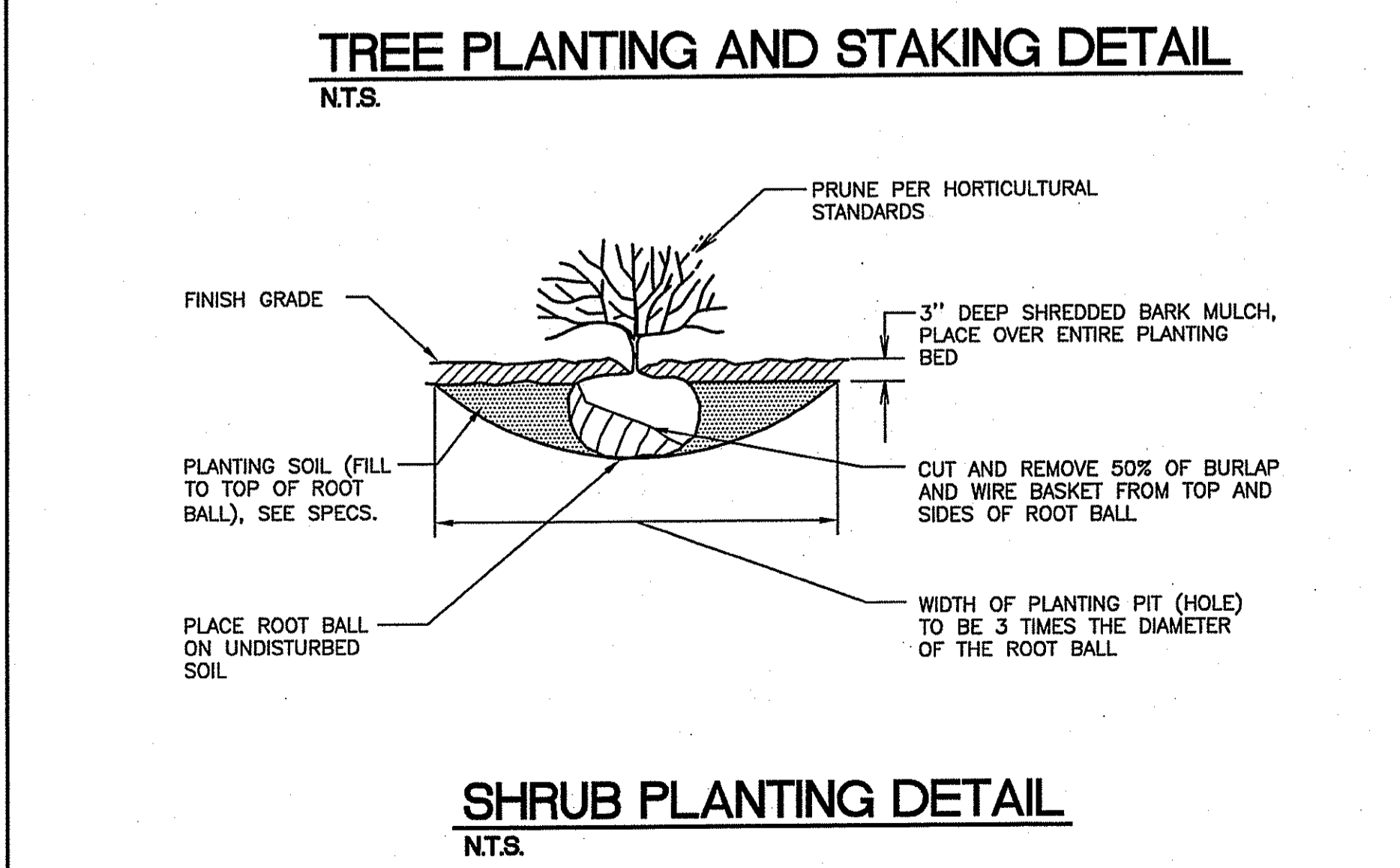
TYPICAL FENCE DETAIL (BEHIND RETAINING WALL)
3/4" = 1'-0"

- NOTES:**
- FENCE DETAIL SHOWN IS BASED ON "AMERISTAR AEGIS II ORNAMENTAL" FENCE. CONTRACTOR MAY SUBMIT ALTERNATE FENCES FOR APPROVAL. REFER TO SPECIFICATION SECTION 02826.
 - PROVIDE GROUNDING LUGS ON EVERY FOURTH POST. LUGS SHALL BE INSTALLED ON POST PRIOR TO INSTALLING FINISH.

TYPICAL GATE POST & POST BEYOND RETAINING WALL FOUNDATION DETAIL
3/4" = 1'-0"

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 28 2008 FILE # 08-0222
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



SHRUB PLANTING DETAIL
N.T.S.

JAMES A. JACKSON, JR.
REGISTERED PROFESSIONAL ENGINEER
No. 10808
3-18-08

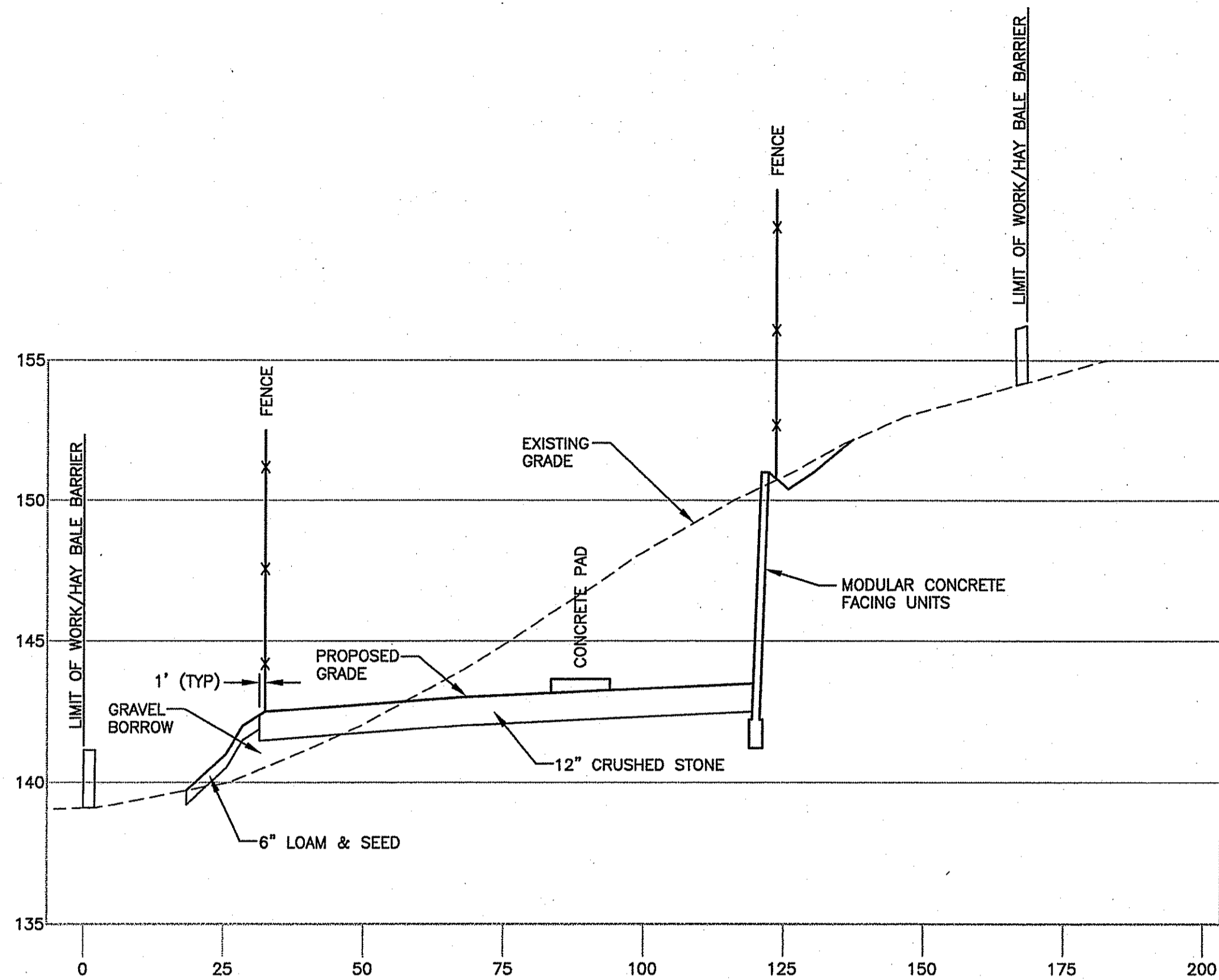
Maguire Group Inc.
Architects/Engineers/Planners
225 Chapman Street
Providence, Rhode Island 02905

NORTH DISTRICT UTILITIES UPGRADE
UNIVERSITY OF RHODE ISLAND KINGSTON CAMPUS

PROJECT NO.: 18009
DESIGNED BY: JJ
DRAWN BY: LM
CHK'D BY:
DATE: MARCH 28, 2008
SCALE: AS NOTED
SHEET NO.:

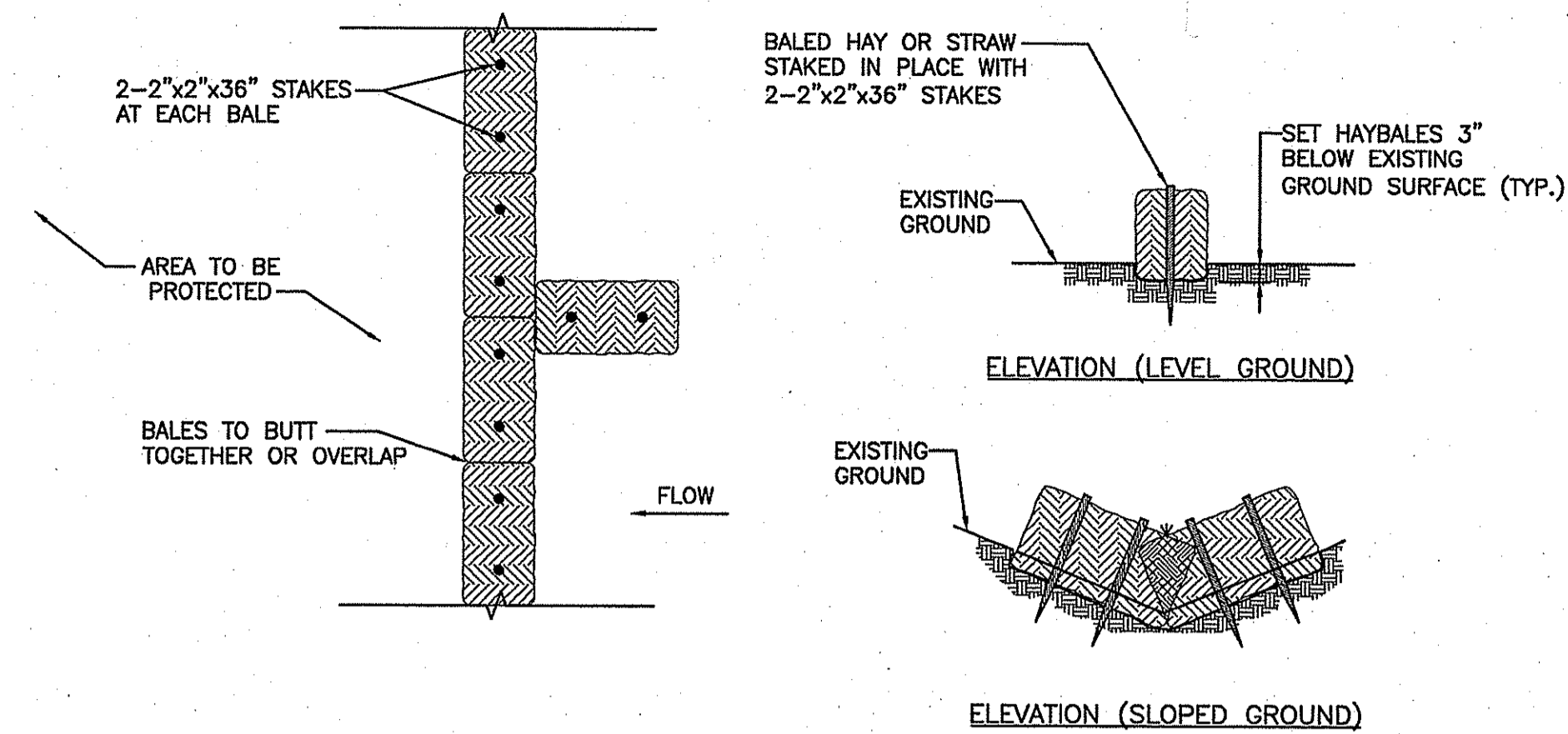
C501
SHEET 5 OF 6

DRAWING FILE: H:\Projects\1000-URL\1000-URL_North\1000-URL_North\1000-URL_North\CAD\1000-URL_North\C502.dwg PLOTTED: Mon 28, 2008 - 2:53:30 PM BY: Jacobs

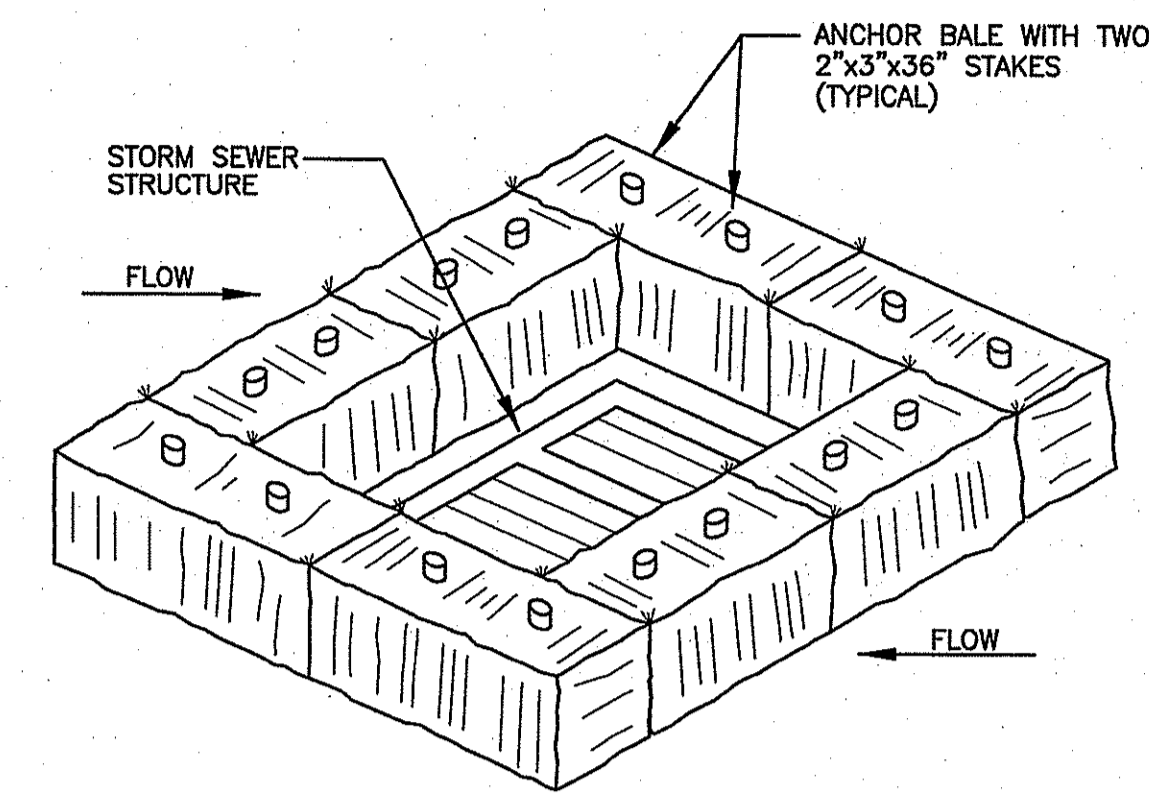


SECTION 1
 C502/ 1"=20' HORIZ.
 1"=4' VERT.

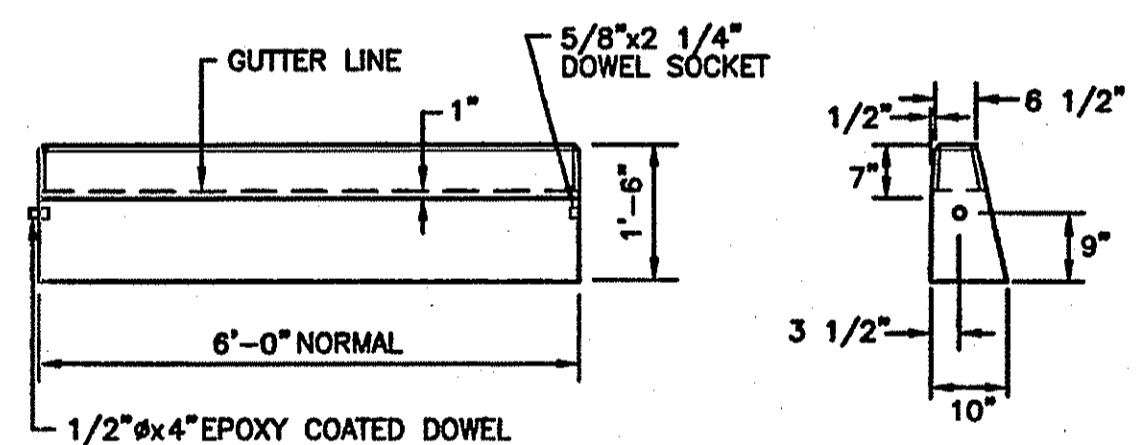
NOTE:
 STRIP TOPSOIL AND UNSATISFACTORY SOIL MATERIAL.



BALED HAY DETAIL
 NOT TO SCALE



TYPICAL HAY BALE INSTALLATION AROUND CATCH BASIN DURING CONSTRUCTION
 NOT TO SCALE



CIRCULAR CURB

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
 3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
 4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADI OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
 5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

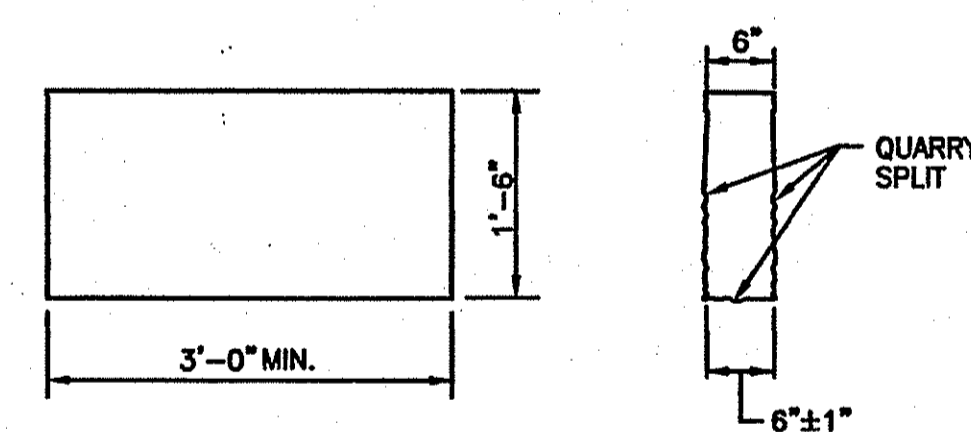
REVISIONS		
NO.	BY	DATE

PRECAST CONCRETE CURB

JAMES A. GAGLIARDI, CHIEF ENGINEER

 THOMAS J. PATERLINI, CHIEF DESIGN ENGINEER
 JUNE 15, 1998, ISSUE DATE

R.I. STANDARD 7.1.0



CIRCULAR CURB

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
 3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
 4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADI OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

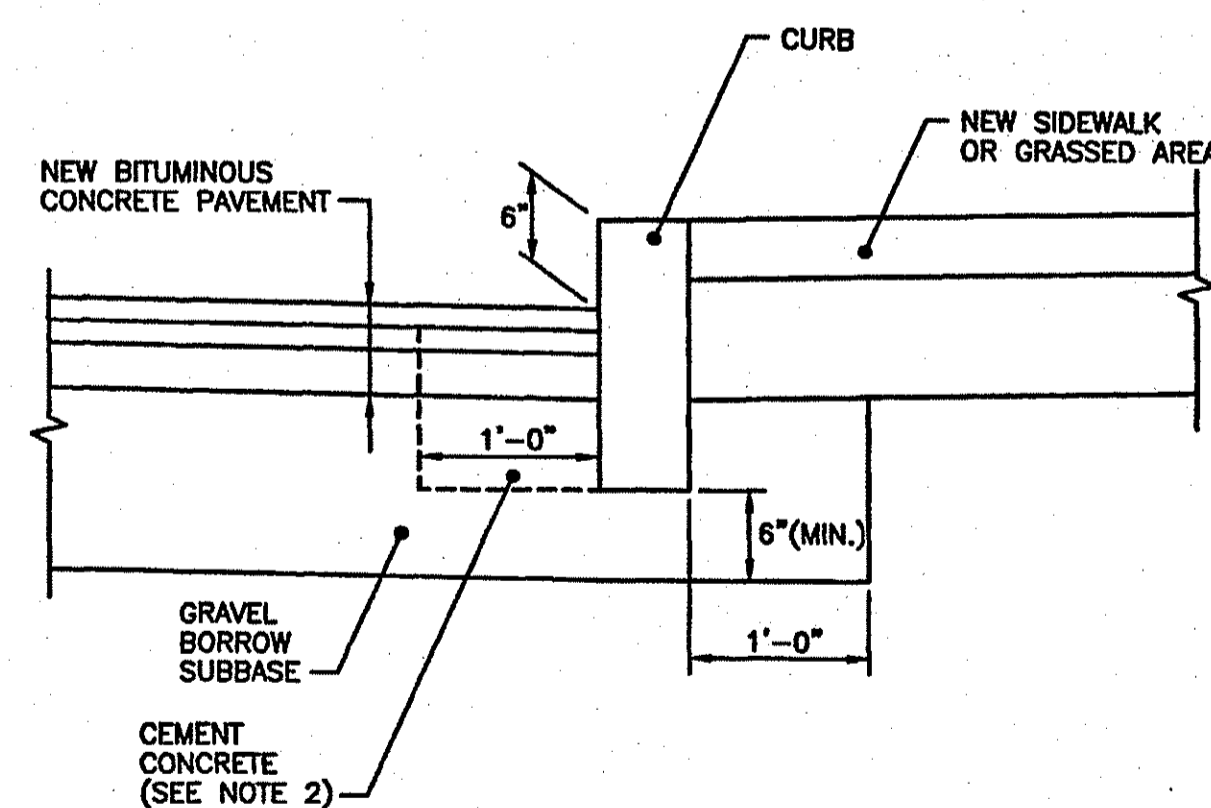
REVISIONS		
NO.	BY	DATE

GRANITE CURB

JAMES A. GAGLIARDI, CHIEF ENGINEER

 THOMAS J. PATERLINI, CHIEF DESIGN ENGINEER
 JUNE 15, 1998, ISSUE DATE

R.I. STANDARD 7.3.0



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

CURB SETTING DETAIL

JAMES A. GAGLIARDI, CHIEF ENGINEER

 THOMAS J. PATERLINI, CHIEF DESIGN ENGINEER
 JUNE 15, 1998, ISSUE DATE

R.I. STANDARD 7.6.0

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED AUG 28 2008 FILE # 08-0222
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 Nancy L. Freeman

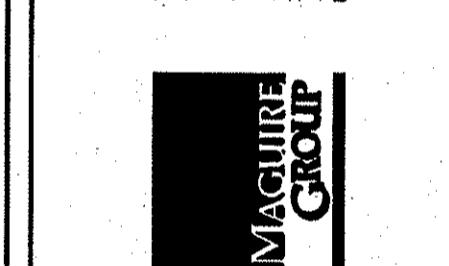
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

JUL 11 2008

MARK	DATE	DESCRIPTION	BY	APP'D

JAMES A. JACKSON, JR.
 No. 08-0222
 REGISTERED PROFESSIONAL ENGINEER
 3-78-08

Maguire Group Inc.
 Architects / Engineers / Planners
 225 Chapman Street
 Providence, Rhode Island 02905



NORTH DISTRICT UTILITIES UPGRADE
 UNIVERSITY OF RHODE ISLAND KINGSTON CAMPUS

MISCELLANEOUS DETAILS AND SECTION

PROJECT NO.: 18009
 DESIGNED BY: JJ
 DRAWN BY: LM
 CHK'D BY:
 DATE: MARCH 28, 2008
 SCALE: AS NOTED
 SHEET NO.:
C502
 SHEET 6 OF 6