

Plans

Issued for: **Request for Preliminary Determination**

Date Issued: February 7, 2012

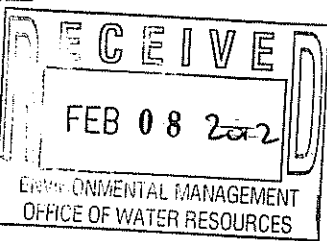
Latest Issue: February 7, 2012

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National Grid Rhode Island Reliability Project

Proposed H17 115kV Transmission Line Structure Relocation
Access from Iron Mine Hill Road
North Smithfield, Rhode Island

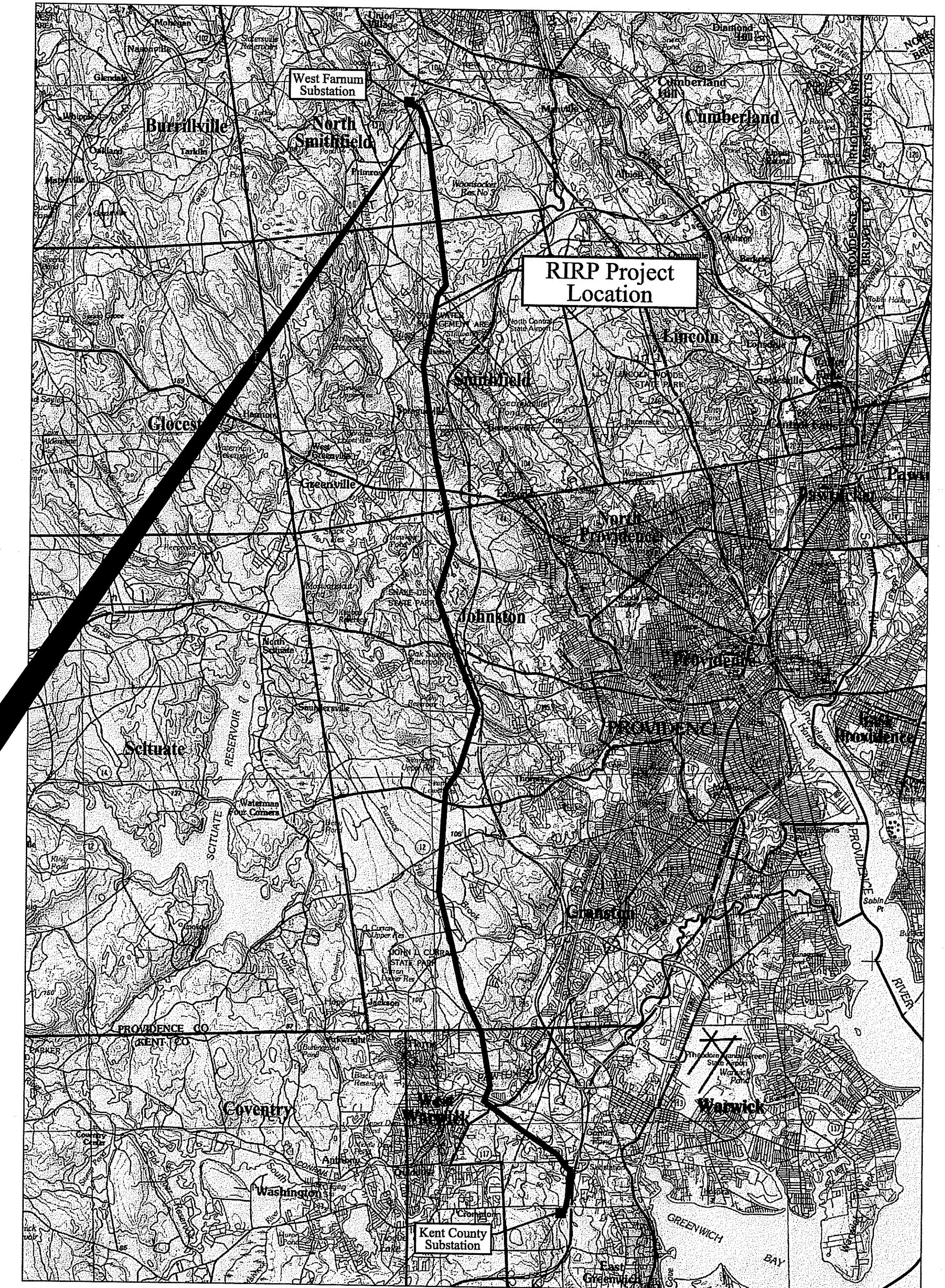


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Transportation
Land Development
Environmental Services

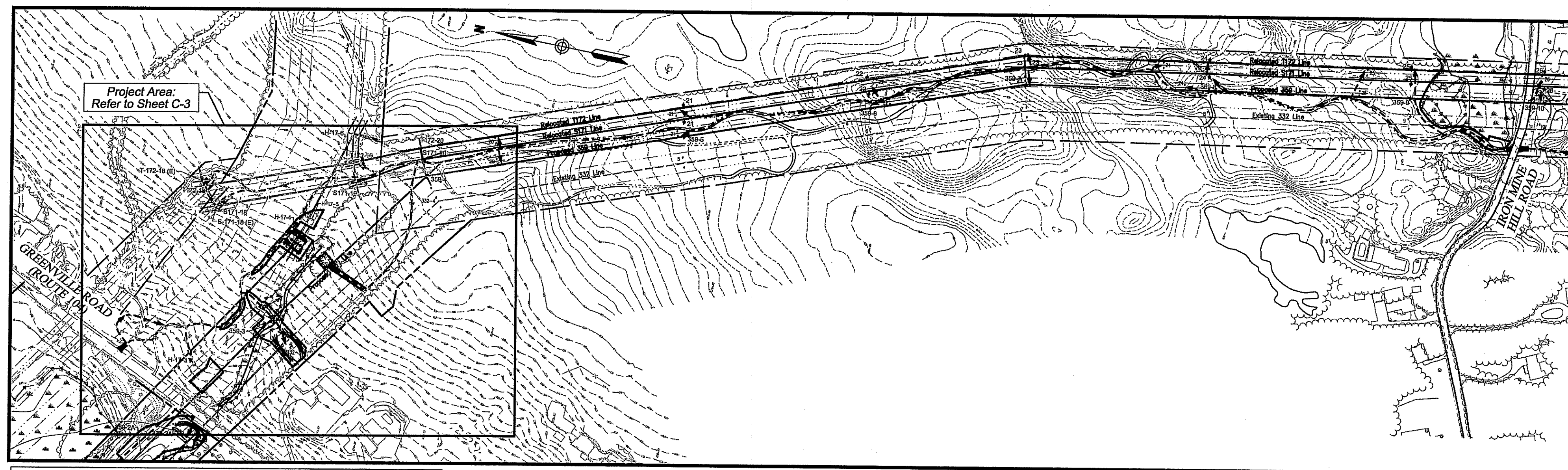
10 Dorrance Street, Suite 400
Providence, Rhode Island 02909
401-272-8100 / FAX 401-273-9694

Owner/Applicant:

The Narragansett Electric Company
d/b/a National Grid
280 Melrose Street
Providence, Rhode Island 02907
508-389-2935 / FAX 508-389-2836



Locus Map



Note:
Plan Depicting the Area also Shown on Sheet C-4 and C-5 of Application
to Alter File No. 09-0163 Plan Set Approved October 15, 2010.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED FEB 22 2012 FILE # 12-0003
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSISTENT SITE

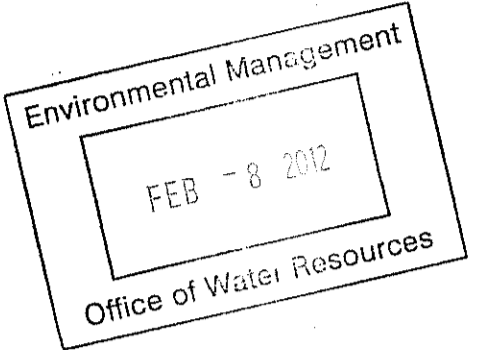




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10 Dorrance Street
Providence, Rhode Island 02903
401.272.8100 • FAX 401.273.9694



Notes

Existing Conditions Information:

References:

1. Intersection of Iron Mine Hill Road and Greenville Road (Route 104) is located approximately 4,000 feet southwest of the Project Site.
2. Plan depicting the area shown on C-4 and C-5 of Application to Alter File No. 09-0153 Plan Set approved October 15, 2010.
3. Kent County Corridor: Base Mapping compiled by James W. Swall Company of Old Town, ME on November 19th 2007 by photogrammetric methods from color aerial photographs dated April 20th 2007 at a scale of 1" = 300'. Ground control supplied by BSC Group and is NAD 83 UTM Zone 18N, and vertically NAVD 88. Base mapping was provided electronically to Vanasse Hangen Brustlin, Inc. as AutoCAD drawing files on November 28 2007. This map meets national map accuracy standards for 1"=100' maps with two foot contours.
4. Transmission line right-of-way (ROW) limits and easement boundaries based on the following T-sheets provided by the Narragansett Electric Company. ROW and easement lines are approximate and intended to be a graphical representation. This shall not be construed to represent an actual boundary survey and is subject to such changes as an accurate boundary survey may disclose.
 - T-sheet No.: 3166; Dated: no original date; Last Revised: November 3, 2003
 - T-sheet No.: 3167; Dated: February 27, 1957; Last Revised: June 25, 2004
 - T-sheet No.: 3168; Dated: February 27, 1957; Last Revised: July 13, 2004
 - T-sheet No.: 3169; Dated: February 27, 1957; Last Revised: July 13, 2004
 - T-sheet No.: 3170; Dated: February 27, 1957; Last Revised: July 13, 2004
 - T-sheet No.: 3171; Dated: February 27, 1957; Last Revised: July 13, 2004
 - T-sheet No.: 3172; Dated: February 27, 1957; Last Revised: July 9, 2004
 - T-sheet No.: 3173; Dated: February 27, 1957; Last Revised: July 9, 2004
 - T-sheet No.: 3174; Dated: February 27, 1957; Last Revised: July 9, 2004
 - T-sheet No.: 3175; Dated: February 27, 1957; Last Revised: July 9, 2004
 - T-sheet No.: 3176; Dated: February 27, 1957; Last Revised: July 7, 2004
 - T-sheet No.: 3177A; Dated: September 15, 1970; Last Revised: December 5, 2003
 - T-sheet No.: 3180a; Dated: September 15, 1970; Last Revised: July 7, 2004
 - T-sheet No.: 3181; Dated: February 27, 1957; Last Revised: July 8, 2004
 - T-sheet No.: 3182; Dated: February 27, 1957; Last Revised: July 7, 2004
 - T-sheet No.: 3183; Dated: February 27, 1957; Last Revised: July 7, 2004
 - T-sheet No.: 3184; Dated: February 27, 1957; Last Revised: July 7, 2004
 - T-sheet No.: 3185; Dated: February 27, 1957; Last Revised: June 28, 2004
 - T-sheet No.: 3186; Dated: February 27, 1957; Last Revised: June 28, 2004
 - T-sheet No.: 3187; Dated: February 27, 1957; Last Revised: June 25, 2004
 - T-sheet No.: 3188; Dated: February 27, 1957; Last Revised: June 25, 2004
 - T-sheet No.: 3189; Dated: February 27, 1957; Last Revised: June 25, 2004
 - T-sheet No.: 3190; Dated: February 27, 1957; Last Revised: June 25, 2004
 - T-sheet No.: 5619; Dated: June 20, 1968; Last Revised: October 10, 2003

5. Except as indicated on specific plan sheets, wetland boundary delineation was performed by Vanasse Hangen Brustlin, Inc., (VHB) Providence, RI. Flag locations were located by a global positioning system (GPS) field survey conducted by VHB between May 31, 2007 and June 30, 2011. This survey conforms to a Class IV standard as defined in the Procedural and Technical Standards for Performing Land Surveying in the State of Rhode Island and Providence Plantations.

6. Proposed grade lines appear on the plan set. Where proposed contours are not shown, no grade changes are proposed.

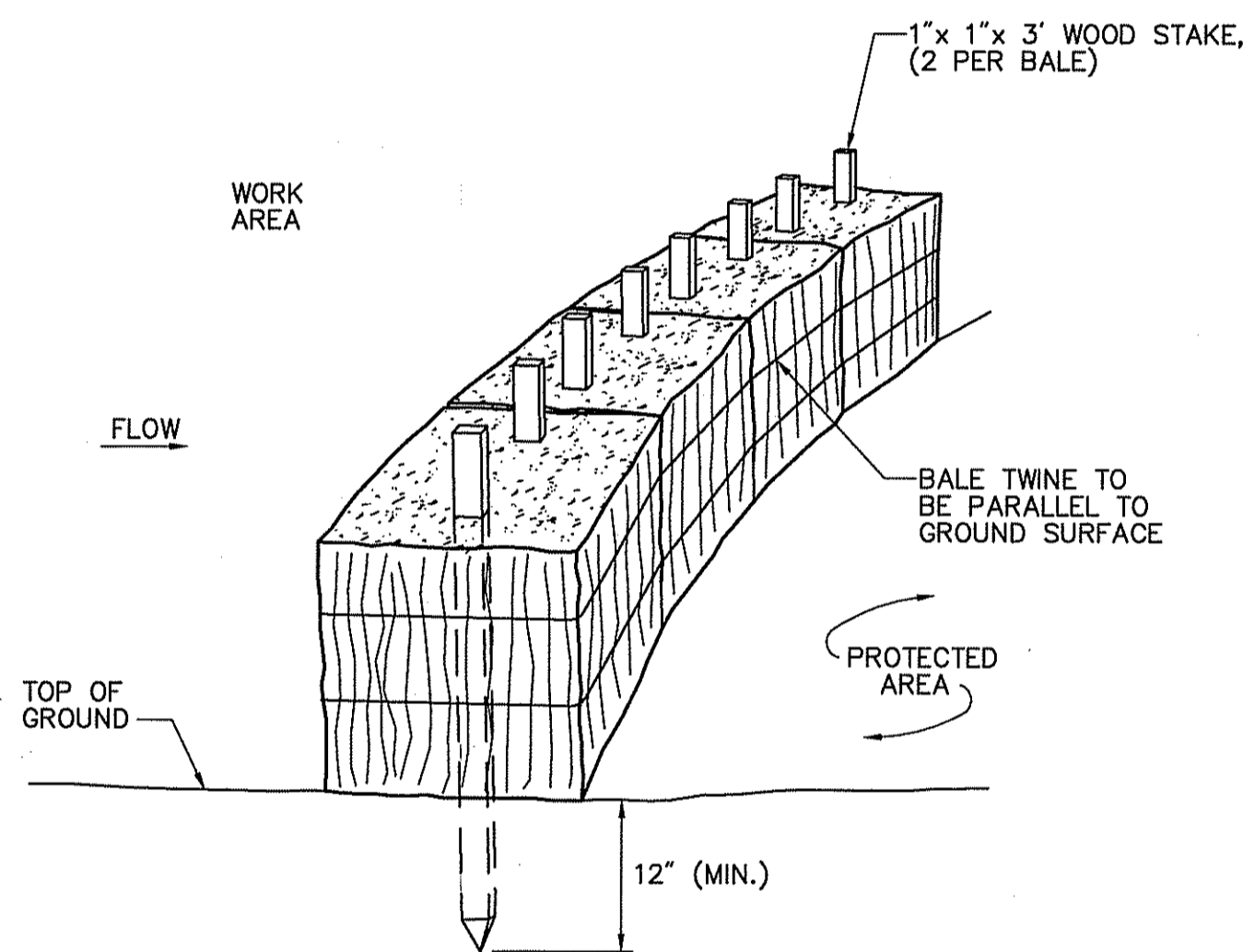
Erosion and Sediment Control Notes:

1. Prior to starting any Site work, the contractor shall notify appropriate agencies and shall install erosion control measures as shown on the plans and as identified in Federal, State and Local approval documents pertaining to this Project.
2. A soil erosion and sedimentation control plan has been designed to protect on-site wetlands and watercourses and off-site areas during and after construction. In areas where access to pole structures is through wetland areas, temporary swamp mats will be placed.
3. In areas where high runoff velocities or high sediment loads are expected, hay bale barriers will be backed with silt fencing.
4. Typical, crushed-stone construction entrance/exits will be constructed at each street access point throughout the project area.
5. If groundwater is encountered during excavation, a temporary dewatering basin or filter bags will be utilized proximate to the work area outside of wetlands whenever possible to detain and filter turbid pump discharges.
6. Soils removed from excavations will be temporarily stockpiled in a suitable upland location away from the wetland edges to reduce the potential for sediment to be transported into wetland resources. Excess soils not utilized during the backfilling operations will be removed from wetlands and floodplains. Excess soils will generally be spread on upland areas proximate to the site within the ROW, and appropriately stabilized in accordance with applicable regulations.
7. Once work is complete, final surface treatment consisting of straw or cellulose mulch will be applied to stabilize the disturbed areas.
8. As directed in the Rhode Island Soil Erosion and Sediment Control Handbook, these erosion/sedimentation control barriers will be inspected periodically and maintained as necessary, at the end of each work day and after significant rainfall events. Areas of soil disturbance will be kept to a minimum, and all disturbed areas will be stabilized with hay mulch.
9. Sediment shall be removed from behind barriers if greater than 6-inches deep or as needed.
10. Damaged or deteriorated erosion/sedimentation control items will be repaired immediately after identification.
11. Erosion control measures shall remain in place until all disturbed earth has been securely stabilized. Once the site is stabilized, the hay bales will be removed or broken up and spread as mulch. All other controls shall be removed and properly disposed of by the contractor.
12. In the event of a fuel spill or equipment malfunction resulting in a release of hazardous material, all work will be stopped in this area until the release/spill is cleaned up.
13. Equipment used for the construction of the transmission line will be properly maintained and operated to reduce the chances of spill occurrences of petroleum products. Refueling of equipment will be required to carry spill containment and prevention devices (i.e., absorbent pads, clean up rags, five gallon containers, absorbent material, etc.) at all times. In addition, maintenance equipment and replacement parts for construction equipment will be on hand to repair failures and stop a spill in the event of equipment malfunction.
14. Any hazardous waste spills shall be cleaned up immediately, and if the spill amount is equal to or exceeds the EPA Reportable Quantity (RQ) for that substance in accordance with 40 CFR Parts 1010, 117, or 302, the contractor shall immediately contact the National Response Center at 1-800-424-8802. The contractor will also be responsible for submitting in writing a description of the release to the EPA Regional Office and RIDEM providing the date and circumstances of the release and the steps to be taken to prevent another release. Directions for cleaning up spills shall be clearly posted at a designated on-site location, and construction personnel shall be made aware of the procedures and location of cleanup supplies. Personnel shall wear appropriate protective gear and have proper training to prevent injury from contact with any hazardous substances.

Restrictions

1. All construction activities involving soil disturbances within watercourses must be limited to the low flow period (July 1 to October 31 of any calendar year).
2. Once excavation work at a structure is completed the resulting disturbed soils should be stabilized with hay mulch or similar material.
3. Any soil disturbance associated with equipment access to structures or structure excavations should be mulched with hay on all disturbed areas as soon as possible but not more than 14 days after the construction activity in that area has temporarily or permanently ceased, unless the activity is to resume within 21 days.
4. In accordance with the RIPDES General Permit all stormwater control measures, disturbed areas, areas used for the storage of materials that are exposed to precipitation (including unstabilized soil stockpiles), discharge locations and locations where vehicles enter or exit the site, as outlined in Part IV of this permit, must be inspected by or under the supervision of the applicant at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff. Such areas shall be inspected for evidence of, or the potential for, pollutants entering the waters of the State or a separate storm sewer system. All BMPs shall be maintained to prevent uncontrolled releases of measurable amounts of sediment or sediment laden water from traveling beyond the limits of disturbance.

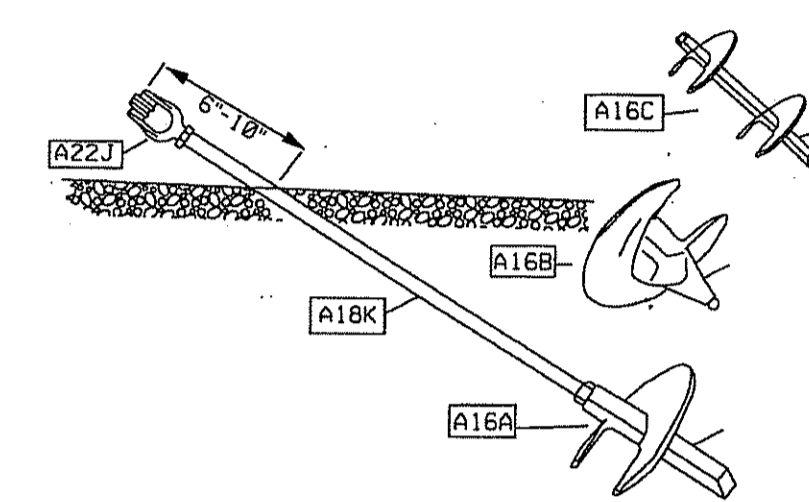
NOTE:
STRAW BALES SHALL BE USED INSTEAD OF HAY BALES IN AREAS (PARTICULARLY WETLANDS) WHERE THE POTENTIAL INTRODUCTION OF INVASIVE PLANT SPECIES IS A CONCERN



Straw Bale Barrier (Non-Embedded)

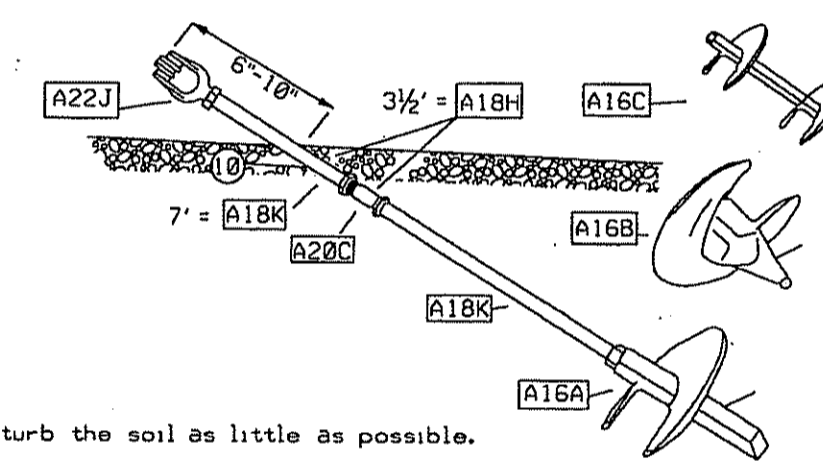
N.T.S. Source: VHB/NGRID EG-303 REV LD_653

Screw Anchor



CU = PATVM	2-4' HELIX
CU = PAPIPT	1-14' HELIX
CU = PAPIST	1-10' HELIX
CU = PAPIRE42	3/4' EXTENSION
CU = PAPIRE44	7' EXTENSION

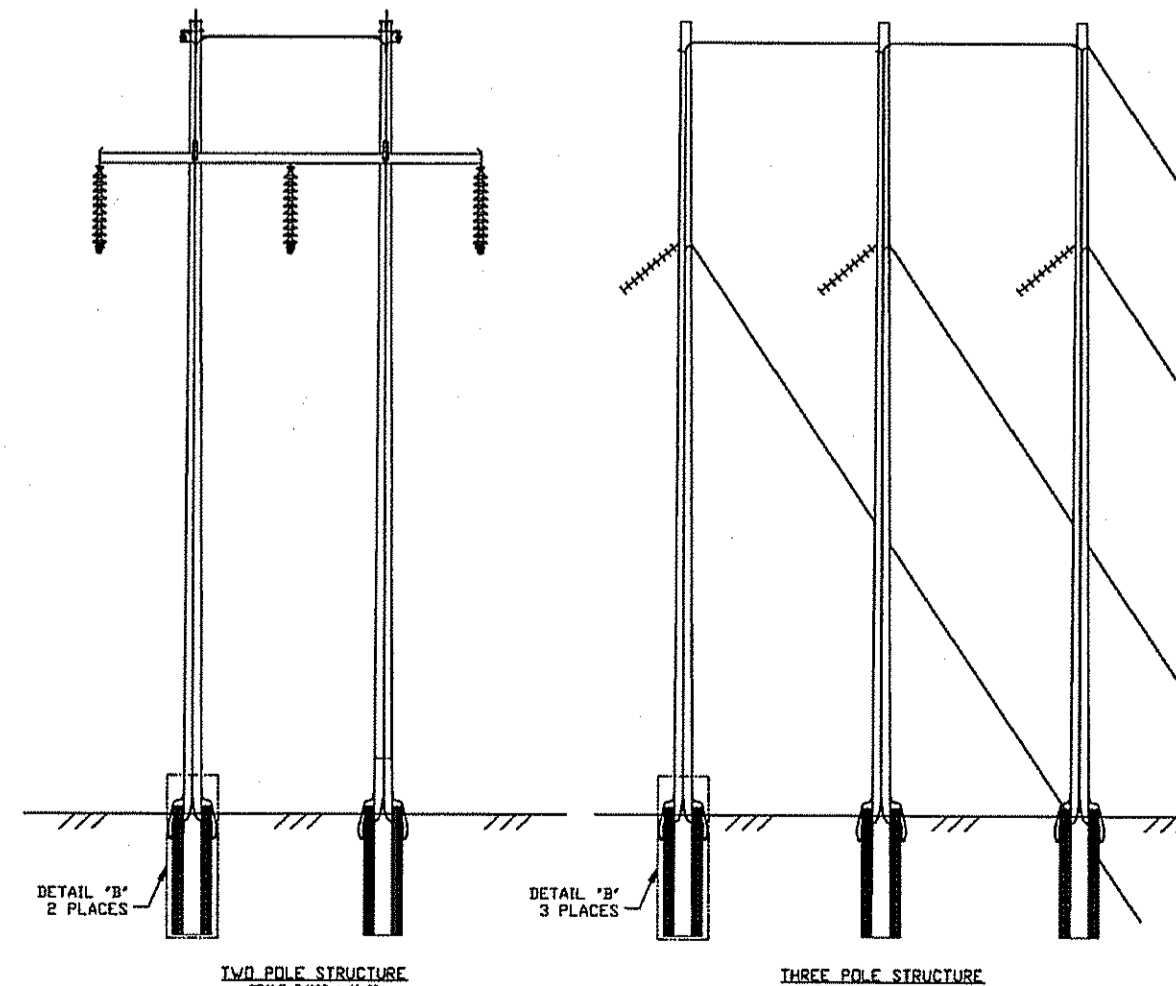
Screw Anchor with 3/4' or 7' Extension



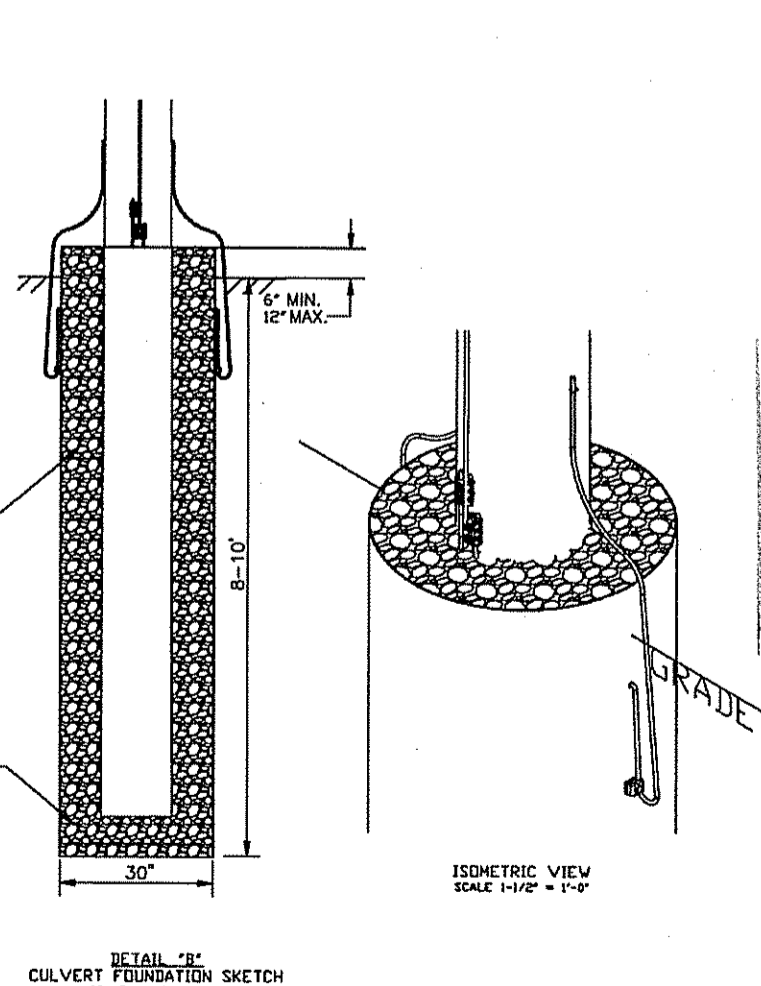
- Notes:
1. Disturb the soil as little as possible.
 2. Maintain alignment during installation.
 3. Do not use more than 1 extension rod per installation.

Screw Anchors

N.T.S. Source: National Grid



- NOTES:
1. BRIDGE FITTINGS TO BE USED WITHIN 1' ABOVE OR BELOW GROUNDLINE
 2. DURING INSTALLATION, 4" TAILS OF GROUNDWIRE TO BE LEFT ABOVE GROUNDLINE AS SHOWN AND SECURED SO AS TO PREVENT A SAFETY HAZARD
 3. GROUND GRIDS OF INDIVIDUAL PILES IN THE SAME STRUCTURE ARE NOT TO BE CONNECTED BELOW THE GROUNDLINE
 4. CULVERT LENGTHS ARE TO BE USED SUCH THAT THEY ARE BURIED AT LEAST AS DEEP AS PILES WHILE STILL MAINTAINING 5" MINIMUM REVEAL. BACKFILL THESE CULVERTS AS NECESSARY TO ACHIEVE PROPER POLE EMBEDMENT DEPTH.
 5. WHERE CULVERTS ARE INSTALLED IN ADVANCE OF POLE INSTALLATION, HOLE IS TO BE COVERED AND SECURED IN A MANNER ACCEPTABLE TO NATIONAL GRID.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED FEB 27 2012 FILE # 12-0003
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Standard Direct Embed Foundation Details

N.T.S. Source: National Grid

No.	Revision	Date	Approved

Project Title
**National Grid
Rhode Island Reliability Project**
Proposed H-17 115kV Transmission Line
Structure Relocation
Access from Iron Mine Hill Road
North Smithfield, Rhode Island
issued for

Request for
Preliminary Determination

Legend, General Notes
and Details

Drawing Number
C-2
Sheet of
2 of 3
Project Number
72005



Vanasse Hangen Brustlin, Inc.

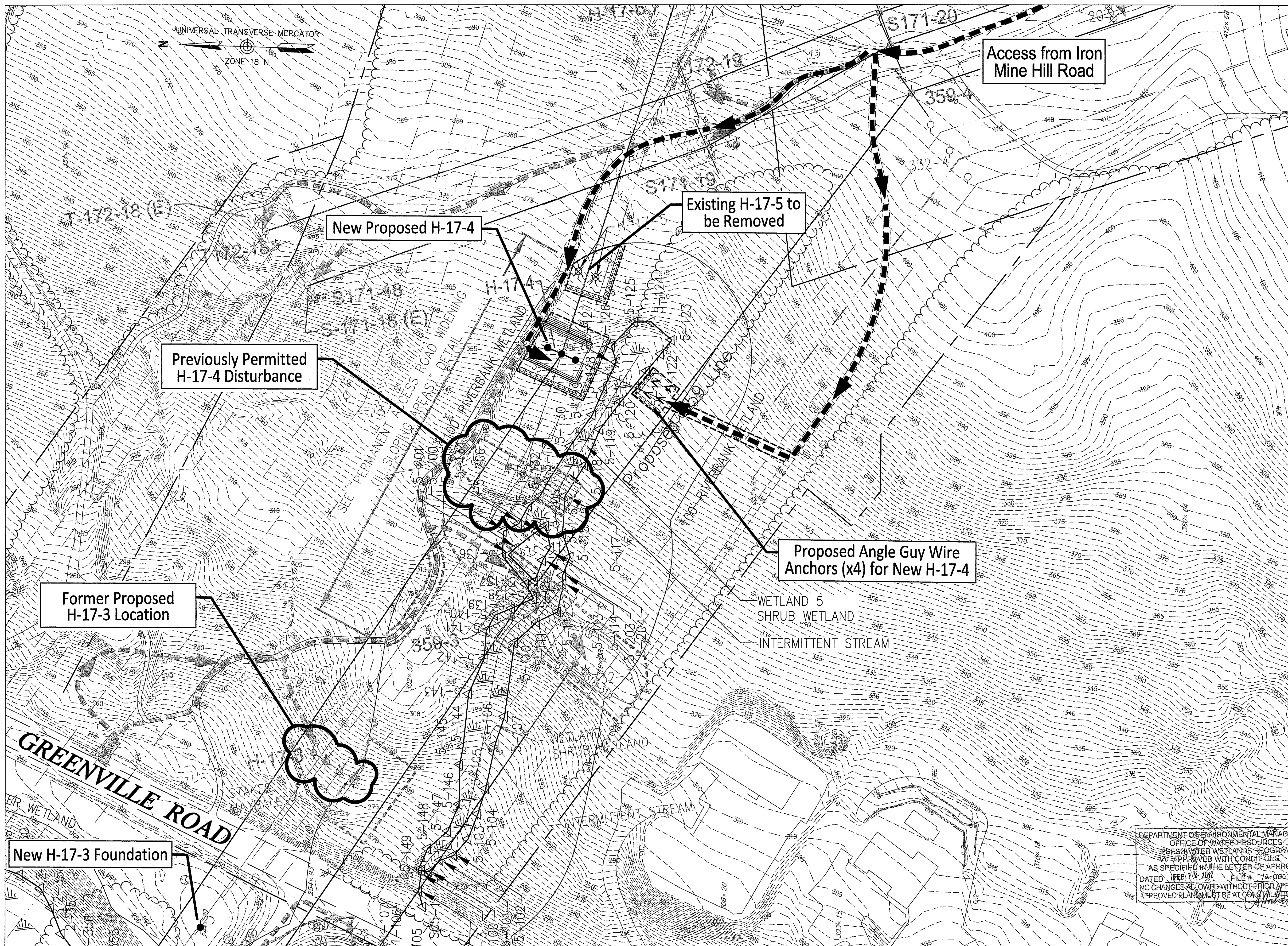
Transportation
Land Development
Environmental Services

Environmental Management

10 Dorrance Street
Providence, Rhode Island 02903
401.272.8100 • FAX 401.272.9694 | Water Resources

Legend

- 1-100 Δ WETLAND SYMBOL
- WETLAND FLAG
- WETLAND EDGE
- FLOWING BODY OF WATER
- 50' PERIMETER WETLAND
- 50' PERIMETER WETLAND
- 100' RIVERBANK WETLAND
- APPROXIMATE R.O.W. LIMITS
- EX. STRUCTURE
- PROPOSED STRUCTURE
- PROPOSED GUY WIRE ANCHOR
- EX. OVERHEAD ELECTRIC LINES
- EX. ACCESS ROAD
- EX. CONTOUR TOPOGRAPHIC (MAJOR)
- EX. CONTOUR TOPOGRAPHIC (MINOR)
- EX. TREETLINE
- PROP. OVERHEAD TRANSMISSION LINES (L)
- PROP. LIMIT OF DISTURBANCE
- PROP. E&S CONTROL
- PROP. ACCESS ROUTE
- EX. ACCESS ROUTE TO BE ABANDONED
- LIMIT OF DISTURBANCE (PREVIOUSLY PERMITTED)
- E&S CONTROL (PREVIOUSLY PERMITTED)
- ACCESS ROUTE (PREVIOUSLY PERMITTED)
- STRUCTURE (PREVIOUSLY PERMITTED)



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED FEB 7, 2012 FILE # 72-0003
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSULTANT'S RISK

No.	Revision	Date	Approved

Designed by	Drawn by	Checked by
CAD checked by	Approved by	
Scale	As Noted	Date
		February 7, 2012

National Grid
Rhode Island Reliability Project

Proposed H-17 115kV Transmission Line
Structure Relocation
Access from Iron Mine Hill Road
North Smithfield, Rhode Island
Issued for

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Preliminary Determination

Drawing Title

Project Plan

Drawing Number
C-3
Sheet of
3 3
Project Number
72005

Note:
The RIDEM reviewed the Rhode Island Reliability Project in its entirety, and this proposed new work represents a minor deviation from the structure alignment approved under Permit to Alter Freshwater Wetlands No. 09-0163 that was issued on October 15, 2010.