

BUCKEYE BROOK RESTORATION

2000 POST ROAD, PLAT 321 LOT 0004
WARWICK, RHODE ISLAND

ISSUED FOR CONSTRUCTION

PREPARED FOR:
CITY OF WARWICK
DEPARTMENT OF PUBLIC WORKS

925 SANDY LANE
WARWICK, RI 02889
(401)-738-2003

OWNER:
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

TWO CAPITOL HILL, ROOM 350
PROVIDENCE, RI 02903
(401)-222-2023

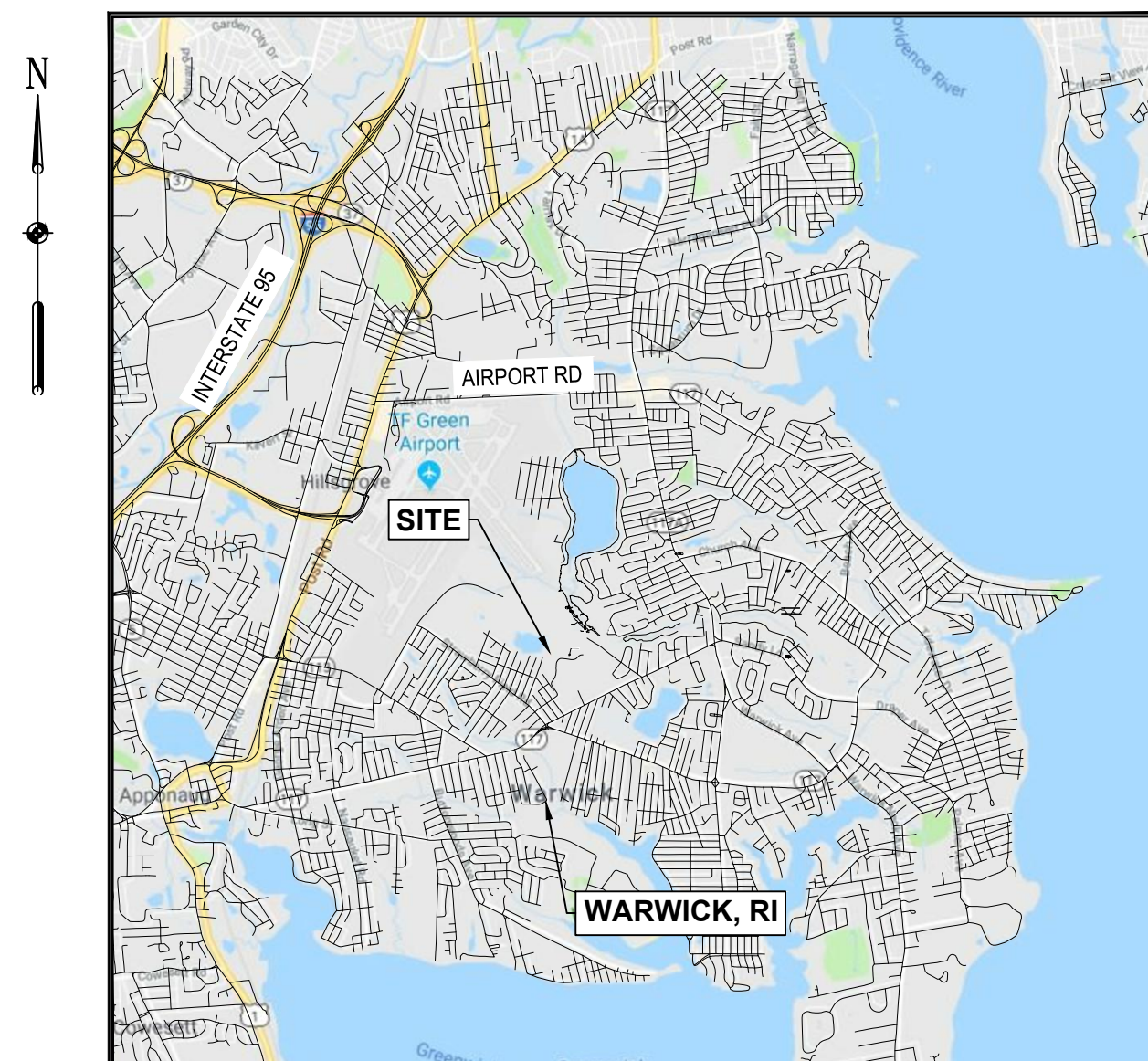
PREPARED BY



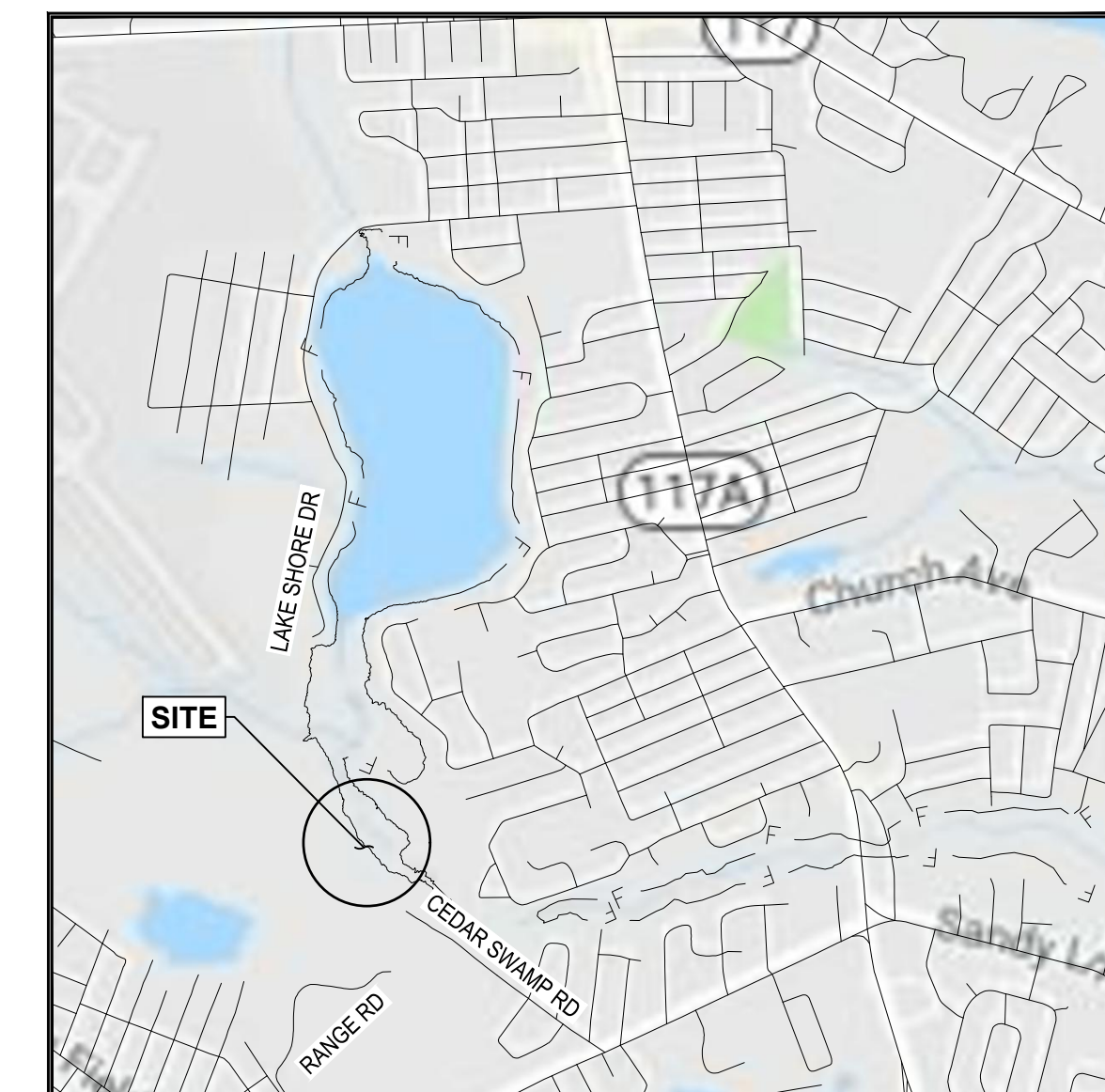
301 Metro Center Blvd, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DRAWING NO.	SHEET NO.	SHEET DESCRIPTION
T-001	1 OF 12	TITLE SHEET
G-001	2 OF 12	GENERAL NOTES AND LEGEND
C-101	3 OF 12	EXISTING CONDITIONS AND RESOURCE AREA MAP KEY
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C-301	11 OF 12	CROSS SECTION AND LONGITUDINAL PROFILE
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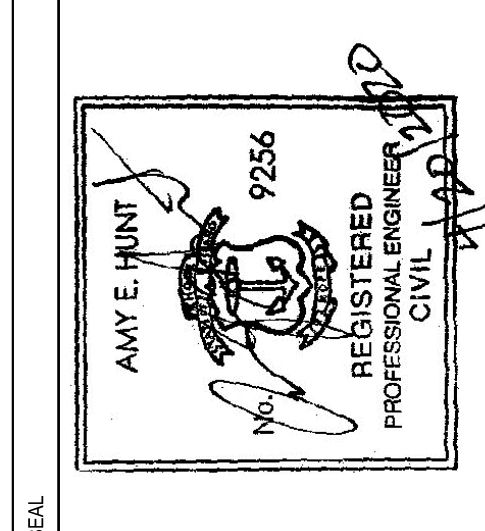


LOCATION MAP
SCALE: 1"= 1 MILE
GRAPHIC SCALE IN FEET

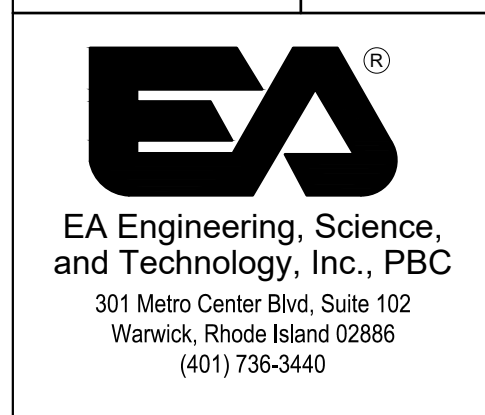


VICINITY MAP
SCALE: 1"= 1500'
GRAPHIC SCALE IN FEET

NO.	DATE	BY	DESCRIPTION
1	11/26/18	AMT	REVISED PER RDEM COMMENTS



BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
WARWICK, RHODE ISLAND
TITLE SHEET



DATE: APRIL 2020
PROJECT NUMBER: 63293.01
T-001
SHEET: 1 OF 12

FILE PATH: I:\MANAGEMENT\PROJECTS\63293\1 - BUCKEYE BROOK RESTORATION\DRAWINGS\BUCKEYE BROOK - PLAT 321 - REVISED PER RDEM COMMENTS - T-001.dwg, DATE: 02/20/2020 10:47 AM

ISSUED FOR CONSTRUCTION

GENERAL NOTES

MAP NOTES AND REFERENCES:

- 1. ALL ELEVATIONS REFERENCE NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
2. THE PROJECT IS SEPARATED INTO TWO GEOGRAPHIC AREAS: THE FLOOD REDUCTION AREA (FRA), WHICH IS PREDOMINANTLY COMPRISED OF WARWICK POND; AND THE RESTORATION CONSTRUCTION AREA (RCA), WHICH IS A MUCH SMALLER AREA AFFECTED BY THE ACTUAL CONSTRUCTION ACTIVITY WHERE SOIL DISTURBANCES SHALL OCCUR.
3. SITE WHERE PHRAGMITES REMOVAL IS PROPOSED IS LOCATED AT 2000 POST ROAD NO. 8, SURFACE WATER CHANGES EXTEND FROM 5 FEET (FT) DOWNSTREAM OF LAKE SHORE DRIVE DOWNSTREAM OF WARWICK POND TO RIVER STATION 26+02 DOWNSTREAM OF THE RCA PROJECT AREA.
4. 100-YEAR FLOODPLAIN BOUNDARY WAS SOURCED FROM RIGIS. THE SITE DOES NOT FALL WITHIN THE 100-YEAR FLOODPLAIN BOUNDARY AS DELINEATED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) IN MAP PANEL 44003C0133H.
5. UPSTREAM EXTENT OF SURFACE WATER ELEVATION CHANGE UNDER PROPOSED CONDITIONS WERE ESTIMATED (AS THE GREATEST EXTENT PRACTICAL) BY USING THE PROPOSED +.08 FT CHANGE IN APPROXIMATE OBSERVED DAY WATER SURFACE ELEVATION FROM EXISTING TO PROPOSED CONDITIONS AT THE OUTLET OF WARWICK POND.
6. APPROXIMATE EXISTING EDGE OF WATER DIGITIZED FROM GOOGLE EARTH DATED AUGUST 2016.
7. TREES GREATER THAN 3 INCHES IN DIAMETER WITHIN THE PROPOSED CONSTRUCTION ACCESS ROAD SHOWN HEREIN WERE DELINEATED BY EA IN MAY OF 2018 WITH A GARMIN GLO GLONASS AND GLOBAL POSITIONING SYSTEM (GPS) SENSOR WITH A 3 METER HORIZONTAL ACCURACY.
8. APPROXIMATE SEWER LINE DIGITALIZED FROM "CITY OF WARWICK, RHODE ISLAND - WARWICK SEWER AUTHORITY SYSTEM OF SEWERS, CONTRACT NO. 18" AUTHORED BY CE MAGUIRE INC. AND DATED 1973.
9. CROSS SECTION SURVEY COMPLETED BY EA IN JUNE 2017.
10. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
11. PROPERTY BOUNDARIES ARE APPROXIMATE AND OBTAINED FROM THE CITY OF WARWICK'S PLANNING DEPARTMENT.
12. WETLAND RESOURCE AND NATURAL HERITAGE AREA LOCATIONS AND DESCRIPTIONS ARE APPROXIMATE ONLY AND AS DIRECTLY OBTAINED FROM THE RIGIS DATABASE AND ARE INTENDED TO SHOW APPROXIMATE LOCATIONS OF SUCH RESOURCES.
13. WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER OF 2017 WITH A GARMIN GLO GLONASS AND GLOBAL POSITIONING SYSTEM (GPS) SENSOR WITH A 3 METER HORIZONTAL ACCURACY AND CONFIRMED IN MAY 2018.
14. BUCKEYE BROOK IS GREATER THAN 10 FT IN WIDTH AND THEREFORE HAS A 200 FT RIVERBANK WETLAND SETBACK.
15. THE PROJECT SITE IS WITHIN A NATURAL HERITAGE AREA AS SHOWN ON THE "EXISTING CONDITIONS, RESOURCE AREA, AND 200 FT RADIUS MAP KEY" AND SHEETS 1-3.
16. THIS SITE DOES NOT LIE WITHIN ANY KNOWN AGRICULTURAL USE, CIVIC STRUCTURAL USE, OR FARMLAND CONSERVATION AREAS.
17. THE PROPOSED "AVERAGE OBSERVED DAY" WATER SURFACE ELEVATION IS NOT SHOWN ON THE PLANS HEREIN AS EXISTING BATHYMETRIC SURVEY OF WARWICK POND WAS NOT AVAILABLE FOR THIS PROJECT THEREFORE THE HORIZONTAL EXTENTS IN THE CHANGE IN WATER SURFACE ELEVATION BETWEEN EXISTING AND PROPOSED CONDITIONS WOULD BE APPROXIMATE ONLY

GENERAL CONSTRUCTION REQUIREMENTS:

- 1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT OF THE CONSTRUCTION WITH ITS RELATIONSHIP TO THE EXISTING SITE CONDITIONS.
2. THE CONTRACTOR SHALL MARK OUT IN FIELD PROPOSED LIMITS OF PHRAGMITES AUSTRALIS EXCAVATION AND REMOVAL.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK ASSOCIATED WITH SUCH FINDINGS.
4. IF THE RELOCATION OF ANY UTILITIES IS REQUIRED, THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATIONS REQUIRED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC., THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
6. AN APPROVED SET OF HARD-COPY PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE SITE THROUGH ENTIRE PERIOD OF CONSTRUCTION.
7. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
8. SITE ACCESS SHALL BE GAINED VIA THE GATED ENTRANCE TO THE RHODE ISLAND AIRPORT CORPORATION PROPERTY AT THE WARWICK CITY YARD OFF RANGE ROAD.
9. A NOTICE OF PROPOSED CONSTRUCTION OR ALTERNATION HAS BEEN SUBMITTED TO THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION (FAA). UNDER THE PROVISIONS OF 49 U.S.C., SECTION 44718 AND TITLE 14 OF THE CODE OF FEDERAL REGULATIONS, PART 77, A MAXIMUM EQUIPMENT HEIGHT OF 20 FT WILL BE ENFORCED.

EROSION CONTROL NOTES:

- 1. DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW AND LOCAL ORDINANCE. APPROVAL FROM RIDEM FRESHWATER WETLANDS AND RIPDES SECTIONS ARE REQUIRED.
2. THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL USE THE LATEST EDITION OF THE "STATE OF RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" AS A GUIDE IN CONSTRUCTION OF THE EROSION AND SEDIMENT CONTROLS INDICATED ON THE PLANS.
4. THE CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROL DEVICES AT THE END OF EACH WORKING DAY.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MAINTAINED AND DUST-FREE CONDITION.
7. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE PROJECT SITE SHALL PASS OVER THE EXISTING CONSTRUCTION ENTRANCE AT THE GATED ENTRANCE TO THE RHODE ISLAND AIRPORT CORPORATION PROPERTY.
8. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS (E.G. SILT FENCE) AND TURBIDITY CURTAINS AS SHOWN ON THE PLANS.
9. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS AS INDICATED ON THE PLANS.
10. ALL IN-WATER WORK INCLUDING PHRAGMITES AUSTRALIS REMOVAL, AND THE PRESENCE OF EQUIPMENT IN THE STREAM SHALL BE PERFORMED WITHIN THE IN-WATER WORK WINDOW OF 1 JULY - 31 OCTOBER.
11. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS THAT HAVE NOT YET REACHED FINISHED GRADE.
12. IF SEEDING OUTSIDE THE AREA OF PHRAGMITES REMOVAL CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
13. STRAW OR HAY MULCH, WOOD FIBER MULCH, AND HYDROMULCH ARE RECOMMENDED.
14. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORMWATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION.

EROSION CONTROL NOTES (CONT):

- 15. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER.
16. INSPECTION OF PERIMETER SEDIMENT BARRIERS (INCLUDING THOSE ENCOMPASSING PHRAGMITES DEWATERING AREAS) SHALL BE MADE AFTER EACH STORM EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED.
17. COMPLETE COMPLIANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS EXPECTED AT ALL TIMES.

PHRAGMITES AUSTRALIS CONSTRUCTION NOTES:

- 1. PHRAGMITES AUSTRALIS REMOVAL SHALL TAKE PLACE IN THE SEQUENCE OUTLINED IN THE PROPOSED SEQUENCE OF CONSTRUCTION ON SHEET C-108.
2. PRIOR TO CONSTRUCTION, ACCESS AND CONSTRUCTION EASEMENTS WILL BE GRANTED BY PROPERTY OWNERS WHERE ACCESS AND CONSTRUCTION WILL BE REQUIRED ON PRIVATE PROPERTY.
3. ALL OF THE CONSTRUCTION WORK WILL OCCUR WITHIN THE IN-WATER WORK WINDOW OF 1 JULY - 31 OCTOBER.
4. THE SOIL MANAGEMENT PLAN SHALL BE FOLLOWED, INCLUDING BUT NOT LIMITED TO THE COVERING OF STOCKPILED EXCAVATED MATERIALS WHEN WORK IS NOT ACTIVELY BEING PERFORMED.
5. SOIL FROM PHRAGMITES AUSTRALIS REMOVAL SHALL NOT BE REUSED ON SITE.
6. ALL EQUIPMENT, MACHINERY, AND HAND TOOLS SHALL BE CLEANED OF ALL VISIBLE SOIL AND PLANT MATERIAL PRIOR TO ENTERING THE PROJECT SITE.
7. MATERIALS FROM THE CHANNEL DURING THE PHRAGMITES AUSTRALIS REMOVAL MUST BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
8. THE TEMPORARY COFFERDAM SYSTEM AND BYPASS STRUCTURES MUST BE MAINTAINED TO ALLOW A SUITABLE WORKING CONDITION.
9. TEMPORARY COFFERDAM(S) AND WATER DIVERSION STRUCTURE(S) ARE TO BE CONSTRUCTED OF MATERIALS THAT CAN BE COMPLETELY REMOVED FROM THE STREAM UPON COMPLETION OF CONSTRUCTION.
10. THE BYPASS SYSTEM SHALL BE SIZED FOR THE 2-YEAR STORM EVENT (21.2 CFS).
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ACTIVITIES WITHIN THE LIMIT OF DISTURBANCE (LOD), AS WELL AS PROPERLY STORING EQUIPMENT AND MATERIALS AWAY FROM THE WORK AREA.
12. CONTRACTOR SHALL PROTECT ALL OF THE EXISTING STRUCTURES WITHIN OR ADJACENT TO THE PROJECT AREAS WHICH ARE SCHEDULED TO REMAIN.
13. ACCESS, STAGING AND TEMPORARY PHRAGMITES DEWATERING AREAS NOT INDICATED ON THE PLANS SHALL BE DELINEATED BY THE CONTRACTOR FOR APPROVAL PRIOR TO PROJECT INITIATION.
14. VEHICLE STORAGE AND FUELING SHALL BE PERFORMED AT LEAST 50 FT OUTSIDE THE RIVER CHANNEL.

VEGETATIVE RESTORATION NOTES:

- 1. RESTORE DISTURBED AREAS TO ORIGINAL GRADES AS SHOWN ON THE PLANS TO PROMOTE UNIMPEDED DRAINAGE AND OPTIMUM VEGETATIVE GROWTH.
2. PERMANENT VEGETATIVE COVER WILL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE.
3. PERMANENT VEGETATIVE COVER WILL CONSIST OF NATIVE AND WETLAND SEED MIXES IN THE LOCATIONS SPECIFIED ON SHEET C-301.
4. CONTRACTOR SHALL FURNISH AND INSTALL ALL PRODUCTS AND MATERIALS, AND MAINTAIN SUCH INSTALLATIONS.

ABBREVIATIONS

Table listing abbreviations: CFS (Cubic Feet Per Second), CM (Centimeter), DOT (Department of Transportation), E (Easting), EL (Elevation), EX (Existing), FEMA (Federal Emergency Management Agency), FRA (Flood Reduction Area), FT (Foot), GIS (Geographic Information System), GPS (Global Positioning System), IN (Inches), LIDAR (Light Detection and Ranging), LOD (Limit of Disturbance), N (North), NAVD 88 (North American Vertical Datum of 1988), NO. (Number), P.K. (Parker Kalon (Survey Nail)), PR (Proposed), RCA (Restoration Construction Area), RIDEM (Rhode Island Department of Environmental Management), RIDOT (Rhode Island Department of Transportation), RIGIS (Rhode Island Geographic Information System), RTK (Real-Time Kinematic), TYP (Typical), U.S. (United States), VRS (Virtual Reference Station), WI (With), WSEL (Water Surface Elevation).

REFERENCE SYMBOLS

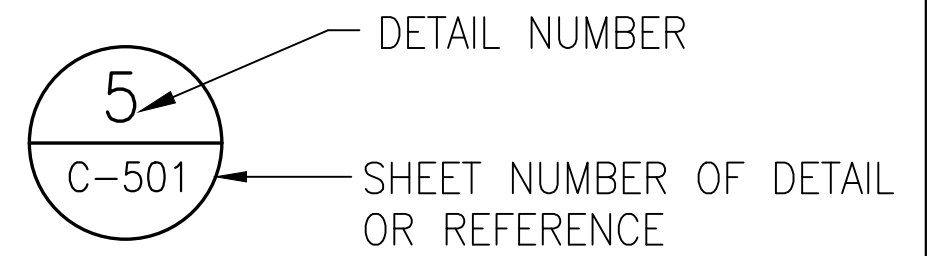
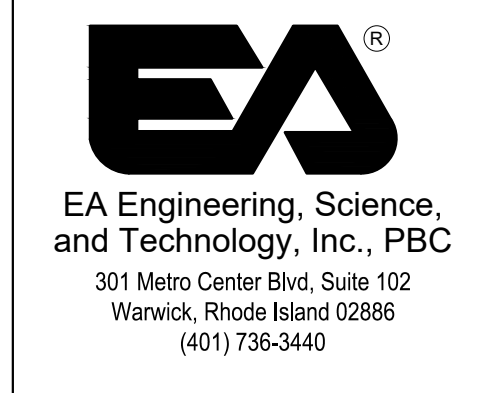


Table with columns: REVISIONS, DESIGN INFORMATION, and SEAL. Includes fields for DESCRIPTION, BY, DATE, NO., DESIGNED BY, DRAWN BY, CHECKED BY, PROJECT MANAGER, and a professional engineer seal for Amy E. Hunt, No. 9256.

BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
WARWICK, RHODE ISLAND
GENERAL NOTES AND LEGEND



FILE PATH: I:\MARAGCOP\WARWICK\PROJECTS\63293 - BUCKEYE BROOK RESTORATION\GENERAL - ACTING\PROJECTS\63293\WARWICK - PLANS - REFERENCE SYMBOLS\EROSION CONTROL NOTES - PART 77 - A MAXIMUM EQUIPMENT HEIGHT OF 20 FT WILL BE ENFORCED.dwg

FOR CONSTRUCTION

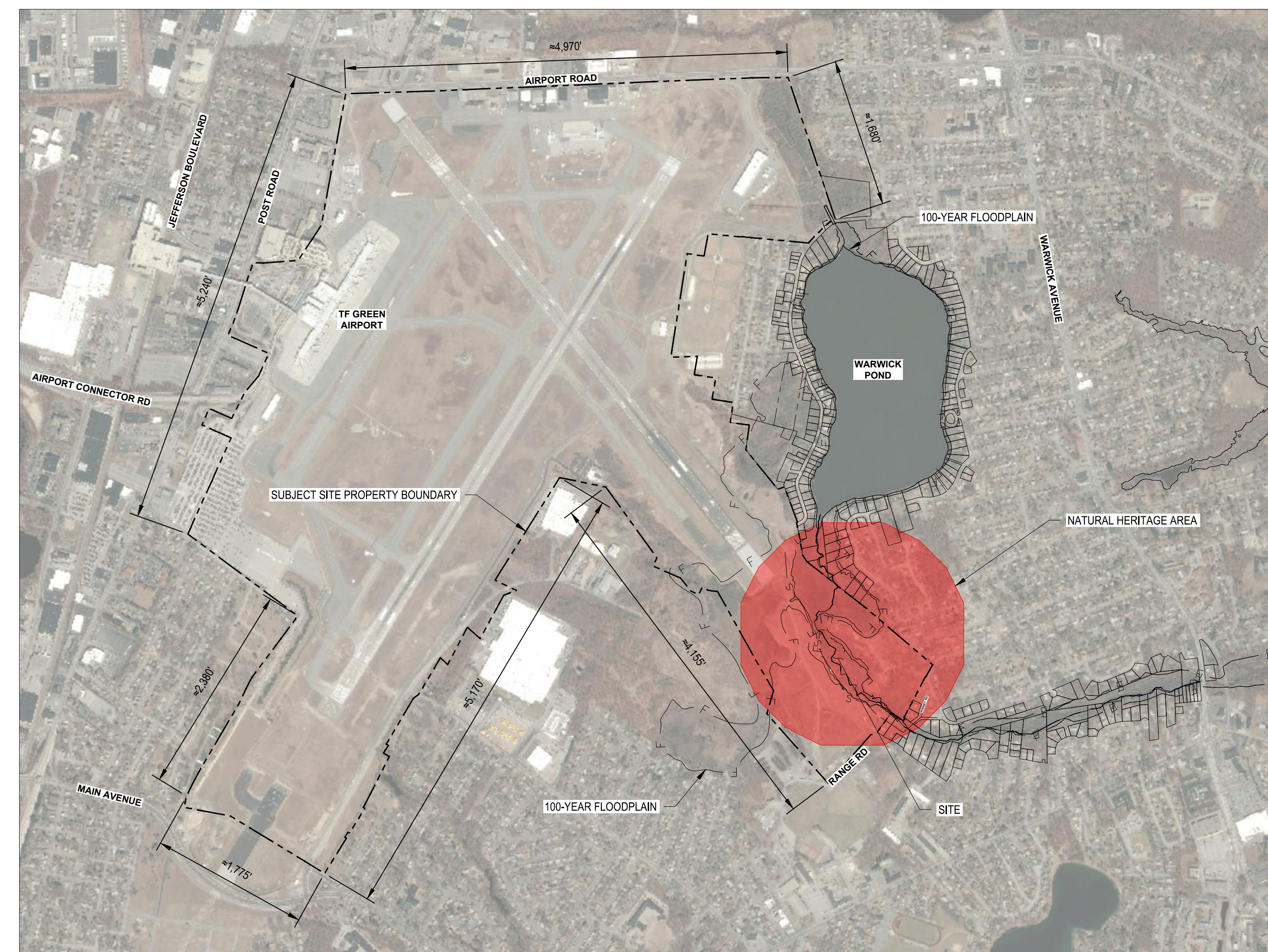
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EL. 16.11 FT

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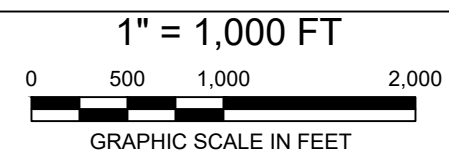
SEE SHEET C-102

SEE SHEET C-103

SEE SHEET C-104



SUBJECT SITE BOUNDARY MAP

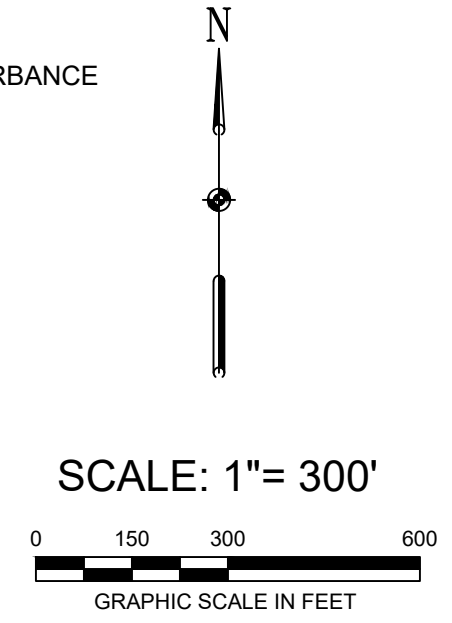


LEGEND:

- SUBJECT SITE PROPERTY BOUNDARY
- PROPERTY LINES
- EXISTING MAJOR CONTOURS
- EXISTING EDGE OF WATER
- EXISTING 100-YEAR FLOODPLAIN LINE
- EXISTING WETLANDS
- NATURAL HERITAGE AREA
- APPROXIMATE LOCATION OF SEWER PIPE
- BUCKEYE BROOK APPROXIMATE CENTERLINE
- EXISTING EDGE OF WATER
- 50 FT PERIMETER WETLAND SETBACK
- 200 FT RIVERBANK WETLAND SETBACK
- FLOOD REDUCTION AREA LIMIT OF DISTURBANCE
- RESTORATION CONSTRUCTION AREA LIMIT OF DISTURBANCE
- FLOW DIRECTION
- SURVEYED WETLANDS LOCATIONS
- BENCHMARK

NOTES

1. AERIAL IS FROM GOOGLE EARTH ONLINE DATABASE; DATED AUGUST 2016.
2. WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE; DATED 2014.
3. WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER 2017.
4. BENCHMARKS SOURCED FROM RHODE ISLAND AIRPORT CORPORATION T.F. GREEN AIRPORT SITE 3 AS-BUILT NO.1 DRAWING SET DATED APRIL 2016.



REVISIONS		DESCRIPTION
NO.	DATE	BY
1	11/02/18	AMT

DESIGNED BY:	AMT
DRAWN BY:	DPA
CHECKED BY:	MB
PROJECT MANAGER:	AEH

SEAL	
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2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
WARWICK, RHODE ISLAND

EXISTING CONDITIONS AND RESOURCE AREA MAP KEY

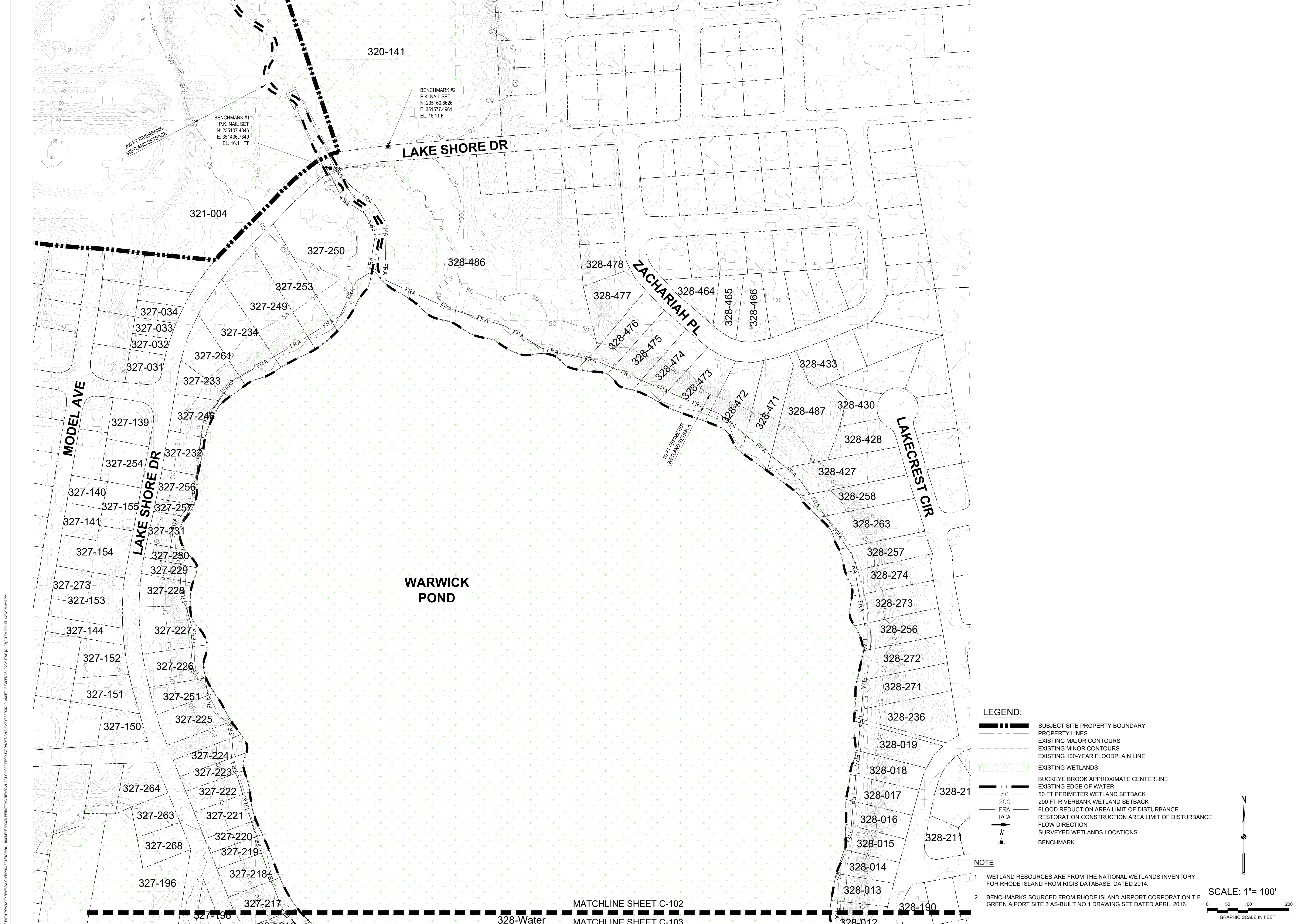
EA
EA Engineering, Science, and Technology, Inc., PBC
301 Metro Center Blvd, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE: APRIL 2020
PROJECT NUMBER: 63293.01

C-101

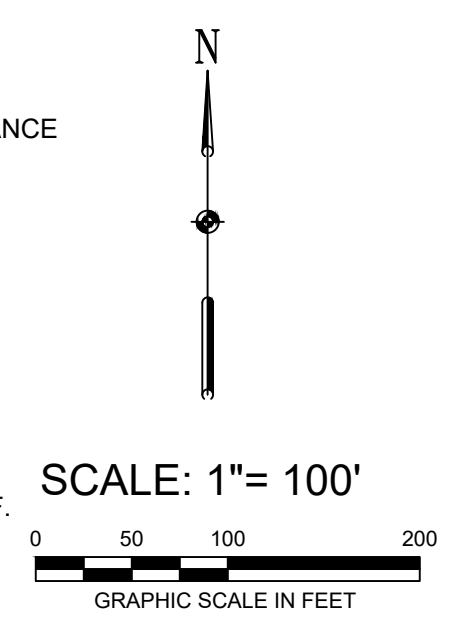
SHEET: 3 OF 12

FOR CONSTRUCTION



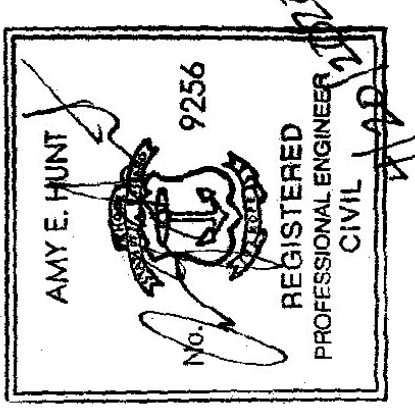
- LEGEND:**
- SUBJECT SITE PROPERTY BOUNDARY
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 - EXISTING MINOR CONTOURS
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MATCHLINE SHEET C-102
 328-Water
 MATCHLINE SHEET C-103

DESIGN INFORMATION		REVISIONS	
NO.	DATE	BY	DESCRIPTION
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DESIGNED BY:	AMT	DRAWN BY:	DPA
CHECKED BY:	MB	PROJECT MANAGER:	AEH

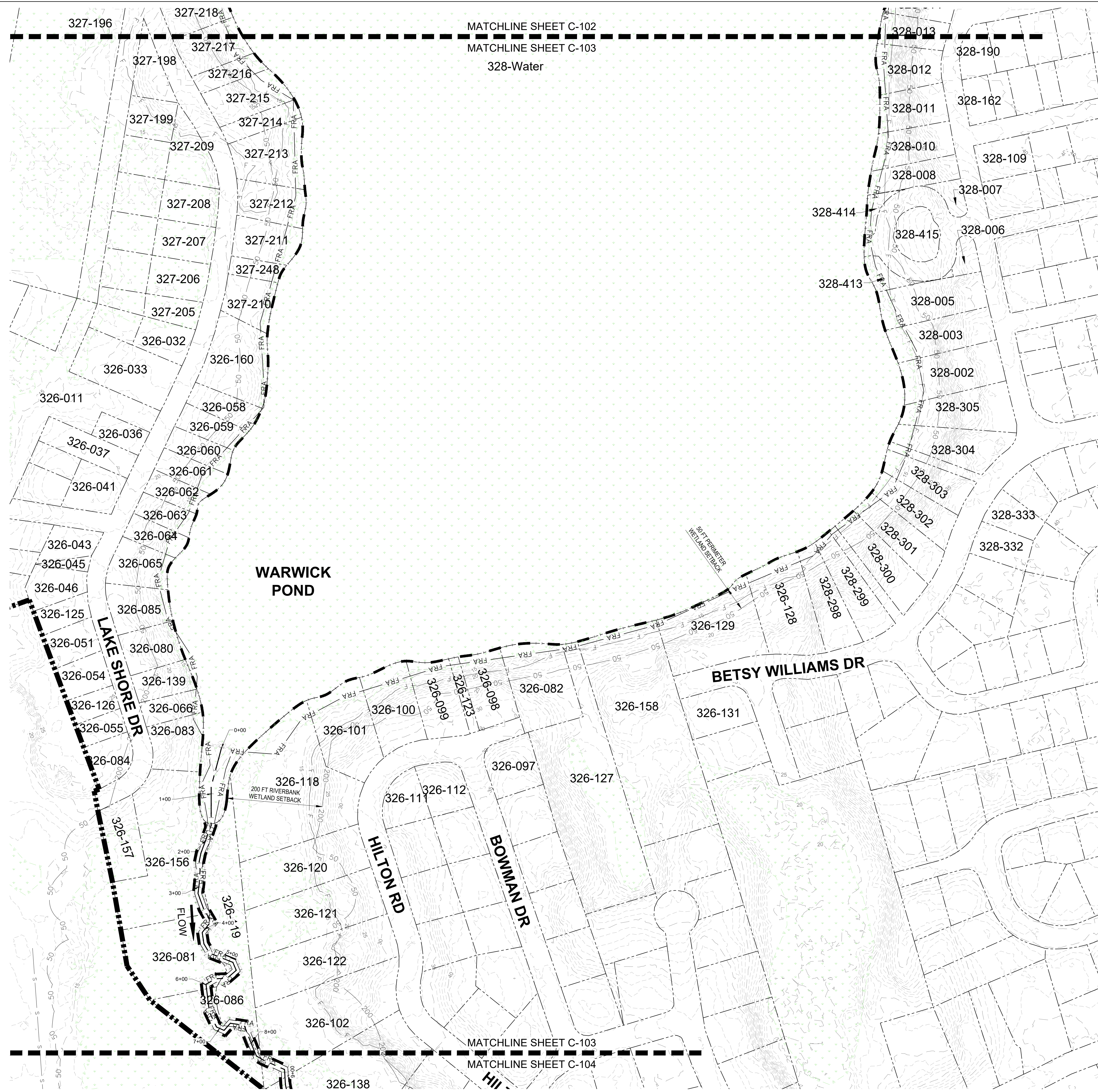


BUCKEYE BROOK RESTORATION
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 CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
 WARWICK, RHODE ISLAND
 EXISTING CONDITIONS AND RESOURCE AREA MAP SHEET 1



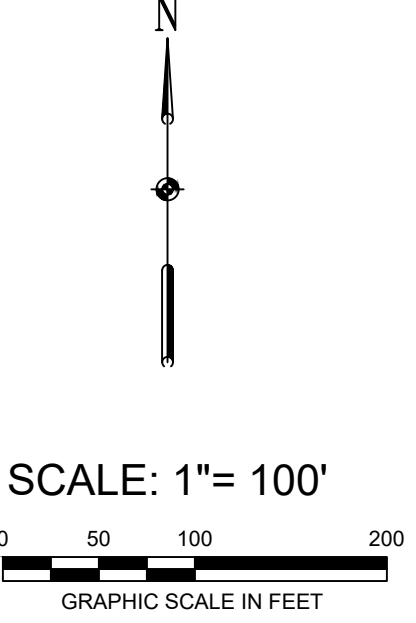
FOR CONSTRUCTION

MATCHLINE SHEET C-102
 MATCHLINE SHEET C-103
 328-Water

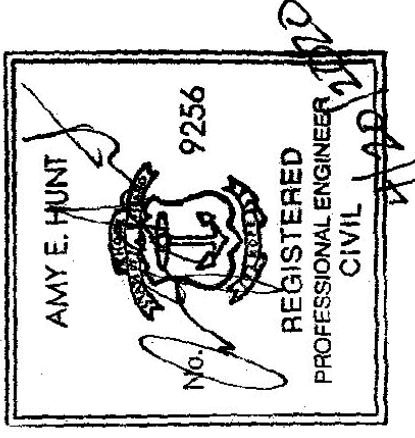


- LEGEND:**
- SUBJECT SITE PROPERTY BOUNDARY
 - PROPERTY LINES
 - EXISTING MAJOR CONTOURS
 - EXISTING MINOR CONTOURS
 - 100-YEAR FEMA FLOODPLAIN LINE
 - APPROXIMATE LOCATION OF SEWER PIPE
 - EXISTING WETLANDS
 - BUCKEYE BROOK APPROXIMATE CENTERLINE
 - EXISTING EDGE OF WATER
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 - SURVEYED WETLANDS LOCATIONS

NOTE
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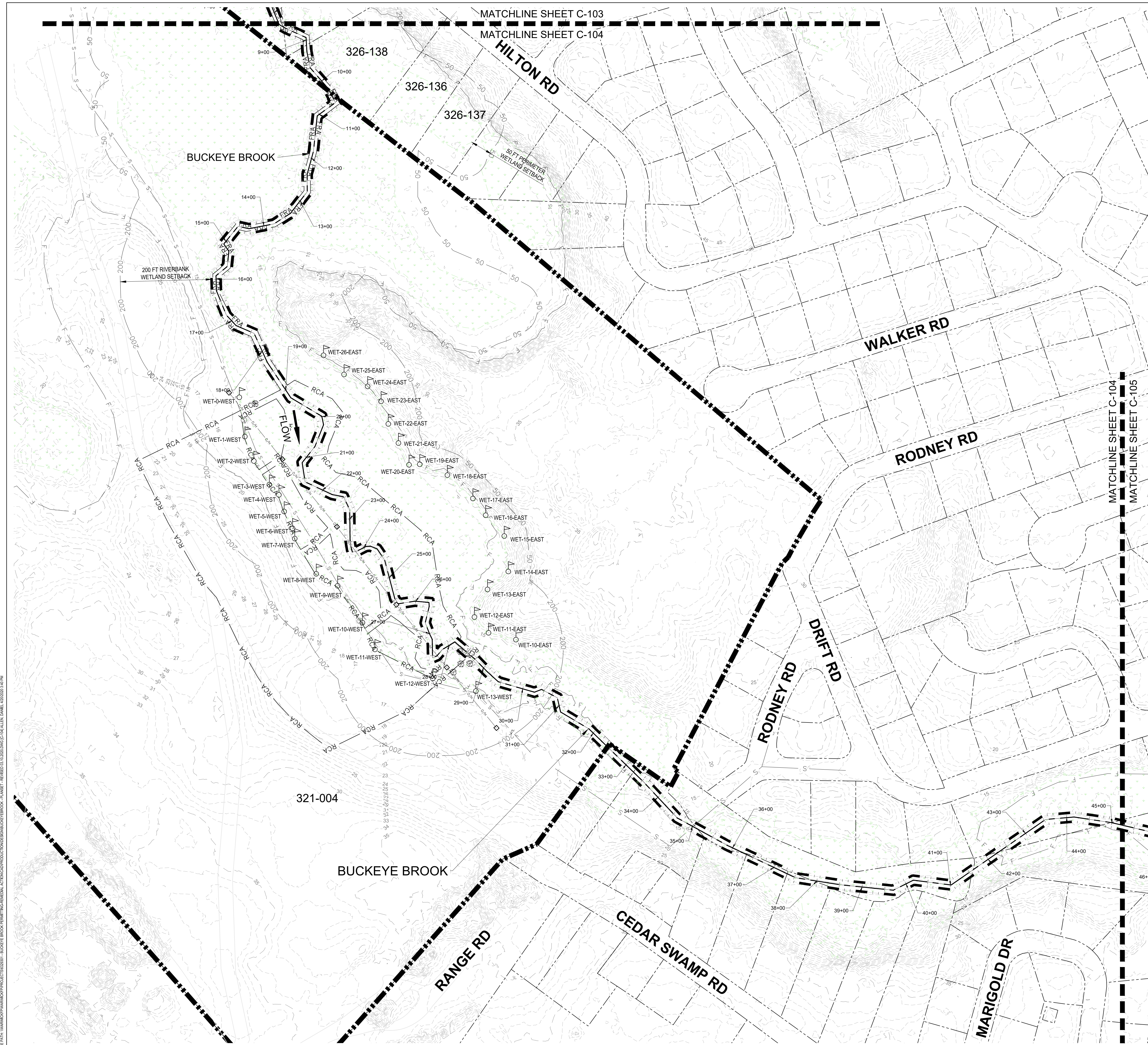
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DATE:	11/05/18	
NO.:	1	
DESIGNED BY:	AMT	
DRAWN BY:	DPA	
CHECKED BY:	MB	
PROJECT MANAGER:	AEH	



BUCKEYE BROOK RESTORATION
 2000 POST ROAD, PLAT 321 LOT 0004
 CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
 WARWICK, RHODE ISLAND
 EXISTING CONDITIONS AND RESOURCE AREA MAP SHEET 2



FOR CONSTRUCTION

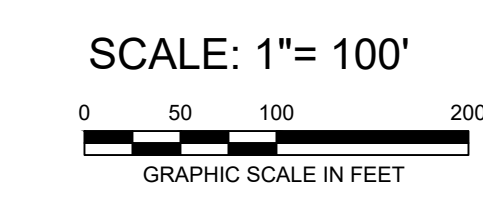
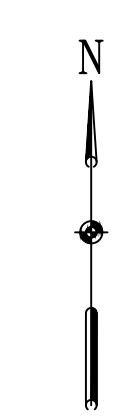


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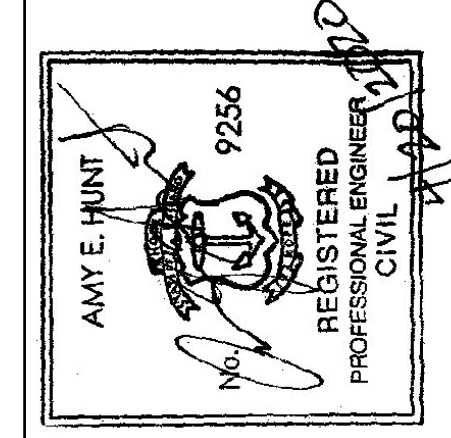
1. DISTANCE OF DOWNSTREAM EXTENT OF PROJECT TO INTERSECTION OF RODNEY ROAD AND DRIFT ROAD IS APPROXIMATELY 800 FT EAST.
2. WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE, DATED 2014.
3. WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER 2017.

LEGEND:

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- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- EXISTING 100-YEAR FLOODPLAIN LINE
- APPROXIMATE LOCATION OF SEWER PIPE
- EXISTING WETLANDS
- BUCKEYE BROOK APPROXIMATE CENTERLINE
- EXISTING EDGE OF WATER
- 50 FT PERIMETER WETLAND SETBACK
- 200 FT RIVERBANK WETLAND SETBACK
- FLOOD REDUCTION AREA LIMIT OF DISTURBANCE
- RESTORATION CONSTRUCTION AREA LIMIT OF DISTURBANCE
- FLOW DIRECTION
- SURVEYED WETLANDS LOCATIONS
- EXISTING LIGHT TOWER WITH OVERHEAD LINE
- EXISTING SEWER MANHOLE
- EXISTING TREES GREATER THAN 3-IN DIAMETER



REVISIONS		DESCRIPTION
NO.	DATE	BY
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DESIGNED BY:		AMT
DRAWN BY:		DPA
CHECKED BY:		MB
PROJECT MANAGER:		AEH



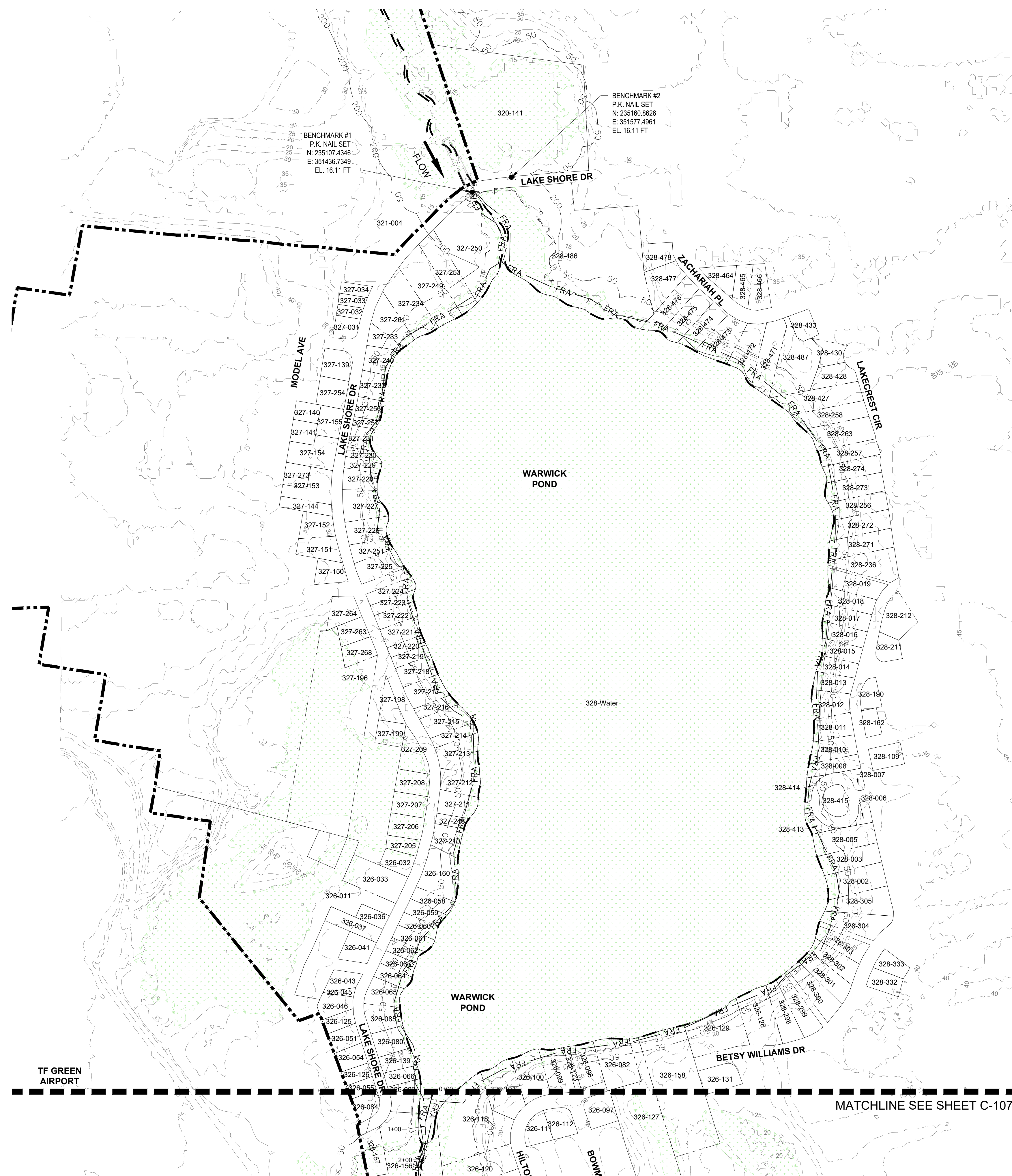
BUCKEYE BROOK RESTORATION
 2000 POST ROAD, PLAT 321 LOT 0004
 CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT

WARWICK, RHODE ISLAND
 EXISTING CONDITIONS AND RESOURCE AREA MAP SHEET 3



DATE: APRIL 2020
 PROJECT NUMBER: 63293.01
C-104
 SHEET: 6 OF 12

FOR CONSTRUCTION

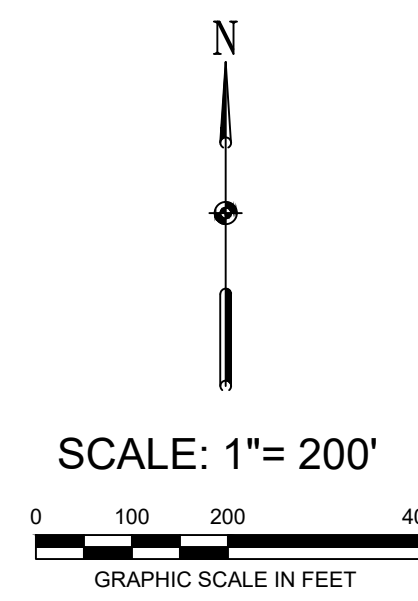


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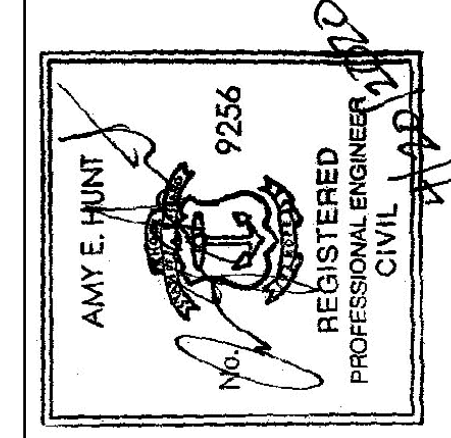
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- PROPERTY LINES
- EXISTING MAJOR CONTOURS
- 100-YEAR EXISTING FLOODPLAIN LINE
- 100-YEAR PROPOSED FLOODPLAIN LINE
- APPROXIMATE LOCATION OF SEWER PIPE
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- FLOW DIRECTION
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- EXISTING TREES GREATER THAN 3-IN DIAMETER
- BENCHMARK

NOTE

1. WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE, DATED 2014.
2. BENCHMARKS SOURCED FROM RHODE ISLAND AIRPORT CORPORATION T.F. GREEN AIRPORT SITE 3 AS-BUILT NO.1 DRAWING SET DATED APRIL 2016.



REVISIONS		DESCRIPTION
NO.	DATE	BY
1	11/05/18	AMT
DESIGNED BY: AMT		REUSED PER RIDOT COMMENTS
DRAWN BY: DPA		
CHECKED BY: MB		
PROJECT MANAGER: AEH		



BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT

WARWICK, RHODE ISLAND

PROPOSED CONDITIONS KEY SOUTH



DATE: APRIL 2020
 PROJECT NUMBER: 63293.01

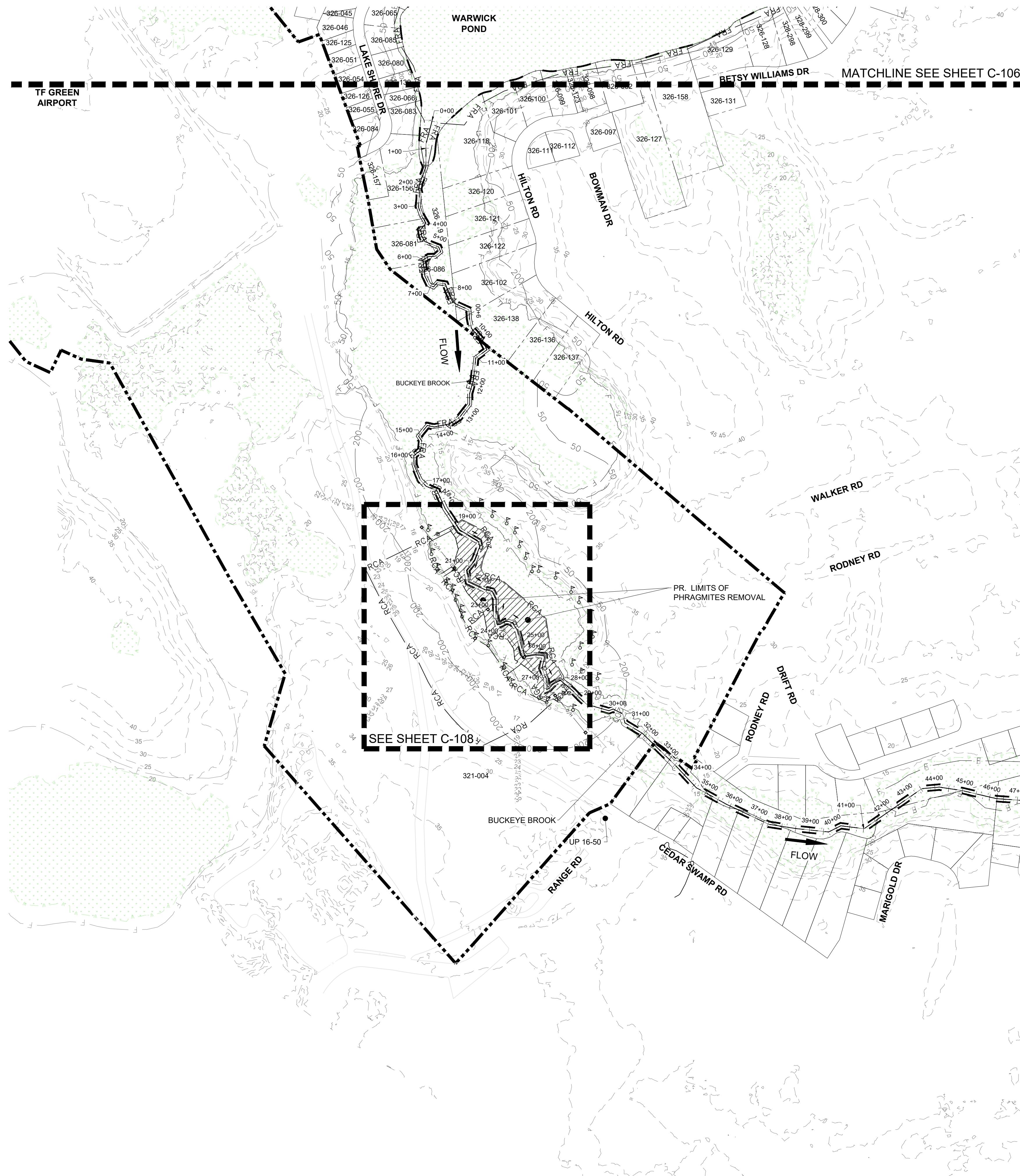
C-105

SHEET: 7 OF 12

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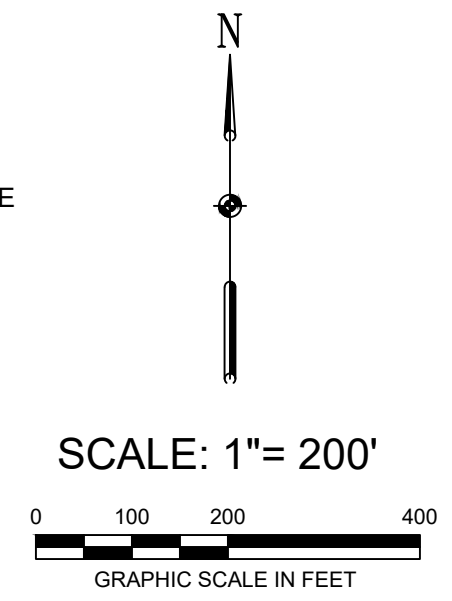
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- LEGEND:**
- SUBJECT SITE PROPERTY BOUNDARY
 - PROPERTY LINES
 - - - EXISTING MAJOR CONTOURS
 - - - 100-YEAR EXISTING FLOODPLAIN LINE
 - - - 100-YEAR PROPOSED FLOODPLAIN LINE
 - - - APPROXIMATE LOCATION OF SEWER PIPE
 - █ EXISTING WETLANDS
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 - RCA RESTORATION CONSTRUCTION AREA LIMIT OF DISTURBANCE
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 - EXISTING SEWER MANHOLE
 - ⊗ EXISTING TREES GREATER THAN 3-IN DIAMETER

NOTE

1. WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE, DATED 2014.
2. WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER 2017.

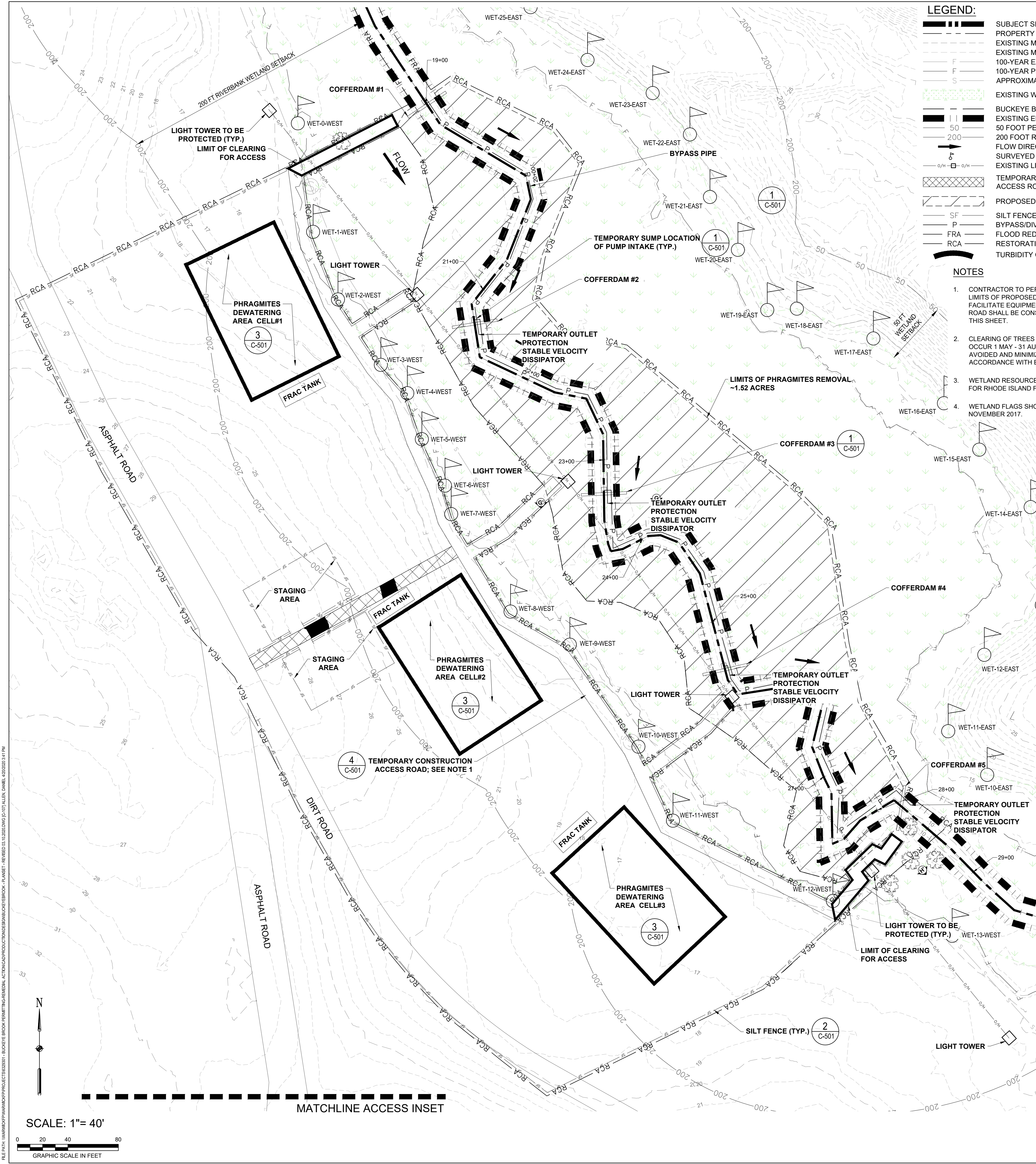


REVISIONS		DESCRIPTION
NO.	DATE	BY
1	11/05/18	AMT
DESIGNED BY: AMT		
DRAWN BY: DPA		
CHECKED BY: MB		
PROJECT MANAGER: AEH		

<p>AMY E. HUNT REGISTERED PROFESSIONAL ENGINEER CIVIL</p>	<p>BUCKEYEBROOK RESTORATION 2000 POST ROAD, PLAT 321 LOT 0004 CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT WARWICK, RHODE ISLAND</p> <p>PROPOSED CONDITIONS KEY SOUTH</p>
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<p>EA Engineering, Science, and Technology, Inc., PBC 301 Metro Center Blvd, Suite 102 Warwick, Rhode Island 02886 (401) 736-3440</p>	<p>DATE: APRIL 2020</p> <p>PROJECT NUMBER: 63293.01</p> <p style="font-size: 1.2em; font-weight: bold;">C-106</p> <p>SHEET: 8 OF 12</p>
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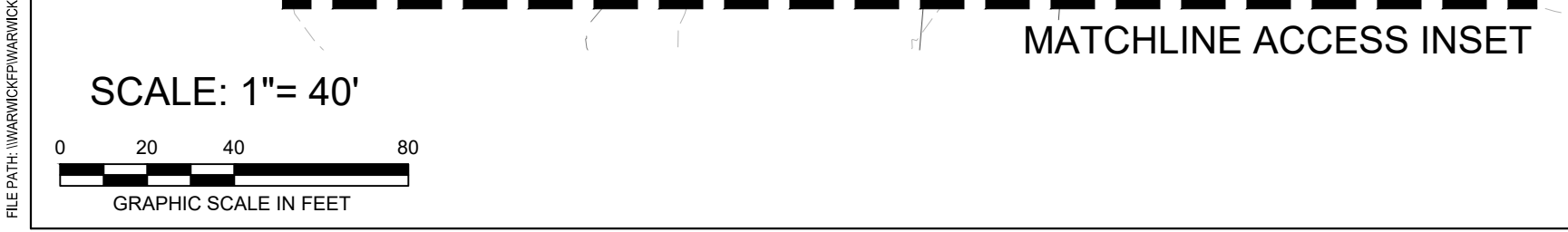
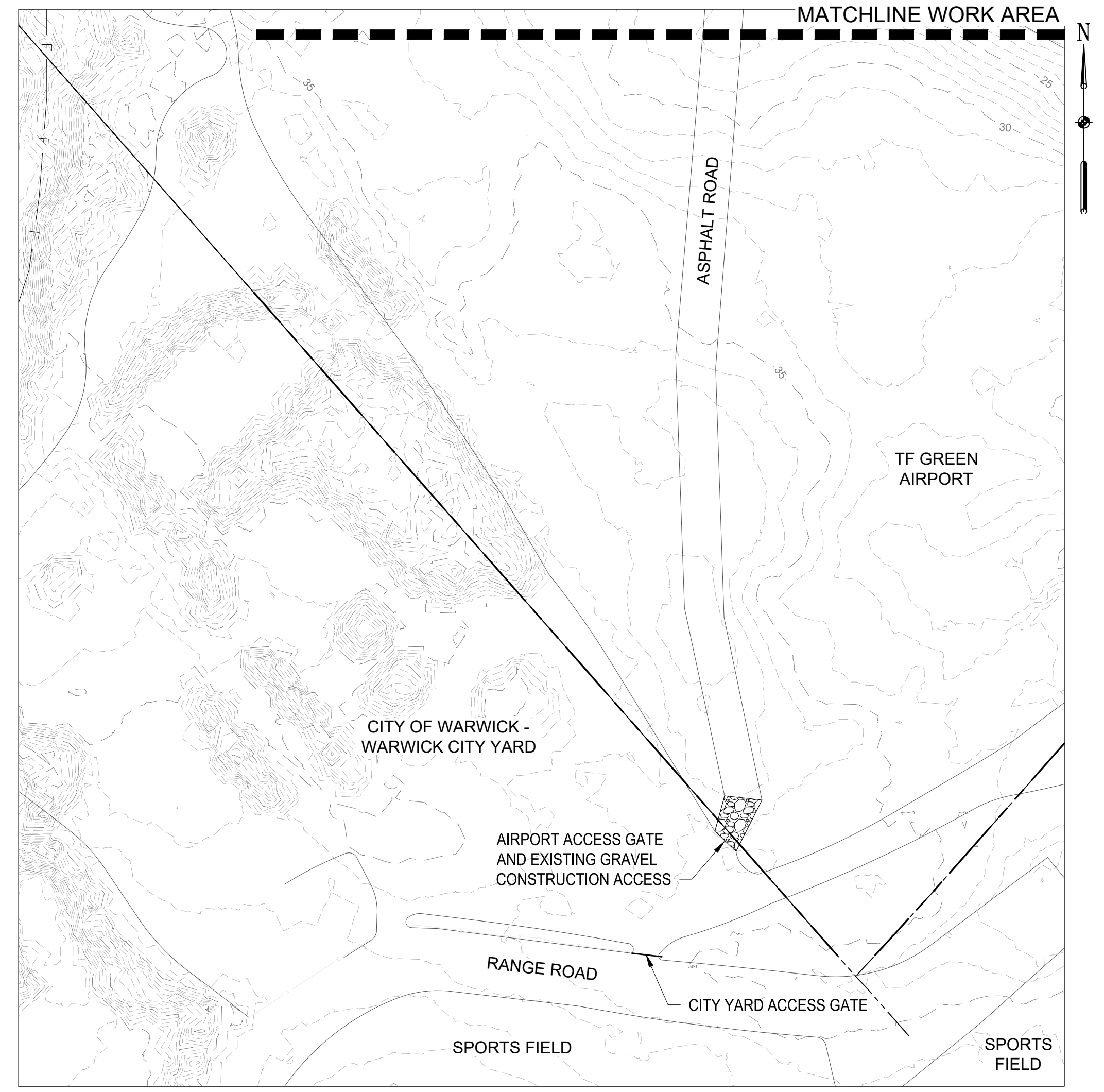
FOR CONSTRUCTION



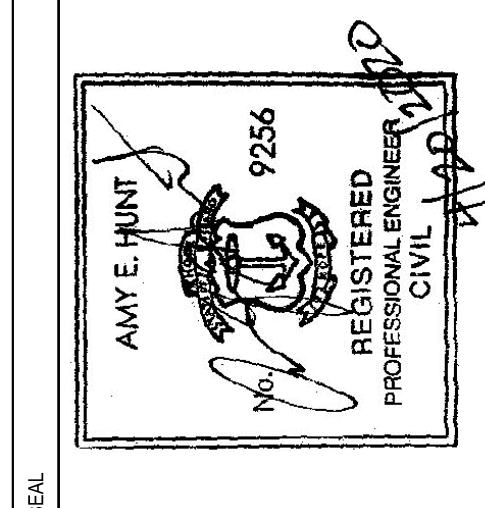
- LEGEND:**
- SUBJECT SITE PROPERTY BOUNDARY
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 - EXISTING MAJOR CONTOURS
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 - FLOW DIRECTION
 - SURVEYED WETLANDS LOCATIONS
 - EXISTING LIGHT TOWER WITH OVERHEAD LINE
 - TEMPORARY CONSTRUCTION ACCESS ROAD
 - PROPOSED PHRAGMITES REMOVAL
 - SILT FENCE
 - BYPASS/DIVERSION
 - FLOOD REDUCTION AREA LIMIT OF DISTURBANCE
 - RESTORATION CONSTRUCTION AREA LIMIT OF DISTURBANCE
 - TURBIDITY CURTAIN

- NOTES**
1. CONTRACTOR TO PERFORM SELECTIVE CLEARING AND TRIMMING WITHIN LIMITS OF PROPOSED TEMPORARY CONSTRUCTION ACCESS ROAD TO FACILITATE EQUIPMENT AND ACCESS. TEMPORARY CONSTRUCTION ACCESS ROAD SHALL BE CONSTRUCTED AS NECESSARY WITHIN LIMITS DEFINED ON THIS SHEET.
 2. CLEARING OF TREES GREATER THAN 3 INCHES IN DIAMETER SHALL NOT OCCUR 1 MAY - 31 AUGUST. REMOVAL OF SHRUBS OR SAPLINGS SHALL BE AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL AND IN ACCORDANCE WITH ENVIRONMENTAL CLEARING REQUIREMENTS.
 3. WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE, DATED 2014.
 4. WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER 2017.

- SEQUENCE OF CONSTRUCTION**
- GENERAL SEQUENCE OF CONSTRUCTION NOTES**
1. TEMPORARY COFFERDAMMING SHALL BE INSTALLED DURING LOW FLOW PERIOD (1 JULY - 31 OCTOBER) AND BE MAINTAINED SO AS NOT TO ALLOW A SEDIMENT PLUME IN THE WATERCOURSE. SOIL DISTURBANCE IN THE WATERCOURSE MUST BE TEMPORARILY CEASED IN THE EVENT OF A FORECASTED 2-YEAR OR GREATER STORM EVENT, CORRESPONDING TO FLOW OF 21.2 CFS. ALTERNATIVE MEANS OF WATER DIVERSION, SUCH AS SHEETING, MAY BE PERMITTED BY RIDOT.
 2. THE CONTRACTOR SHALL BE AWARE THAT THE GROUND SURFACE WITHIN THE LOD MAY BE COMPRISED OF PEAT AND BE EXTREMELY UNSTABLE. LOW GROUND PRESSURE EQUIPMENT SHALL BE USED. MARSH/TIMBER MATTING FOR ACCESS WITHIN WETLAND RECOMMENDED.
 3. CONTRACTOR SHALL SUBMIT A COMPLETE AND DETAILED WATER CONTROL PLAN TO EA FOR REVIEW AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.
 4. THE CONTRACTOR SHALL STAKE OUT ALL LIMITS OF DISTURBANCE PRIOR TO THE PRE-CONSTRUCTION MEETING FOR REVIEW. THE LIMITS OF DISTURBANCE AND EROSION AND SEDIMENT CONTROL REQUIREMENTS WILL BE REVIEWED BY THE TEAM DURING THE PRE-CONSTRUCTION MEETING. THE PARTICIPANTS WILL ALSO DESIGNATE THE CONTRACTOR'S STAGING AREA, DEWATERING AREA, AND LOG ALL TREES WITHIN THE LIMIT OF DISTURBANCE WHICH WILL BE REMOVED DURING CONSTRUCTION. TREES SHALL NOT BE REMOVED WITHIN THE LIMIT OF DISTURBANCE WITHOUT APPROVAL FROM THE LOCAL AUTHORITY.
 5. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL ALL EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF THE DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHENEVER POSSIBLE.
 6. THE CONTRACTOR SHALL BEGIN WORK AT THE UPSTREAM SECTION AND PROCEED DOWNSTREAM BEGINNING WITH THE ESTABLISHMENT OF STABILIZED CONSTRUCTION ACCESS ROADS. THE CONTRACTOR SHALL ONLY BEGIN WORK IN AN AREA WHICH CAN BE COMPLETED BY THE END OF THE DAY INCLUDING GRADING ADJACENT TO THE CHANNEL. THE CONTRACTOR MAY CREATE SMALLER CELLS TO FACILITATE THIS WORK. AT THE END OF EACH WORK DAY, THE WORK AREA MUST BE STABILIZED AND THE BYPASS REMOVED FROM THE CHANNEL. WORK SHALL NOT BE CONDUCTED IN THE CHANNEL DURING RAIN EVENTS. WORK SHALL ONLY OCCUR WITHIN A SINGLE CELL AT ONE TIME.
 7. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL ALL EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF THE DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHENEVER POSSIBLE.
 8. THE CONTRACTOR SHALL BEGIN WORK AT THE UPSTREAM SECTION AND PROCEED DOWNSTREAM BEGINNING WITH THE ESTABLISHMENT OF STABILIZED CONSTRUCTION ACCESS ROADS. THE CONTRACTOR SHALL ONLY BEGIN WORK IN AN AREA WHICH CAN BE COMPLETED BY THE END OF THE DAY INCLUDING GRADING ADJACENT TO THE CHANNEL. THE CONTRACTOR MAY CREATE SMALLER CELLS TO FACILITATE THIS WORK. AT THE END OF EACH WORK DAY, THE WORK AREA MUST BE STABILIZED AND THE BYPASS REMOVED FROM THE CHANNEL. WORK SHALL NOT BE CONDUCTED IN THE CHANNEL DURING RAIN EVENTS. WORK SHALL ONLY OCCUR WITHIN A SINGLE CELL AT ONE TIME.
 9. AFTER CONSTRUCTION, ALL DISTURBED AREAS SHALL BE REVEGETATED AS PER THE PLANTING PLAN.
 10. SOIL DISTURBANCE SHALL BE CEASED DURING ANY HIGH FLOW EVENT AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE EXPECTED TO CONTROL FLOW AROUND THE SITE.
- PHASE 1: HERBICIDE APPLICATION**
1. CLEAR WITHIN LIMITS OF CONSTRUCTION ACCESS ROAD AS NECESSARY.
 2. DATES: FROM 31 AUGUST TO 30 SEPTEMBER.
 3. SPRAY HERBICIDE.
- PHASE 2: PHRAGMITES AUSTRALIS REMOVAL AND REVEGETATION**
1. DATES: FROM 1 OCTOBER TO 31 OCTOBER. PHRAGMITES AUSTRALIS REMOVAL SHALL OCCUR NO LESS THAN 30 DAYS AFTER HERBICIDE APPLICATION.
 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND ESTABLISH STAGING AREAS AND PHRAGMITES DEWATERING AREAS. INSTALL EROSION AND SEDIMENT CONTROL DEVICES.
 3. ESTABLISH TEMPORARY ACCESS ROAD TO ACCESS THE PROJECT SITE BETWEEN STATION 19+00 FT. AND STATION 28+50 FT.
 4. INSTALL TEMPORARY ACCESS BRIDGES AS NECESSARY.
 5. OBTAIN CONFIRMATORY ELEVATIONS OF CHANNEL BOTTOM AND ALONG PROPOSED ROUTE OF BYPASS PIPES ALONG STREAMBANK TO VERIFY FLOW REGIME FOR BYPASS SYSTEM.
 6. WITH 72 HOURS OF FORECAST DRY WEATHER BEGIN BYPASS WORK IN AN UPSTREAM TO DOWNSTREAM DIRECTION. INSTALL INLET AND OUTLET PROTECTION FOR THE BYPASS PRIOR TO REDIRECTING FLOW. ONLY EXCAVATE PHRAGMITES AUSTRALIS EXTENTS OF WORK THAT CAN BE FULLY COMPLETED WITHIN THE WORKING DAY. ALL DISTURBED AREAS MUST BE FULLY STABILIZED AT THE END OF EACH WORK DAY AND BYPASS SHALL BE DISCONTINUED DAILY.
 7. PERFORM PHRAGMITES AUSTRALIS REMOVAL, SALVAGING AND STOCKPILING REMOVED TREES AND OTHER WOODY MATERIAL. PLACE THE EXCAVATED MATERIALS IN THE DESIGNATED DEWATERING AREA AND PUMP WATER TO FRAC TANKS. THE ADEQUACY OF PHRAGMITES AUSTRALIS REMOVAL SHALL BE PERFORMED TO THE ENGINEER'S APPROVAL.
 8. DEWATERED WATER SHALL BE PUMPED TO FRAC TANKS AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
 9. REMOVE TEMPORARY ACCESS BRIDGES AS NECESSARY.
 10. ONCE WORK IS COMPLETE, STABILIZE BANKS OF THE BROOK AND ALL DISTURBED AREAS SHALL BE REGRADED AND STABILIZED WITH THE PROPOSED SEED MIX OR STRAW MULCH AS SPECIFIED.



REVISIONS	DESCRIPTION
BY:	REVISION PER RIBEN COMMENTS
DATE:	AMT
NO.:	1



BUCKEYE BROOK RESTORATION
 2000 POST ROAD, PLAT 321 LOT 0004
 CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT

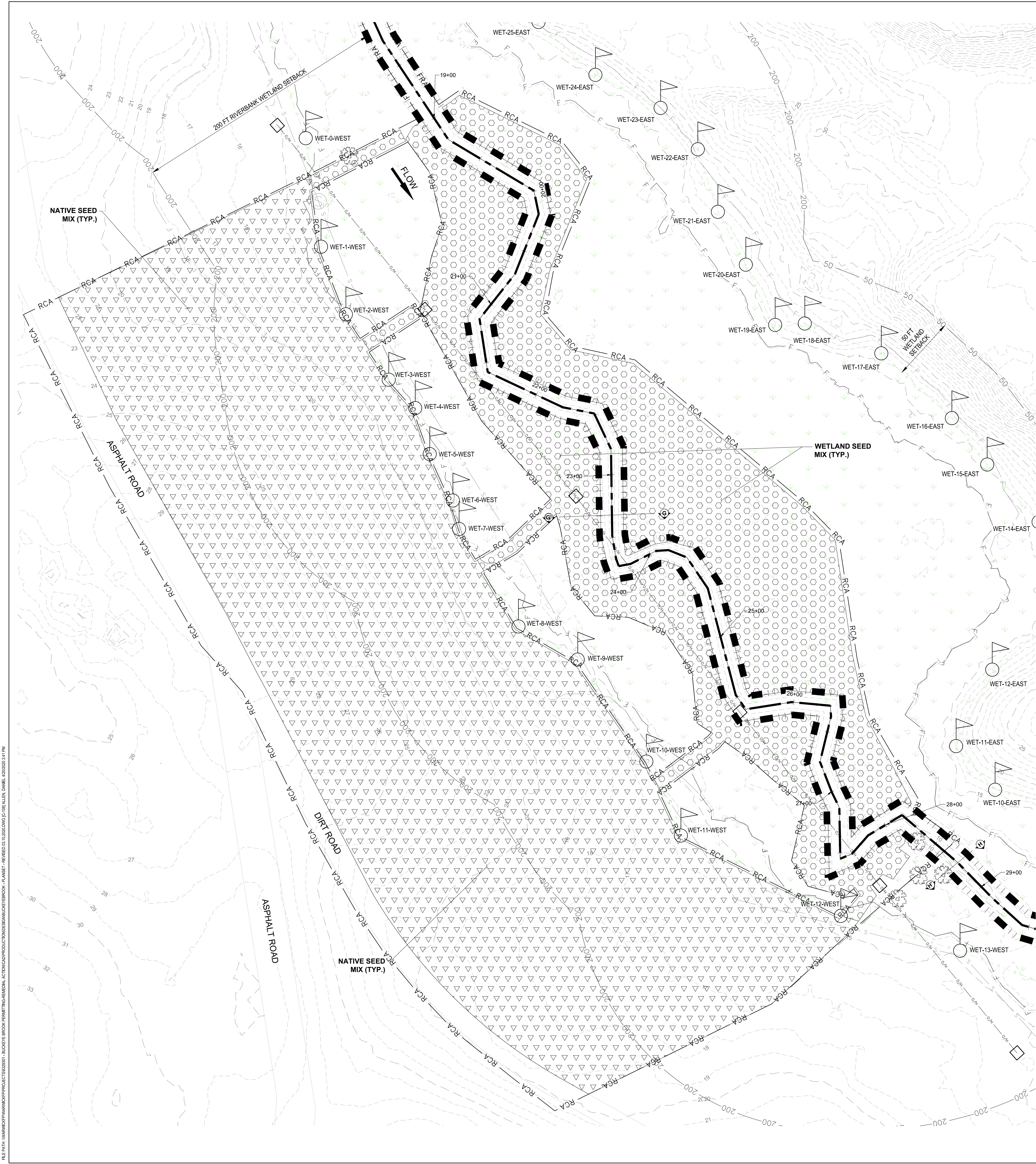
WARWICK, RHODE ISLAND

PHRAGMITES REMOVAL, EROSION CONTROL, AND CONSTRUCTION ACCESS & SEQUENCING PLAN

EA
 EA Engineering, Science, and Technology, Inc., PBC
 301 Metro Center Blvd, Suite 102
 Warwick, Rhode Island 02886
 (401) 736-3440

DATE: APRIL 2020
 PROJECT NUMBER: 63293.01
C-107
 SHEET: 9 OF 12

FOR CONSTRUCTION



- NOTES:
- TEMPORARY ACCESS AREA, STAGING AREA, AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE REGRADED, RESTORED, AND SEEDED WITH NATIVE SEED MIX AS INDICATED ON THIS SHEET AND AS NECESSARY. TEMPORARY SEED MIX SHALL BE 40% ANNUAL RYEGRASS AND 60% PERENNIAL RYEGRASS.
APPLICATION RATE: TEMPORARY COVER = 25 LBS/ACRE
NATIVE SEED MIX = 60 LBS/ACRE
 - REMOVE CRUSHED STONE AND TEMPORARY CONSTRUCTION ACCESS MATERIALS FROM ALL AREAS TO PRE-CONSTRUCTION GRADES. TOP-DRESS WITH TOPSOIL AND SEED TO ESTABLISH STABLE VEGETATION.
ANY DISTURBED AREA ABOVE THE WATER SURFACE ELEVATION AND WITHIN FLAGGED WETLAND BOUNDARIES SHALL BE SEEDED WITH WETLAND SEED MIX AS INDICATED ON THIS SHEET. TEMPORARY COVER SHALL BE 40% ANNUAL RYEGRASS AND 60% PERENNIAL RYEGRASS. PLAN VIEW OF THIS AREA IS APPROXIMATE. ACTUAL AREA OF RESTORATION TO BE DETERMINED IN THE FIELD AFTER PHASE II.
APPLICATION RATE: TEMPORARY COVER = 18 LBS/ACRE
WETLAND SEED MIX = 18 LBS/ACRE
 - WETLAND RESOURCES ARE FROM THE NATIONAL WETLANDS INVENTORY FOR RHODE ISLAND FROM RIGIS DATABASE, DATED 2014.
 - WETLAND FLAGS SHOWN HEREIN WERE DELINEATED BY EA IN MAY AND NOVEMBER 2017.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF 85 PERCENT VEGETATIVE COVERAGE AFTER ONE GROWING SEASON.

NATIVE SEED MIX (TYPE 4 JOB SPECIFIC)			
Botanical Name	Common Name	% By Weight	Vol. By Pure Live Seed
<i>Panicum virgatum</i>	Switch Grass	20	75
<i>Schizachyrium scoparium</i>	Little Bluestem	25	75
<i>Lolium perenne</i>	Perennial Ryegrass	20	90
<i>Festuca rubra</i>	Red Fescue	15	78

NEW ENGLAND WETMIX (WETLAND SEED MIX)		
Botanical Name	Common Name	Indicator
<i>Carex lurida</i>	Lurid Sedge	OBL
<i>Carex scoparia</i>	Blunt Broom Sedge	FACW
<i>Verbena hastata</i>	Blue Vervain	FACW
<i>Carex lupulina</i>	Hop Sedge	OBL
<i>Scirpus atrovirens</i>	Green Bulrush	OBL
<i>Panicum rigidulum</i>	Redtop Panic Grass	FACW+
<i>Deschampsia cespitosa</i>	Tufted Hairgrass	FACW
<i>Bidens aristosa</i>	Tickseed Sunflower/Bur Marigold	FACW
<i>Eleocharis palustris</i>	Creeping Spike Rush	OBL
<i>Juncus effusus</i>	Soft Rush	FACW+
<i>Carex crinita</i>	Fringed Sedge	OBL
<i>Mimulus ringens</i>	Square Stemmed Monkey Flower	OBL
<i>Aster puniceus</i>	Swamp Aster	OBL
<i>Eupatorium perfoliatum</i>	Boneset	FACW
<i>Glyceria canadensis</i>	Rattlesnake Grass	OBL
<i>Asclepias incarnata</i>	Swamp Milkweed	OBL
<i>Helenium autumnale</i>	Common Sneezeweed	FACW+
<i>Penthorum sedoides</i>	Ditch Stonewort	OBL

LEGEND:

- SUBJECT SITE PROPERTY BOUNDARY
- PROPERTY LINES
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- 100-YEAR EXISTING FLOODPLAIN LINE
- 100-YEAR PROPOSED FLOODPLAIN LINE
- APPROXIMATE LOCATION OF SEWER PIPE
- EXISTING WETLANDS
- BUCKEYE BROOK APPROXIMATE CENTERLINE
- EXISTING EDGE OF WATER/APPROXIMATE OBSERVED DAY WATER SURFACE ELEVATION
- 50 - 50 FT PERIMETER WETLAND SETBACK
- 200 - 200 FT RIVERBANK WETLAND SETBACK
- FRA - FLOOD REDUCTION AREA LIMIT OF DISTURBANCE
- RCA - RESTORATION CONSTRUCTION AREA LIMIT OF DISTURBANCE
- FLOW DIRECTION
- SURVEYED WETLANDS LOCATIONS
- EXISTING LIGHT TOWER WITH OVERHEAD LINE
- NATIVE SEED MIX PLACEMENT AREA
- WETLAND SEED MIX PLACEMENT AREA

SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

NO.	1	DATE	11/06/18	BY	AMT	DESCRIPTION	REVISIONS
DESIGNED BY	AMT	DRAWN BY	DPA	CHECKED BY	MB	PROJECT MANAGER	AEH

AMY E. HUNT
REGISTERED PROFESSIONAL ENGINEER
CIVIL
9256

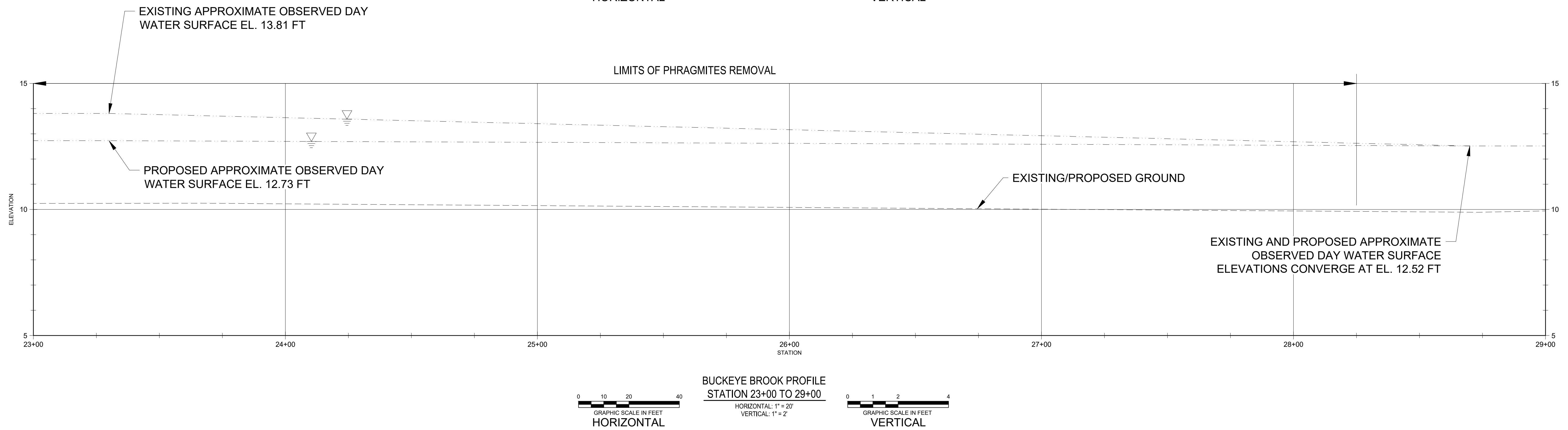
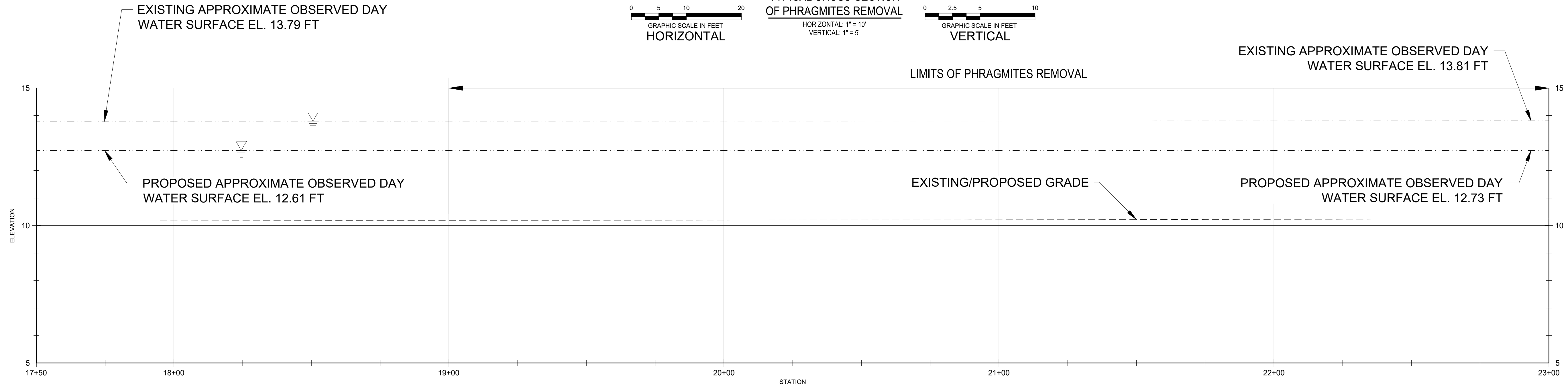
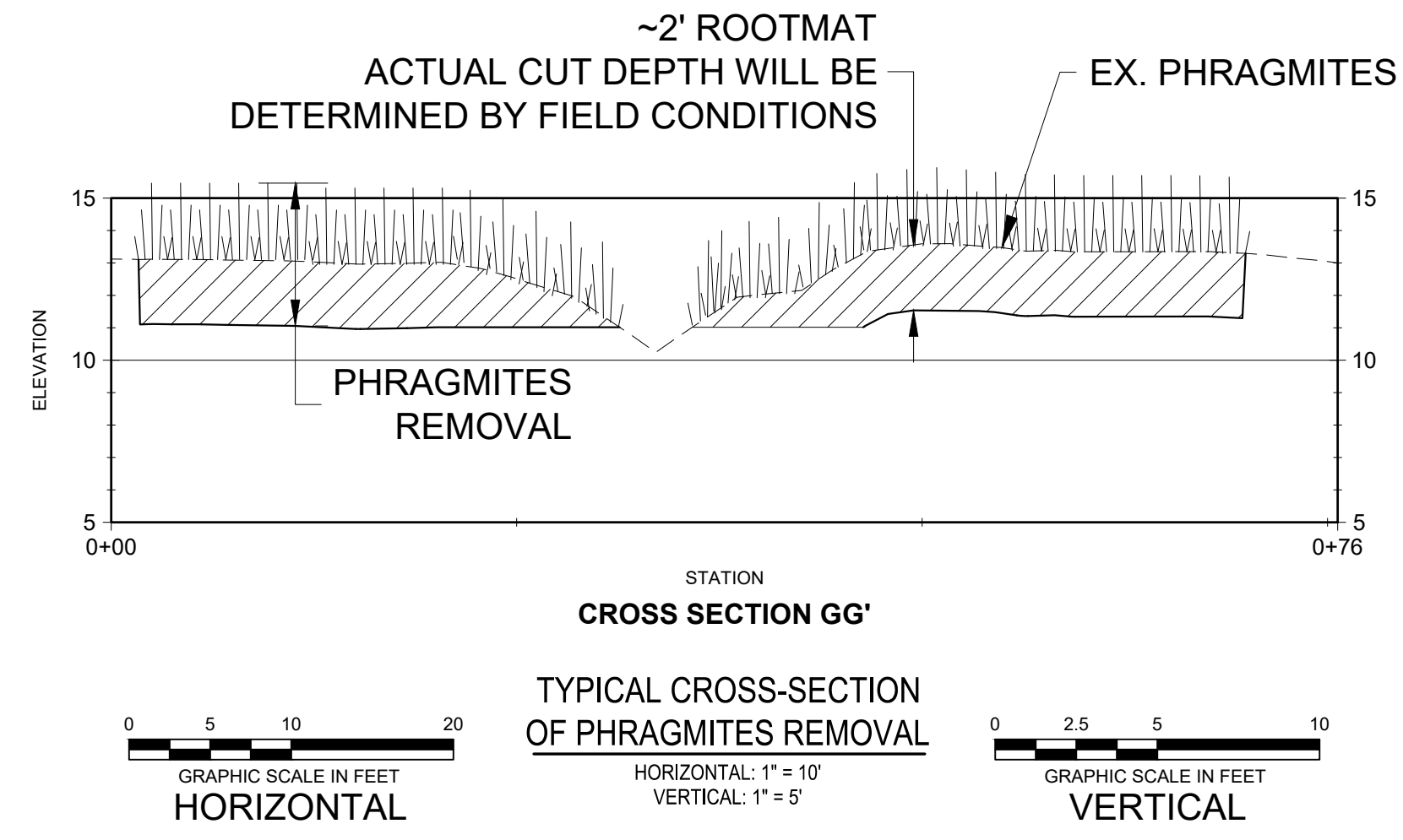
BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
WARWICK, RHODE ISLAND

RESTORATION PLAN

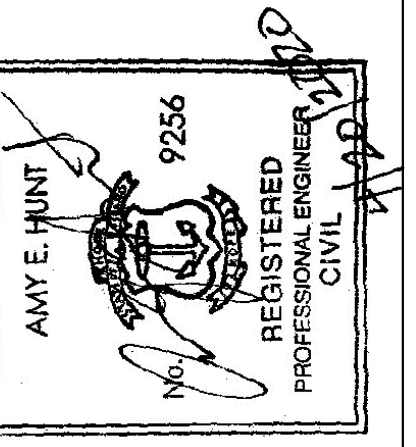
EA Engineering, Science, and Technology, Inc., PBC
301 Metro Center Blvd, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE: APRIL 2020
PROJECT NUMBER: 63293.01
C-108
SHEET: 10 OF 12

FOR CONSTRUCTION



REVISIONS		DESCRIPTION
NO.	DATE	BY
1	11/05/18	AMT
REVISION PER RIBEN COMMENTS		
DESIGN INFORMATION		
DESIGNED BY:	AMT	AMT
DRAWN BY:	DPA	
CHECKED BY:	MB	
PROJECT MANAGER:	AEH	



BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT

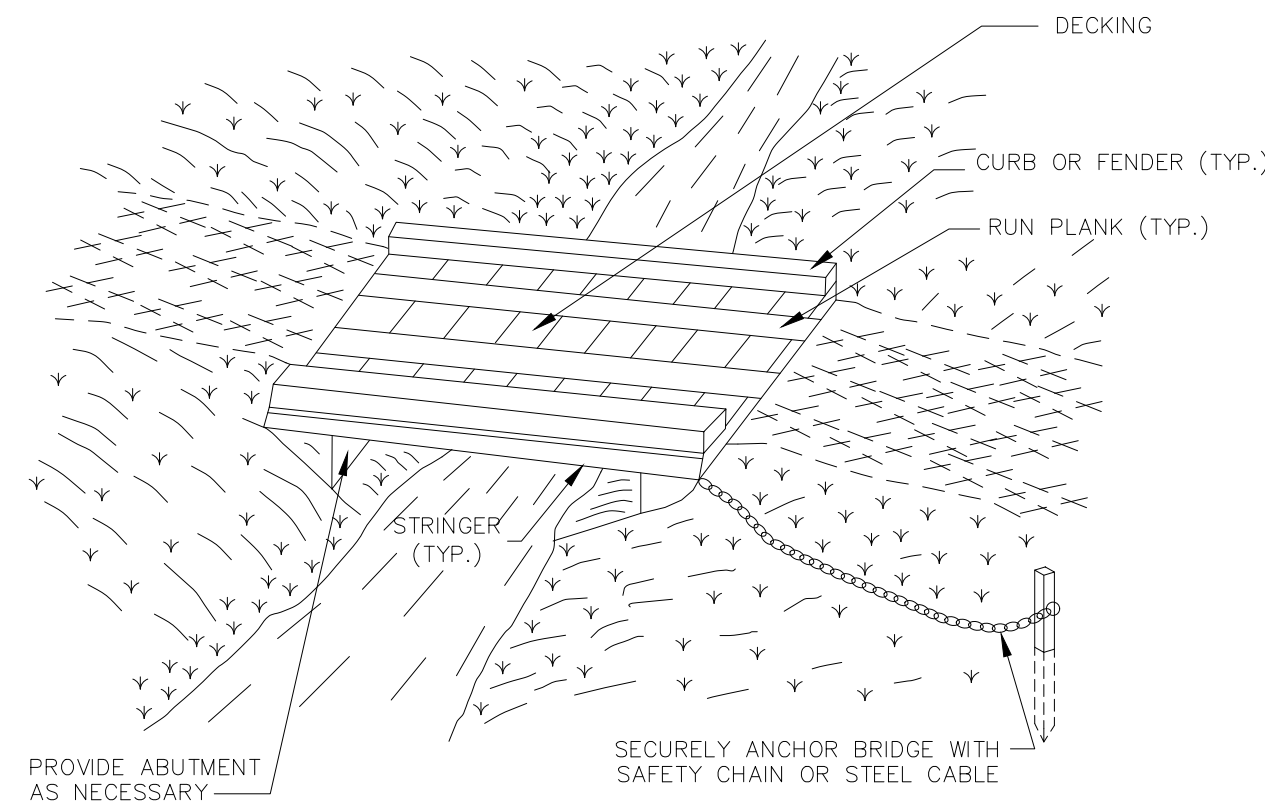
WARWICK, RHODE ISLAND
CROSS SECTION AND LONGITUDINAL PROFILE

EA
EA Engineering, Science, and Technology, Inc., PBC
301 Metro Center Blvd, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE: APRIL 2020
PROJECT NUMBER: 63293.01

C-301
SHEET: 11 OF 12

FOR CONSTRUCTION



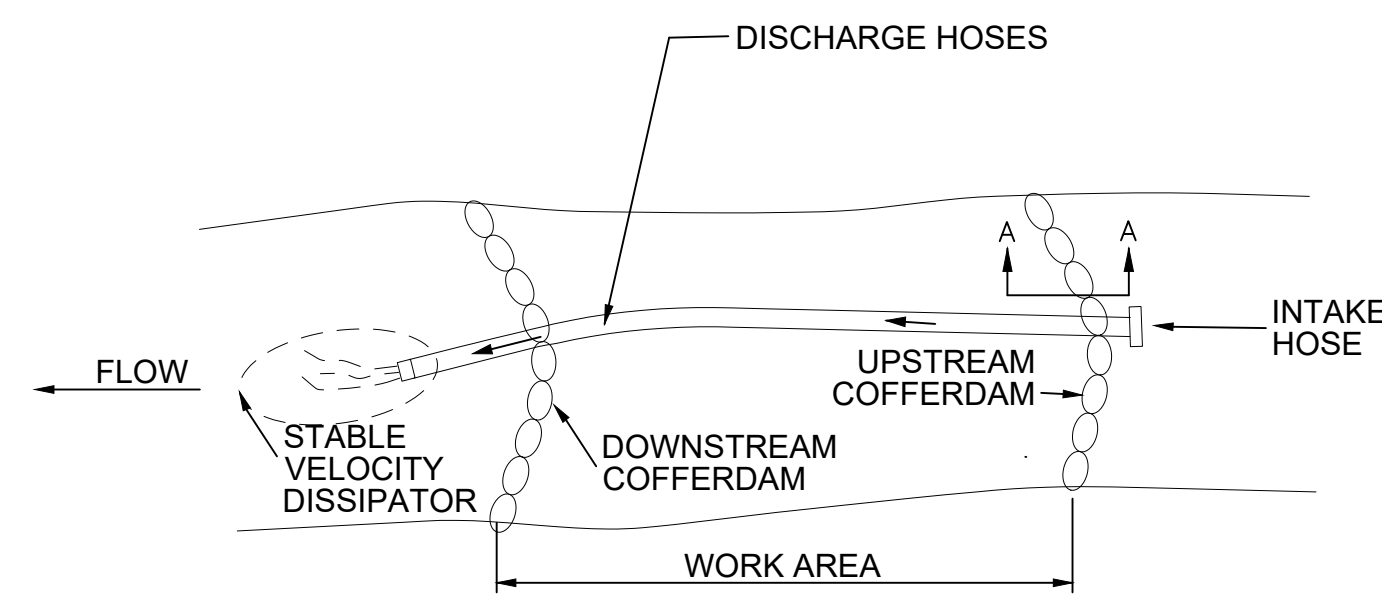
5 TEMPORARY ACCESS BRIDGE
C-501 NOT TO SCALE

NOTES

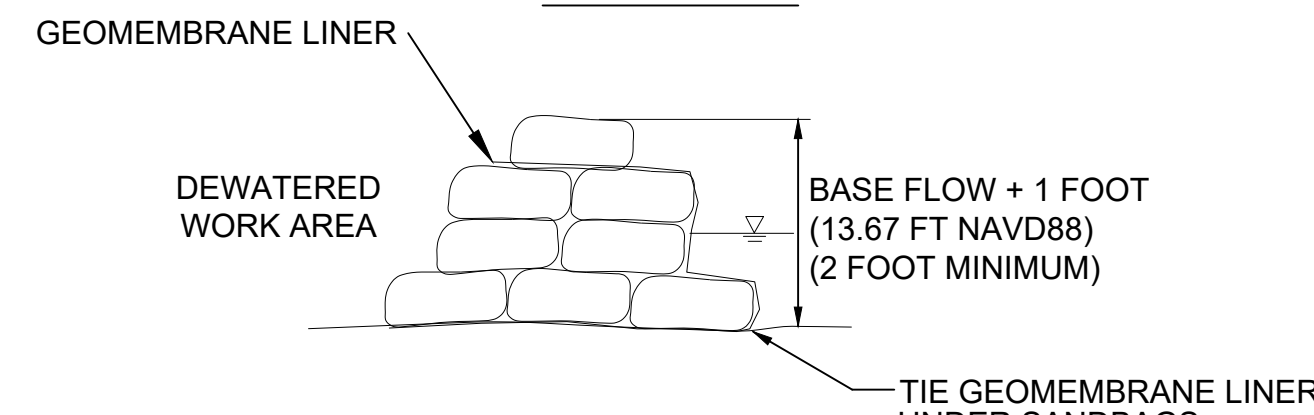
- TEMPORARY ACCESS BRIDGES MAY BE CONSTRUCTED AFTER THE ACCESS ROAD IS COMPLETED AND AT THE CONTRACTOR'S DISCRETION AND SCHEDULE. PRIOR TO PLACING THE TEMPORARY ACCESS BRIDGE, THE CONTRACTOR SHALL UTILIZE A STREAM BYPASS FOR SEDIMENT CONTROL.
- WHERE SHORT TERM STREAM CROSSINGS ARE REQUIRED FOR LOCALIZED CONSTRUCTION ACCESS, SAME DAY TEMPORARY ACCESS BRIDGES MAY BE USED AS NEEDED. SAME DAY TEMPORARY ACCESS BRIDGES MAY BE LOCATED AT THE CONTRACTORS DISCRETION WITHIN THE LOD, WITH THE APPROVAL OF THE ENGINEER. NO EXCAVATION OR DISTURBANCE OF STREAM BANKS IS PERMITTED FOR PLACEMENT OF THE SAME DAY TEMPORARY ACCESS BRIDGE, UNLESS A PUMP AROUND PRACTICE IS IN PLACE. THE SAME DAY TEMPORARY ACCESS BRIDGE SHALL BE REMOVED BY THE END OF EACH WORK DAY AND ALL DISTURBED AREAS SHALL BE STABILIZED.
- TIME OF YEAR RESTRICTIONS DO NOT APPLY TO THE CONSTRUCTION OR REMOVAL OF A TEMPORARY ACCESS BRIDGE UNLESS THERE IS DISTURBANCE TO THE STREAM CHANNEL.

CONSTRUCTION SPECIFICATIONS

- BRIDGE PLACEMENT - A TEMPORARY BRIDGE STRUCTURE SHALL BE CONSTRUCTED AT OR ABOVE THE BANK ELEVATION TO PREVENT THE ENTRAPMENT OF FLOATING MATERIALS AND DEBRIS.
- ABUTMENTS - ABUTMENTS SHALL BE PLACED PARALLEL TO, AND ON, STABLE BANKS.
- BRIDGE SPAN - BRIDGES SHALL BE CONSTRUCTED TO SPAN THE ENTIRE CHANNEL. NO FOOTINGS, PIERS, OR BRIDGE SUPPORTS MAY BE CONSTRUCTED WITHIN THE WATERWAY.
- STRINGERS - STRINGERS SHALL EITHER BE LOGS, SAWN TIMBER, PRESTRESSED CONCRETE BEAMS, METAL BEAMS, OR OTHER APPROVED MATERIALS.
- DECK MATERIAL - DECKING SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOAD, ALL DECKING MEMBER SHALL BE PLACED PERPENDICULAR TO THE STRINGERS, BUTTED TIGHTLY, AND SECURELY FASTENED TO THE STRINGERS. DECKING MATERIALS MUST BE BUTTED TIGHTLY TO PREVENT ANY SOIL MATERIAL TRACKED ONTO THE BRIDGE FROM FALLING INTO THE WATERWAY.
- RUN PLANKS (OPTIONAL) - RUN PLANKING SHALL BE SECURELY FASTENED TO THE LENGTH OF THE SPAN. ONE RUN PLANK SHALL BE PROVIDED FOR EACH TRACK OF THE EQUIPMENT WHEELS. ALTHOUGH RUN PLANKS ARE OPTIONAL, THEY MAY BE NECESSARY TO PROPERLY DISTRIBUTE LOADS.
- AREAS DISTURBED DURING BRIDGE INSTALLATION AND/OR REMOVAL MUST NOT BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
- BRIDGE ANCHORS - BRIDGES SHALL BE SECURELY ANCHORED AT ONLY ONE END USING STEEL CABLE OR CHAIN. ANCHORING AT ONLY ONE END WILL PREVENT CHANNEL OBSTRUCTION IN THE EVENT THAT FLOODWATERS FLOAT THE BRIDGE. ACCEPTABLE ANCHORS ARE LARGE BOULDERS, LARGE TREES, OR DRIVEN STEEL ANCHORS. ANCHORING SHALL BE SUFFICIENT TO PREVENT THE BRIDGE FROM FLOATING DOWNSTREAM AND POSSIBLE CAUSING AN OBSTRUCTION TO FLOW.
- STABILIZATION - AREAS DISTURBED DURING THE BRIDGE INSTALLATION AND/OR REMOVAL SHALL BE STABILIZED BY THE END OF EACH WORK DAY UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
- STABILIZATION AND EROSION APPROACH - SEDIMENT SHALL BE CLEANED FROM DECKING AND CURBS DAILY BY SCRAPING, SWEEPING, AND/OR VACUUMING. DECKING CURBS SHALL REMAIN TIGHTLY BUTTED WITHOUT GAPS. REMOVE DEBRIS TRAPPED BY BRIDGE. REMOVE DEBRIS TRAPPED BY BRIDGE. MAINTAIN AREAS ADJACENT TO CROSSING TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- STABILIZE APPROACH TO BRIDGE AND KEEP FREE OF EROSION. CLEAN SEDIMENT FROM DECKING AND CURBS DAILY BY SCRAPING, SWEEPING, AND/OR VACUUMING. ENSURE THAT DECKING AND CURBS REMAIN TIGHTLY BUTTED WITHOUT GAPS. REMOVE DEBRIS TRAPPED BY BRIDGE. MAINTAIN AREAS ADJACENT TO CROSSING TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT.
- AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS. IF SUBJECT TO THE USE DESIGNATION CLOSURE, REMOVE AT THE END OF CLOSURE PERIOD. PROTECT STREAM BANKS DURING BRIDGE REMOVAL AND STABILIZE ALL DISTURBED AREAS WITH EROSION CONTROL MATTING. ACCOMPLISH REMOVAL OF THE BRIDGE AND CLEAN UP OF THE AREA WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL. STORE ALL REMOVED MATERIALS IN AN APPROVED STAGING AREA.
- WHERE POSSIBLE, UTILIZE OR UPGRADE EXISTING PATH OR ROAD CROSSINGS TO AVOID OR MINIMIZE NEW WETLAND AND/OR STREAMBED DISTURBANCE.
- WHERE NEW CROSSING MUST BE USED, SELECT THE NARROWEST SECTION OF WETLAND AND/OR STREAM AS THE LOCATION FOR THE BREEDING SEASON.



PLAN VIEW



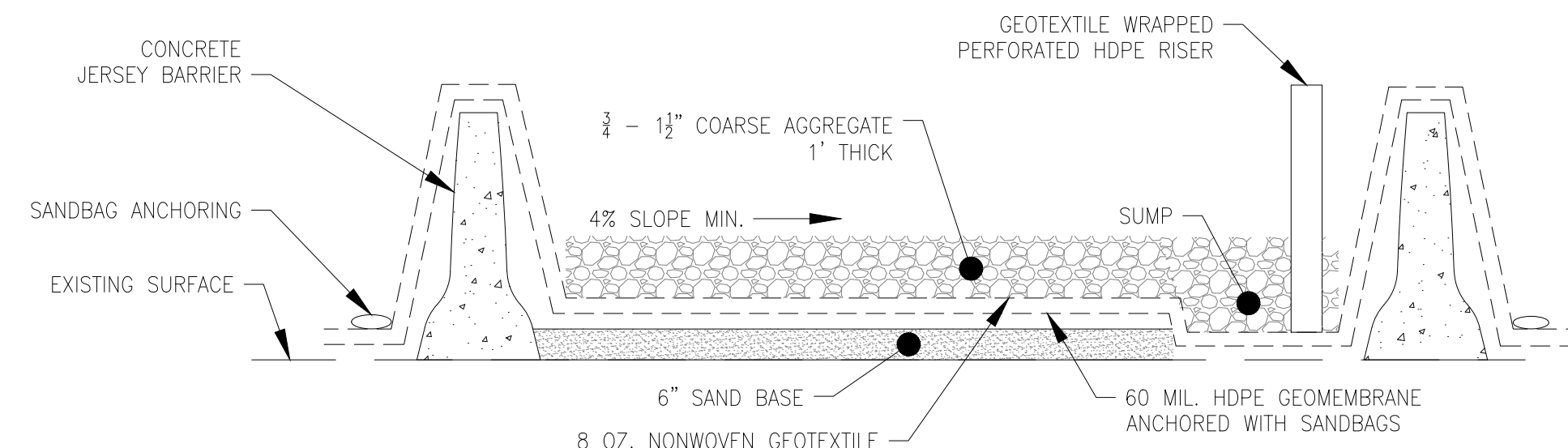
SECTION A-A

1 BYPASS DETAIL
C-501 NOT TO SCALE

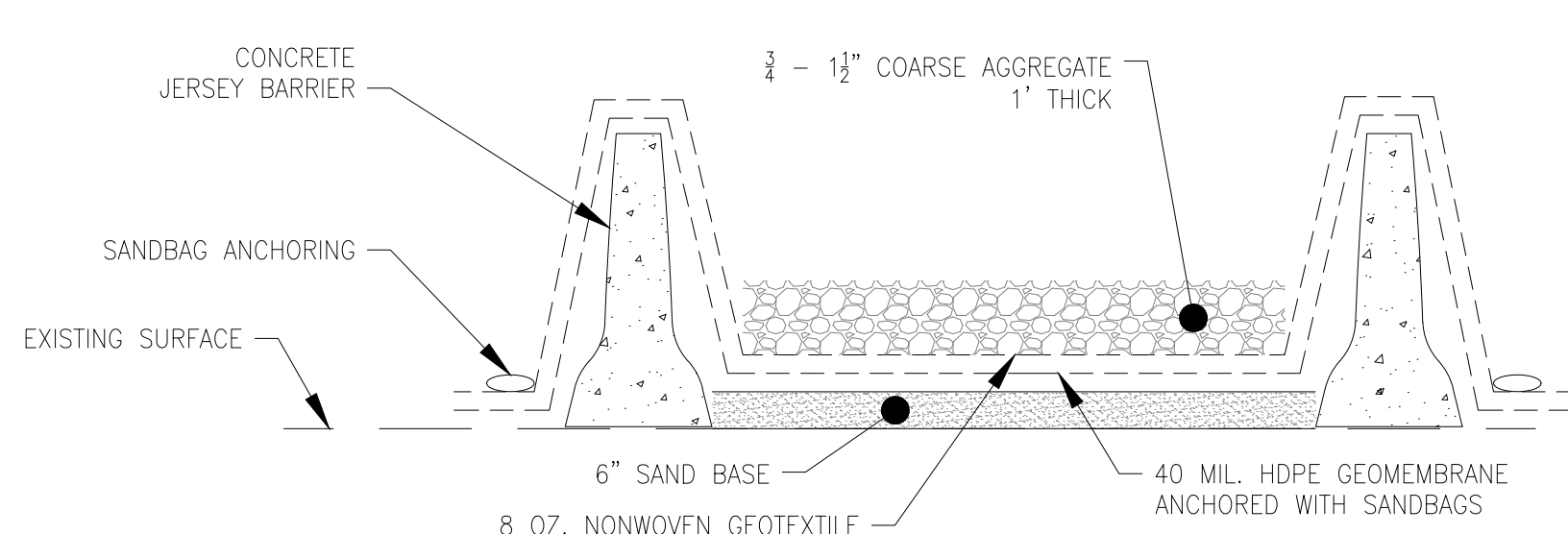
MGWC 1.2 BYPASS PRACTICE DESCRIPTION- THE WORK SHALL CONSIST OF INSTALLING A TEMPORARY BYPASS AND SUPPORTING MEASURES TO DIVERT FLOW AROUND OR THROUGH INSTREAM CONSTRUCTION SITES.

NOTES:

- COFFERDAMS, OR ALTERNATIVE MEANS OF DIVERTING WATER AS APPROVED BY RIDEM, SHALL BE SITUATED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE WORK AREA AS SHOWN ON THE PLANS, AND STREAM FLOW SHALL BE DIVERTED AROUND OR THROUGH THE WORK AREA. THE PIPE SHALL DISCHARGE ONTO A STABLE VELOCITY DISSIPATOR MADE OF RIPRAP OR SANDBAGS. TEMPORARY MEASURE FOR DEWATERING IN CHANNEL CONSTRUCTION SITES.
- THE CONDITION OF THE OUTLET PROTECTION SANDBAGS IS TO BE CHECKED TWICE PER DAY (START OF WORK DAY AND MIDDAY) TO ENSURE THAT SAND IS NOT ESCAPING BAGS. DAMAGED OR LEAKING BAGS ARE TO BE REMOVED AND REPLACED.
- THE CHANNEL SHALL NOT BE ALLOWED TO SCOUR AS A RESULT OF BYPASS DISCHARGE. TO PREVENT SCOUR, PLACE ADEQUATELY SIZED RIPRAP OVER GEOMEMBRANE LINER AT BYPASS OUTLET. REMOVE RIPRAP AND LINER WHEN BYPASS IS NO LONGER NEEDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EITHER THE IMMEDIATE REMOVAL OF CHANNEL COFFERDAMS OR MANUAL TRANSFERENCE OF HERRING AT ANY SIGNS THAT FISH ARE STRESSED WHILE STAGED UPSTREAM OF COFFERDAMS.

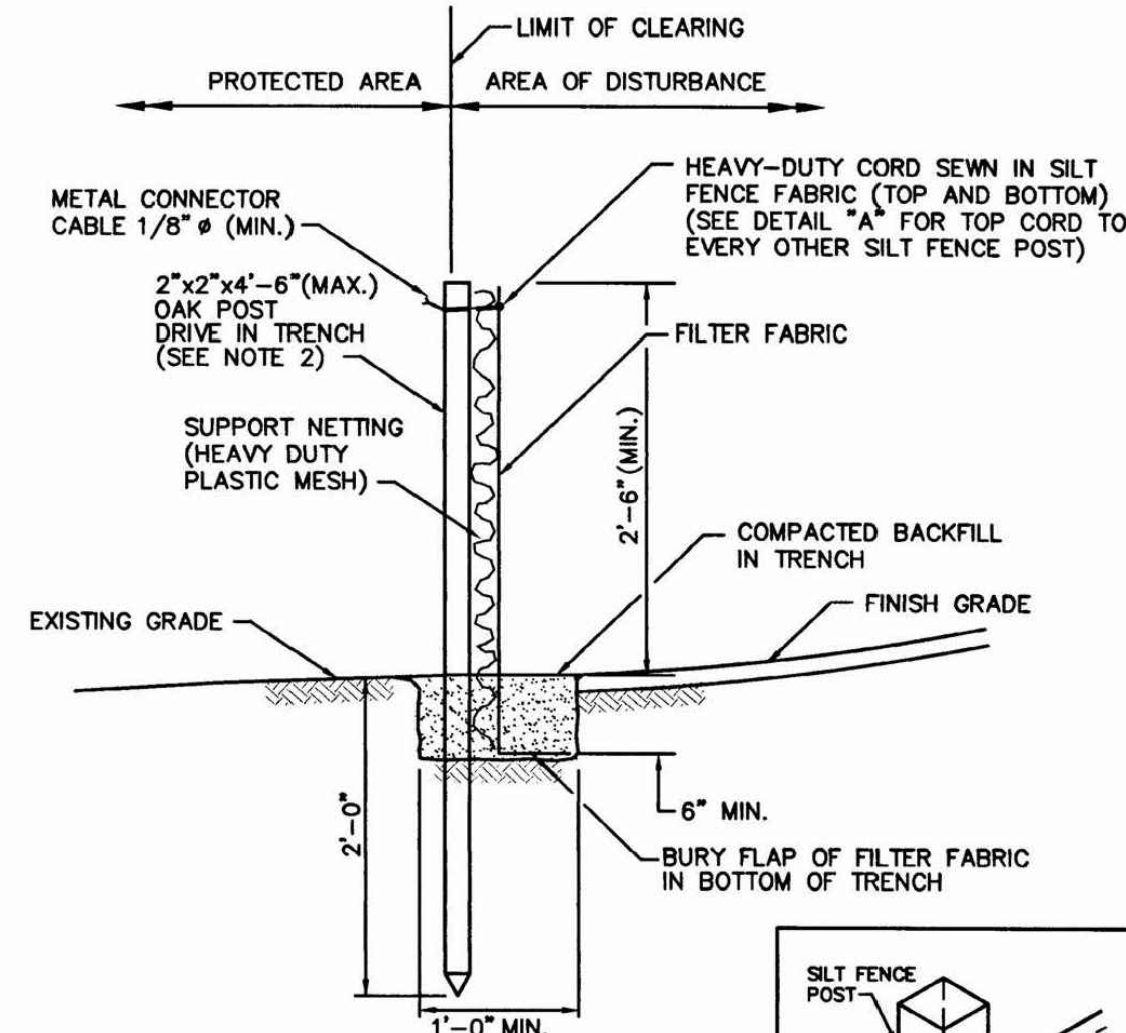


SECTION A-A



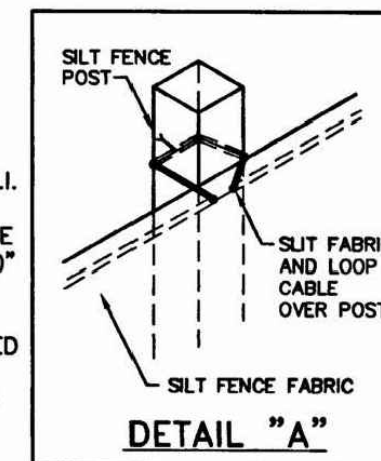
SECTION B-B

3 PHRAGMITES DEWATERING AREA DETAIL
C-501 NOT TO SCALE

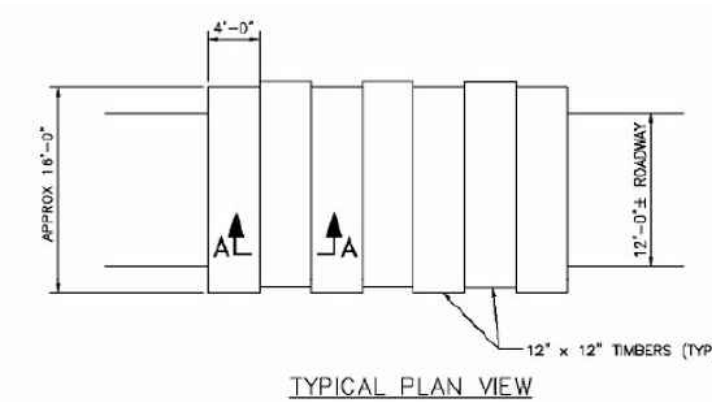


NOTES:

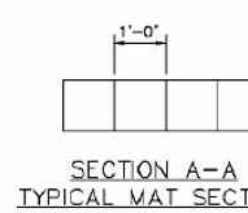
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
- 2"x2"x4"-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
- 1"x1"x4"-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
- SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



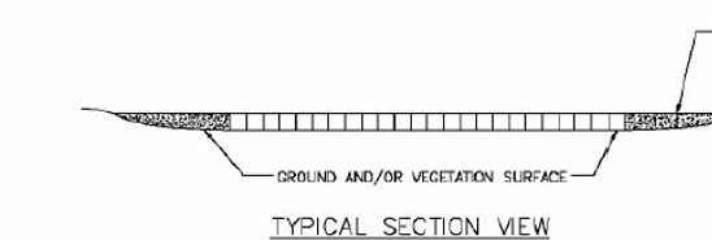
2 SILT FENCE DETAIL
C-501 NOT TO SCALE



TYPICAL PLAN VIEW



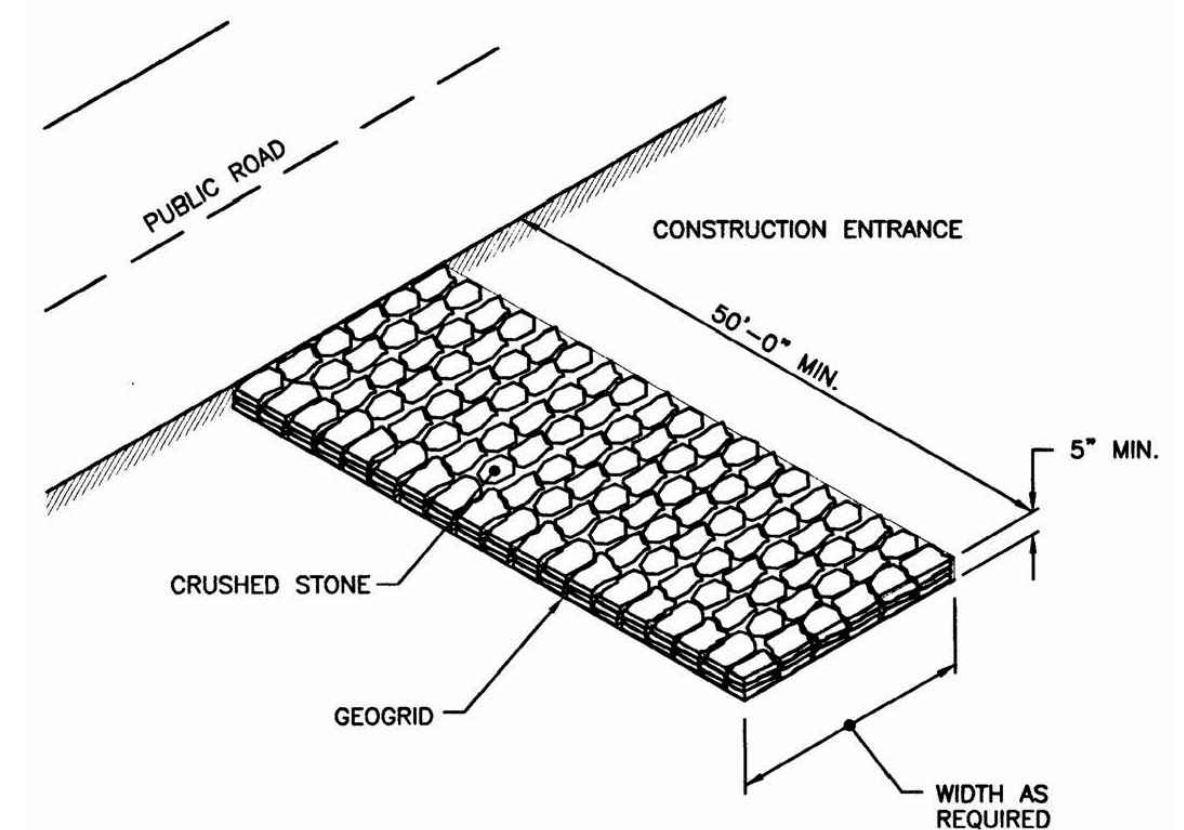
SECTION A-A TYPICAL MAT SECTION



TYPICAL SECTION VIEW

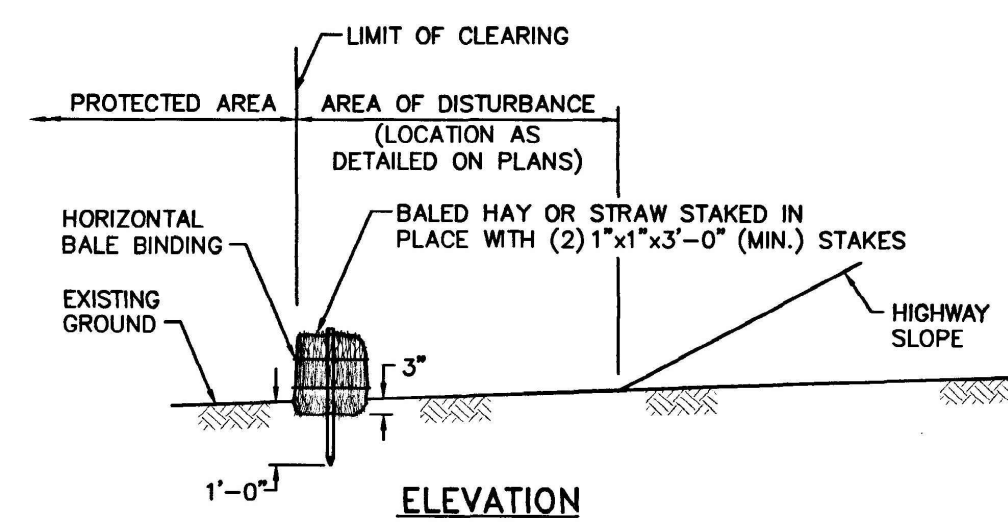
NOTE: 1. SHALL BE INSTALLED IF NECESSARY TO PREVENT SLIDING TO ACCESS STRUCTURES.
2. THIS DETAIL SHOWS TYPICAL DIMENSIONS. SOME CONTRACTORS SWAMP MATS ARE DIMENSIONALLY DIFFERENT FROM WHAT IS SHOWN HERE.
3. DEPENDENT ON SITE CONDITIONS, MULTIPLE LAYERS OF SWAMP MATS MAY BE INSTALLED.

7 TIMBER SWAMP MATTING
C-501 NOT TO SCALE

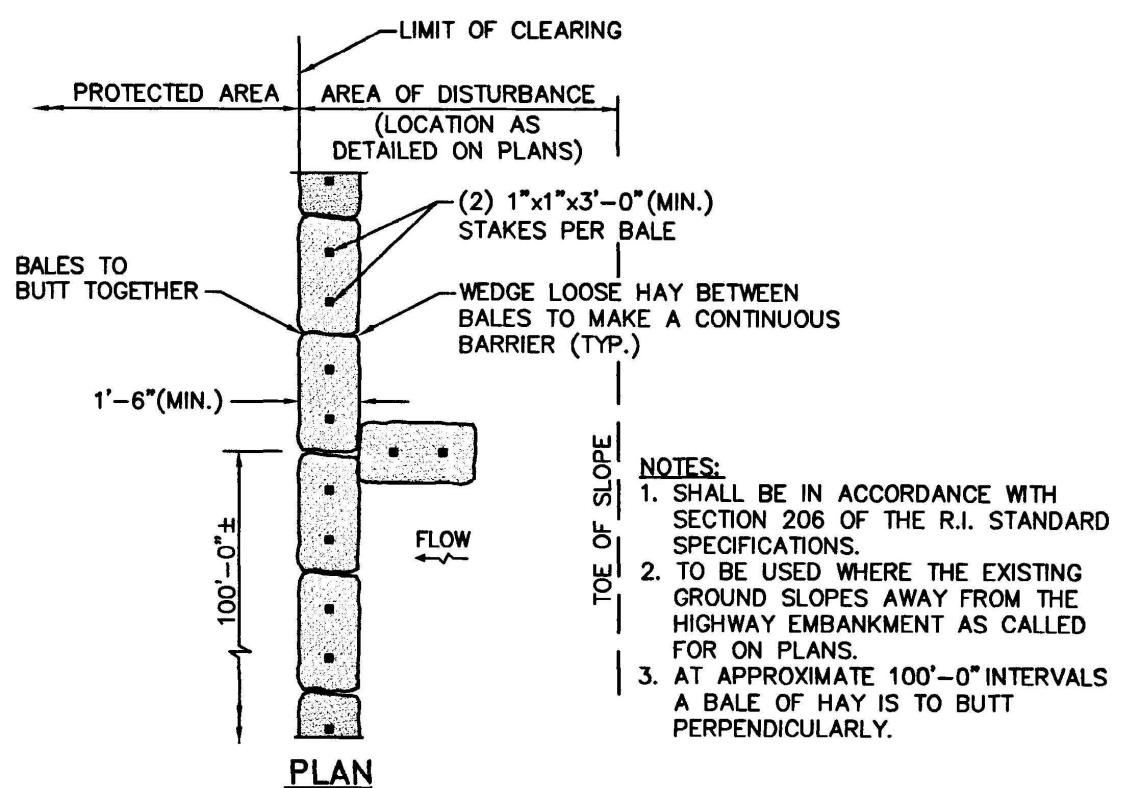


4 STABILIZED CONSTRUCTION ACCESS ROAD DETAIL
C-501 NOT TO SCALE

NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.



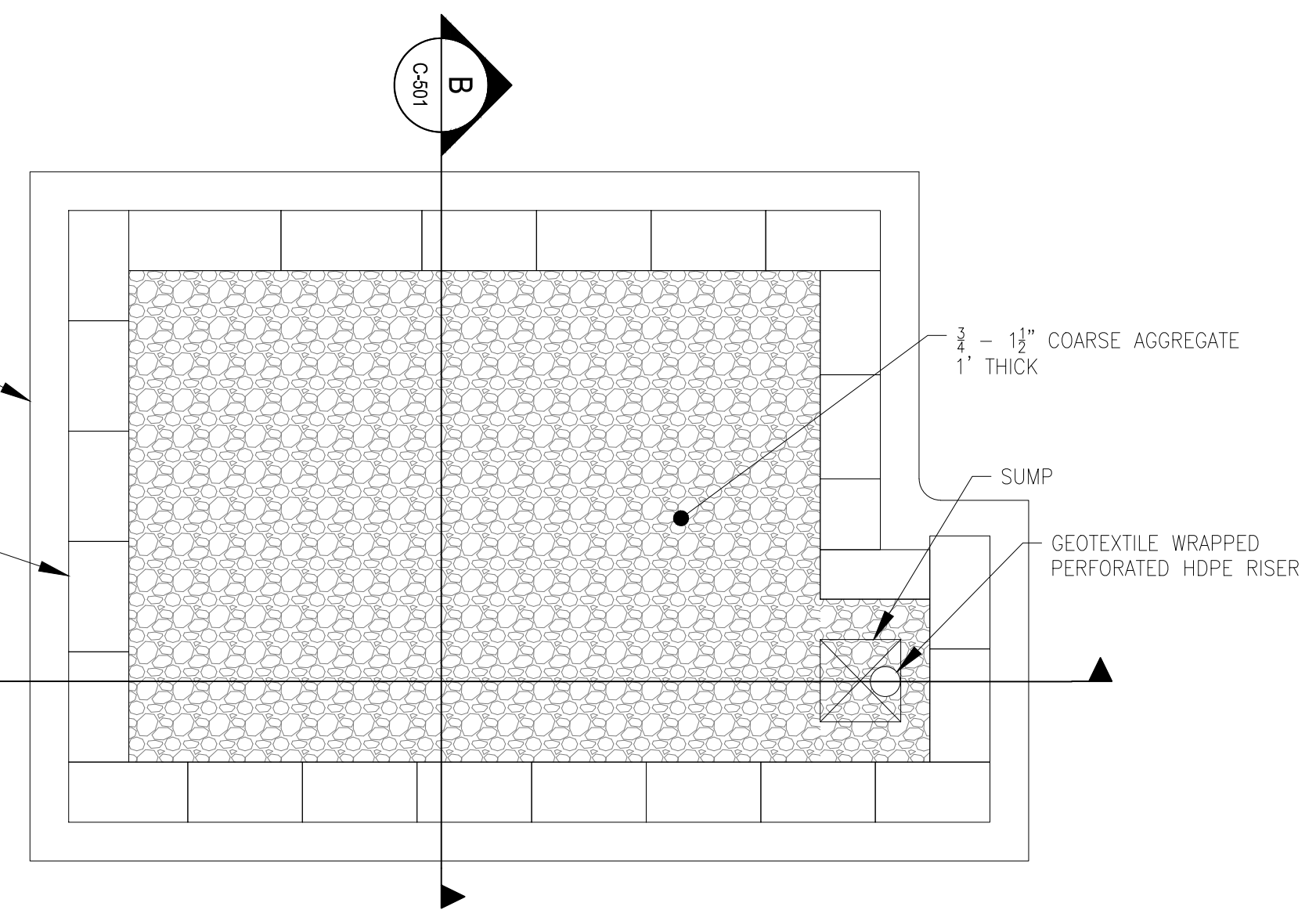
ELEVATION



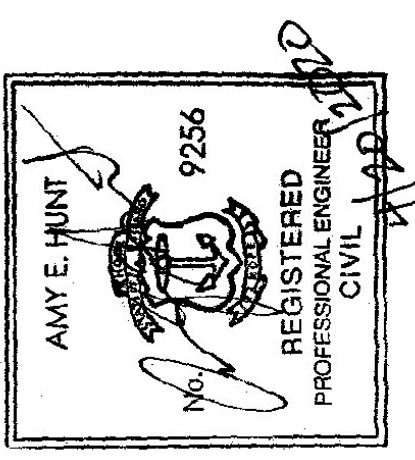
PLAN

6 STAKED STRAW BALES
C-501 NOT TO SCALE

NOTE: STRAW BALES TO BE USED ONLY.



REVISIONS	DESCRIPTION
BY: AMT	REVISED PER RIDEH COMMENTS
DATE: 11/05/18	
NO. 1	
DESIGN INFORMATION	
DESIGNED BY: AMT	
DRAWN BY: DPA	
CHECKED BY: MB	
PROJECT MANAGER: AEH	



BUCKEYE BROOK RESTORATION
2000 POST ROAD, PLAT 321 LOT 0004
CITY OF WARWICK DEPARTMENT OF PUBLIC WORKS / RIDOT
WARWICK, RHODE ISLAND
EROSION AND SEDIMENT CONTROL & WATER CONTROL DETAILS



FILE PATH: I:\MAGNACOPY\WARWICK\PROJECTS\63293\01\BUCKEYE BROOK RESTORATION\ACTUATION\CONSTRUCTION\EROSION AND SEDIMENT CONTROL\DETAILS\C-501.DWG DATE: 02/03/2018 10:14 PM

FOR CONSTRUCTION