

November 2, 2016  
Transmittal No: CREC - 002

Joseph Raymond  
144 Harrisville Main Street  
Harrisville, RI 02830

**Subject: Clear River Energy Center (CREC) – Building Drawing Package**

Dear Mr. Raymond,

To supplement our October 17, 2016 transmittal of building drawings for the CREC, enclosed you will find the drawing plans for the preliminary Soil Erosion and Sedimentation Control (SESC) Plan for your review. A list of the drawings included in this package is enclosed.

Please feel free to reach out to me via email should you have any questions or concerns at [jniland@Invenergyllc.com](mailto:jniland@Invenergyllc.com).

Regards,



John Niland

CC: Amit Nadkarni

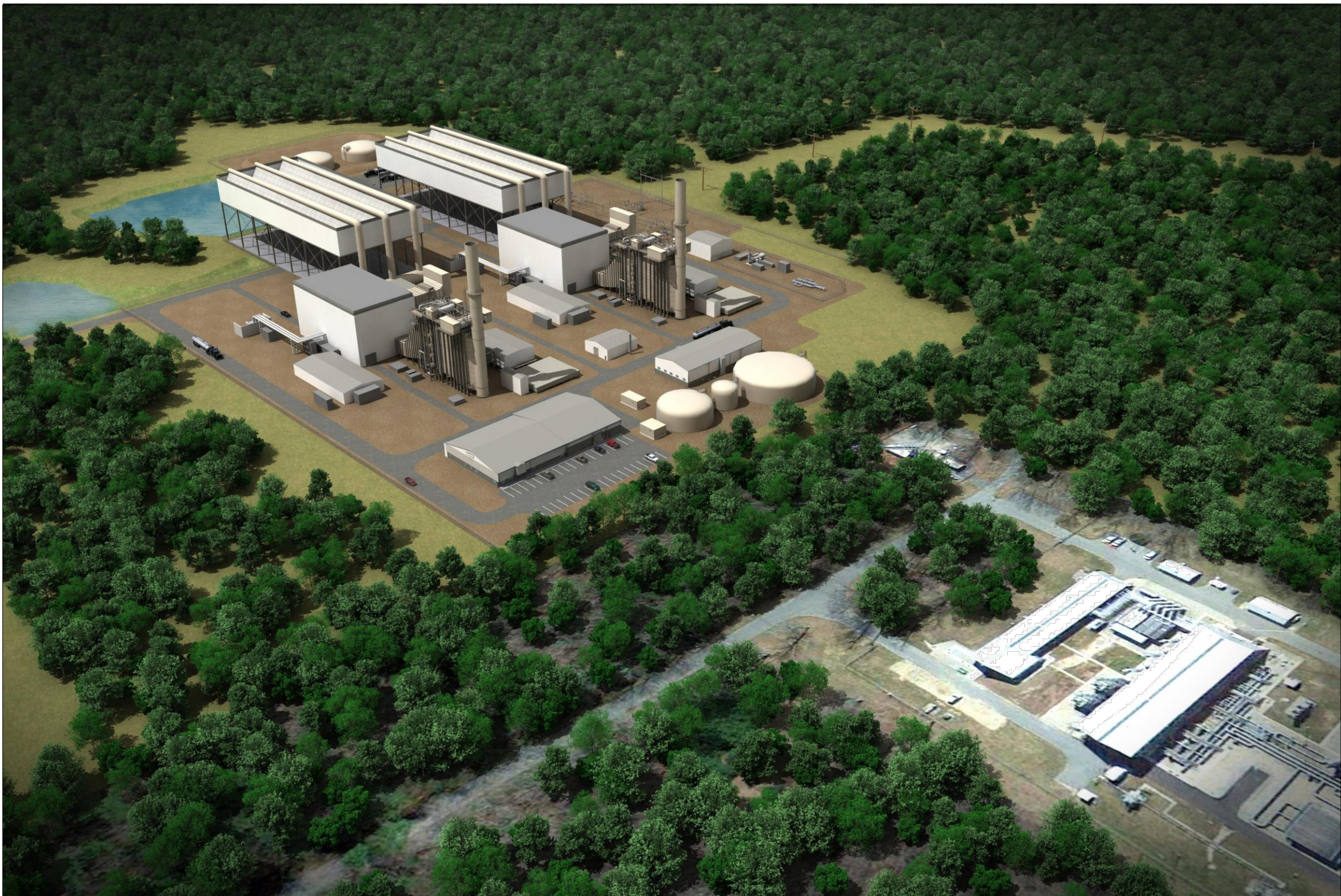
Alan Shoer (APS)

## **Information Provided for Building Inspector Review**

### **SESC Permit Package**

<b>Drawing Number</b>	<b>Drawing Title</b>
01C900	SESC Permit Package Cover
01C901	Legend
01C902	SESC Notes
01C903	SESC Existing Conditions and Constraints Map
01C904	SESC Plan Phase I
01C905	SESC plan Phase II
01C906	SESC Plan Phase III
01C907	SESC Plan Phase IV
01C908	SESC Details
01C909	SESC Details
01C910	SESC Details
01C911	SESC Details



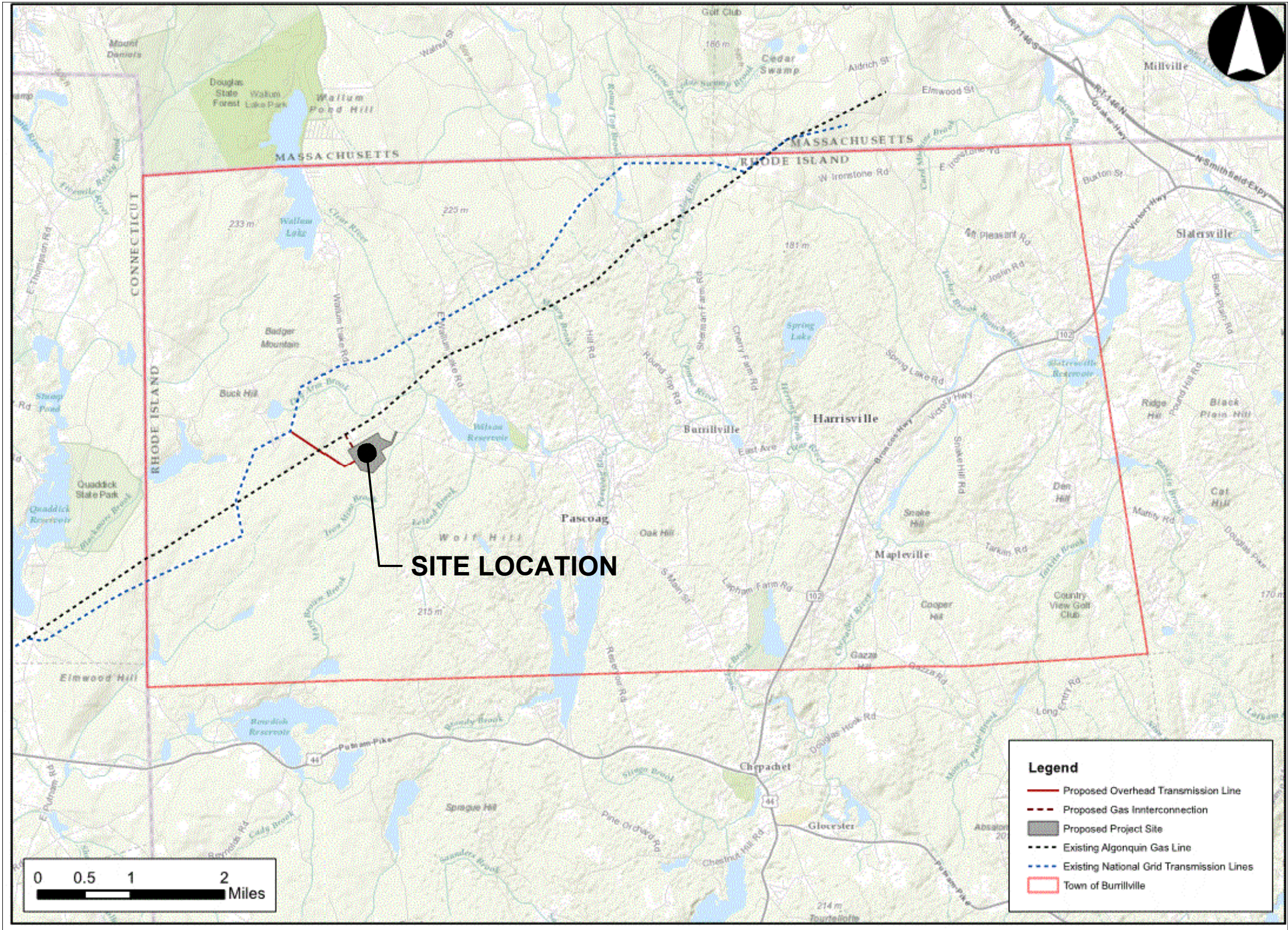


Drawing Package For

# SESC Permit Package

## INDEX OF DRAWINGS

EROSION CONTROL	
01C900	COVER
01C901	LEGEND
01C902	SESC NOTES
01C903	SESC EXISTING CONDITIONS AND CONSTRAINTS MAP
01C904	SESC PLAN PHASE I
01C905	SESC PLAN PHASE II
01C906	SESC PLAN PHASE III
01C907	SESC PLAN PHASE IV
01C908	SESC DETAILS
01C909	SESC DETAILS
01C910	SESC DETAILS
01C911	SESC DETAILS



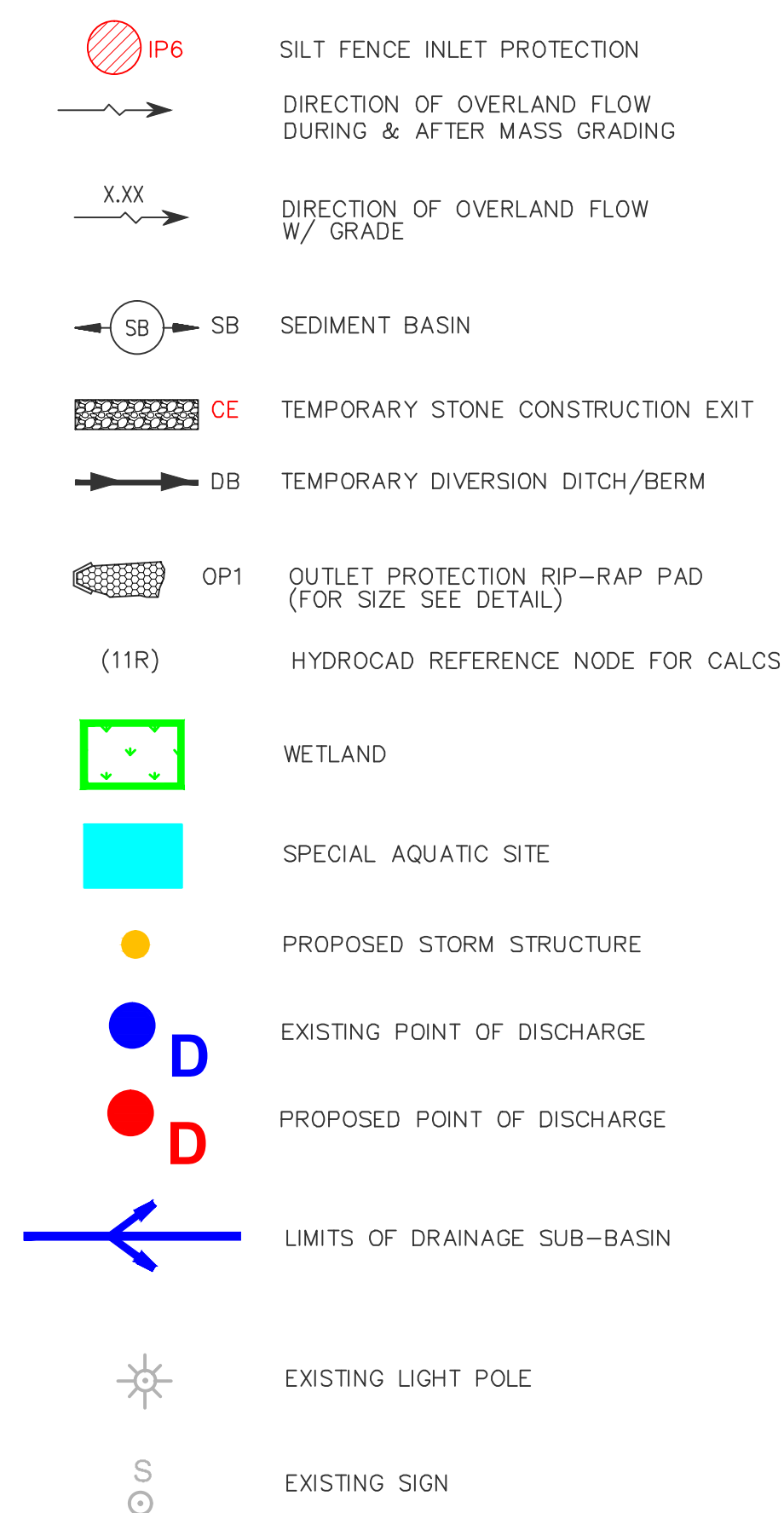
## Clear River Energy LLC

Project No.  
000000000238926

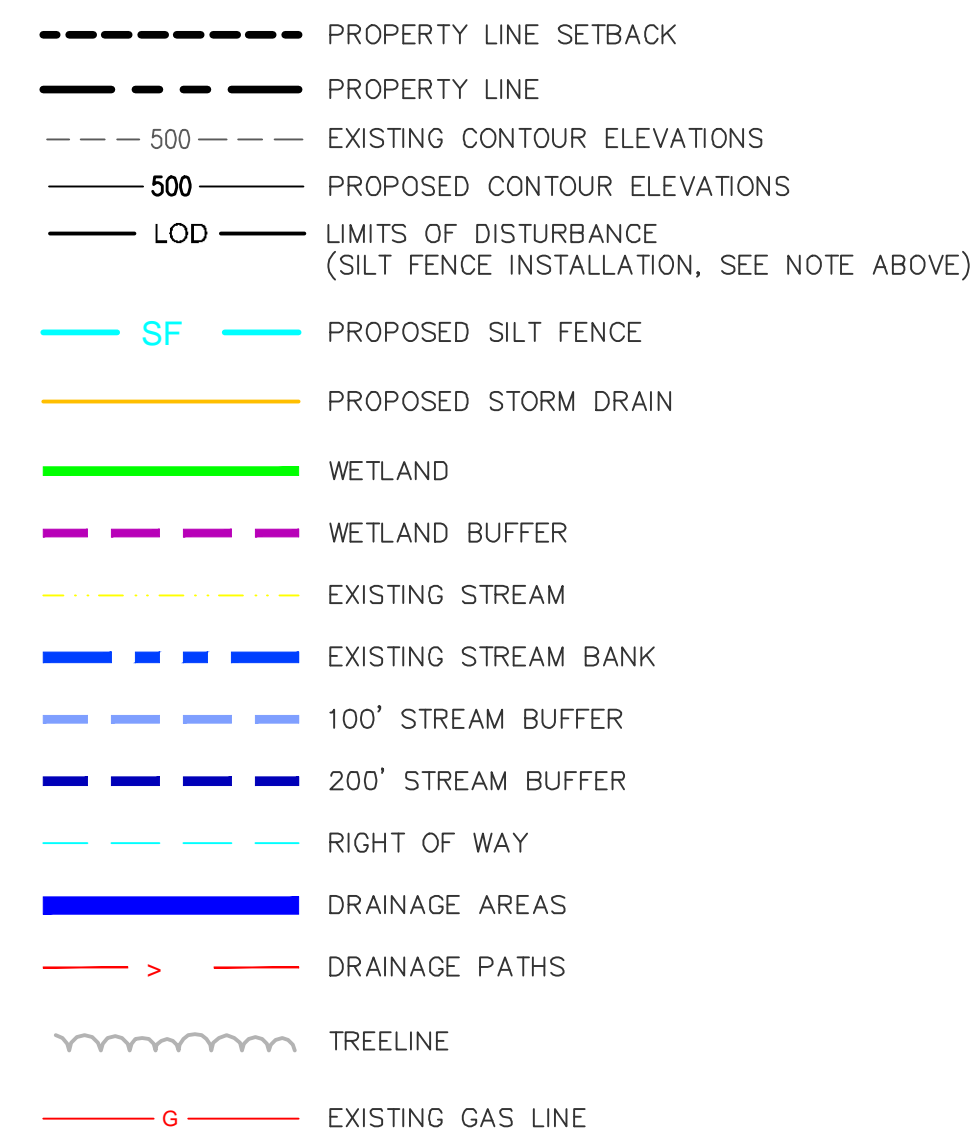
Burrillville, Rhode Island  
September, 2016



## CIVIL MAPPING SYMBOLOGY



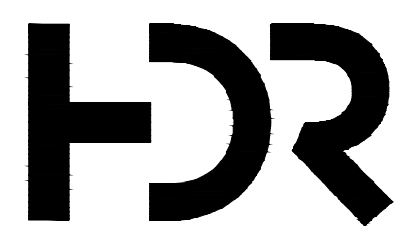
## UTILITY/CIVIL LINE SYMBOLOGY



GENERAL NOTES:

1. THIS IS A STANDARD CIVIL SYMBOLGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

[illegible]

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

## LEGEND



FILENAME	01C901.dwg
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SHEET  
**01C901**

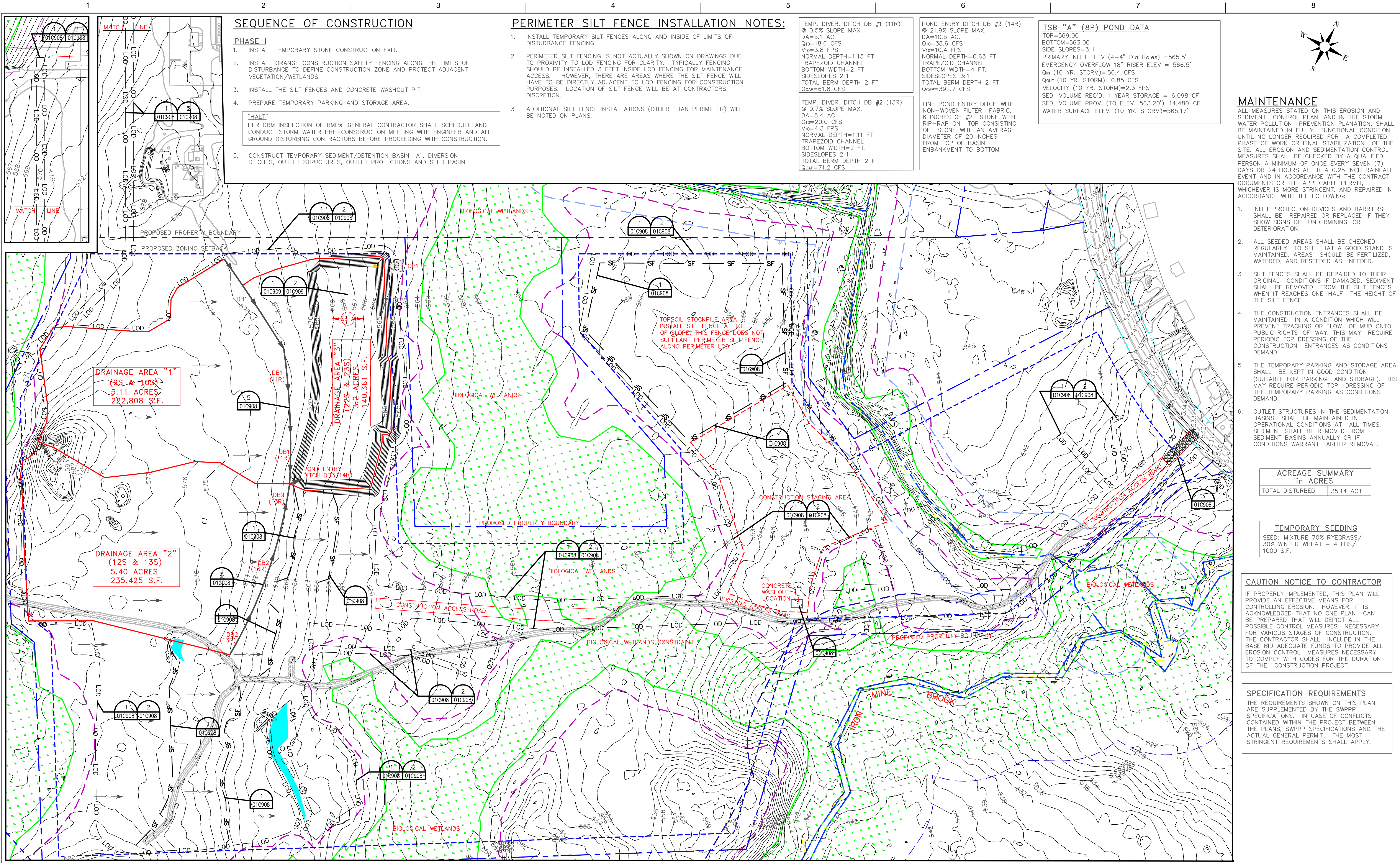




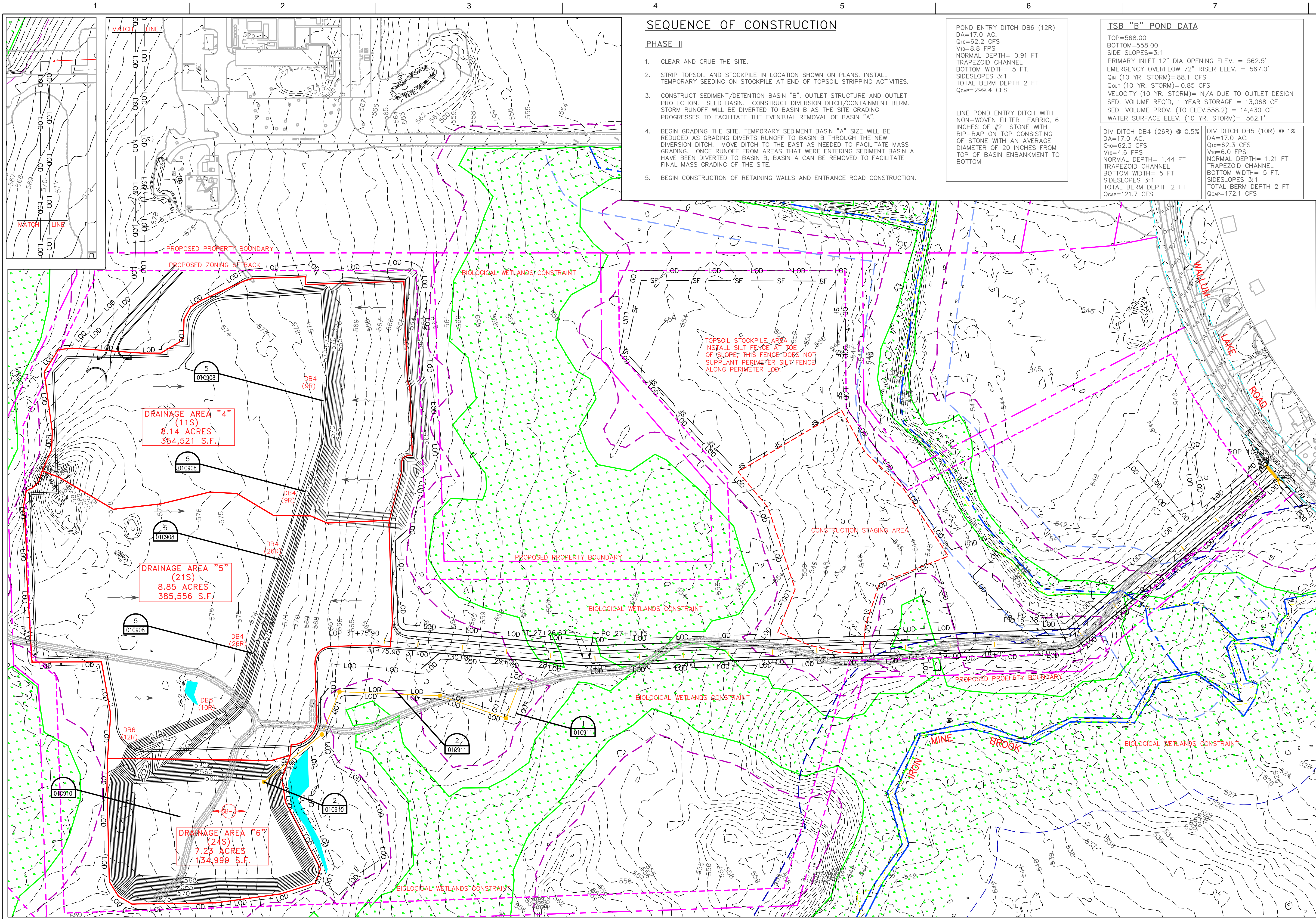












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## SEQUENCE OF CONSTRUCTION

### PHASE II

1. CLEAR AND GRUB THE SITE.
2. STRIP TOPSOIL AND STOCKPILE IN LOCATION SHOWN ON PLANS. INSTALL TEMPORARY SEEDING ON STOCKPILE AT END OF TOPSOIL STRIPPING ACTIVITIES.
3. CONSTRUCT SEDIMENT/DETENTION BASIN "B". OUTLET STRUCTURE AND OUTLET PROTECTION. SEED BASIN. CONSTRUCT DIVERSION DITCH/CONTAINMENT BERM. STORM RUNOFF WILL BE DIVERTED TO BASIN B AS THE SITE GRADING PROGRESSES TO FACILITATE THE EVENTUAL REMOVAL OF BASIN "A".
4. BEGIN GRADING THE SITE. TEMPORARY SEDIMENT BASIN "A" SIZE WILL BE REDUCED AS GRADING DIVERTS RUNOFF TO BASIN B THROUGH THE NEW DIVERSION DITCH. MOVE DITCH TO THE EAST AS NEEDED TO FACILITATE MASS GRADING. ONCE RUNOFF FROM AREAS THAT WERE ENTERING SEDIMENT BASIN A HAVE BEEN DIVERTED TO BASIN B, BASIN A CAN BE REMOVED TO FACILITATE FINAL MASS GRADING OF THE SITE.
5. BEGIN CONSTRUCTION OF RETAINING WALLS AND ENTRANCE ROAD CONSTRUCTION.

POND ENTRY DITCH DB6 (12R)  
DA=17.0 AC.  
Q10=62.2 CFS  
V10=6.8 FPS  
NORMAL DEPTH= 0.91 FT  
TRAPEZOID CHANNEL  
BOTTOM WIDTH= 5 FT.  
SIDESLOPES 3:1  
TOTAL BERM DEPTH 2 FT  
QCAP=299.4 CFS

LINE POND ENTRY DITCH WITH NON-WOVEN FILTER FABRIC, 6 INCHES OF #2 STONE WITH RIP-RAP ON TOP CONSISTING OF STONE WITH AN AVERAGE DIAMETER OF 20 INCHES FROM TOP OF BASIN EMBANKMENT TO BOTTOM

### TSB "B" POND DATA

TOP=568.00  
BOTTOM=558.00  
SIDE SLOPES=3:1  
PRIMARY INLET 12" DIA OPENING ELEV. = 562.5'  
EMERGENCY OVERFLOW 72" RISER ELEV. = 567.0'  
Q10 (10 YR. STORM)=88.1 CFS  
Qout (10 YR. STORM)=0.85 CFS  
VELOCITY (10 YR. STORM)= N/A DUE TO OUTLET DESIGN  
SED. VOLUME REQ'D, 1 YEAR STORAGE = 13,068 CF  
SED. VOLUME PROV. (TO ELEV.558.2) = 14,430 CF  
WATER SURFACE ELEV. (10 YR. STORM)= 562.1'

DIV DITCH DB4 (26R) @ 0.5%  
DA=17.0 AC.  
Q10=62.3 CFS  
V10=4.6 FPS  
NORMAL DEPTH= 1.44 FT  
TRAPEZOID CHANNEL  
BOTTOM WIDTH= 5 FT.  
SIDESLOPES 3:1  
TOTAL BERM DEPTH 2 FT  
QCAP=121.7 CFS

DIV DITCH DB5 (10R) @ 1%  
DA=17.0 AC.  
Q10=62.3 CFS  
V10=6.0 FPS  
NORMAL DEPTH= 1.21 FT  
TRAPEZOID CHANNEL  
BOTTOM WIDTH= 5 FT.  
SIDESLOPES 3:1  
TOTAL BERM DEPTH 2 FT  
QCAP=172.1 CFS

## MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON A MINIMUM OF ONCE EVERY SEVEN (7) DAYS OR 24 HOURS AFTER A 0.25 INCH RAINFALL EVENT AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS ANNUALLY OR IF CONDITIONS WARRANT EARLIER REMOVAL.

### ACREAGE SUMMARY

in ACRES
TOTAL DISTURBED
35.14 AC±

### TEMPORARY SEEDING

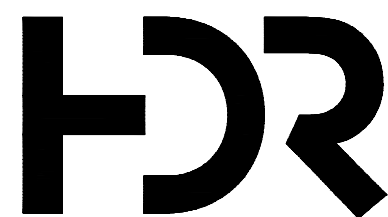
SEED: MIXTURE 70% RYEGRASS/  
30% WINTER WHEAT - 4 LBS/  
1000 S.F.

### CAUTION NOTICE TO CONTRACTOR

IF PROPERLY IMPLEMENTED, THIS PLAN WILL PROVIDE AN EFFECTIVE MEANS FOR CONTROLLING EROSION. HOWEVER, IT IS ACKNOWLEDGED THAT NO ONE PLAN CAN BE PREPARED THAT WILL DEPICT ALL POSSIBLE CONTROL MEASURES NECESSARY FOR VARIOUS STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE IN THE BASE BID ADEQUATE FUNDS TO PROVIDE ALL EROSION CONTROL MEASURES NECESSARY TO COMPLY WITH CODES FOR THE DURATION OF THE CONSTRUCTION PROJECT.

### SPECIFICATION REQUIREMENTS

THE REQUIREMENTS SHOWN ON THIS PLAN ARE SUPPLEMENTED BY THE SWPPP SPECIFICATIONS. IN CASE OF CONFLICTS CONTAINED WITHIN THE PROJECT BETWEEN THE PLANS, SWPPP SPECIFICATIONS AND THE ACTUAL GENERAL PERMIT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.



8/17/2016 SOIL EROSION SEDIMENT CONTROL PLAN  
ISSUE DATE DESCRIPTION

PROJECT MANAGER C. JACOBS

PROJECT NUMBER 000000000238926

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

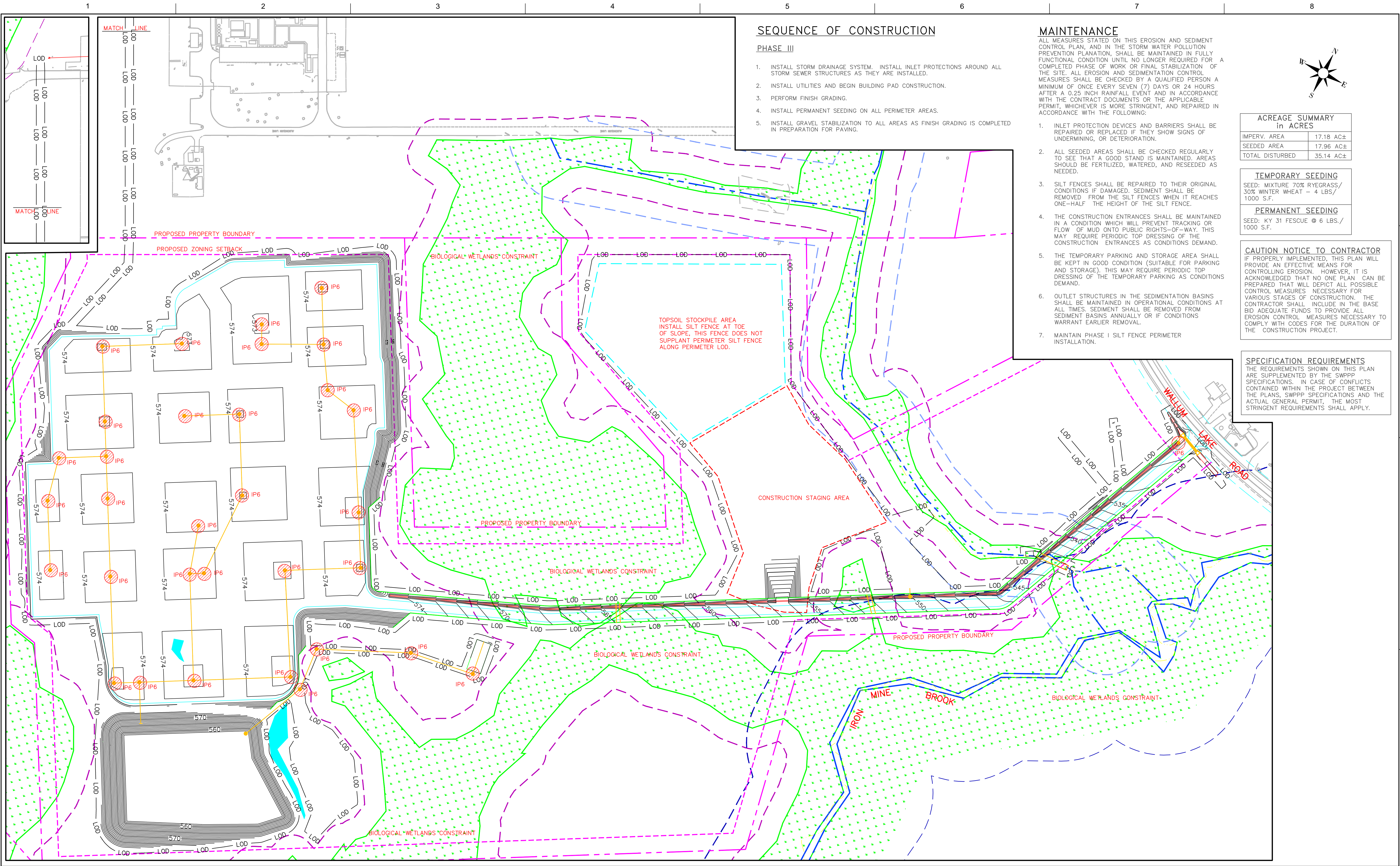
## SOIL EROSION AND SEDIMENT CONTROL PHASE II PLAN

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01C905





SEQUENCE OF CONSTRUCTION

PHASE III

1. INSTALL STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTIONS AROUND ALL STORM SEWER STRUCTURES AS THEY ARE INSTALLED.
2. INSTALL UTILITIES AND BEGIN BUILDING PAD CONSTRUCTION.
3. PERFORM FINISH GRADING.
4. INSTALL PERMANENT SEEDING ON ALL PERIMETER AREAS.
5. INSTALL GRAVEL STABILIZATION TO ALL AREAS AS FINISH GRADING IS COMPLETED IN PREPARATION FOR PAVING.

MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON A MINIMUM OF ONCE EVERY SEVEN (7) DAYS OR 24 HOURS AFTER A 0.25 INCH RAINFALL EVENT AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

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5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATION. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS ANNUALLY OR IF CONDITIONS WARRANT EARLIER REMOVAL.
7. MAINTAIN PHASE I SILT FENCE PERIMETER INSTALLATION.

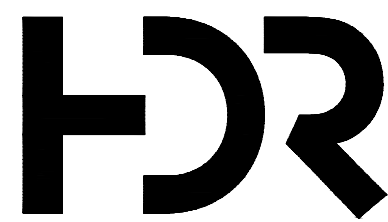
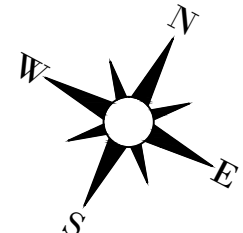
ACREAGE SUMMARY in ACRES	
IMPERV. AREA	17.18 AC±
SEEDED AREA	17.96 AC±
TOTAL DISTURBED	35.14 AC±

TEMPORARY SEEDING  
SEED: MIXTURE 70% RYEGRASS/  
30% WINTER WHEAT - 4 LBS./  
1000 S.F.

PERMANENT SEEDING  
SEED: KY 31 FESCUE @ 6 LBS./  
1000 S.F.

CAUTION NOTICE TO CONTRACTOR  
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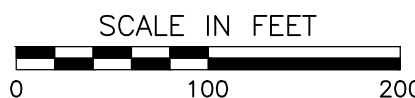


ISSUE	DATE	DESCRIPTION
8/17/2016	SOIL EROSION SEDIMENT CONTROL PLAN	

PROJECT MANAGER	C. JACOBS
PROJECT NUMBER	000000000238926

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

SOIL EROSION AND SEDIMENT CONTROL  
PHASE III PLAN

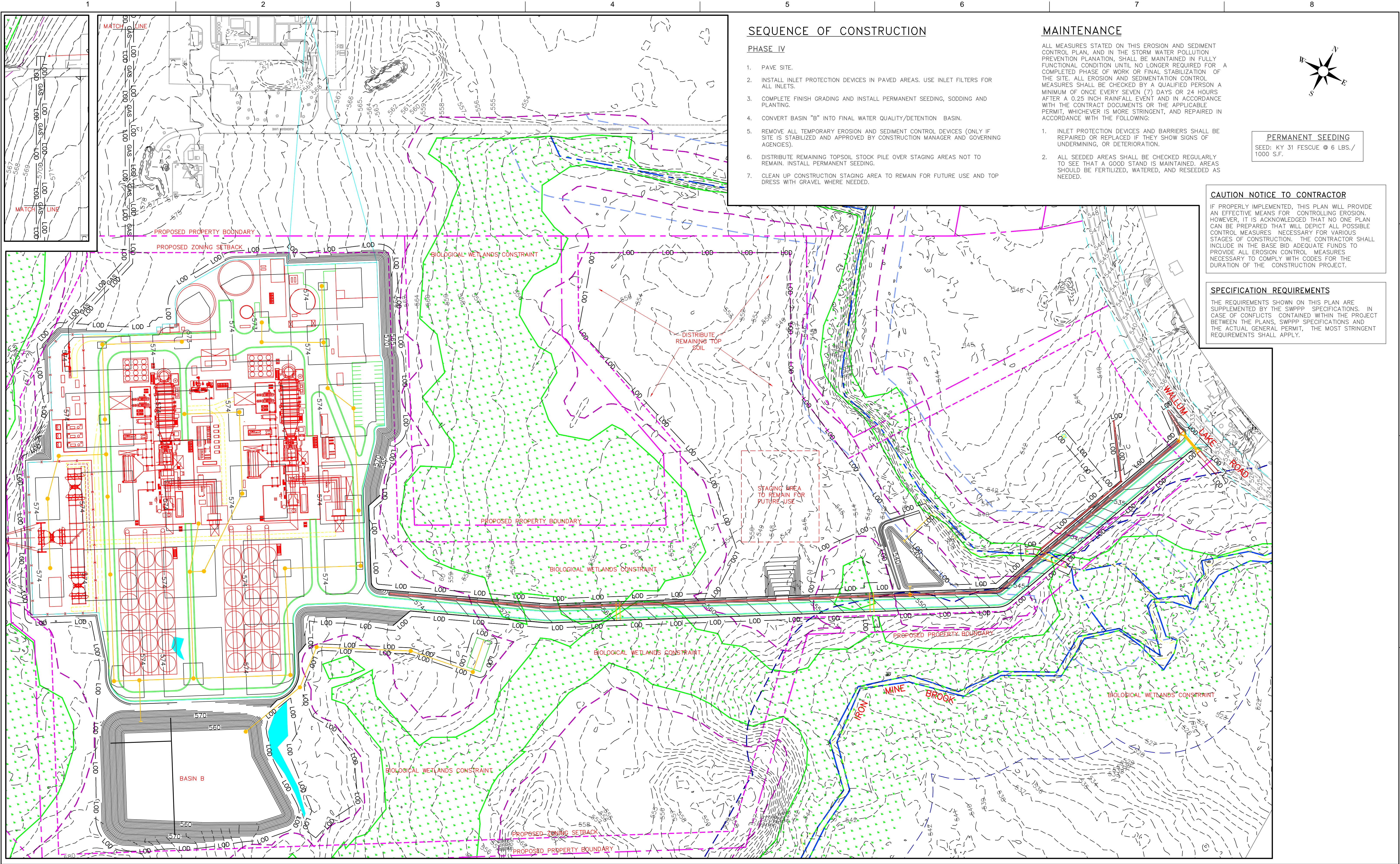


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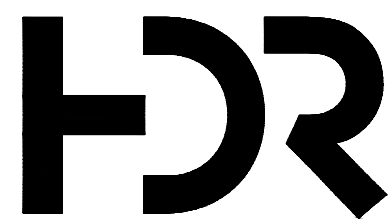
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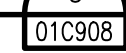
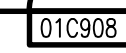
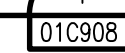
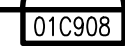
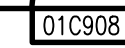
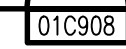
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CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

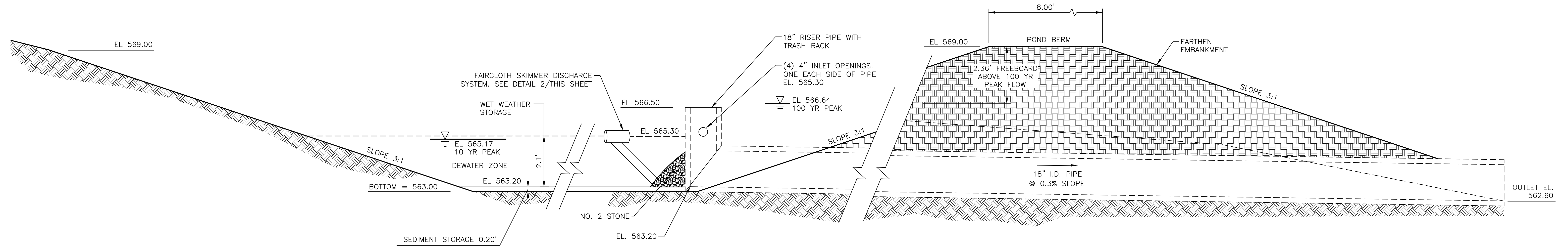
SOIL EROSION AND SEDIMENT CONTROL  
PHASE IV PLAN







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### BASIN A DETAIL

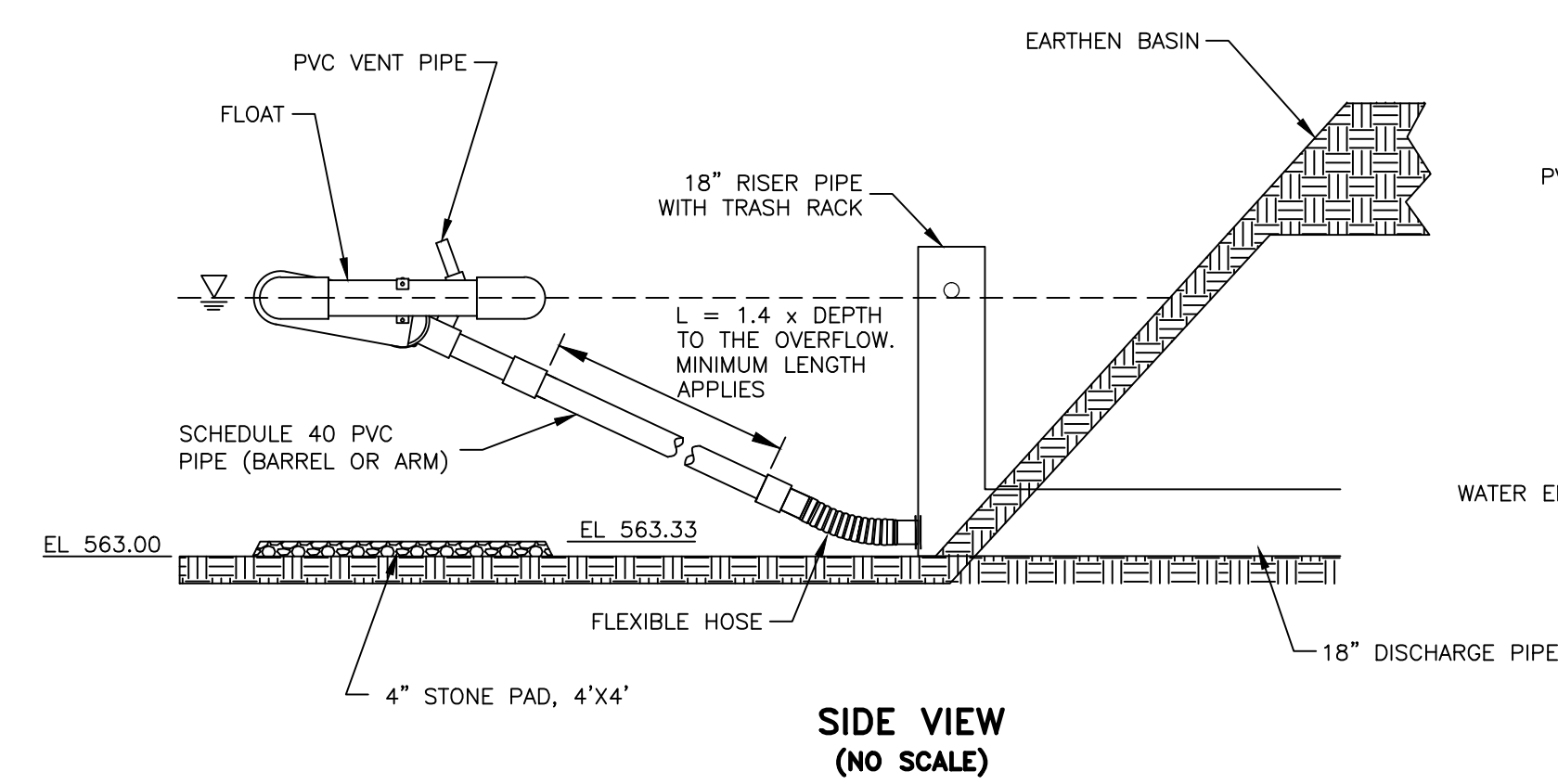
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1  
01C909

#### GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.

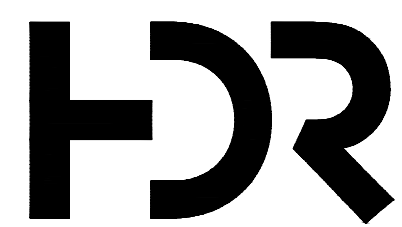
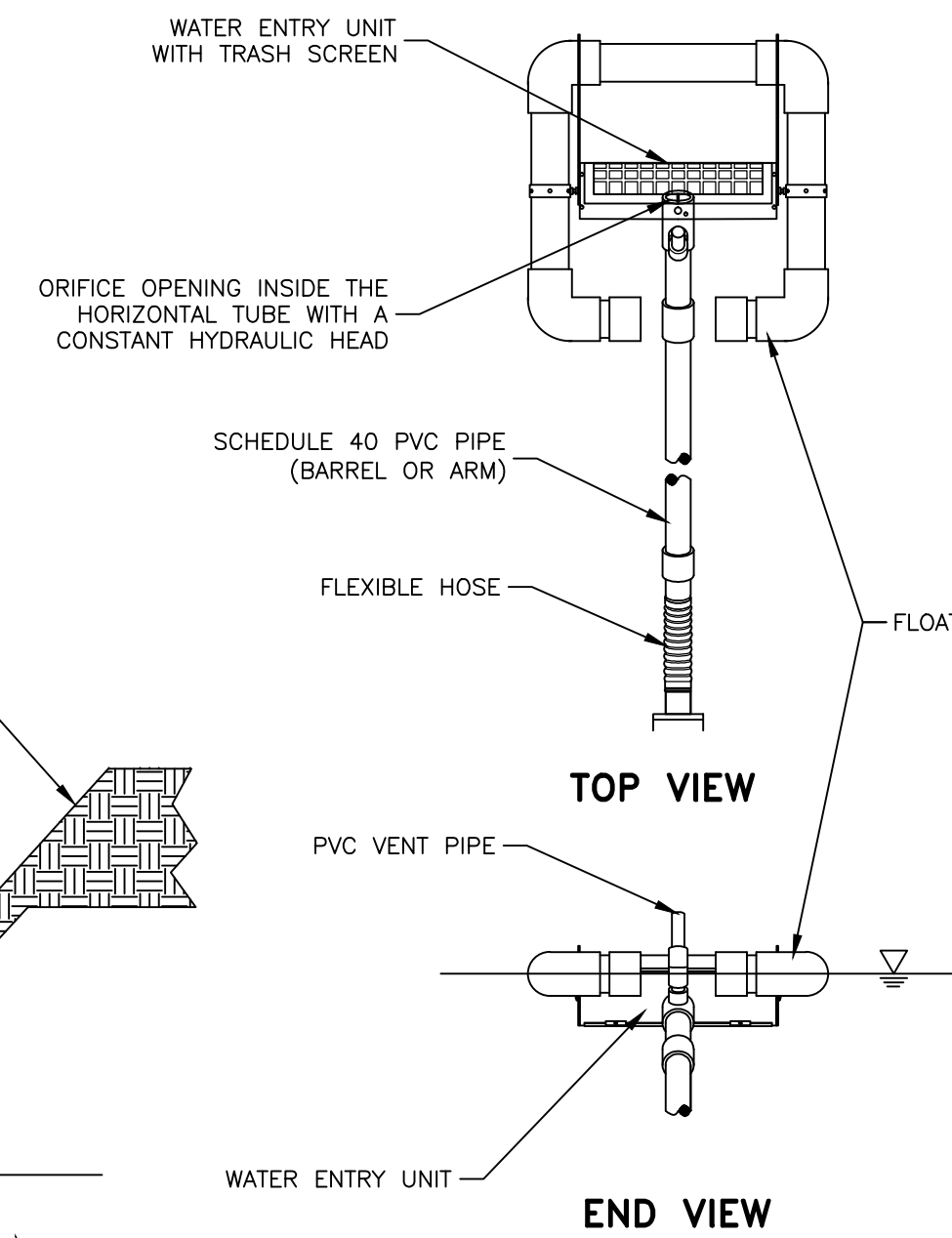
NOTE: SIZE SKIMMER FOR 0.85 CFS OUTFLOW.



### FAIRCLOTH® SKIMMER DISCHARGE SYSTEM WITH EMBANKMENT – BASIN A

SCALE: NTS

2  
01C909



PROJECT MANAGER			C. JACOBS	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	000000000238926

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

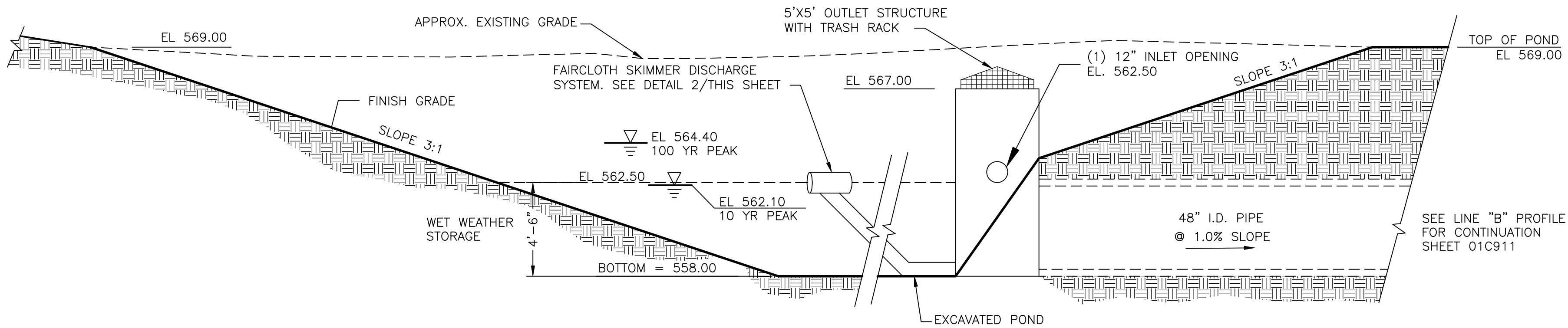
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01C909





BASIN B DETAIL

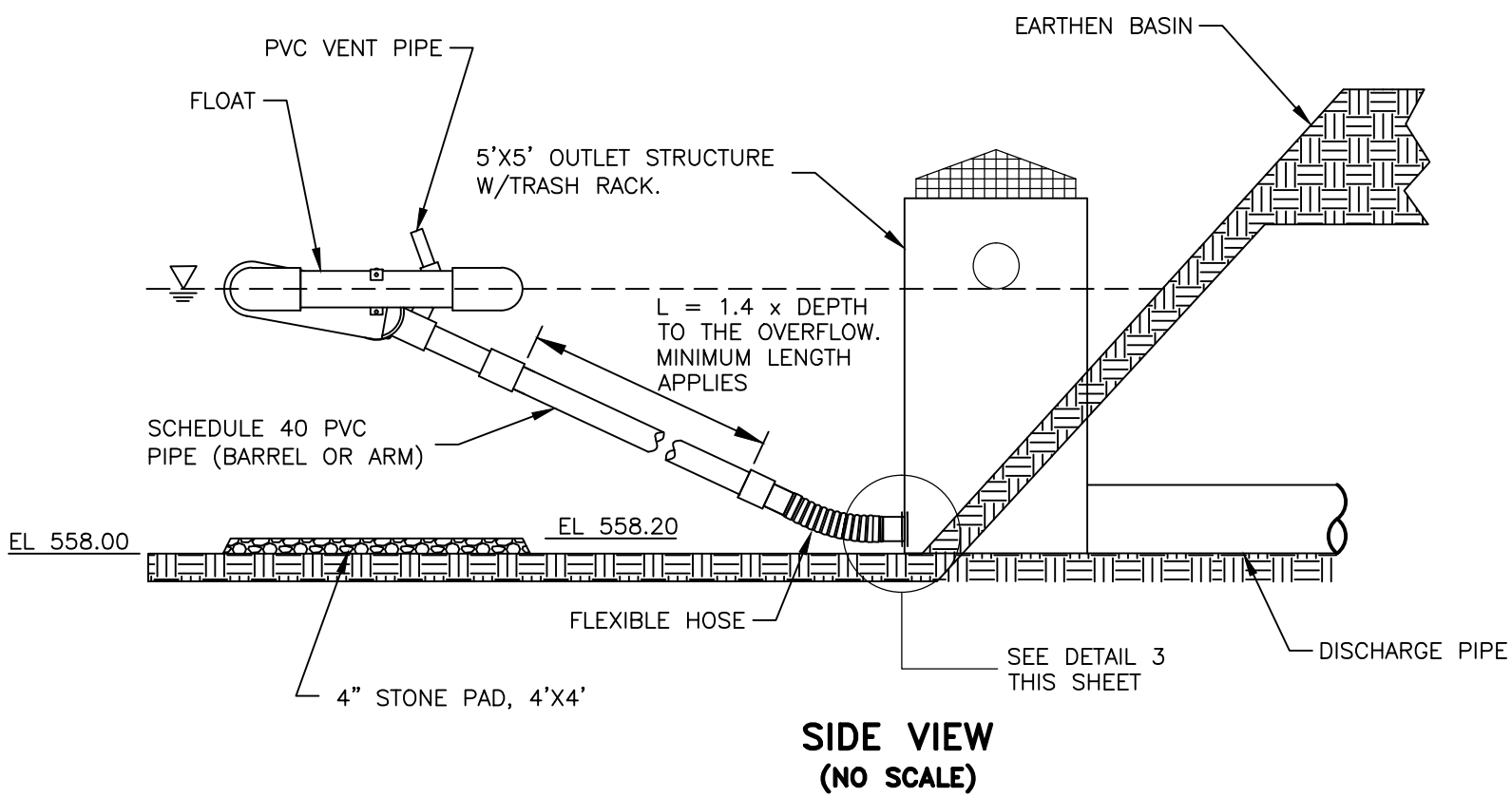
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1  
01C910

GENERAL NOTES:

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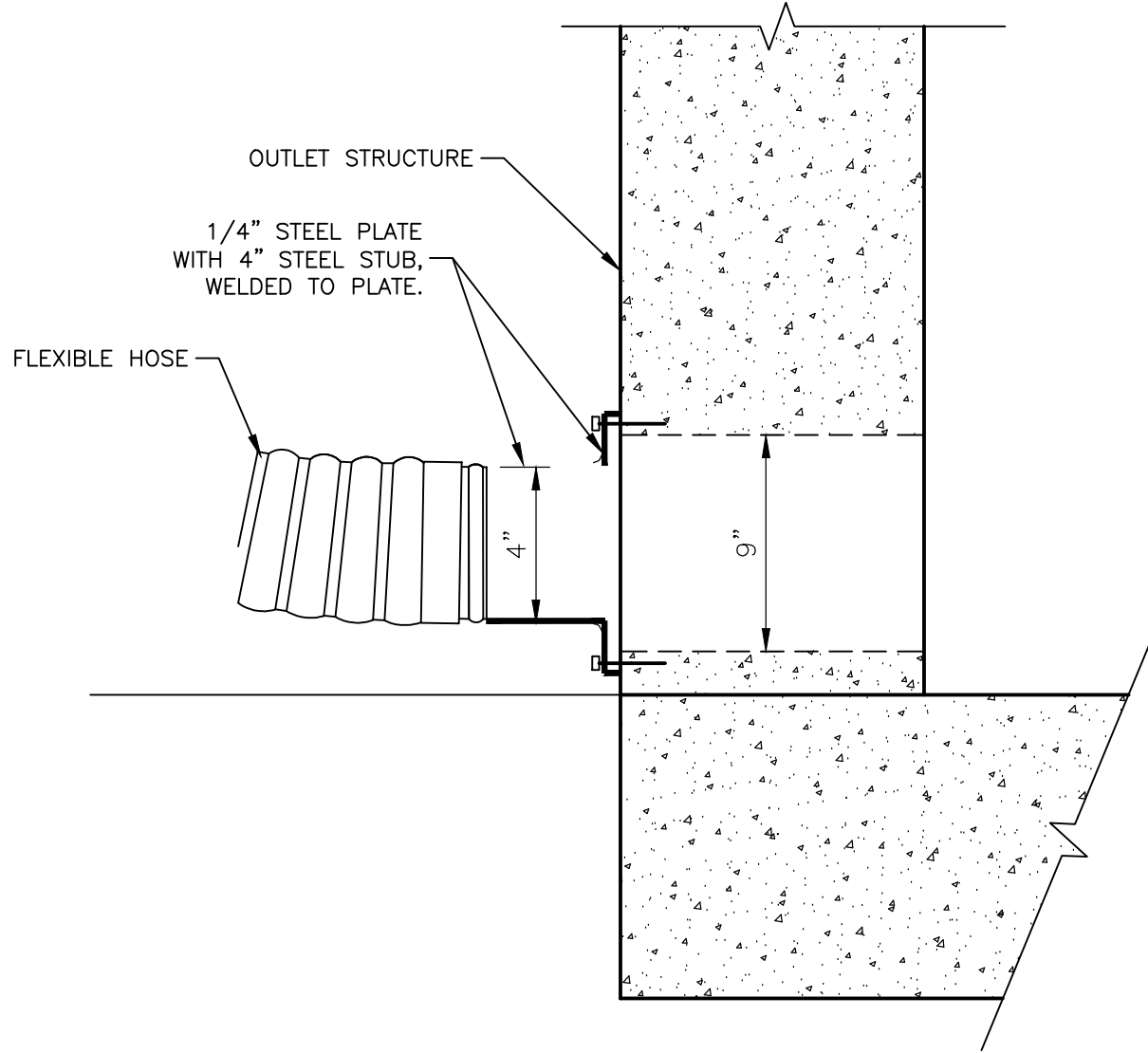
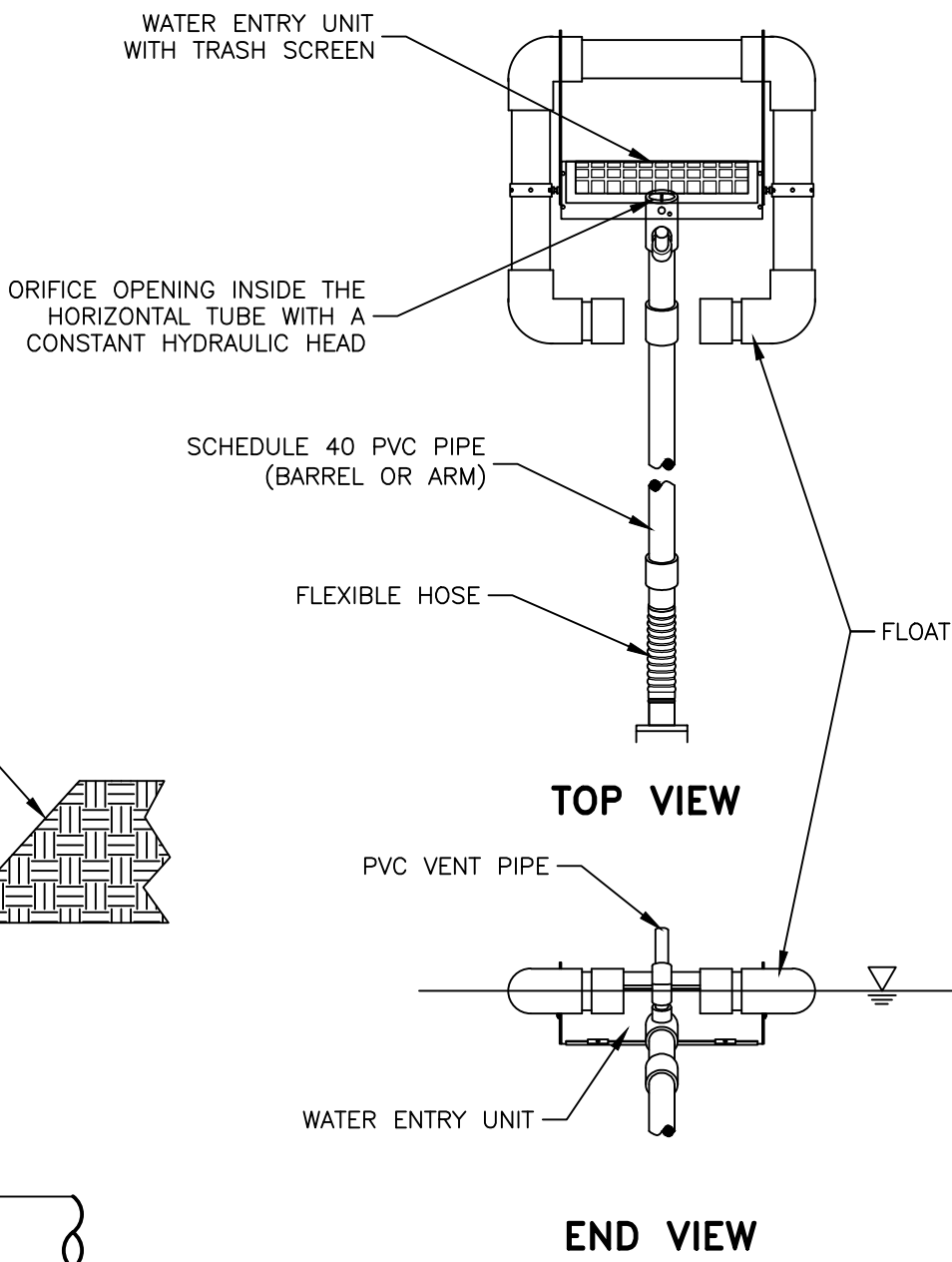
NOTE: SIZE SKIMMER FOR 0.85 CFS OUTFLOW.



FAIRCLOTH® SKIMMER  
DISCHARGE SYSTEM WITH EMBANKMENT – BASIN B

SCALE: NTS

2  
01C910

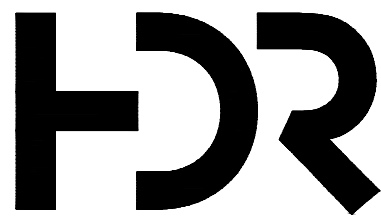


SKIMMER CONNECTION DETAIL

SCALE: NTS

3  
01C910

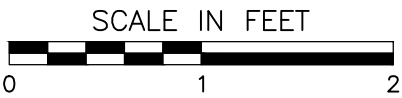
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			PROJECT MANAGER C. JACOBS	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	000000000238926

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

PROPOSED  
SWPP DETAILS

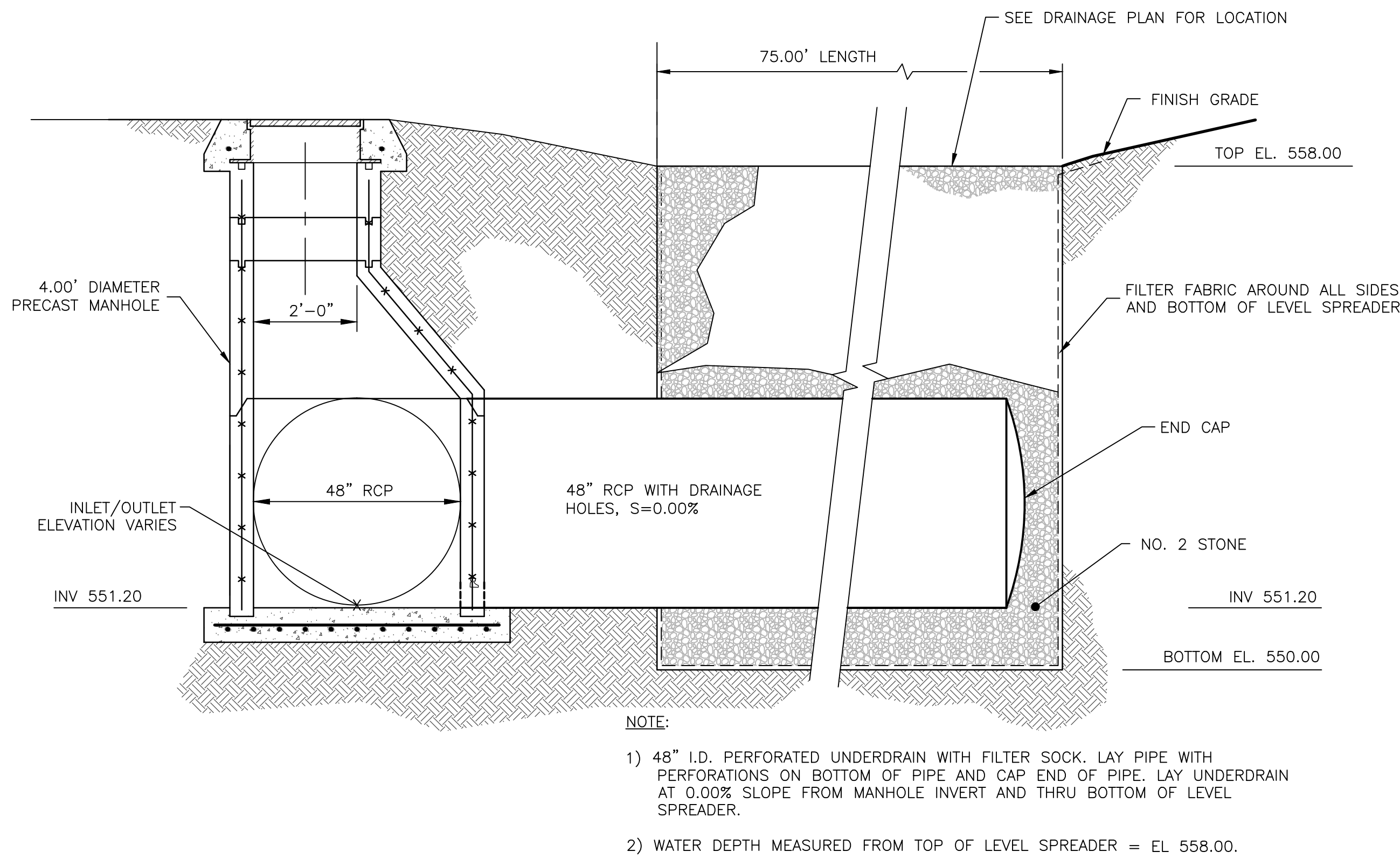


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01C910



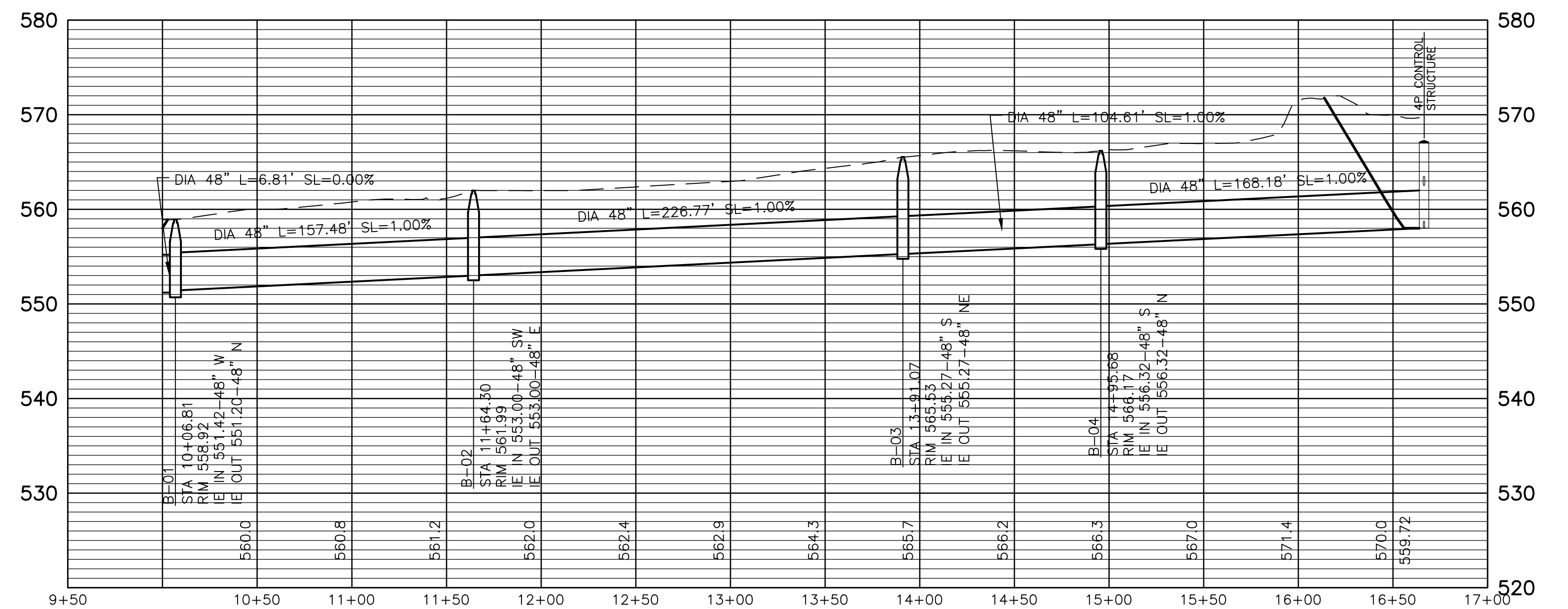
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### LEVEL SPREADER DETAIL (18P)

SCALE: 1/2"=1'-0"

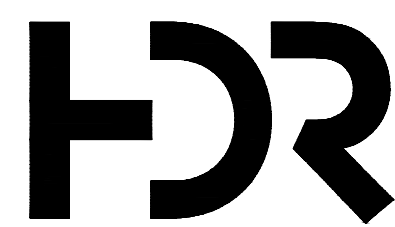
1  
01C911



### PROFILE OF LINE B

SCALE: HOR- 1"=50' VER- 1"= 5'

2  
01C911



PROJECT MANAGER			C. JACOBS	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	000000000238926

CLEAR RIVER ENERGY CENTER  
TOWN OF BURRILLVILLE,  
PROVIDENCE COUNTY, RHODE ISLAND

### PROPOSED SITE DRAINAGE DETAILS



FILENAME 01C911.dwg  
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01C911