# Site Plans

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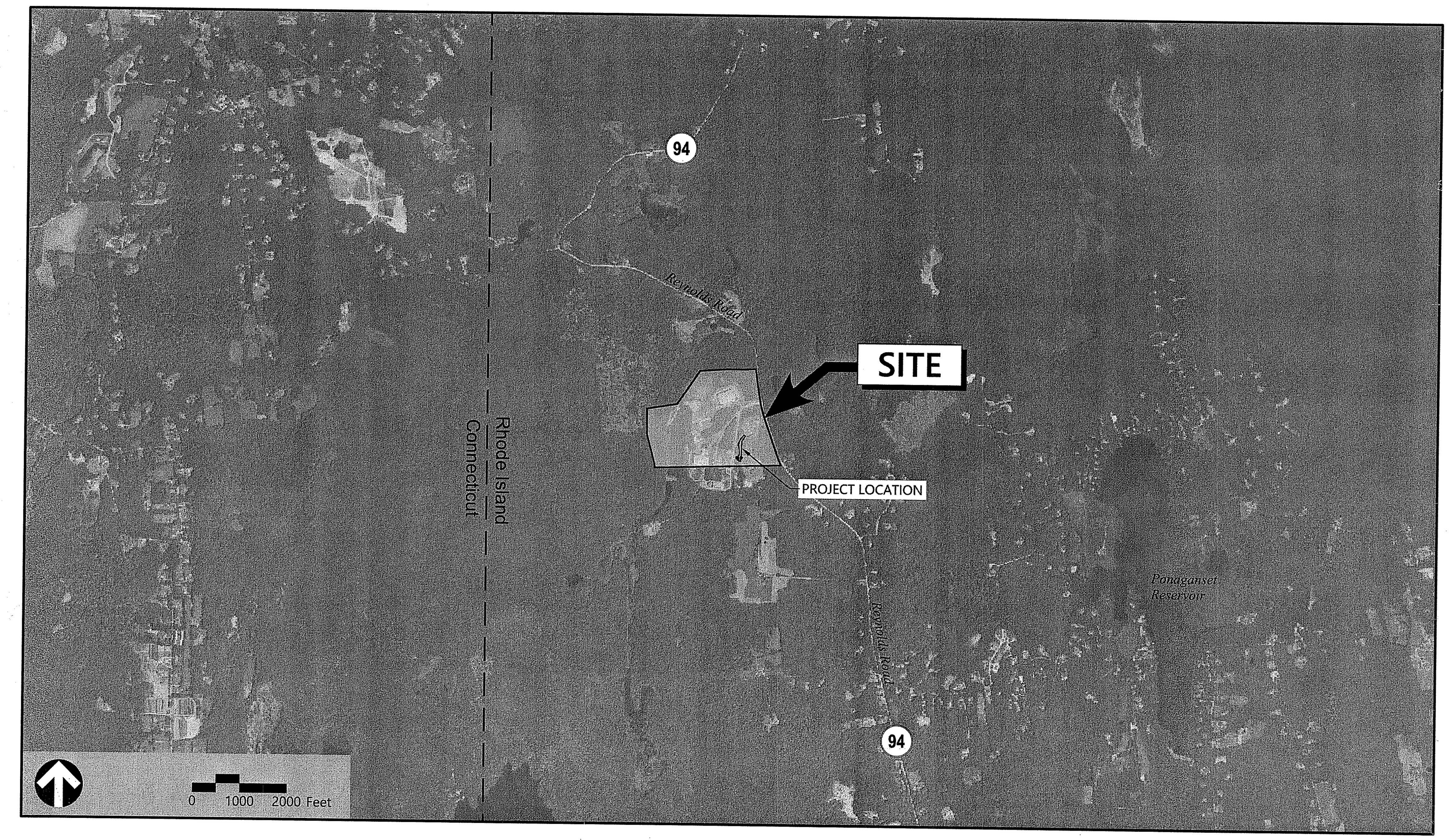
|---|---|
| Issued for | Permits |
| Date Issued | October 27, 2023 |
| Latest Issue | March 25, 2024 |

# FM Global Farmhouse Access Road

Research Campus
743 Reynolds Road
West Glocester, Rhode Island
02814





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1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100


**Owner/Applicant**

Factory Mutual Insurance Company
d/b/a FM Global Research Campus

743 Reynolds Road
West Glocester, RI 02814

**Assessor's Map: Plat 2**
**Lot: 4**

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY - 2 2024 FILE #: 23-0235
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:

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

RI Environmental Management
MAR 25 2024
Office of Water Resources

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

VHB Project : 73281.00 FM Global Farmhouse Access Road
Issued for : Permits 3/25/2024

\\VHB.COM\GBL\PROJ\PROVIDENCE\73281.00\CAD\LD\PLANSET\73281.00 COV 21 March 2024

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## Legend

| Exist. | Prop. | |
|---|---|---|
| | | PROPERTY LINE |
| | | PROJECT LIMIT LINE |
| | | RIGHT-OF-WAY/PROPERTY LINE |
| | | EASEMENT |
| | | BUILDING SETBACK |
| | | PARKING SETBACK |
| 10+00 | 10+00 | BASELINE |
| | | CONSTRUCTION LAYOUT |
| | | ZONING LINE |
| | | TOWN LINE |
| | | LIMIT OF DISTURBANCE |
| | | WETLAND LINE WITH FLAG |
| | | FLOODPLAIN |
| BLSF | | BORDERING LAND SUBJECT TO FLOODING |
| 200'JA | | 200' JURISDICTIONAL AREA |
| 100'BZ/50'BZ/25'BZ | | 100'/50'/25' WETLAND BUFFER ZONE |
| BUFFER | | WETLAND BUFFER |
| | | GRAVEL ROAD |
| EOP | EOP | EDGE OF PAVEMENT |
| BB | BB | BITUMINOUS BERM |
| BC | BC | BITUMINOUS CURB |
| CC | CC | CONCRETE CURB |
| | CG | CURB AND GUTTER |
| CC | ECC | EXTRUDED CONCRETE CURB |
| CC | MCC | MONOLITHIC CONCRETE CURB |
| CC | PCC | PRECAST CONC. CURB |
| SGE | SGE | SLOPED GRAN. EDGING |
| VGC | VGC | VERT. GRAN. CURB |
| | | LIMIT OF CURB TYPE |
| | | SAWCUT |
| | | BUILDING |
| | EN | BUILDING ENTRANCE |
| | LD | LOADING DOCK |
| | | BOLLARD |
| D | D | DUMPSTER PAD |
| | | SIGN |
| | | DOUBLE SIGN |
| | | STEEL GUARDRAIL |
| | | WOOD GUARDRAIL |
| | | PATH |
| | | TREE LINE |
| | | WIRE FENCE |
| | | FENCE |
| | | STOCKADE FENCE |
| | | STONE WALL |
| | | RETAINING WALL |
| | | STREAM / POND / WATER COURSE |
| | | DETENTION BASIN |
| | | HAY BALES |
| | | SILT FENCE |
| | | SILT SOCK / STRAW WATTLE |
| 4 | 4 | MINOR CONTOUR |
| 20 | 20 | MAJOR CONTOUR |
| 10 | 10 | PARKING COUNT |
| | C10 | COMPACT PARKING STALLS |
| DYL | DYL | DOUBLE YELLOW LINE |
| SL | SL | STOP LINE |
| | | CROSSWALK |
| | | ACCESSIBLE CURB RAMP |
| | | ACCESSIBLE PARKING |
| VAN | VAN | VAN-ACCESSIBLE PARKING |

| Exist. | Prop. | |
|---|---|---|
| | | CONCRETE |
| | | HEAVY DUTY PAVEMENT |
| | | BUILDINGS |
| | | RIPRAP |
| | | CONSTRUCTION EXIT |
| 27.35 TC× | 27.35 TC× | TOP OF CURB ELEVATION |
| 26.85 BC× | 26.85 BC× | BOTTOM OF CURB ELEVATION |
| 132.75× | 132.75× | SPOT ELEVATION |
| 45.0 TW 38.5 BW | 45.0 TW 38.5 BW | TOP & BOTTOM OF WALL ELEVATION |
| | | BORING LOCATION |
| | | TEST PIT LOCATION |
| MW | MW | MONITORING WELL |
| UD | UD | UNDERDRAIN |
| 12"D | 12"D | DRAIN |
| 6"RD | 6"RD | ROOF DRAIN |
| 12"S | 12"S | SEWER |
| FM | FM | FORCE MAIN |
| OHW | OHW | OVERHEAD WIRE |
| 8"W | 8"W | WATER |
| 4"FP | 4"FP | FIRE PROTECTION |
| | 2"DW | DOMESTIC WATER |
| 3"G | G | GAS |
| E | E | ELECTRIC |
| STM | STM | STEAM |
| T | T | TELEPHONE |
| FA | FA | FIRE ALARM |
| CATV | CATV | CABLE TV |
| | | CATCH BASIN CONCENTRIC |
| | | CATCH BASIN ECCENTRIC |
| | | DOUBLE CATCH BASIN CONCENTRIC |
| | | DOUBLE CATCH BASIN ECCENTRIC |
| | | GUTTER INLET |
| | | DRAIN MANHOLE CONCENTRIC |
| | | DRAIN MANHOLE ECCENTRIC |
| | | TRENCH DRAIN |
| | | PLUG OR CAP |
| CO | CO | CLEANOUT |
| | | FLARED END SECTION |
| | | HEADWALL |
| | | SEWER MANHOLE CONCENTRIC |
| | | SEWER MANHOLE ECCENTRIC |
| CS | CS | CURB STOP & BOX |
| WV | WV | WATER VALVE & BOX |
| TSV | TSV | TAPPING SLEEVE, VALVE & BOX |
| | | FIRE DEPARTMENT CONNECTION |
| HYD | HYD | FIRE HYDRANT |
| WM | WM | WATER METER |
| PIV | PIV | POST INDICATOR VALVE |
| | | WATER WELL |
| GG | GG | GAS GATE |
| GM | GM | GAS METER |
| | EMH | ELECTRIC MANHOLE |
| EM | EM | ELECTRIC METER |
| | | LIGHT POLE |
| | TMH | TELEPHONE MANHOLE |
| T | T | TRANSFORMER PAD |
| | | UTILITY POLE |
| | | GUY POLE |
| | | GUY WIRE & ANCHOR |
| HH | HH | HAND HOLE |
| PB | PB | PULL BOX |
| | | MATCHLINE |

## Abbreviations

### General

| | |
|---|---|
| ABAN | ABANDON |
| ACR | ACCESSIBLE CURB RAMP |
| ADJ | ADJUST |
| APPROX | APPROXIMATE |
| BIT | BITUMINOUS |
| BS | BOTTOM OF SLOPE |
| BWLL | BROKEN WHITE LANE LINE |
| CONC | CONCRETE |
| DYCL | DOUBLE YELLOW CENTER LINE |
| EL | ELEVATION |
| ELEV | ELEVATION |
| EX | EXISTING |
| FDN | FOUNDATION |
| FFE | FIRST FLOOR ELEVATION |
| GRAN | GRANITE |
| GTD | GRADE TO DRAIN |
| LA | LANDSCAPE AREA |
| LOD | LIMIT OF DISTURBANCE |
| MAX | MAXIMUM |
| MIN | MINIMUM |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| PERF | PERFORATED |
| PROP | PROPOSED |
| REM | REMOVE |
| RET | RETAIN |
| R&D | REMOVE AND DISPOSE |
| R&R | REMOVE AND RESET |
| SWEL | SOLID WHITE EDGE LINE |
| SWLL | SOLID WHITE LANE LINE |
| TS | TOP OF SLOPE |
| TYP | TYPICAL |

### Utility

| | |
|---|---|
| CB | CATCH BASIN |
| CMP | CORRUGATED METAL PIPE |
| CO | CLEANOUT |
| DCB | DOUBLE CATCH BASIN |
| DMH | DRAIN MANHOLE |
| CIP | CAST IRON PIPE |
| COND | CONDUIT |
| DIP | DUCTILE IRON PIPE |
| FES | FLARED END SECTION |
| FM | FORCE MAIN |
| F&G | FRAME AND GRATE |
| F&C | FRAME AND COVER |
| GI | GUTTER INLET |
| GT | GREASE TRAP |
| HDPE | HIGH DENSITY POLYETHYLENE PIPE |
| HH | HANDHOLE |
| HW | HEADWALL |
| HYD | HYDRANT |
| INV | INVERT ELEVATION |
| I= | INVERT ELEVATION |
| LP | LIGHT POLE |
| MES | METAL END SECTION |
| PIV | POST INDICATOR VALVE |
| PWW | PAVED WATER WAY |
| PVC | POLYVINYLCHLORIDE PIPE |
| RCP | REINFORCED CONCRETE PIPE |
| R= | RIM ELEVATION |
| RIM= | RIM ELEVATION |
| SMH | SEWER MANHOLE |
| TSV | TAPPING SLEEVE, VALVE AND BOX |
| UG | UNDERGROUND |
| UP | UTILITY POLE |

## Notes

### General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

### Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. STORM DRAINAGE PIPES SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) PIPE
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

### Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE PORTLAND CEMENT CONCRETE (PCC) WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

### Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

### Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, 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. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

### Existing Conditions Information

1. BASE PLAN: THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON FILES AND PLANS OF RECORD PROVIDED BY FM GLOBAL.
   A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: CAPUTO AND WICK LTD..
   B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: INSTRUMENT SURVEY BY CAPUTO AND WICK.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD 88.
3. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM VHB, INC.

### Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

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**FM Global**
**Farmhouse Access Road**
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West Glocester, Rhode Island

| No. | Revision | Date | Appvd. |
|---|---|---|---|

Designed by SAP | Checked by RLC

Issued for: Permits | Date: October 27, 2023

Not Approved for Construction

Drawing Title: **Legend and General Notes**

RI Environmental Management
MAR 2 5 2024
Office of Water Resources

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Drawing Number: **C1.01**

Sheet 1 of 5

Project Number 73281.00

Saved Monday, October 23, 2023 7:20:12 AM ACUNHA Plotted Thursday, March 21, 2024 9:50:22 AM Ashley Cunha

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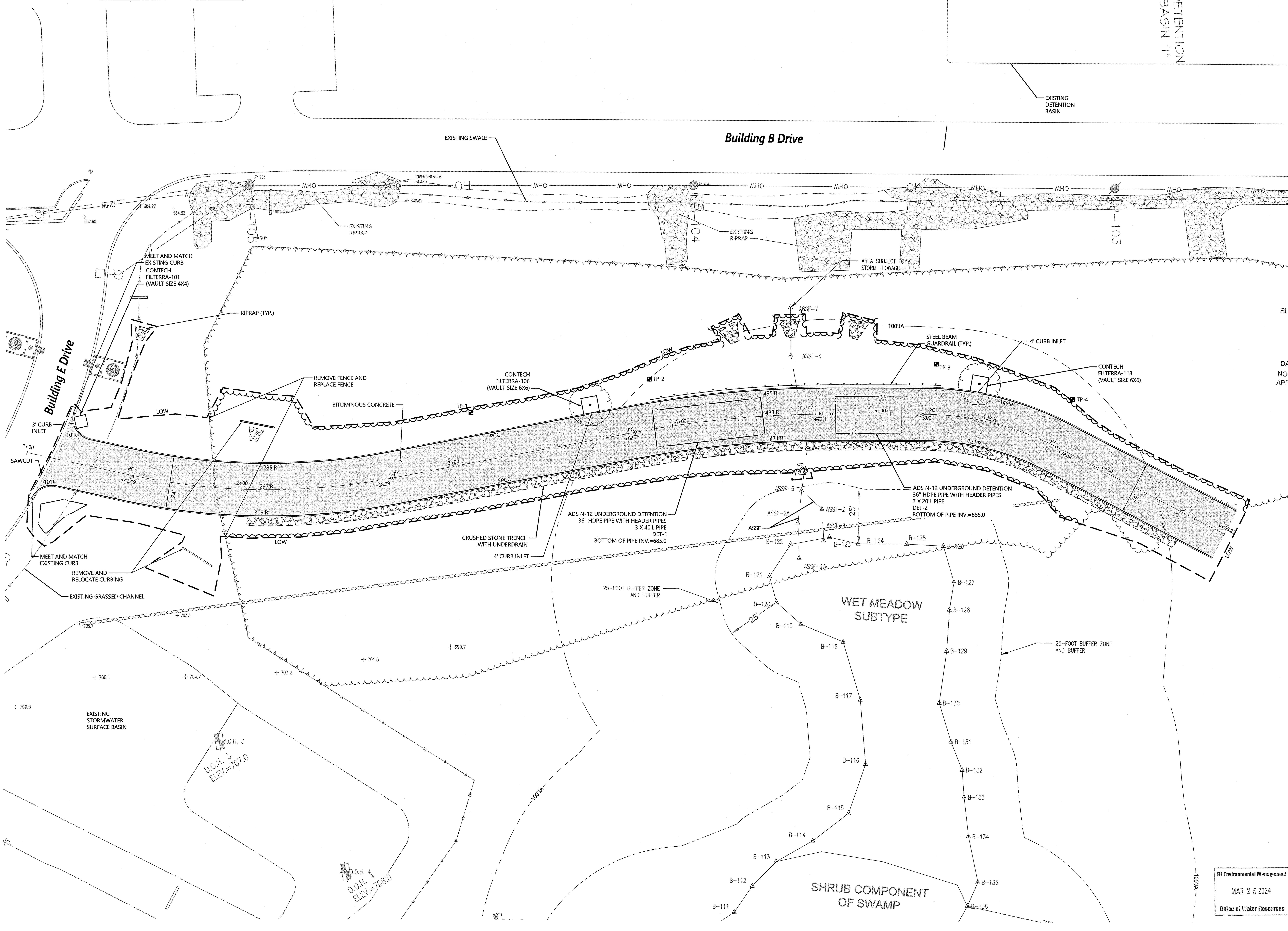
## Test Pit Summary

| Test Pit | Existing Grade Elevation | Depth to SHWT | SHWT Elevation |
|---|---|---|---|
| TP-1 | 689.2 | 22" | 687.4 |
| TP-2 | 685.8 | 23" | 683.9 |
| TP-3 | 686.0 | 28" | 683.7 |
| TP-4 | 689.1 | 25" | 687.0 |

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Drawing Title: Layout and Materials Plan

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No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Drawing Number: C2.01

Sheet 2 of 5

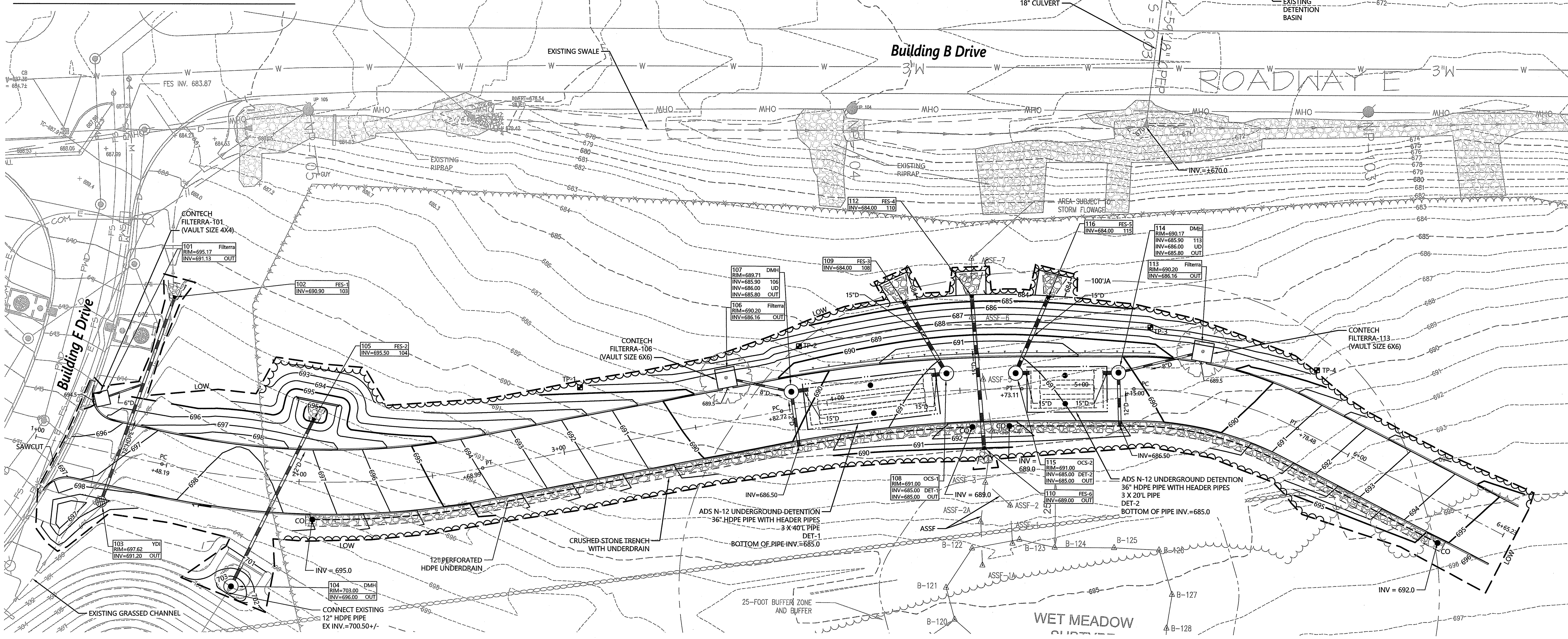
Project Number: 73281.00

Saved Thursday, March 21, 2024 9:23:26 AM ACUNHA Plotted Friday, March 22, 2024 8:59:27 AM Stephen Pereira

\\vhb\gbl\proj\providence\73281.00\cad\ld\Planset\73281.00 GD.dwg

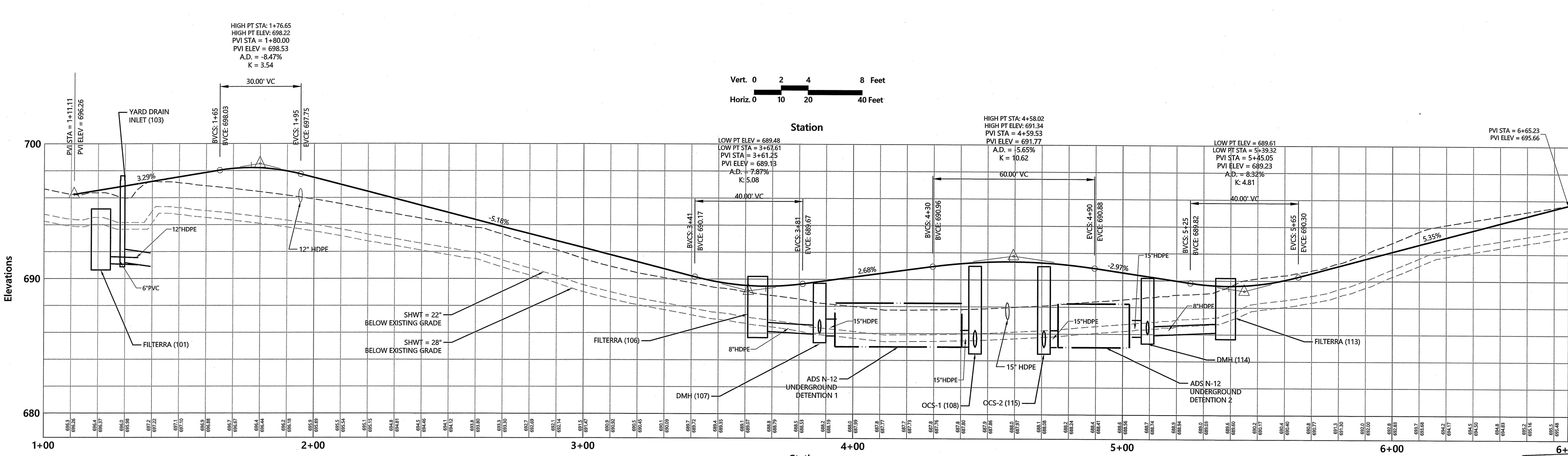
## Test Pit Summary

| Test Pit | Existing Grade Elevation | Depth to SHWT | SHWT Elevation |
|---|---|---|---|
| TP-1 | 689.2 | 22" | 687.4 |
| TP-2 | 685.8 | 23" | 683.9 |
| TP-3 | 686.0 | 28" | 683.7 |
| TP-4 | 689.1 | 25" | 687.0 |




RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY - 2 2024 FILE #: 23-0235
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

0 10 20 40 Feet




Alignment - Centerline


vhb.com
1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100


# FM Global Farmhouse Access Road

743 Reynolds Road
West Glocester, Rhode Island

| No. | Revision | Date | Appvd. |
|---|---|---|---|
| 1 | Per RIDEM Comments | 03/25/2024 | |

Designed by SAP | Checked by RLC

Issued for Permits | Date October 27, 2023

Not Approved for Construction

Drawing Title

## Grading and Drainage Plan and Profile

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Drawing Number **C3.01**

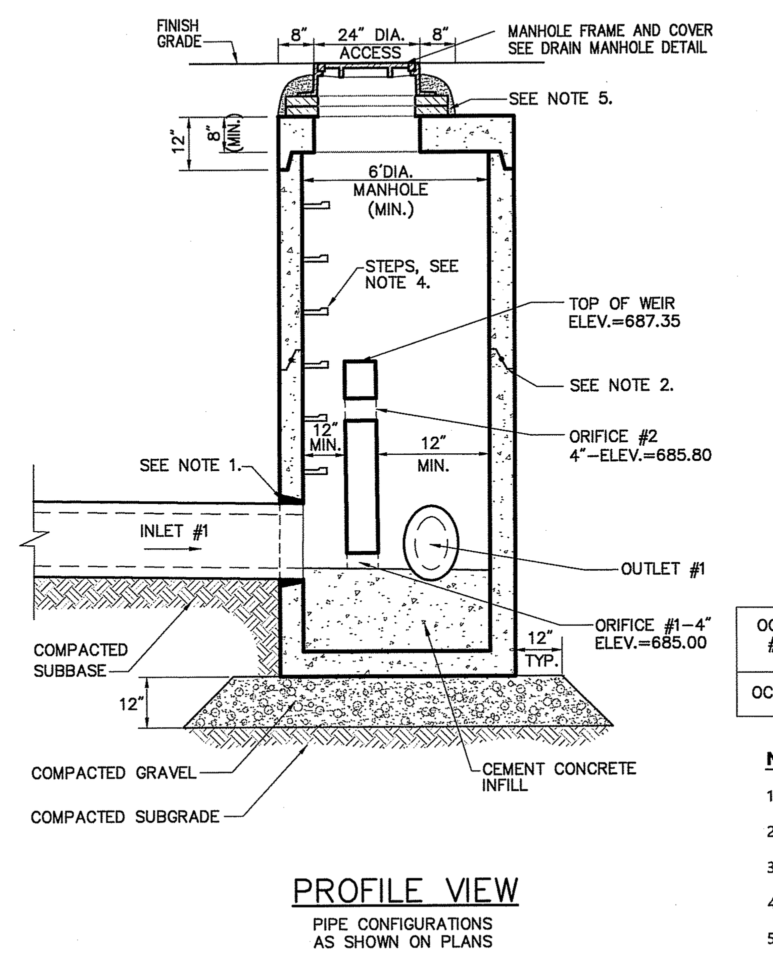
Sheet 3 of 5

Project Number 73281.00

RI Environmental Management
MAR 2 5 2024
Office of Water Resources

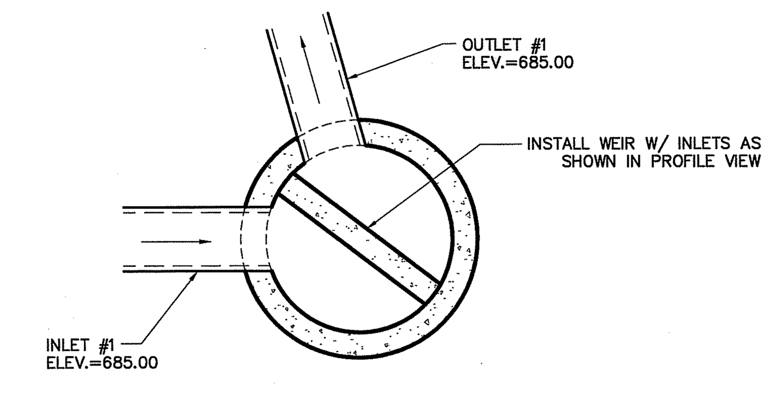
Saved Friday, March 22, 2024 8:47:27 AM SPEREIRA Plotted Friday, March 22, 2024 9:00:06 AM Stephen Pereira

\\vhb.com\gbl\proj\Providence\73281.00\cad\ld\Planset\73281.00 DT.dwg




PROFILE VIEW

PIPE CONFIGURATIONS AS SHOWN ON PLANS




PLAN VIEW

PIPE CONFIGURATIONS AS SHOWN ON PLANS

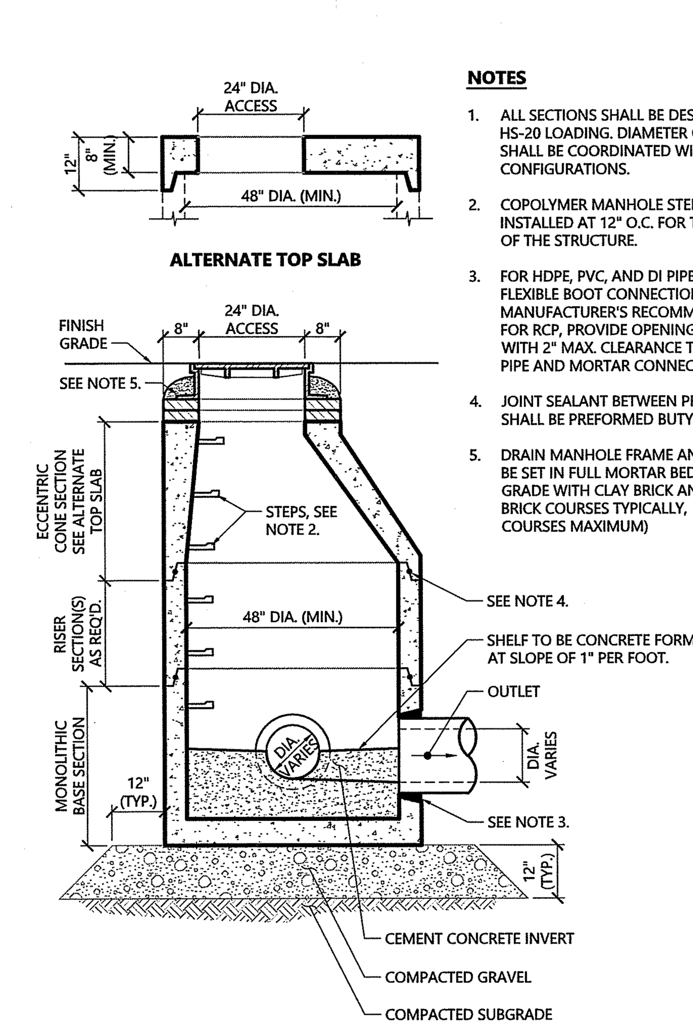
| OCS # | RIM ELEV | INLET ELEV | INLET DIA | TOP OF WEIR ELEV | ORIFICE #1 ELEV | ORIFICE #1 DIA | ORIFICE #2 ELEV | ORIFICE #2 DIA | OUTLET ELEV | OUTLET DIA |
|---|---|---|---|---|---|---|---|---|---|---|
| OCS–1 | 691.00 | 685.00 | 15" | 687.35 | 685.00 | 4" | 685.80 | 4" | 685.00 | 15" |

**NOTES**

1. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
2. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
3. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
4. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

## Outlet Control Structure OCS-1

N.T.S. Source: VHB



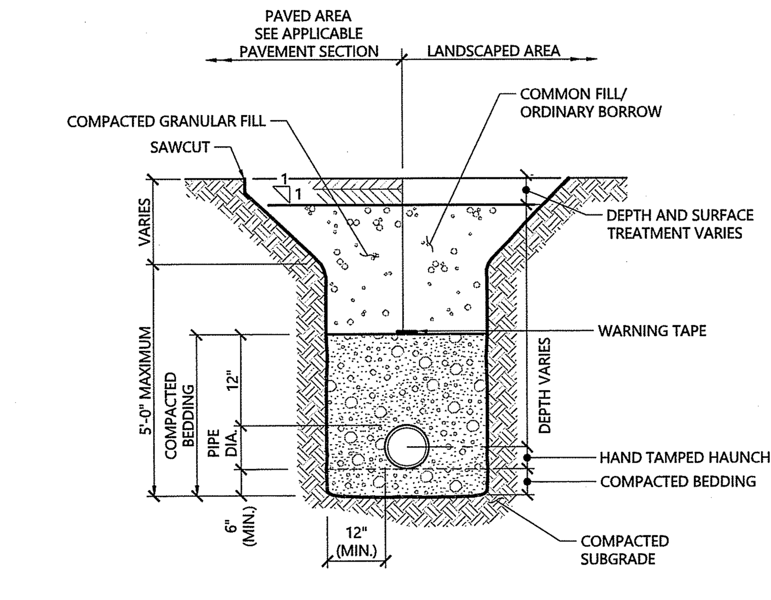

**NOTES**

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. FOR HDPE, PVC, AND DI PIPE, PROVIDE FLEXIBLE BOOT CONNECTION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. FOR RCP, PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE AND MORTAR CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

## Drain Manhole (DMH)

11/19

N.T.S. Source: VHB LD_115




**NOTES**

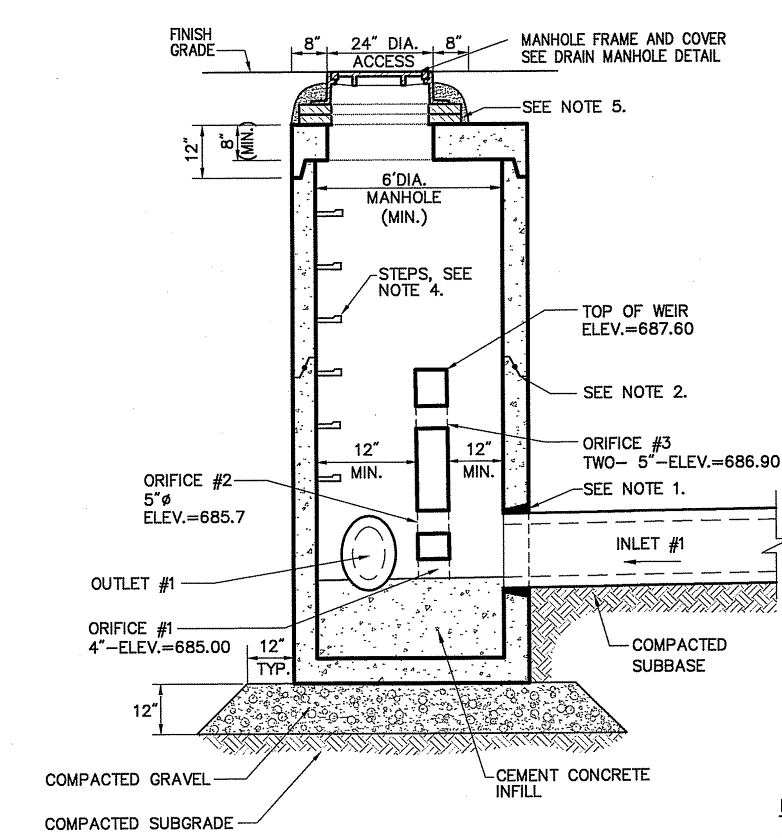
1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
3. COMPACTED GRANULAR FILL MAY CONSIST OF GRAVEL, CRUSHED STONE, SAND, OR OTHER MATERIAL AS APPROVED BY ENGINEER.

## Utility Trench

11/19

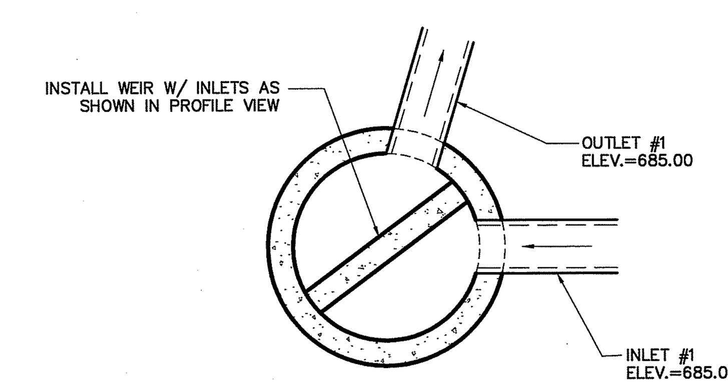
N.T.S. Source: VHB LD_300

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY - 2 2024 FILE #: 23-0235
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE




PROFILE VIEW

PIPE CONFIGURATIONS AS SHOWN ON PLANS




PLAN VIEW

PIPE CONFIGURATIONS AS SHOWN ON PLANS

| OCS # | RIM ELEV | INLET ELEV | INLET DIA | TOP OF WEIR ELEV | OUTLET ELEV | OUTLET DIA |
|---|---|---|---|---|---|---|
| OCS–2 | 691.00 | 685.00 | 15" | 687.60 | 685.00 | 15" |

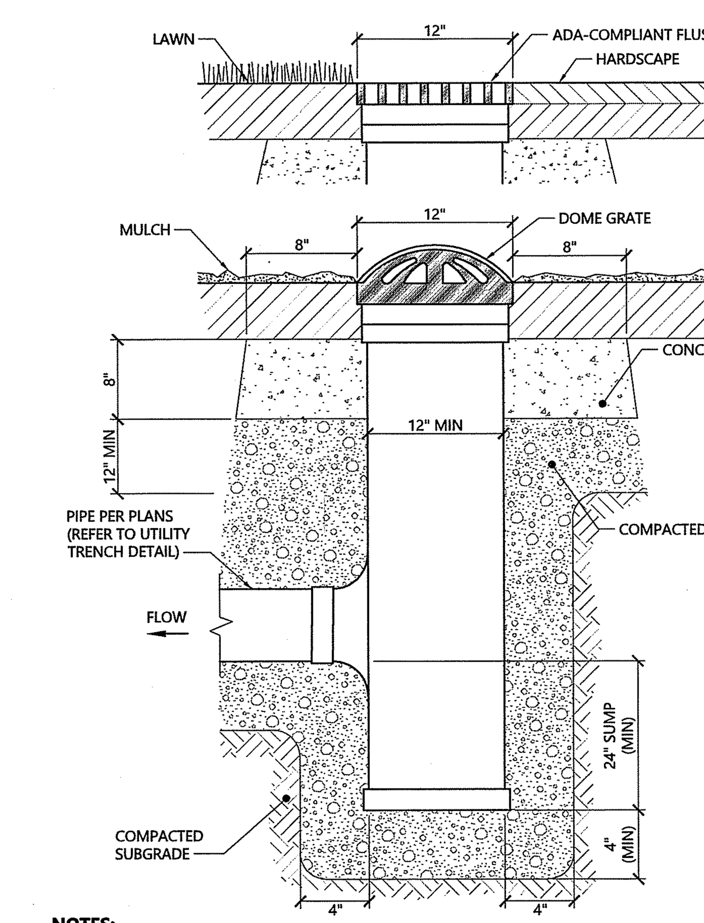
| ORIFICE #1 ELEV | ORIFICE #1 DIA | ORIFICE #2 ELEV | ORIFICE #2 DIA | ORIFICE #3 ELEV | ORIFICE #3 DIA |
|---|---|---|---|---|---|
| 685.00 | 4" | 685.70 | 5" | 686.90 | 5"(2) |

**NOTES**

1. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
2. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
3. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
4. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

## Outlet Control Structure OCS-2

N.T.S. Source: VHB



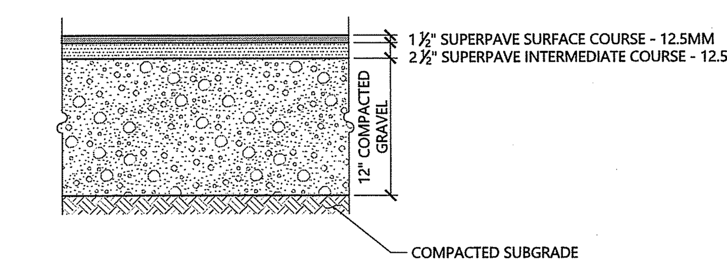

**NOTES:**

1. AREA DRAINS SHALL BE NYLOPLAST 12" DIAMETER DRAIN BASIN, OR APPROVED EQUAL.
2. GRATES SHALL BE NYLOPLAST 12" PEDESTRIAN MODEL 1299CGP OR 12" DOME GRATE MODEL 1299CGD (OR APPROVED EQUAL).

## Yard Drain (YD)

12/19

N.T.S. Source: VHB REV LD_193




HEAVY DUTY FLEXIBLE PAVEMENT

**NOTES**

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

## Bituminous Concrete Pavement Sections

7/22

N.T.S. Source: VHB REV LD_430

# FM Global
# Farmhouse Access Road
### 743 Reynolds Road
### West Glocester, Rhode Island

| No. | Revision | Date | Appvd. |
|---|---|---|---|
| 1 | Per RIDEM Comments | 03/25/2024 | |

Designed by SAP Checked by RLC

Issued for: **Permits** Date: **October 27, 2023**

**Not Approved for Construction**

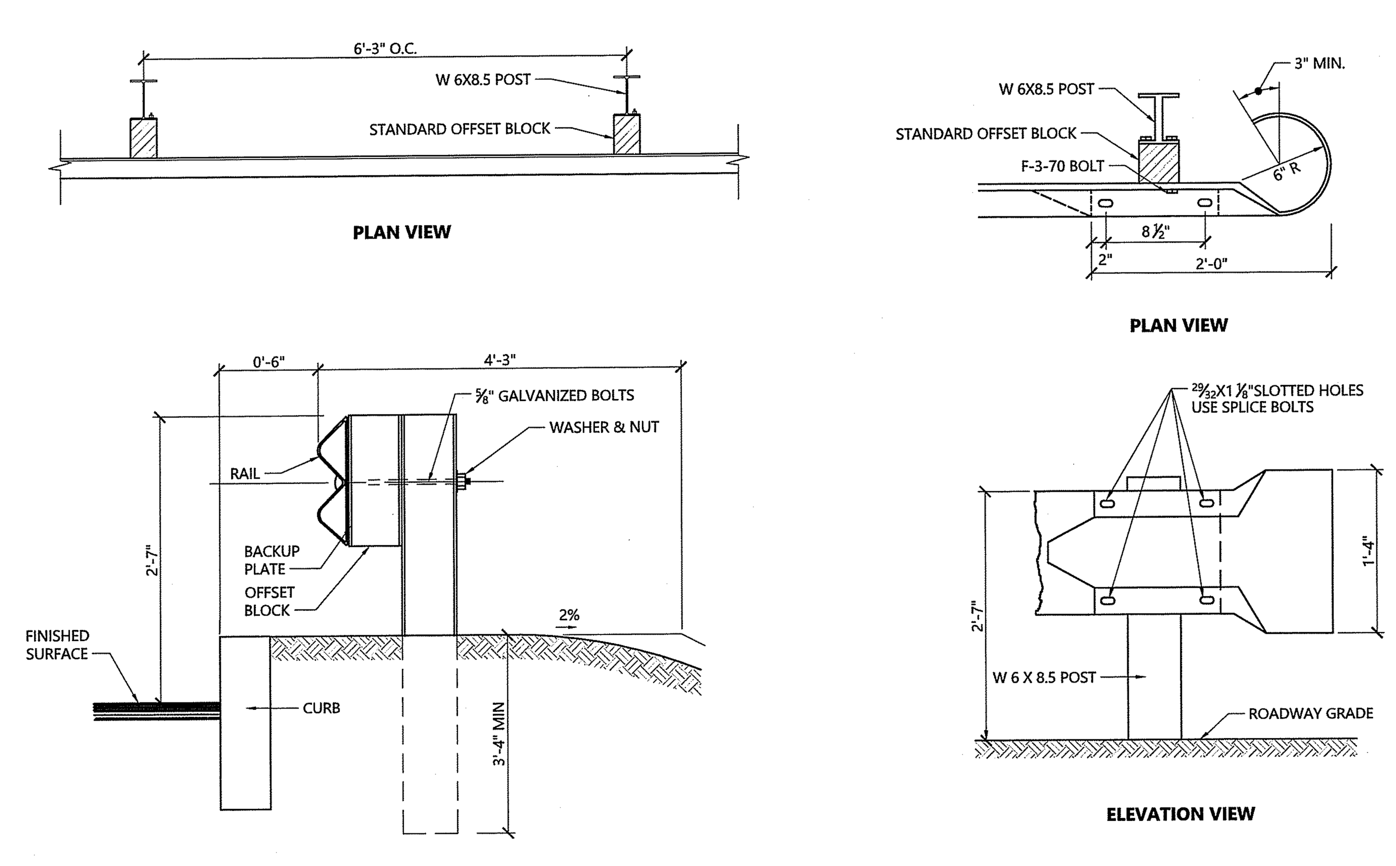
Drawing Title
**Site Details 1**

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Drawing Number **C4.01**

Sheet 4 of 5

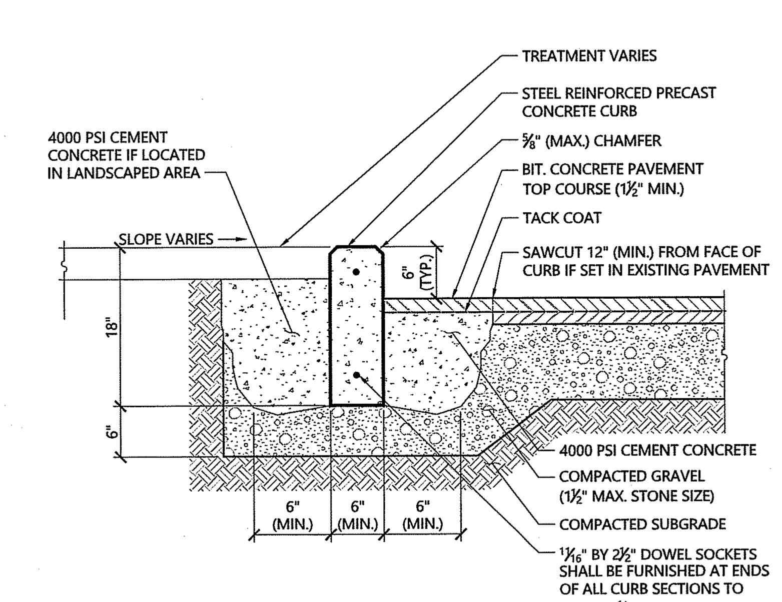
Project Number 73281.00




## Steel Beam Guardrail with Steel Post

10/20

N.T.S. Source: VHB LD_456



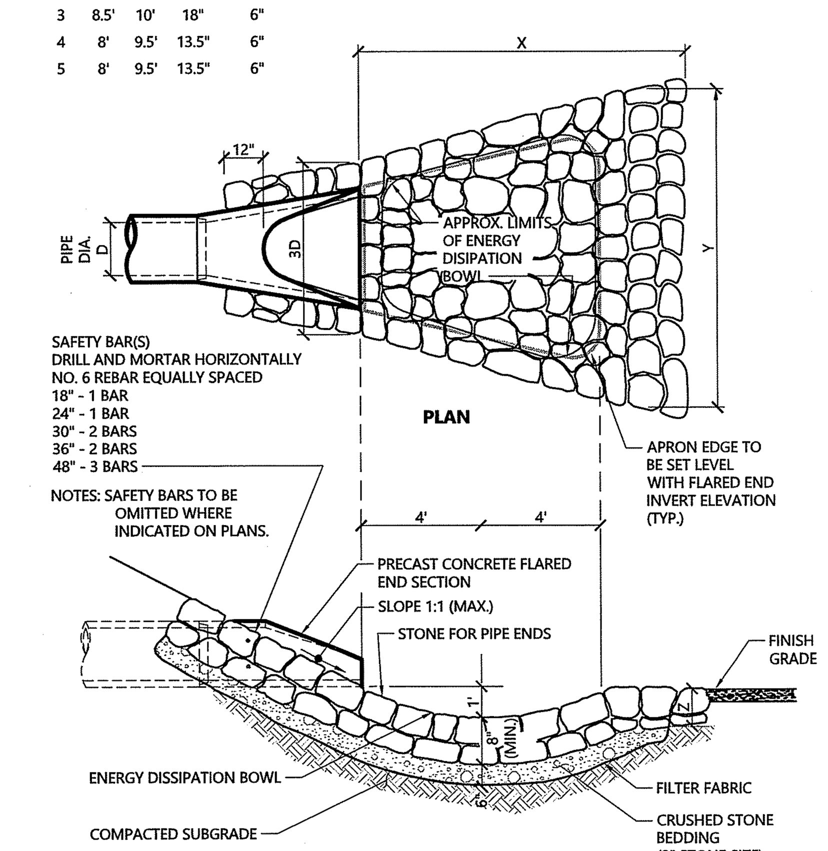

## Precast Concrete Curb (PCC)

3/20

N.T.S. Source: VHB LD_404

**RIPRAP STONE**

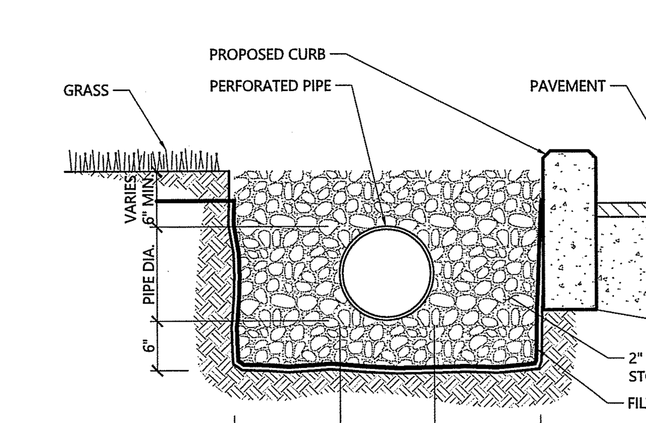
| FES NO. | X | Y | Z | STONE DIA. ($D_{50}$) |
|---|---|---|---|---|
| 1 | 6' | 7' | 13.5" | 6" |
| 2 | 6' | 7' | 13.5" | 6" |
| 3 | 8.5' | 10' | 18" | 6" |
| 4 | 8' | 9.5' | 13.5" | 6" |
| 5 | 8' | 9.5' | 13.5" | 6" |




## Flared End Section (FES) with Stone Protection

3/19

N.T.S. Source: VHB REV LD_134




RI Environmental Management
MAR 2 5 2024
Office of Water Resources

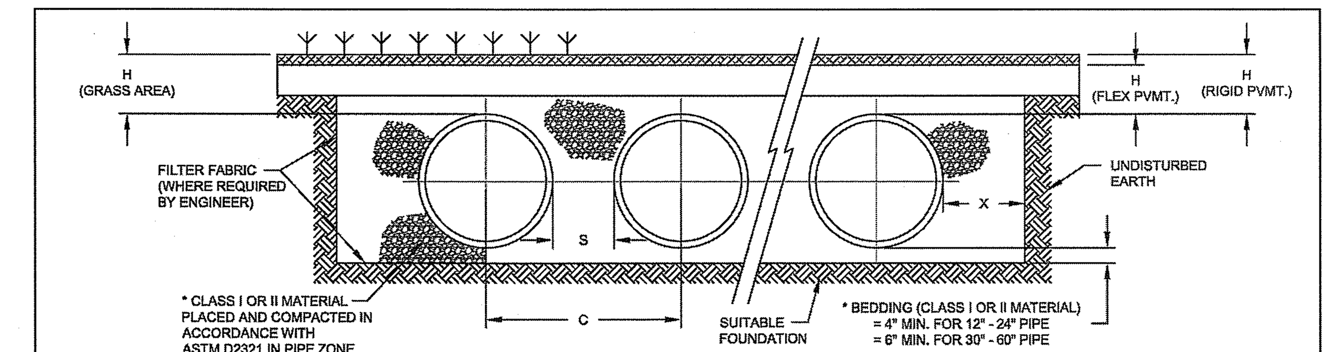
## Crushed Stone Trench with Underdrain

1/16

N.T.S. Source: VHB REV LD_184


vhb.com
1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100

\\vhb.com\gbl\proj\Providence\73281.00\cad\ld\Planset\73281.00 DT.dwg




NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

| NOMINAL DIAMETER | NOMINAL O.D. | TYPICAL SPACING "S" | NOMINAL SPACING "C" | TYPICAL SIDE WALL "X" | H (NON-TRAFFIC) | H (TRAFFIC) |
|---|---|---|---|---|---|---|
| 12" (300mm) | 14.5" (368mm) | 11" (279mm) | 25.5" (648mm) | 8" (203mm) | 12" (305mm) | 12" (305mm) |
| 15" (375mm) | 18" (457mm) | 11.5" (292mm) | 29.0" (737mm) | 8" (203mm) | 12" (305mm) | 12" (305mm) |
| 18" (450mm) | 21" (533mm) | 17.0" (432mm) | 38.0" (965mm) | 9" (229mm) | 12" (305mm) | 12" (305mm) |
| 24" (600mm) | 28" (711mm) | 14.0" (356mm) | 41.5" (1054mm) | 10" (254mm) | 12" (305mm) | 12" (305mm) |
| 30" (750mm) | 36" (914mm) | 18" (457mm) | 53.0" (1346mm) | 18" (457mm) | 12" (305mm) | 12" (305mm) |
| 36" (900mm) | 42" (1067mm) | 22" (559mm) | 63.0" (1600mm) | 18" (457mm) | 12" (305mm) | 12" (305mm) |
| 42" (1050mm) | 48" (1219mm) | 24" (610mm) | 72.0" (1829mm) | 18" (457mm) | 12" (305mm) | 24" (610mm) |
| 48" (1200mm) | 54" (1372mm) | 25" (635mm) | 78.5" (1994mm) | 18" (457mm) | 12" (305mm) | 24" (610mm) |
| 60" (1500mm) | 67" (1702mm) | 24" (610mm) | 90" (2286mm) | 18" (457mm) | 12" (305mm) | 24" (610mm) |

* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS.

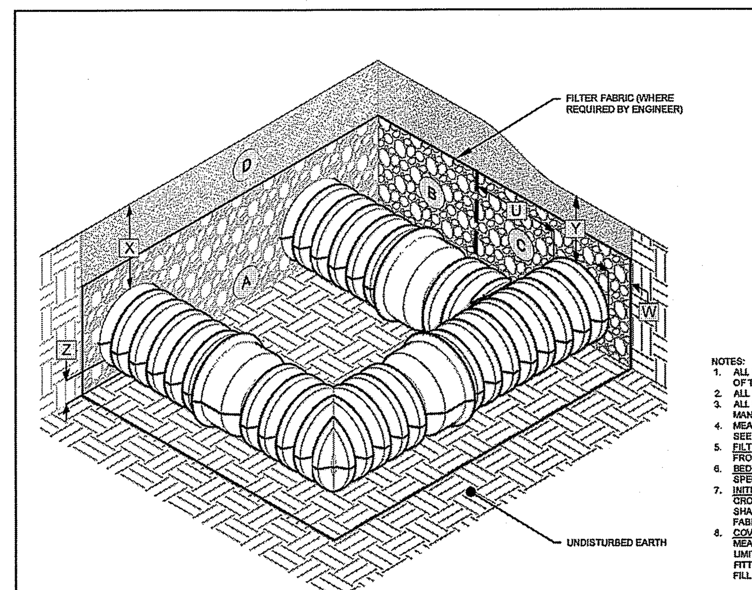
| REV. | DESCRIPTION | BY | MM/DD/YY | CHK'D |
|---|---|---|---|---|
| 4 | GENERAL UPDATES AND RENAMED | TJR | 02/19/16 | |



RETENTION–DETENTION SYSTEM (CROSS–SECTION)
DRAWING NUMBER: STD–702
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
AWM 07.25.06 NTS OF

## Subsurface Detention Basin Cross Section

N.T.S. Source: ADS




| | | NOMINAL DIAMETER | | |
|---|---|---|---|---|
| | | 12-24" (300-600 mm) | 30-36" (750-900 mm) | 42-60" (1050-1500 mm) |
| U | MIN. FITTINGS EMBEDMENT LIMIT | 12" (305 mm) | 12" (305 mm) | 12" (305 mm) |
| W | TYPICAL SIDE WALL | 8-10" (203-255 mm)* | 18" (457 mm) | 18" (457 mm) |
| X | MIN. PIPE COVER DEPTH UNDER NON-TRAFFIC | 12" (305 mm) | 12" (305 mm) | 12" (305 mm) |
| X | MIN. PIPE COVER DEPTH UNDER TRAFFIC | 12" (305 mm) | 12" (305 mm) | 12-24" (305-610 mm)** |
| X | MAX. PIPE COVER DEPTH | REFERENCE TECH NOTE(S) 2.01, 2.02, 2.04, OR 2.05 | | |
| Y | MIN. FITTINGS COVER DEPTH UNDER NON-TRAFFIC | 12" (305 mm) | 12" (305 mm) | 12" (305 mm) |
| Y | MIN. FITTINGS COVER DEPTH UNDER TRAFFIC | 12" (305 mm) | 12" (305 mm) | 24" (610 mm) |
| Y | MAX. FITTINGS COVER DEPTH*** | 8' (2.4 m) | 8' (2.4 m) | 8' (2.4 m) |
| Z | BEDDING DEPTH | 4" (102 mm) | 6" (152 mm) | 6" (152 mm) |

* TYPICAL SIDE WALLS FOR 18" AND 24" PIPE SYSTEMS ARE 9" (230 mm) AND 10" (255 mm), RESPECTIVELY
** 24" MINIMUM PIPE COVER DEPTH UNDER TRAFFIC IS REQUIRED FOR 60" SYSTEMS ONLY
*** MAY INCREASE BASED ON SPECIFIC FITTINGS CONFIGURATION. CONTACT AN ADS REPRESENTATIVE FOR ADDITIONAL DETAILS

NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIALS ARE PER ASTM D2321" STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL REFERENCES TO AASHTO MATERIAL SPECIFICATIONS ARE PER AASHTO M43 AND M145 GRADATIONS, LATEST EDITION.
3. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
4. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED, SEE ASTM D2321.
5. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER.
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" (152 mm) ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. IF DIFFERENT FILL IS USED IN ZONES B AND C, FILTER FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER PER NOTE 5.
8. COVER: ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT IS LIMITED TO 8 FT (2.4 m) OVER FITTINGS FOR TYPICAL SYSTEM INSTALLATIONS. PLEASE NOTE THESE LIMITS APPLY TO ALL FITTINGS WITHIN SYSTEMS LIMITS, AND NOT JUST MANIFOLD FITTINGS. CONTACT AN ADS REPRESENTATIVE WHEN MAXIMUM FILL HEIGHTS EXCEED 8 FT (2.4 m) FOR INSTALLATION CONSIDERATIONS.

### ACCEPTABLE FILL MATERIALS

| MATERIAL LOCATION | | ASTM MATERIAL CLASSIFICATION | AASHTO MATERIAL CLASSIFICATION | COMPACTION / DENSITY REQUIRED |
|---|---|---|---|---|
| D | FINAL FILL: FINAL FILL LIMITS START FROM THE TOP OF THE INITIAL BACKFILL LAYER AND END AT THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE. NOTE THAT PAVEMENT SUBBASE MAY BE INCLUDED IN THE FINAL FILL. | N/A[2] | N/A[2] | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE SPECIFIC MATERIAL AND PREPARATION REQUIREMENTS. |
| C | FITTINGS EMBEDMENT: FILL SURROUNDING THE SYSTEM FITTINGS FROM THE INVERT (BOTTOM) UP TO NO LESS THAN 6" ABOVE THE CROWN (TOP) OF THE FITTINGS | CLASS I OR II[1] | AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67 | COMPACT IN MAXIMUM 8" (203 mm) LOOSE LIFTS TO A MINIMUM OF 95% OF MAXIMUM STANDARD PROCTOR DENSITY |
| B | PIPE EMBEDMENT: FILL SURROUNDING THE SYSTEM PIPE FROM THE INVERT (BOTTOM) UP TO NO LESS THAN 6" ABOVE THE CROWN (TOP) OF THE PIPE | CLASS I OR II | AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67 | COMPACT PER THE LATEST EDITION OF ASTM D2321 SPECIFICATIONS |
| A | BEDDING: FILL BELOW THE PIPE FROM THE SUBGRADE UP TO THE INVERT (BOTTOM) OF THE PIPE | CLASS I OR II[1] | AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67 | COMPACT TO 90% STANDARD PROCTOR DENSITY |

PLEASE NOTE:
1. 60" (1500 mm) PIPE SYSTEMS ARE LIMITED TO ASTM D2321 CLASS I (AASHTO M43 A5 OR A56) BACKFILL MATERIALS ONLY.
2. MATERIAL SPECIFICATIONS INCLUDE ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.

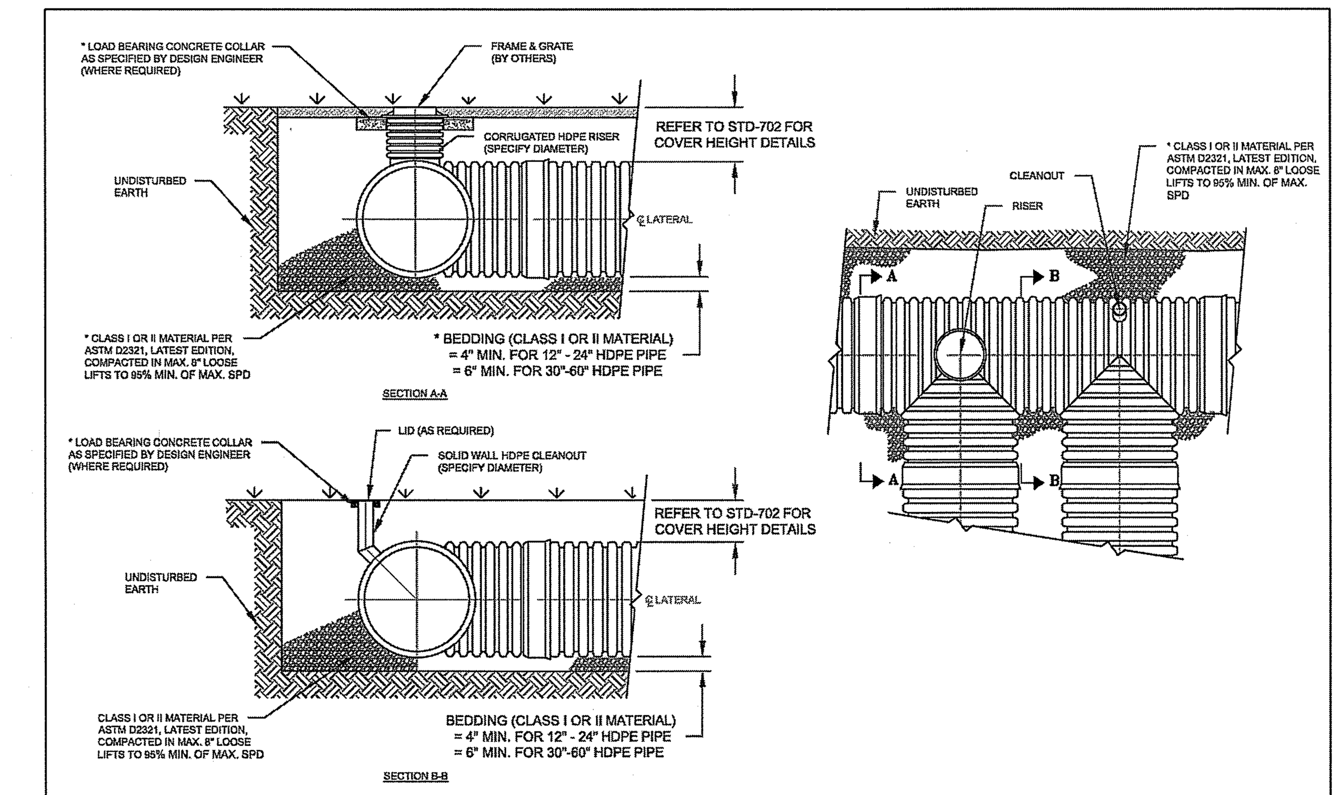
| REV. | DESCRIPTION | BY | MM/DD/YY | CHKD |
|---|---|---|---|---|



RETENTION–DETENTION (SYSTEM INSTALLATION)
DRAWING NUMBER: STD-705
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
GGC 06/08/21 SDL NTS 1 OF 1

## Subsurface Detention Basin System Installation

N.T.S. Source: ADS




* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS

* LOAD BEARING CONCRETE COLLAR SHALL BE CONSTRUCTED IN TRAFFIC AREAS SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER.

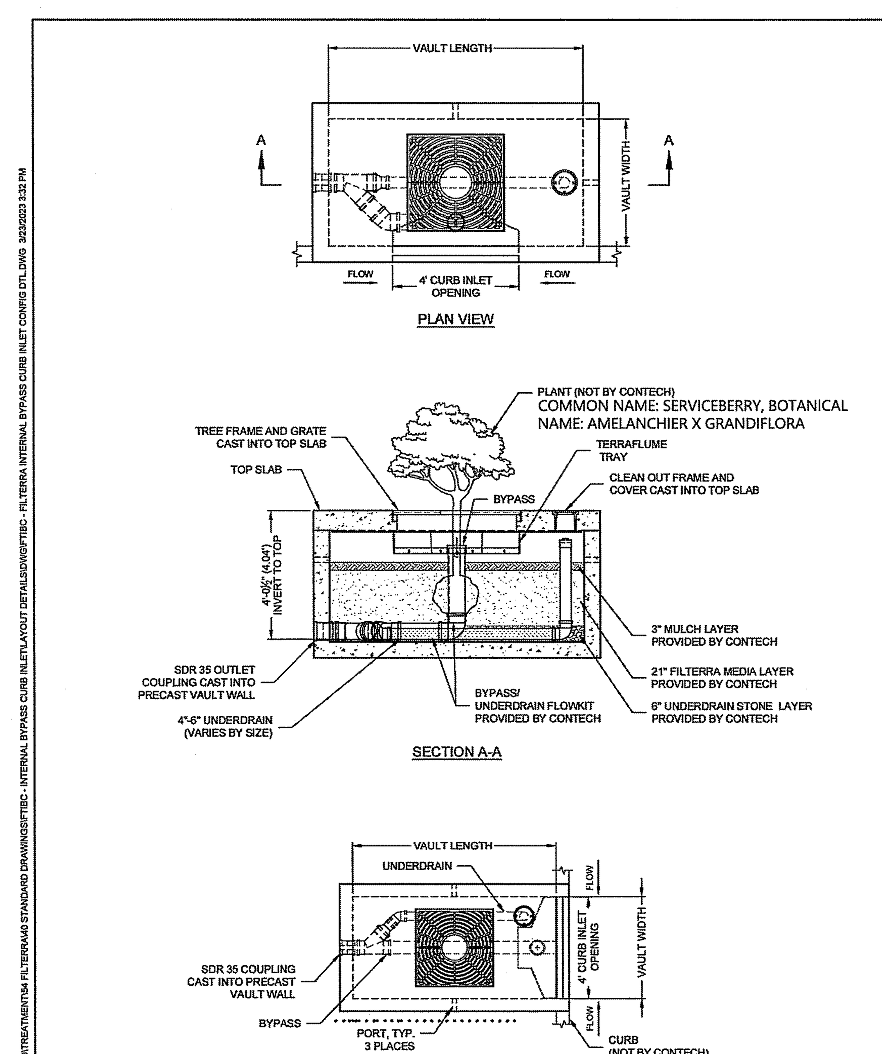
| REV. | DESCRIPTION | BY | MM/DD/YY | CHK'D |
|---|---|---|---|---|
| 4 | GENERAL UPDATES AND RENAMED | TJR | 02/19/16 | |

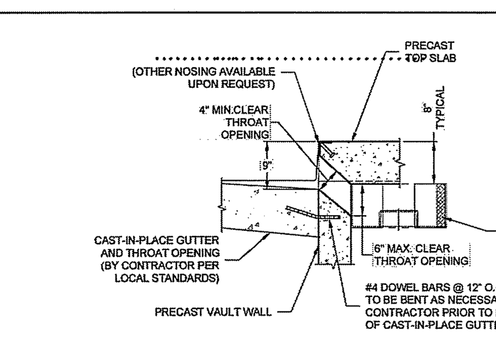


RETENTION–DETENTION SYSTEM (RISER AND CLEANOUT)
DRAWING NUMBER: STD–703
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
NTS OF

## Subsurface Detention Basin Riser and Cleanout

N.T.S. Source: ADS




STANDARD CURB INLET WITH TERRAFLUME
NOT TO SCALE

RI Environmental Management
MAR 25 2024
Office of Water Resources

FTIBC CONFIGURATION

| | VAULT SIZE (L x W) | MEDIA AREA (SF) | LONG SIDE INLET DESIG. / PART NO. | SHORT SIDE INLET DESIG. / PART NO. | AVAILABILITY | MAX. OUTLET/ BYPASS PIPE DIA. | MAX. BYPASS FLOW (CFS) | UNDER-DRAIN PIPE DIA. (PERF) | TREE GRATE QTY. & SIZE |
|---|---|---|---|---|---|---|---|---|---|
| * | 4 x 4 | 16 | FTIBC0404 | FTIBC0404 | ALL | 6" SDR 35 | 1.42 | 4" SDR 35 | (1) 3' x 3' |
| | 6 x 4 | 24 | FTIBC0604 | FTIBC0406 | ALL | 8" SDR 35 | 1.89 | 4" SDR 35 | (1) 3' x 3' |
| | 8 x 4 | 32 | FTIBC0804 | FTIBC0408 | ALL (EXCEPT DE, MD, NJ, PA, VA, WV) | 8" SDR 35 | 1.89 | 4" SDR 35 | (1) 3' x 3' |
| | 7.83 x 4.5 | 35 | FTIBC078045 | FTIBC045078 | DE, MD, NJ, PA, VA, WV ONLY | 8" SDR 35 | 1.89 | 4" SDR 35 | (1) 3' x 3' |
| * | 6 x 6 | 36 | FTIBC0606 | FTIBC0606 | ALL (EXCEPT CA, TX) | 8" SDR 35 | 1.89 | 4" SDR 35 | (1) 3' x 3' |
| | 8 x 6 | 48 | FTIBC0806 | FTIBC0608 | ALL | 10" SDR 35 | 2.37 | 4" SDR 35 | (1) 4' x 4' |
| | 10 x 6 | 60 | FTIBC1006 | FTIBC0610 | ALL (EXCEPT CA, TX) | 10" SDR 35 | 2.37 | 6" SDR 35 | (1) 4' x 4' |
| | 8 x 8 | 64 | FTIBC0808 | FTIBC0808 | CA, TX ONLY | 10" SDR 35 | 2.37 | 6" SDR 35 | (1) 4' x 4' |
| | 12 x 6 | 72 | FTIBC1206 | FTIBC0612 | ALL (EXCEPT TX) | 10" SDR 35 | 2.37 | 6" SDR 35 | (2) 4' x 4' |
| | 10 x 8 | 80 | FTIBC1008 | FTIBC0810 | CA, TX ONLY | 10" SDR 35 | 2.37 | 6" SDR 35 | (1) 4' x 4' |
| | 13 x 7 | 91 | FTIBC1307 | FTIBC0713 | ALL (EXCEPT CA, TX) | 10" SDR 35 | 2.37 | 6" SDR 35 | (2) 4' x 4' |
| | 12 x 8 | 96 | FTIBC1208 | FTIBC0812 | CA,TX ONLY | 10" SDR 35 | 2.37 | 6" SDR 35 | (2) 4' x 4' |
| | 14 x 8 | 112 | FTIBC1408 | N/A | ALL | 10" SDR 35 | 2.37 | 6" SDR 35 | (2) 4' x 4' |

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING ON VAULT SIZE

filterra

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

FILTERRA INTERNAL BYPASS CURB (FTIBC) CONFIGURATION DETAIL

vhb.com

vhb

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY - 2 2024 FILE #: 23-0235
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

# FM Global Farmhouse Access Road

743 Reynolds Road
West Glocester, Rhode Island

| No. | Revision | Date | Appvd. |
|---|---|---|---|

Designed by SAP Checked by RLC

Issued for Permits Date October 27, 2023

Not Approved for Construction

Drawing Title
Site Details 2

Drawing Number
C4.02

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Sheet 5 of 5

Project Number 73281.00

Saved Thursday, March 21, 2024 9:29:26 AM ACUNHA Plotted Thursday, March 21, 2024 10:12:14 AM Ashley Cunha

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## General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 4 INCHES LOAM AND SEED.
4. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
5. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
6. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
7. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
8. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
9. STAGING AND STOCKPILE AREAS SHALL NOT BE LOCATED WITHIN ANY WETLAND AND ABUTTING RESOURCE AREA AND SHALL BE LOCATED WITHIN THE LOD.
10. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND INSTALLING THE FOLLOWING ITEMS ON SITE AND REDLINING THE PLAN FOR RECORD KEEPING PURPOSES AS REQUIRED BY THE RIPDES PERMIT:
    a. STOCKPILE AREAS. EROSION CONTROLS SHALL BE PLACED AT THE BASE OF ALL STOCKPILES
    b. DESIGNATED WASHOUT AND REFUELING AREAS.
11. THE FOLLOWING DISCHARGES ARE PROHIBITED AT THE CONSTRUCTION SITE:
    - CONTAMINATED GROUNDWATER, UNLESS AUTHORIZED BY SEPARATE THE RIDEM RIPDES PERMIT.
    - WASTEWATER FROM WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS.
    - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE. PROPER STORAGE AND SPILL PREVENTION PRACTICES MUST BE UTILIZED AT ALL CONSTRUCTION SITES.
    - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
    - TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE
12. ALL CHEMICALS AND/OR HAZARDOUS WASTE MATERIAL MUST BE STORED PROPERLY AND LEGALLY IN COVERED AREAS, WITH CONTAINMENT SYSTEMS CONSTRUCTED IN OR AROUND THE STORAGE AREAS. AREAS MUST BE DESIGNATED FOR MATERIALS DELIVERY AND STORAGE. ALL AREAS WHERE POTENTIAL SPILLS CAN OCCUR AND THEIR ACCOMPANYING DRAINAGE POINTS MUST BE DESCRIBED. THE OWNER AND OPERATOR MUST ESTABLISH SPILL PREVENTION AND CONTROL MEASURES TO REDUCE THE CHANCE OF SPILLS, STOP THE SOURCE OF SPILLS, CONTAIN AND CLEAN-UP SPILLS, AND DISPOSE OF MATERIALS CONTAMINATED BY SPILLS. THE OPERATOR MUST ESTABLISH AND MAKE HIGHLY VISIBLE LOCATION(S) FOR THE STORAGE OF SPILL PREVENTION AND CONTROL EQUIPMENT AND PROVIDE TRAINING FOR PERSONNEL RESPONSIBLE FOR SPILL PREVENTION AND CONTROL ON THE CONSTRUCTION SITE.

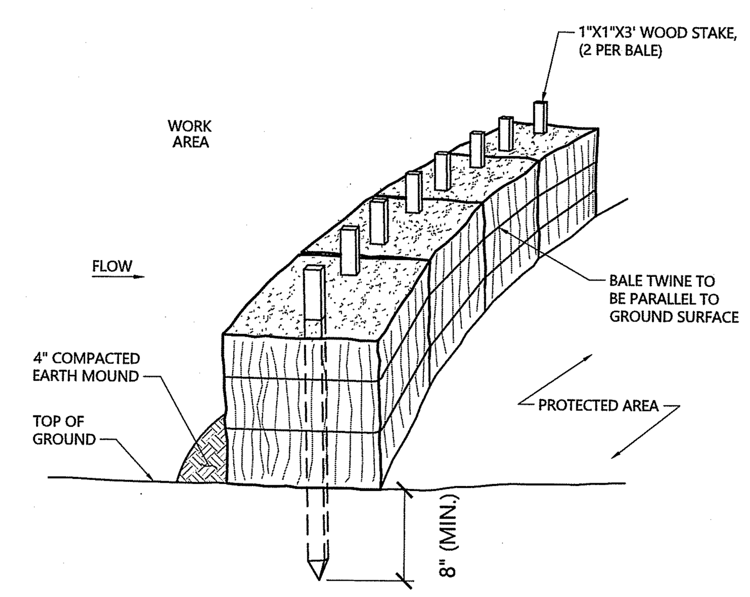
## Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, 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. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES DAILY, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
6. A CROSS SLOPE SHALL BE PLACED ON THE STABILIZED CONSTRUCTION EXIT TO DIRECT RUNOFF TO AN ONSITE SETTLING AREA. IF DEEMED NECESSARY AFTER CONSTRUCTION BEGINS, A WASH PAD MAY BE INCLUDED TO WASH OFF VEHICLE WHEELS BEFORE LEAVING THE PROJECT SITE.
7. TEMPORARY SEDIMENT BASINS WILL BE DESIGNED EITHER AS EXCAVATIONS OR BERMED STORMWATER DETENTION STRUCTURES THAT WILL RETAIN RUNOFF FOR A SUFFICIENT PERIOD OF TIME TO ALLOW SUSPENDED SOIL PARTICLES TO SETTLE OUT PRIOR TO DISCHARGE. BASINS WILL BE LOCATED AS DETERMINED BY THE CONTRACTOR BASED ON CONSTRUCTION NEEDS. POINT OF DISCHARGE FROM SEDIMENT BASINS WILL BE STABILIZED TO MINIMIZE EROSION.
8. VEGETATIVE SLOPE STABILIZATION WILL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. VEGETATIVE SLOPE STABILIZATION WILL BE USED TO MINIMIZE EROSION ON SLOPES OF 3:1 OR STEEPER. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED BY HYDRO-SEEDING OR SODDING. A SUITABLE TOPSOIL, GOOD SEEDBED PREPARATION, AND ADEQUATE LIME, FERTILIZER AND WATER WILL BE PROVIDED FOR EFFECTIVE ESTABLISHMENT OF THESE VEGETATIVE STABILIZATION METHODS. MULCH WILL ALSO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER.
9. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATION OR OTHER EARTH DISTURBANCE ACTIVITIES ARE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT BE RESUMED FOR A PERIOD EXCEEDING FOURTEEN (14) CALENDAR DAYS. STABILIZATION MUST BE COMPLETED USING VEGETATIVE STABILIZATION MEASURES WHERE POSSIBLE.
10. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15TH SHALL BE SEEDED BY THAT DATE. ANY SUCH AREAS WHICH DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15TH MUST BE STABILIZED THROUGH THE USE OF NON-VEGETATIVE EROSION CONTROL MEASURES. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15TH TO APRIL 15TH CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THE DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE STABILIZED WITHIN FIVE (5) WORKING DAYS.
11. THE SOIL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) CONTAINED ON THE SITE DRAWINGS ARE THE MINIMUM REQUIRED BY THE RHODE ISLAND POLLUTION DISCHARGE ELIMINATION SYSTEM (RIPDES) PROGRAM. THE CONTRACTOR IS REQUIRED TO PROVIDE ADDITIONAL BMPS TO PREVENT POLLUTION FROM STORM WATER DISCHARGES LEAVING THE WORK SITE OR ENTERING WETLANDS IN COMPLIANCE WITH THE RIPDES GENERAL PERMIT AND ALL OTHER LOCAL, STATE AND FEDERAL REQUIREMENTS.

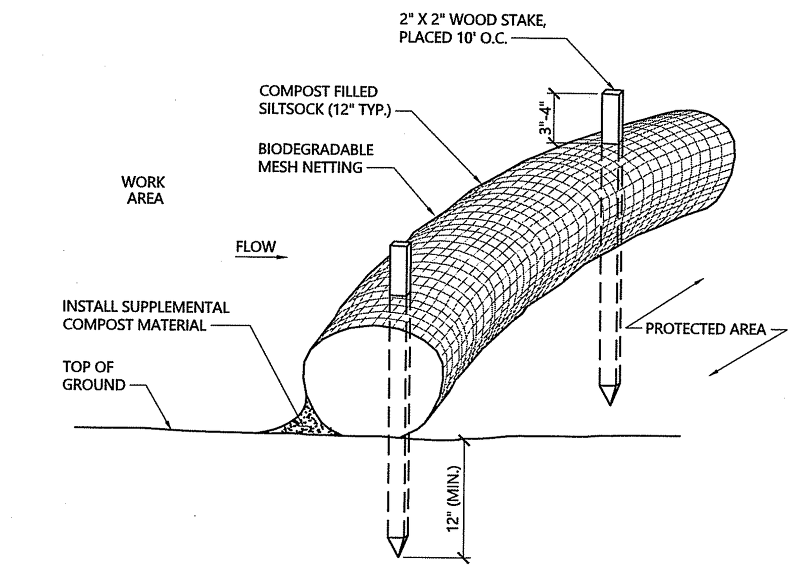
## Erosion Control Maintenance Requirements

SITE OWNERS AND OPERATORS MUST ENSURE THAT ALL EROSION, RUNOFF, SEDIMENT, AND POLLUTION PREVENTION CONTROLS REMAIN IN EFFECTIVE OPERATING CONDITION AND ARE PROTECTED FROM ACTIVITIES THAT WOULD REDUCE THEIR EFFECTIVENESS. SITE OWNERS AND OPERATORS MUST ALSO ENSURE THAT ALL EROSION, RUNOFF, SEDIMENT, AND POLLUTION PREVENTION CONTROLS ARE INSPECTED AT THE REQUIRED FREQUENCY REQUIREMENTS LISTED BELOW. IF THE DESIGNATED SITE INSPECTOR FINDS A PROBLEM (I.E. EROSION, RUNOFF, SEDIMENT OR POLLUTION PREVENTION CONTROLS REQUIRE REPLACEMENT, REPAIR, OR MAINTENANCE), THE OWNER AND OPERATOR MUST ENSURE THAT THE NECESSARY REPAIRS OR MODIFICATIONS ARE MADE IN ACCORDANCE WITH THE FOLLOWING:

1. INITIATE WORK TO FIX THE PROBLEM IMMEDIATELY AFTER DISCOVERING THE PROBLEM, AND COMPLETE SUCH WORK BY THE CLOSE OF THE NEXT WORK DAY, IF THE PROBLEM DOES NOT REQUIRE SIGNIFICANT REPAIR OR REPLACEMENT, OR IF THE PROBLEM CAN BE CORRECTED THROUGH ROUTINE MAINTENANCE.
2. WHEN INSTALLATION OF A NEW CONTROL OR A SIGNIFICANT REPAIR IS NEEDED, SITE OWNERS AND OPERATORS MUST ENSURE THAT THE NEW OR MODIFIED CONTROL PRACTICE IS INSTALLED AND MADE OPERATIONAL BY NO LATER THAN SEVEN (7) CALENDAR DAYS FROM THE TIME OF DISCOVERY WHERE FEASIBLE. IF IT IS INFEASIBLE TO COMPLETE THE INSTALLATION OR REPAIR WITHIN SEVEN (7) CALENDAR DAYS, THE REASONS WHY IT IS INFEASIBLE MUST BE DOCUMENTED IN THE SESC PLAN ALONG WITH THE SCHEDULE FOR INSTALLING THE STORMWATER CONTROL(S) AND MAKING IT OPERATIONAL AS SOON AS PRACTICABLE AFTER THE 7-DAY TIMEFRAME. WHERE THESE ACTIONS RESULT IN CHANGES TO ANY OF THE STORMWATER CONTROL MEASURES OUTLINED IN THE SESC PLAN, SITE OWNERS AND OPERATORS MUST MODIFY THE SESC PLAN ACCORDINGLY WITHIN SEVEN (7) CALENDAR DAYS OF COMPLETING THIS WORK IN ACCORDANCE WITH THE FOLLOWING:
    a. THE OWNER AND OPERATOR SHALL AMEND THE SESC PLAN WITHIN SEVEN (7) DAYS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE OR OTHER PROCEDURE WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SESC PLAN PROVES TO BE INEFFECTIVE IN ACHIEVING ITS OBJECTIVES. IN ADDITION, THE SESC PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW OPERATOR THAT WILL IMPLEMENT A COMPONENT OF THE SESC PLAN. THE AMENDED SESC PLAN MUST BE KEPT ON FILE AT THE CONSTRUCTION SITE AND ANY SESC PLAN MODIFICATIONS MUST BE DOCUMENTED. ANY AMENDMENTS TO CONTROL MEASURES WHICH INVOLVED THE PRACTICE OF ENGINEERING, MUST FIRST BE REVIEWED, SIGNED, AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF RHODE ISLAND.
3. IF CORRECTIVE ACTIONS ARE REQUIRED, THE SITE OWNER AND OPERATOR MUST ENSURE THAT ALL CORRECTIVE ACTIONS ARE DOCUMENTED ON THE INSPECTION REPORT IN WHICH THE PROBLEM WAS FIRST DISCOVERED. THESE CORRECTIVE ACTIONS MUST BE DOCUMENTED, SIGNED, AND DATED BY THE SITE OPERATOR ONCE ALL NECESSARY REPAIRS HAVE BEEN COMPLETED.
4. SOIL EROSION AND SEDIMENT CONTROL INSPECTION REQUIREMENTS
    MINIMUM FREQUENCY - EACH OF THE FOLLOWING AREAS MUST BE INSPECTED BY OR UNDER THE SUPERVISION OF THE OWNER AND OPERATOR 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:
    a. ALL AREAS THAT HAVE BEEN CLEARED, GRADED, OR EXCAVATED AND THAT HAVE NOT YET COMPLETED STABILIZATION;
    b. ALL STORMWATER EROSION, RUNOFF, AND SEDIMENT CONTROL MEASURES (INCLUDING POLLUTION PREVENTION PRACTICES) INSTALLED AT THE SITE TO COMPLY WITH THIS PERMIT;
    c. CONSTRUCTION MATERIAL, UNSTABILIZED SOIL STOCKPILES, WASTE, BORROW, OR EQUIPMENT STORAGE, AND MAINTENANCE AREAS THAT ARE COVERED BY THIS PERMIT AND ARE EXPOSED TO PRECIPITATION;
    d. ALL AREAS WHERE STORMWATER TYPICALLY FLOWS WITHIN THE SITE, INCLUDING TEMPORARY DRAINAGE WAYS DESIGNED TO DIVERT, CONVEY, AND/OR TREAT STORMWATER;
    e. ALL POINTS OF DISCHARGE FROM THE SITE;
    f. ALL LOCATIONS WHERE TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES HAVE BEEN IMPLEMENTED.
    g. ALL LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.



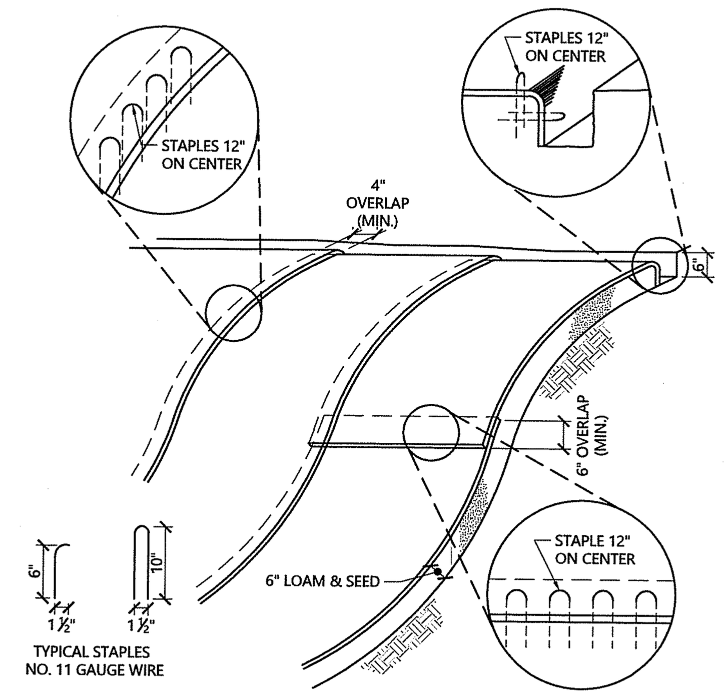

**Straw Bale Barrier** 1/16
N.T.S. Source: VHB REV LD_653




NOTES

1. SILTSOCK SHALL BE FILTREXX SILTSOXX, OR APPROVED EQUAL.
2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

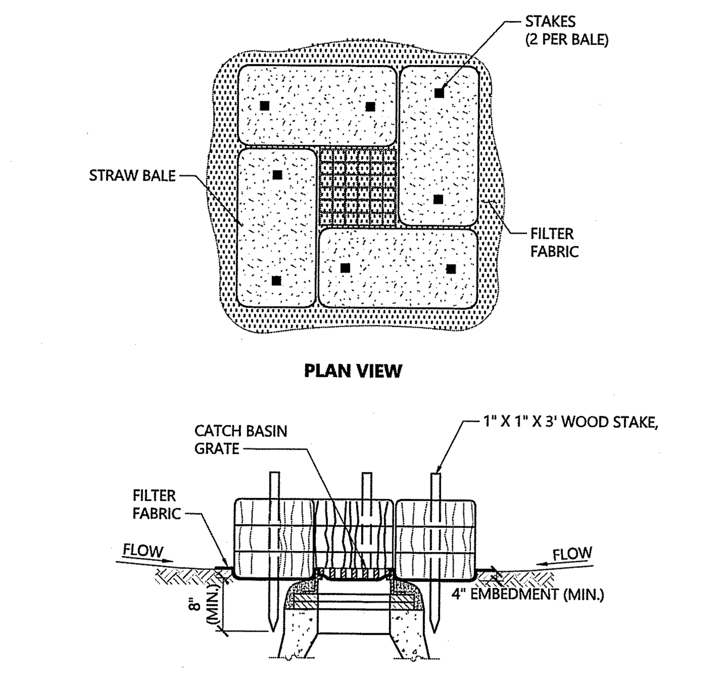
**Siltsock - Erosion Control Barrier** 1/16
N.T.S. Source: VHB LD_658




NOTES

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.

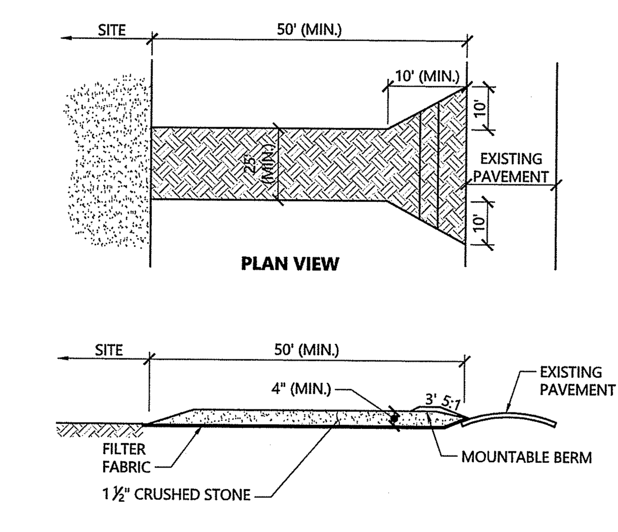
**Erosion Control Blanket Slope Installation** 1/16
N.T.S. Source: VHB LD_680




NOTES

1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. IF GRATE IS AGAINST EXISTING CURB THEN BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
3. GRATE TO BE PLACED OVER FILTER FABRIC.
4. BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

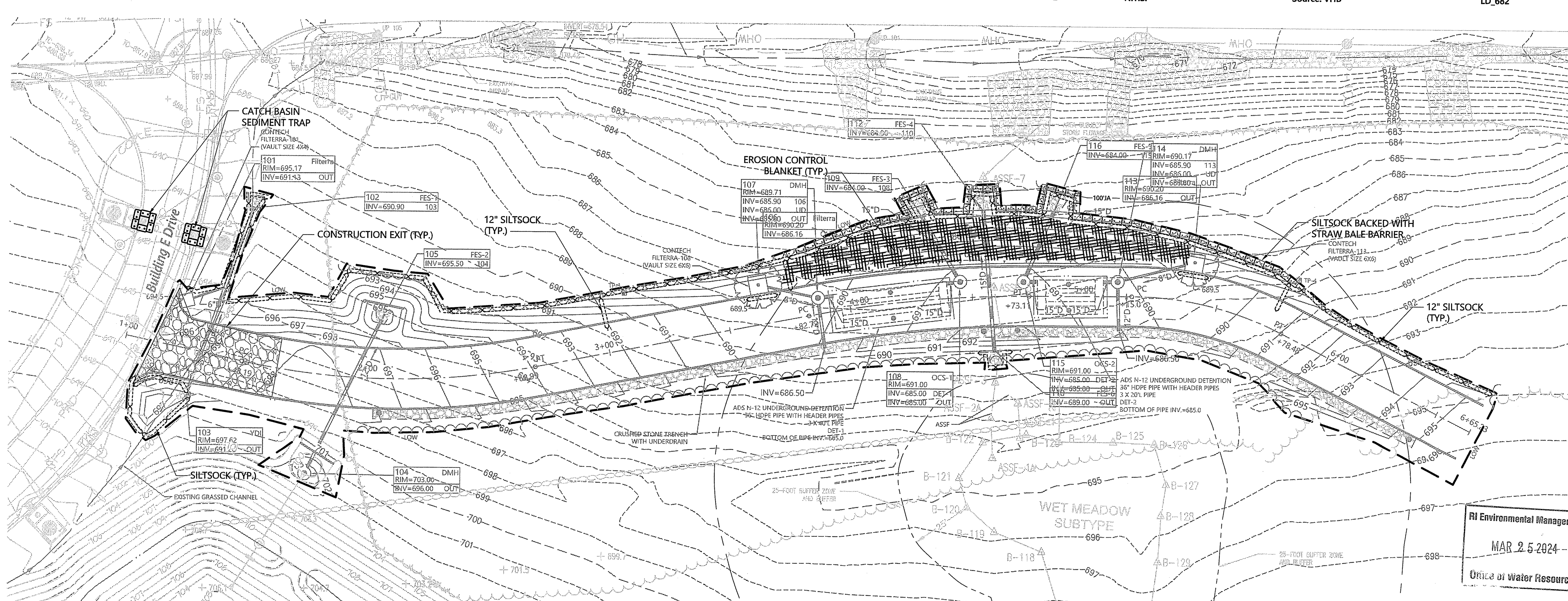
**Catch Basin Sediment Trap** 1/16
N.T.S. Source: VHB LD_673




NOTES

1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

**Stabilized Construction Exit** 1/16
N.T.S. Source: VHB LD_682





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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY - 2 2024 FILE #: 23-0235
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Notes:

1. REFER TO SOIL EROSION AND SEDIMENT CONTROL PLAN REPORT FOR ADDITIONAL INFORMATION AND GUIDELINES.
2. TOTAL SITE AREA = 101.47 ACRES. TOTAL SITE DISTURBANCE = 0.7± ACRES.
3. LOCATION OF RECEIVING WATERS: SHADY OAK BROOK (RI0005047R-03)
4. NO PORTION OF THE SITE FALLS WITHIN OR DIRECTLY DISCHARGES TO A NATURAL HERITAGE AREA (NHA), OR OTHERWISE IMPACTS THREATENED SPECIES OR HABITATS.
5. STOCKPILING MUST BE WITHIN PROJECT LIMIT OF WORK BUT OUTSIDE THE BMP AREAS SHOWN ON THE PLANS AND SUCH THAT CONSTRUCTION VEHICLES DO NOT DRIVE OVER THESE AREAS TO ACCESS THE STOCKPILES.
6. WASHOUT AND REFUELING AREAS MUST BE WITHIN PROJECT LIMITS BUT OUTSIDE THE BMP AREAS LISTED BELOW AND SHOWN ON THE PLANS.

0 15 30 60 Feet

# FM Global
# Farmhouse Access Road

743 Reynolds Road
West Glocester, Rhode Island

| No. | Revision | Date | Appvd. |
|---|---|---|---|
| | | | |

Designed by SAP Checked by RLC
Issued for Permits Date November 1, 2023

Not Approved for Construction

Drawing Title
**Soil Erosion and Sediment Control - General Notes, Details, and Plan**

RENEE L. CODEGA
No. 6517
REGISTERED PROFESSIONAL ENGINEER
3/25/2024

Drawing Number
**SESC-1**
Sheet 1 of 1

RI Environmental Management
MAR 2 5 2024
Office of Water Resources

Project Number
73281.00

Saved Tuesday, March 5, 2024 1:41:07 PM SPEREIRA Plotted Friday, March 22, 2024 9:00:35 AM Stephen Pereira