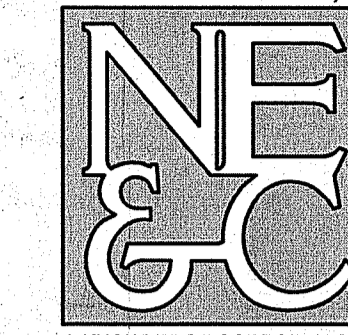


# FRIENDSHIP FARMS: PHASE I

## PROPOSED MULTIFAMILY DEVELOPMENT ASSESSOR'S PLAT 214 LOT 112 STAFFORD ROAD AND GLENDALE STREET TIVERTON, RHODE ISLAND

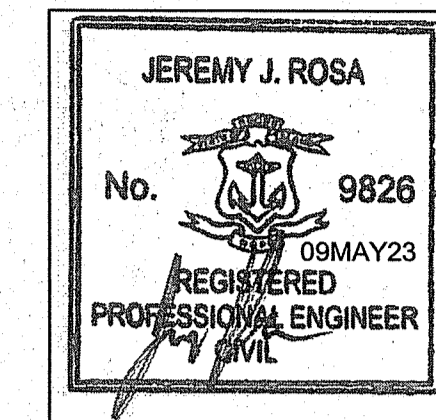
CIVIL ENGINEER:

NORTHEAST ENGINEERS  
& CONSULTANTS, INC.



SITE/CIVIL  
LAND PLANNING  
WATERFRONT  
SURVEYING  
GEO TECHNICAL  
ENVIRONMENTAL  
TRANSPORTATION  
STRUCTURAL  
MATERIALS TESTING

A KNOWLEDGE CORPORATION  
6 VALLEY ROAD MIDDLETOWN RI 02842  
PHONE (401) 849-0810 FAX (401) 846-4169  
WWW.NORTHEASTENGINEERS.COM



ENGINEER CERTIFICATION

OWNER:

TIVERTON INVESTMENTS LLC  
150 CHESTNUT STREET 4TH FLOOR  
PROVIDENCE, RI 02903  
davidm@dscrealty.com  
(401) 277-0300

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: AUG 13 2023 FILE #: 22-0255  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Martin D. Wenczek*

## MAY 9, 2023 PERMIT SET

### PLAN INDEX

#### SITE/CIVIL ENGINEERING PLANS

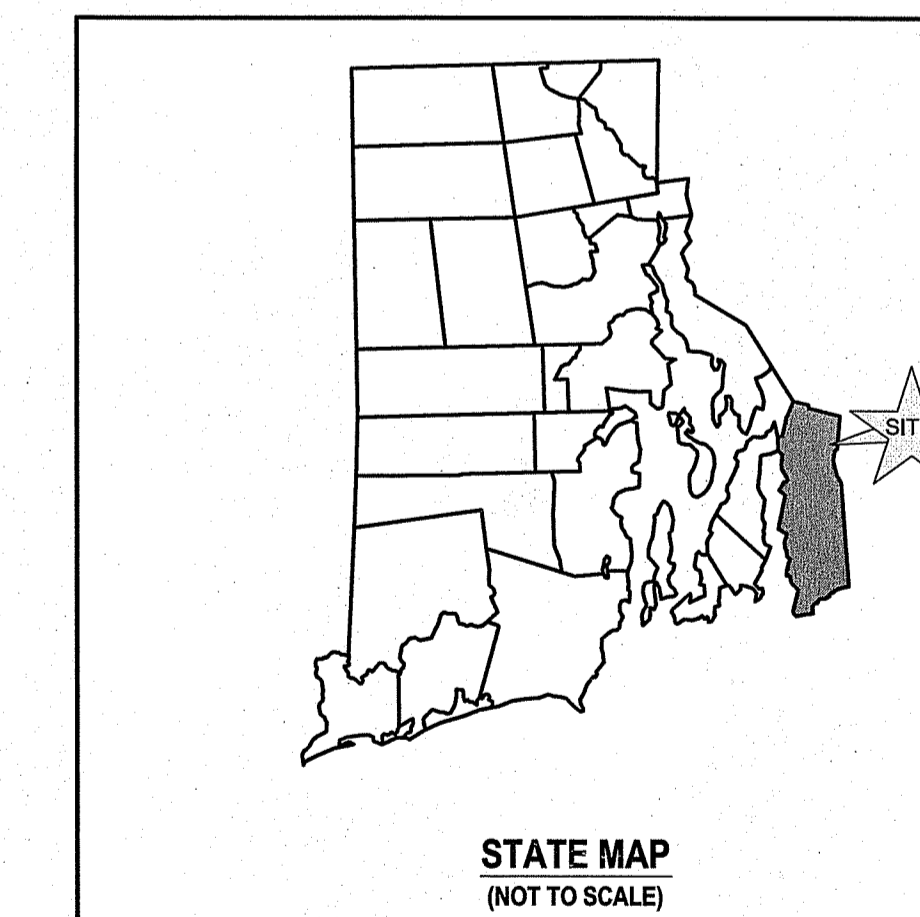
TITLE SHEET  
PROJECT NOTES  
EXISTING CONDITIONS  
PROPOSED LAYOUT AND UTILITY PLAN  
PROPOSED GRADING AND DRAINAGE PLAN  
PROPOSED SOIL EROSION AND SEDIMENT CONTROL PLAN  
PROPOSED DETAILS

SHEET 1  
SHEET 2  
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SHEETS 5-6  
SHEETS 7-8  
SHEETS 9-10  
SHEETS 11-14

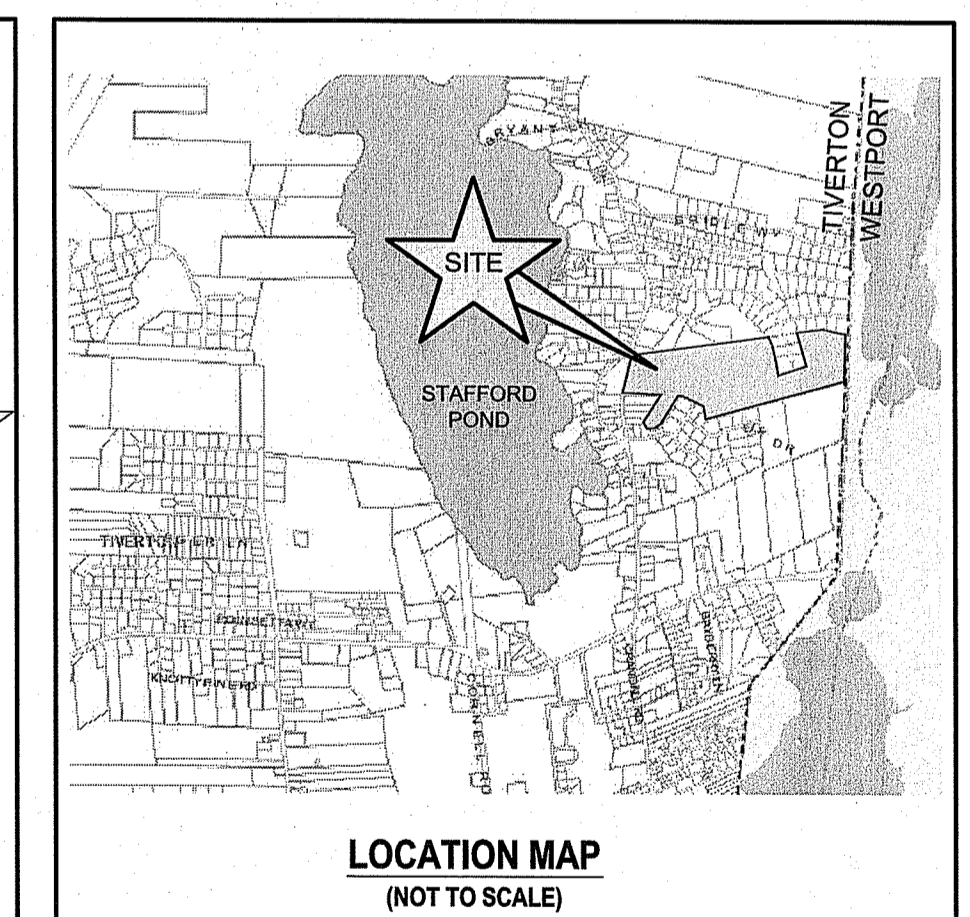


### SITE PLAN

SCALE = 1"=200'



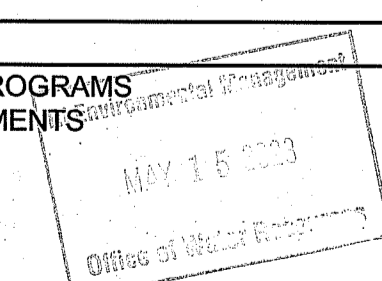
STATE MAP  
(NOT TO SCALE)



LOCATION MAP  
(NOT TO SCALE)

#### SUBMISSION AND REVISION SUMMARY

AGENCY OR REVISION	DATE:	COMMENTS:
RIDEM	JUN 21, 2022	FWW AND RIPDES PROGRAMS
RIDEM	MAY 9, 2023	RESPONSE TO COMMENTS



**GENERAL NOTES**

- PROPERTY LINE INFORMATION SHOWN ON SHEETS 3 AND 4 TAKEN FROM PLAN ENTITLED "PLAN OF SURVEY OF EAST SIDE OF STAFFORD ROAD, PLAT 4-11, BLOCK 89 LOT 88, TIVERTON, RI 02878" PREPARED BY JOHN BRAGA & ASSOCIATES, INC., DATED 4/8/9, GROUND FEATURES SHOWN BASED ON A 2009 AERIAL SURVEY PREPARED BY EASTERN TOPOGRAPHICS.
- TOPOGRAPHY CONTOURS SHOWN TAKEN FROM AVAILABLE RIGIS STATEWIDE LIDAR INFORMATION, BASE OF ELEVATIONS: NAVD83.
- PROPERTY IS ZONED R60 (RESIDENTIAL). ABUTTING PROPERTIES ARE ALL RESIDENTIALLY ZONED AS R60.
- UNDERGROUND UTILITIES SHOWN FROM OBSERVED EVIDENCE AND SUPPLEMENTED WITH ADDITIONAL RESEARCH.
- NORTH ARROW REFERENCES GRID NORTH (RISP NAD83).
- THERE ARE FRESHWATER WETLANDS ON THE SUBJECT PROPERTY PER A DELINEATION PERFORMED BY MCCUE ENVIRONMENTAL, LLC IN DECEMBER OF 2021.
- SOIL EVALUATIONS SHOWN PERFORMED BY NORTHEAST ENGINEERS & CONSULTANTS IN OCTOBER 2021 AND JUNE OF 2022.
- SUBJECT SITE IS NOT SITUATED IN A 100-YEAR FLOOD ZONE, AS SHOWN ON FEMA FIRM 44005C0044H LAST REVISED APRIL 5, 2010.
- THE UNDERGROUND UTILITIES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE UTILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. ALL DAMAGED PORTIONS SHALL BE REPLACED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AFFECTED UTILITY COMPANY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PERSONAL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. WHEREVER CONNECTION OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR NEW LINES. (PLEASE CALL DIG SAFE PRIOR TO CONSTRUCTION AT 1-888-DIG-SAFE AND ALL LOCAL UTILITY COMPANIES).
- THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATIONS OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING.
- THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION OR BETTER, ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS PROVIDED FOR SPECIFICALLY IN THE PLANS.
- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT AND DETAILS WITH THEIR RELATIONSHIP TO THE EXISTING SITE SURVEY. CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING WORK.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PRESERVE PROPERTY MONUMENTS.
- DEVIATIONS OR CHANGES FROM THESE PLANS WILL NOT BE ALLOWED UNLESS APPROVED BY THE PROJECT ENGINEER, APPROPRIATE AGENCY AND OWNER.
- RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND BE COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATION REQUIRED PRIOR TO THE START OF CONSTRUCTION.
- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE 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 ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR PROJECT ENGINEER.
- SEVERAL UNNAMED STREAMS ARE LOCATED ON THE PROPERTY, THE PRIMARY STREAM IDENTIFIED BY RIDEM AS "UNNAMED TRIBUTARY #2 TO SOUTH WATUPPA POND, MA, TIVERTON" (R0907037R-04). NONE OF THESE WATERWAYS ARE KNOWN TO BE IMPAIRED.
- THERE ARE HYDRIC SOILS ON THE SUBJECT PROPERTY LOCATED WITHIN THE AREAS OF FRESHWATER WETLANDS AND OUTSIDE ALL AREAS OF DEVELOPMENT AS IDENTIFIED BY THE USDA NRCS SOIL SURVEY. ALL SOILS WITHIN THE AREA OF DEVELOPMENT ARE IDENTIFIED AS HYDROLOGIC GROUP "C".
- THERE ARE NO KNOWN AREAS OF LEDGE OR OUTCROPPINGS ON THE SUBJECT PROPERTY.
- THERE ARE NO KNOWN RECREATIONAL RESOURCES ON THE SUBJECT PROPERTY.
- PORTIONS OF THE SUBJECT PROPERTY ARE CONSIDERED PRIME FARMLAND SOILS PER THE RIDEM ENVIRONMENTAL RESOURCE MAPS.
- THE PROPOSED DEVELOPMENT DOES NOT LIE IN ANY OF THE FOLLOWING AREAS:
  - NATURAL HERITAGE AREAS (RIDEM)
  - CULTURAL RESOURCE AREA
  - SPECIAL AREA MANAGEMENT PLAN (CRMC)
  - GROUNDWATER AQUIFERS, STATE DESIGNATED "GROUNDWATER RESERVOIRS", RECHARGE AREAS, OR WELLS/HEAD PROTECTION AREAS
  - STATE, REGIONAL OR LOCAL GREENWAYS, OR GREENSPACE PRESERVES
- ALL WORK WITHIN THE TOWN RIGHT OF WAY (STAFFORD ROAD AND GLENDALE STREET) WILL CONFORM TO THE TOWN DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
- THE SITE IS NOT SITUATED IN A COMMUNITY WELLHEAD PROTECTION AREA PER RIDEM ENVIRONMENTAL RESOURCE MAPS.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES LATEST EDITION INCLUDING ALL REVISIONS.

**GRADING NOTES**

- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT RUNOFF FROM LEAVING THE SITE.
- ALL GRADED AREAS SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER THE GRUBBING WORK HAS BEEN COMPLETED.
- THE TOWN SHALL BE INFORMED OF THE LOCATION OF THE DISPOSAL SITE, IF ANY, FOR THE PROJECT.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE MUNICIPALITY, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH ANY COMMUNITY NOISE CONTROL STANDARDS.
- THE LIMITS OF DISTURBANCE SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE MUNICIPALITY.
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE GRADING WORK IS INITIATED.
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- NONCOMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

**UTILITY NOTES**

- THE LOCATIONS OF PROPOSED ELECTRICAL CONNECTIONS TO THE OVERHEAD SERVICES ALONG GLENDALE STREET AND STAFFORD ROAD ARE PRELIMINARY. FINAL DESIGN OF THE ELECTRICAL SERVICES ARE SUBJECT TO DESIGN REVIEW AND APPROVAL OF NATIONAL GRID.
- THE PROPOSED CONNECTIONS TO THE WATER MAINS IN GLENDALE STREET AND STAFFORD ROAD ARE PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE PROVIDING WATER DEPARTMENT.
- ALL NEW ELECTRIC, TELEPHONE AND CABLE SERVICES SHALL BE INSTALLED UNDERGROUND.
- PROPOSED WASTEWATER TREATMENT SYSTEMS SHOWN SUBJECT TO FURTHER TESTING AND PERMITTING.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASSUMPTIONS, DEDUCTIONS, OR CONCLUSIONS HE/SHE MAY MAKE OR DERIVE FROM THE SUBSURFACE INFORMATION OR DATA FURNISHED ON THE PLANS. THE CONTRACTOR MUST SATISFY HIMSELF/HERSELF THROUGH HIS/HER OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED.
- IF THE CONTRACTOR ELECTS NOT TO EXCAVATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO PIPELINE EXCAVATION, HE/SHE FORFEITS HIS/HER RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EFFLUENT ASSOCIATED WITH THE CONSTRUCTION ACTIVITY AND THE DISINFECTION AND HYDROTESTING OPERATIONS TO SAFEGUARD PUBLIC HEALTH AND SAFETY IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF HEALTH REQUIREMENTS. ALL PERMITS AND LICENSES FOR CONSTRUCTION WATER DISPOSAL, INCLUDING ALL APPLICATIONS, CHARGES, FEES, AND TAXES, ARE THE RESPONSIBILITY OF THE CONTRACTOR.

**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- CONSTRUCTION SEQUENCE:
  - DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED. THIS INCLUDES ALL PERMITS FROM APPLICABLE UTILITIES.
  - ALL CONSTRUCTION VEHICLES SHALL ENTER AND LEAVE THE SITE VIA THE PROPOSED CONSTRUCTION ENTRANCE CONFORMING TO THE DETAIL PROVIDED.
  - INSTALL SILT FENCES, SILT SACKS, CHECK DAMS, FILTER SOCKS, STRAW WATTLE AND/OR STRAW BALES AS INDICATED ON THE DRAWINGS TO CONTROL EROSION AND PREVENT SEDIMENT CONTAMINATION OF DOWNSTREAM AREAS PRIOR TO ANY EARTH MOVING ACTIVITIES. THE CONTRACTOR SHALL CONFIRM WITH THE TOWN BUILDING OFFICIAL/TOWN ENGINEER WHICH TYPE OF SEDIMENTATION BARRIERS ARE PREFERRED BY THE TOWN PRIOR TO INSTALLATION.
  - CONTRACTOR TO FIELD LOCATE EXISTING WATER MAIN TO WHICH CONNECTIONS ARE PROPOSED PRIOR TO ANY CONSTRUCTION.
  - LIMITS OF CLEARING SHALL BE FLAGGED PRIOR TO THE REMOVAL OF ANY VEGETATION. REMOVE VEGETATION ONLY WHERE NECESSARY. ANY STUMPS TO BE GROUND OR DISPOSED OF OFF SITE. LIMITS OF PERIMETER AND RIVERBANK WETLANDS SHALL ALSO BE FLAGGED TO PREVENT DISTURBANCE.
  - AREAS OF FUTURE WASTEWATER DISPOSAL SYSTEMS SHALL BE IDENTIFIED AND PROTECTED FROM CONSTRUCTION DISTURBANCE.
  - EXCAVATE TEMPORARY SEDIMENT TRAPS IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND ESTABLISH A TEMPORARY VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER/BUILDING OFFICIAL. REFER TO DETAILS.
  - ROUGH GRADE SITE AS SHOWN ON SOIL EROSION AND SEDIMENT CONTROL PLANS. EXCAVATE FOR ROAD BASE.
  - INSTALL UTILITY MAINS AND ROAD BASE. ANY EXCAVATED MATERIAL SHALL BE STOCKPILED OR REGRADED ON SITE UNTIL GRADING OPERATIONS ARE COMPLETE.
  - CONSTRUCT STORMWATER CONVEYANCE SYSTEM BEGINNING AT THE LOWEST POINTS AND WORKING UPSTREAM.
  - BEGIN BUILDING CONSTRUCTION. INSTALL ANY ROOFTOP RUNOFF COLLECTION PIPING AS SHOWN ON PLANS TO CONVEYANCE SYSTEM.
  - INSTALL UTILITY SERVICES FOR EACH STRUCTURE PER DESIGNS APPROVED BY PROVIDING ENTITIES. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED UNDER SUPERVISION BY THE PROVIDING ENTITIES.
  - FINAL GRADE SITE AND COMPLETE SAND FILTER AND DETENTION BASIN EXCAVATIONS PER THE DESIGN PLANS. INSTALL LINERS IN DETENTION BASINS WHERE REQUIRED, PLACE LOAM, AND ESTABLISH VEGETATIVE COVERAGE.
  - REMOVE ALL SEDIMENTS FROM SAND FILTER EXCAVATIONS. INSTALL SAND FILTER UNDERDRAINS AND PLACE MEDIA LAYERS PER THE CONSTRUCTION DETAILS. INSTALL LOAM AND ESTABLISH VEGETATIVE COVERAGE.
  - REMOVE CONSTRUCTION ENTRANCE AND INSTALL AREAS OF IMPERVIOUS BINDER PAVEMENT COURSE AND CURBING.
  - ESTABLISH FINAL VEGETATIVE GROWTH ON ALL DISTURBED AREAS.
  - INSTALL TOP PAVEMENT COURSE.
  - ENSURE THAT ROOF DOWNSPOUTS ARE CONNECTED TO STORMWATER SYSTEM WHERE SHOWN ON PLANS AND THAT ANY SURFACE ROOF DISCHARGE PIPES ARE DIRECTED AS SHOWN ON PLANS.
  - MAINTAIN SITE IN ACCORDANCE WITH THE OPERATIONS AND MAINTENANCE DOCUMENT. BASIC MAINTENANCE OUTLINE ALSO PROVIDED ON THIS SHEET.

**2. NOTES:**

- DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. ONLY THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- AREAS OF INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS SHALL NOT BE USED FOR STOCKPILES OR STORAGE OF MATERIALS OR EQUIPMENT.
- ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE STABILIZED WITHIN FOURTEEN DAYS IN ACCORDANCE WITH TEMPORARY MEASURES IN THE VEGETATIVE PRACTICE NOTES.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOP SOIL TO REMOVE VEGETATION, ROOTS, AND ANY OTHER OBJECTIONABLE MATERIAL.
- ALL FILL SHALL BE COMPACTED TO 95% MAX. DENSITY TO REDUCE EROSION, SLIPPAGE, SETTLEMENT SUBSIDENCE, OR OTHER RELATED PROBLEMS.
- FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES AND SPECIFICATIONS.
- ALL FILL SHALL BE PLACED AND COMPACTED TO 95% MAX. DENSITY IN LAYERS NOT TO EXCEED 12" IN THICKNESS FILLS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION SUBGRADE.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF FINISH GRADING IN ACCORDANCE WITH THE VEGETATIVE PRACTICE NOTES.
- REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED AND VEGETATED AREAS HAVE RECEIVED TWO MOWINGS.

**3. VEGETATIVE PRACTICE:**

**PERMANENT MEASURES:**

- SLOPES SHALL NOT BE STEEPER THAN 1 VERTICAL TO 3 HORIZONTAL UNLESS OTHERWISE SPECIFIED.
  - LOAM AND SEED REQUIREMENTS ARE SPECIFIED IN RIDOT L01 & L02.
  - A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED. THE LOAM SHALL BE GRADED TO A SMOOTH CONDITION AND STONES AND OTHER OBJECTS LARGER THAN 2 INCHES SHALL BE REMOVED.
- TEMPORARY MEASURES (FOR TEMPORARY PROTECTION OF DISTURBED AREAS)**
- LIMESTONE AND FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:
    - LIMESTONE: 3 TONS/ACRE
    - FERTILIZER: (10-10-10) 600 LBS/ACRE
  - SEED SHALL BE APPLIED AT THE FOLLOWING RATE:
    - WINTER RYE: 100 LB/ACRE
    - STRAW MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TONS/ACRE.

**4. MAINTENANCE**

DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED, THE EROSION CONTROL MEASURES SHALL BE INSPECTED. REFER TO SOIL EROSION AND SEDIMENT CONTROL DOCUMENT FOR ADDITIONAL INFORMATION.

- AT A MINIMUM THE SILT FENCING, STRAW BALES AND FILTER SOCK BARRIERS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. SEDIMENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REGRADED ON THE SITE.
- EROSION CONTROL BLANKETS SHALL BE INSPECTED ON A WEEKLY BASIS.
- SILT SACKS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. DURING HEAVY RAIN EVENT, IT MAY BE NECESSARY TO TEMPORARILY REMOVE SACKS IN ORDER TO PREVENT FLOODING. SEDIMENT TRAPPED WITHIN SACKS SHALL BE DISPOSED OF OFF-SITE AT A LICENSED FACILITY OR REGRADED ON THE SITE.
- STONE RIPRAP SHALL BE INSPECTED MONTHLY FOR EXCESSIVE ACCUMULATION OF SEDIMENT. IT MAY BE NECESSARY TO REMOVE STONES, EXCAVATE SEDIMENT, AND REPLACE STONES.
- THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO PAVING. DURING CONSTRUCTION THE ENTRANCE SHALL BE INSPECTED WEEKLY, AND RE-ESTABLISHED AS NECESSARY.
- SEEDED AREAS WILL BE FERTILIZED AND RESEEDDED AS NECESSARY TO INSURE ESTABLISHMENT OF A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE TOWN ENGINEER.

**DRAINAGE NOTES**

- ALL DRAIN PIPES SHALL BE ADS-N12 TYPE IB OR SCH40 PVC AS SHOWN ON SITE PLANS.
- DRAIN MANHOLES AND CATCH BASINS SHALL BE PRECAST CONCRETE UNLESS OTHERWISE NOTED.
- CERTAIN STRUCTURE ROOFTOP SHALL DISCHARGE TO STORMWATER CONVEYANCE AS SHOWN ON PLANS. ALL OTHER STRUCTURES SHALL HAVE THE ROOF DOWNSPOUT PIPES DIRECTED TO THE SURFACE AS SHOWN. SURFACE DISCHARGE PIPES SHALL BE TO PAVED SURFACES OR CONCRETE SPLASH BLOCKS WHERE NECESSARY.
- ALL CATCH BASINS SHALL HAVE BICYCLE SAFE GRATES WITH A MINIMUM OF H-20 LOADING.
- PIPED CONVEYANCE, SAND FILTERS, SWALES, AND DETENTION BASINS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS PROVIDED. ANY DISCREPANCIES OR INCONGRUENCIES WITH THE EXISTING SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

**STORMWATER MAINTENANCE NOTES**

**SEDIMENT FOREBAY MAINTENANCE:**

GENERAL INSPECTIONS SHALL BE CONDUCTED ON A MONTHLY BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES). THE MAINTENANCE OBJECTIVES FOR THIS DEVICE INCLUDE MONITORING THE COLLECTED SEDIMENT VOLUME AND MAINTAINING STRUCTURAL INTEGRITY.

- THE SLOPES OF A FOREBAY SHALL BE INSPECTED FOR EROSION AND GULLYING. REINFORCE EXISTING INLET RIPRAP IF RIPRAP IS FOUND TO BE DEFICIENT, EROSION IS PRESENT AT THE OUTFALLS, OR THE EXISTING RIPRAP HAS BEEN COMPROMISED.
- ALL STRUCTURAL COMPONENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, TRASH RACKS, ACCESS GATES, VALVES, PIPES, WEIR WALLS, ORIFICE STRUCTURES, AND SPILLWAY STRUCTURES SHALL BE INSPECTED AND ANY DEFICIENCIES SHOULD BE RESOLVED.
- SEDIMENT SHALL BE REMOVED FROM A FOREBAY WHEN THE DEPTH HAS BEEN REDUCED BY 50%. ALL MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL AND LOCAL REGULATIONS.

**DETENTION BASIN:**

GENERAL INSPECTIONS SHALL BE CONDUCTED ON A MONTHLY BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES).

- THE SLOPES OF THE BASIN SHALL BE INSPECTED FOR EROSION AND GULLYING. ANY ERODED AREAS SHALL BE REPAIRED AND REINFORCED WITH A SEEDING OF GRASS. SLOPE PROTECTION MATERIAL SHOULD BE PLACED IN AREAS PRONE TO EROSION.
- REINFORCE INLET AREAS WITH EROSION CONTROL BLANKETS OR STONE OVER A BED OF FILTER FABRIC IF EROSION IS FOUND.
- ALL MATERIAL, INCLUDING ANY TRASH, DEBRIS, AND SEDIMENTS WITHIN THE EXTENTS OF A BASIN SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. SHOULD EXCESSIVE SEDIMENTS BE FOUND WITHIN THE BASIN, THE OWNER SHOULD CONSIDER MORE FREQUENT SWEEPING OF THE ROADWAYS OR MORE INTENSIVE MAINTENANCE OF THE CATCH BASIN.
- THE CONCRETE OVERFLOW WEIR SHALL BE INSPECTED FOR STRUCTURAL FAULTS. IN PARTICULAR, IT SHOULD BE DETERMINED THAT THE BASIN AROUND THE SIDES OF THE CONCRETE WEIR. ANY FAULTS SHALL BE CORRECTED IMMEDIATELY. ALL WORK SHALL BE CARRIED OUT BY A QUALIFIED CONTRACTOR.
- EMBANKMENTS OF A BASIN SHALL BE INSPECTED FOR SEEPAGE AND BURROWING ANIMALS. PEST CONTROL WILL BE REQUIRED SHOULD EVIDENCE OF BURROWING ANIMALS BE REQUIRED. ANY EVIDENCE OF GROUNDWATER SEEPAGE SHALL BE BROUGHT TO THE ATTENTION OF A LICENSED ENGINEER IMMEDIATELY.
- IF DEAD OR DYING GRASS ON THE BOTTOM IS OBSERVED OR IF STANDING WATER IS OBSERVED MORE THAN 48 HOURS AFTER A STORM EVENT, THE BOTTOM OF THE BASIN SHALL BE REGRADED TO SLOPE TOWARDS THE OUTLET PIPES AND THE PIPES SHALL BE INSPECTED TO ENSURE THAT NO BLOCKAGES ARE PRESENT.
- THE INSPECTOR SHALL ENSURE THAT THE GRASS AROUND THE PERIMETER OF AND WITHIN A BASIN HAS BEEN MOWED AT LEAST THREE TIMES PER GROWING SEASON, FOLLOWING EACH MOWING, BARE AREAS SHOULD BE SEEDDED. THE INTENTION IS TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN TWELVE INCHES.
- DURING INSPECTION, REMOVE ANY INVASIVE VEGETATION WITHIN THE EXTENTS OF THE BASIN. ANY INVASIVE VEGETATION ENCRONCHING UPON THE PERIMETER OF THE BASIN SHALL BE PRUNED OR REMOVED.
- INSPECT STONE SPILLWAY FROM OUTLET WEIR. MISSING STONE SHALL BE REPLACED IN KIND. SHOULD EVIDENCE OF STONE TRANSPORT BE FOUND, THE REPLACEMENT STONE SHALL BE OF A LARGER DIAMETER.

**CATCH BASIN / DRAIN MANHOLES (STRUCTURES):**

GENERAL INSPECTIONS SHALL BE CONDUCTED ON A MONTHLY BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES).

- THE SUMP OF A DRAINAGE STRUCTURE SHALL BE INSPECTED FOR THE PRESENCE OF DEBRIS OR SEDIMENTS. SHOULD THE DEPTH OF MATERIAL WITHIN THE SUMP EXCEED 50% OF THE TOTAL SUMP DEPTH, THE SEDIMENTS SHALL BE REMOVED VIA A VACUUM TRUCK. ALL MATERIAL REMOVED SHALL BE REMOVED BY THE OPERATOR AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE RIDEM REGULATIONS. ANY LARGE DEBRIS WHICH COULD POTENTIALLY OBSTRUCT THE OUTFLOW PIPE SHALL BE REMOVED IMMEDIATELY. SHOULD EXCESS SEDIMENTS AND DEBRIS BE ENCOUNTERED, THE OWNER SHOULD CONSIDER MORE FREQUENT SWEEPING.
- THE FRAME AND GRATES/COVERS OF THE CATCH BASINS SHALL BE INSPECTED FOR DAMAGE. DAMAGE MAY INCLUDE BLOCKAGE OF THE GRATE OPENINGS, OR A COMPROMISE OF THE SAFETY OF THE DEVICE. STRUCTURAL FAULTS SHALL BE REPAIRED BY A QUALIFIED CONTRACTOR.
- THE INTERNAL STEPS SHALL BE INSPECTED FOR DAMAGE. DANGEROUS OR DAMAGED RUNGS SHALL BE REPAIRED BY A QUALIFIED CONTRACTOR.
- THE OUTLET PIPES SHALL BE INSPECTED FOR DAMAGE OR OBSTRUCTION. ANY DAMAGE SHALL BE REPAIRED BY A QUALIFIED CONTRACTOR.

**SWALE:**

GENERAL INSPECTIONS SHALL BE CONDUCTED ON A MONTHLY BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES).

- THE SIDE SLOPES OF A SWALE SHALL BE INSPECTED FOR EROSION AND GULLYING. REINFORCE EXISTING GRASS PLANTINGS IF FOUND TO BE DEFICIENT, EROSION IS PRESENT, OR THE CHANNEL HAS BEEN COMPROMISED.
- SEDIMENT SHALL BE REMOVED FROM A SWALE WHEN THE DESIGN DEPTH HAS BEEN REDUCED BY 25%. ALL MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
- INVASIVE PLANTS WHICH REDUCE THE CAPACITY OR INTEGRITY OF THE SWALES ARE TO BE REMOVED AND DISPOSED OF.

**SAND FILTER:**

GENERAL INSPECTIONS SHALL BE CONDUCTED ON A MONTHLY BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES).

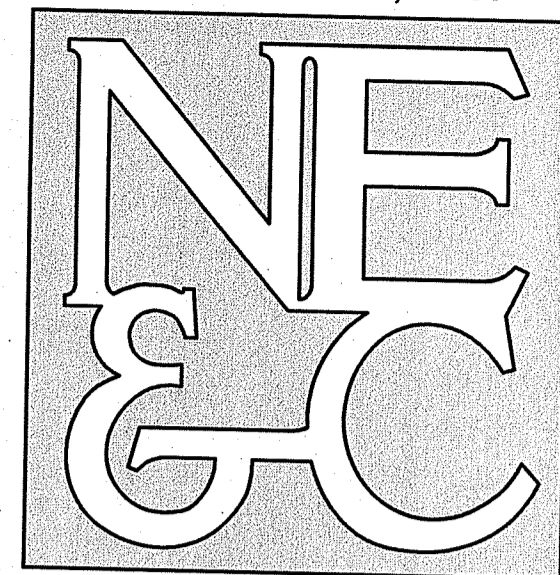
- GRASSES AND/OR SPECIFIED VEGETATION SHALL BE PLANTED AROUND AND WITHIN THE SAND FILTER IMMEDIATELY FOLLOWING CONSTRUCTION TO STABILIZE SLOPES AND PREVENT EROSION.
- THE SLOPES OF THE FILTER SHOULD BE INSPECTED FOR EROSION AND GULLYING.
- REINFORCE ANY EXISTING RIPRAP IF IT IS FOUND TO BE DEFICIENT. EROSION IS PRESENT AT THE OUTLET STRUCTURES, OR ANY EXISTING RIPRAP HAS BEEN COMPROMISED.
- THE OUTLET STRUCTURE SHALL BE INSPECTED FOR LEAKY JOINTS OR CRUSHED LINES. UNDERDRAIN AND OUTLET PIPE SHALL BE CLEAN AND FREE OF MATERIALS THAT CAN REDUCE FLOW.
- ANY AREAS WITHIN THE EXTENTS OF THE FILTER THAT ARE SUBJECT TO EROSION OR GULLYING SHOULD BE REPLENISHED WITH THE ORIGINAL DESIGN MATERIAL AND RE-VEGETATED ACCORDING TO DESIGN DRAWINGS. SLOPE PROTECTION MATERIAL SHOULD BE PLACED IN AREAS PRONE TO EROSION. EMBANKMENT STABILITY SHOULD BE INSPECTED FOR SEEPAGE AND BURROWING ANIMALS.
- MOW THE GRASS AROUND THE PERIMETER OF AND WITHIN THE FILTER. SEED BARE AREAS, AND REMOVE LITTER AND DEBRIS AT LEAST THREE TIMES PER GROWING SEASON TO MAINTAIN MAXIMUM GRASS HEIGHTS LESS THAN TWELVE INCHES. REMOVE ANY INVASIVE VEGETATION WITHIN THE EXTENTS OF THE FILTER. ANY INVASIVE VEGETATION ENCRONCHING UPON THE PERIMETER OF AND/OR COMPROMISING THE ORIGINAL DESIGN INTENT, IF DEAD OR DYING GRASS ON THE BOTTOM IS OBSERVED, CHECK TO ENSURE THAT WATER INFILTRATES WITHIN TWO DAYS FOLLOWING STORMS.
- SILT/SEDIMENT SHOULD BE REMOVED FROM THE FILTER BED ANNUALLY, WHEN ACCUMULATION EXCEEDS 1 INCH, OR WHEN THE FILTERING CAPACITY DIMINISHES SUBSTANTIALLY. IF STANDING WATER IS OBSERVED MORE THAN 48 HOURS AFTER A STORM EVENT, THEN THE TOP 6 INCHES OF SAND SHOULD BE REMOVED AND REPLACED. IF DISCOLORED OR CONTAMINATED MATERIAL IS FOUND BELOW THIS REMOVED SURFACE THEN THAT MATERIAL SHOULD ALSO BE REMOVED AND REPLACED UNTIL ALL CONTAMINATED SAND REGULATIONS.

**GENERAL NOTES:**

- MAINTENANCE OF THE STORMWATER SYSTEM DURING CONSTRUCTION OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- UPON COMPLETION OF THE CONSTRUCTION, MAINTENANCE OF THE STORMWATER SYSTEM SHALL BECOME THE RESPONSIBILITY OF THE OWNER.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: AUG 03 2023 FILE #: 22-0255  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**NORTHEAST ENGINEERS & CONSULTANTS, INC.**



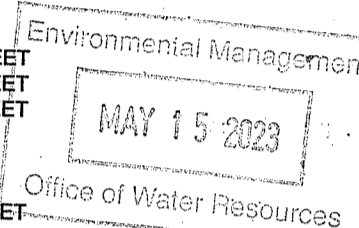
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- WATERFRONT
- SURVEYING
- GEOTECHNICAL
- ENVIRONMENTAL
- TRANSPORTATION
- STRUCTURAL

**TOWN OF TIVERTON ZONING DATA:**

ZONING DISTRICT:	R60 (RESIDENTIAL)
MINIMUM LOT AREA:	60,000 SQ. FT.
MINIMUM LOT WIDTH:	175 FEET
MINIMUM BUILDING SETBACK:	FRONT YARD 40 FEET SIDE YARD 30 FEET REAR YARD 60 FEET
MAXIMUM LOT COVERAGE:	15%
MAXIMUM BUILDING HEIGHT:	35 FEET



**RECEIVING WATER CONDITIONS TABLE:**

NAME	UNNAMED TRIBUTARY
STREAM ORDER	01
WATERBODY ID	R007037R-04
WB DESCRIPTION	UNNAMED TRIBUTARY #2 TO SOUTH WATUPPA POND, MA, TIVERTON
IMPAIRMENTS	TMDL
TPML	NONE
WATER QUALITY STANDARD	A
303D CATEGORY	3
FISHERY TYPE	WARM
SRPW	NO
STORMWATER POT. IMPAIR.	NO
STORMWATER CONFIRM IMPAIR.	NO

No.	Revision	Date	App.
Designed By:	JJR	Drawn by:	JJR
Scale:	N/A	Date:	21JUN22
Checked by:	GES		

Project Title:  
**FRIENDSHIP FARMS  
PHASE I  
A.P. 214, LOT 112  
STAFFORD ROAD  
TIVERTON, RHODE ISLAND**

Client/Owner:  
**TIVERTON INVESTMENTS, LLC  
150 CHESTNUT STREET, 4th FLOOR  
PROVIDENCE, RI 02903**

Issued for:  
**PERMITTING**

Drawing Title:

**PROJECT NOTES**

Drawing Number:	<b>C-2</b>
Sheet	<b>2 of 14</b>
Project Number:	<b>21265.0</b>
Survey Index:	<b>11 - 214 - 112</b>

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A.P. 213, LOT 134  
N/F AWASHONK'S  
REALTY INC.  
BK. 1574 PG. 60

A.P. 214 LOT 112  
N/F TIVERTON  
INVESTMENTS, LLC  
AREA: 62.70 AC  
DEVELOPABLE: 38.89 AC

N/F ROSE L. ALEMIDA &  
BETHANY CARDACI  
AP 214 LOT 101  
BK. 1766 PG. 65

N/F DONNA MOREIRA  
AP 214 LOT 102  
BK. 1412 PG. 214

N/F THOMAS J. BLUSKO  
GEORGE MEDEIROS  
AP 214 LOT 103  
BK. 1646 PG. 272

N/F GEORGE MEDEIROS  
AP 214 LOT 104  
BK. 1472 PG. 133

N/F KEVIN W. S.  
DEMELLO  
AP 214 LOT  
109  
BK. 1432  
PG. 180

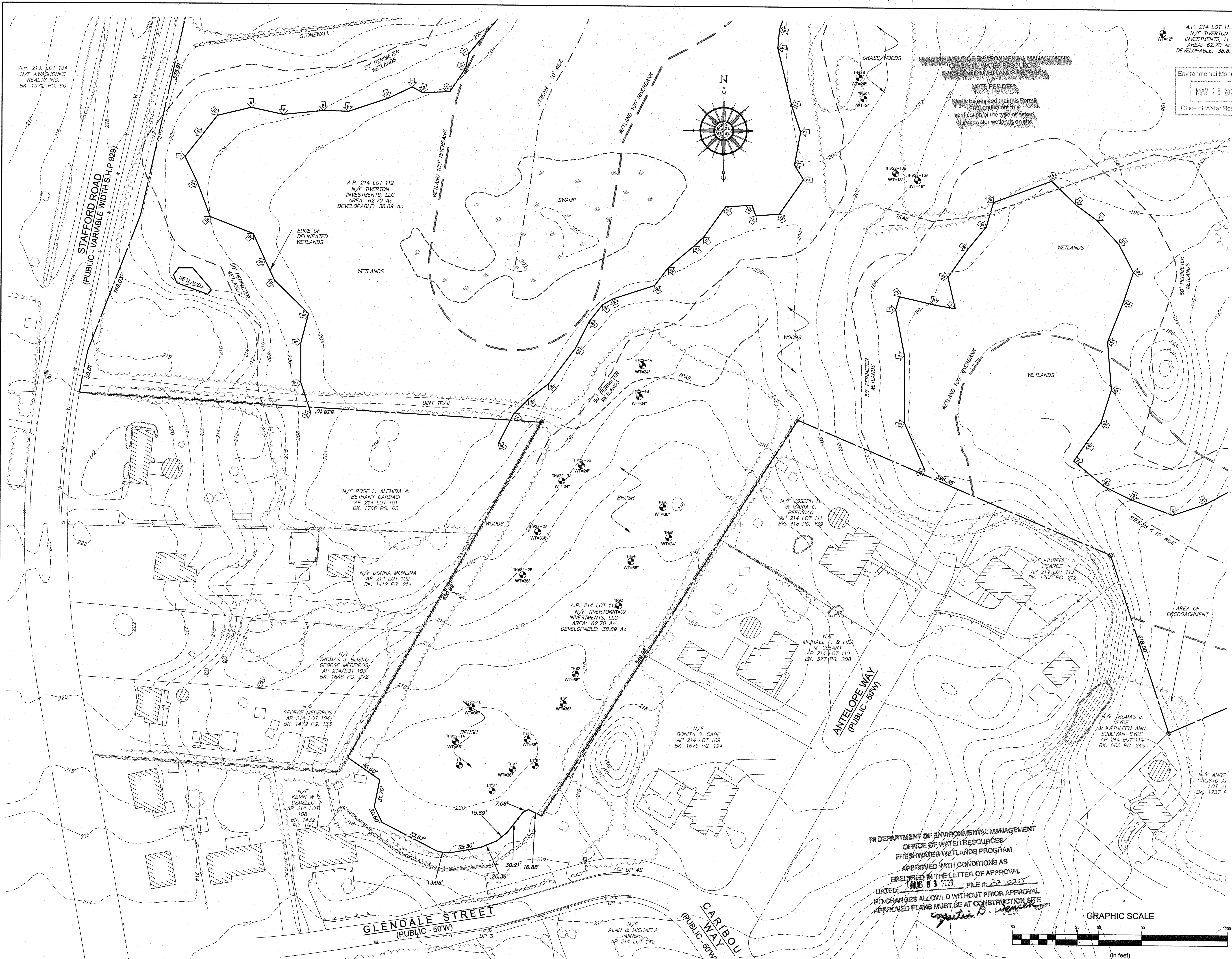
A.P. 214 LOT 111  
N/F TIVERTON  
INVESTMENTS, LLC  
AREA: 62.70 AC  
DEVELOPABLE: 38.89 AC

N/F BONITA G. CADE  
AP 214 LOT 109  
BK. 1675 PG. 194

N/F MICHAEL F. & LISA  
M. CLEARY  
AP 214 LOT 110  
BK. 377 PG. 208

N/F THOMAS J.  
STOIE  
& KATHLEEN ANN  
SULLIVAN-STOIE  
AP 214-400\*178  
BK. 605 PG. 248

N/F ANGE  
CAUSTO A.  
LOT 21  
BK. 1237 F



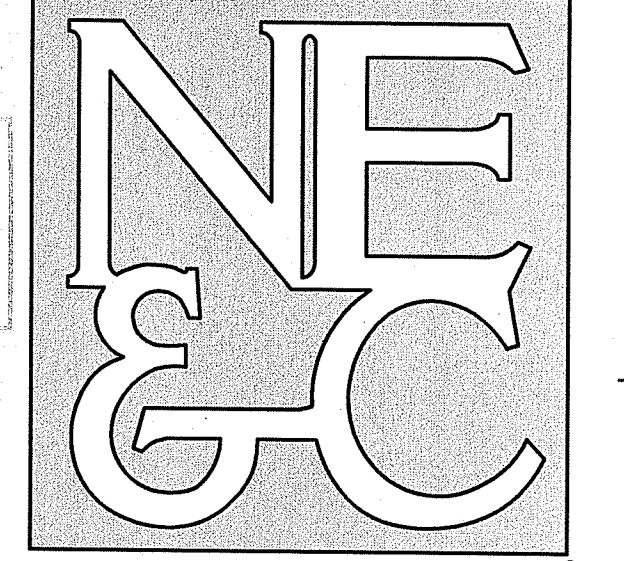
A.P. 214 LOT 11,  
N/F TIVERTON  
INVESTMENTS, LLC  
AREA: 62.70 AC  
DEVELOPABLE: 38.89 AC

Environmental Management  
Office of Water Resources  
MAY 15 2023

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.

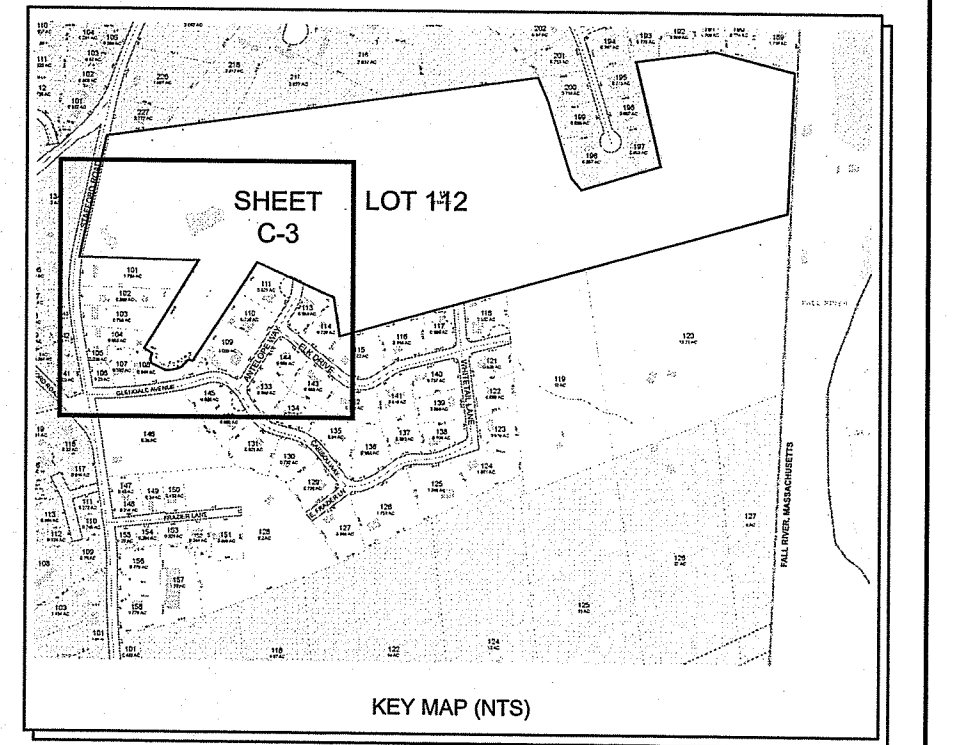
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: **JUN 03 2023** FILE #: 22-0253  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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ENVIRONMENTAL  
TRANSPORTATION  
STRUCTURAL

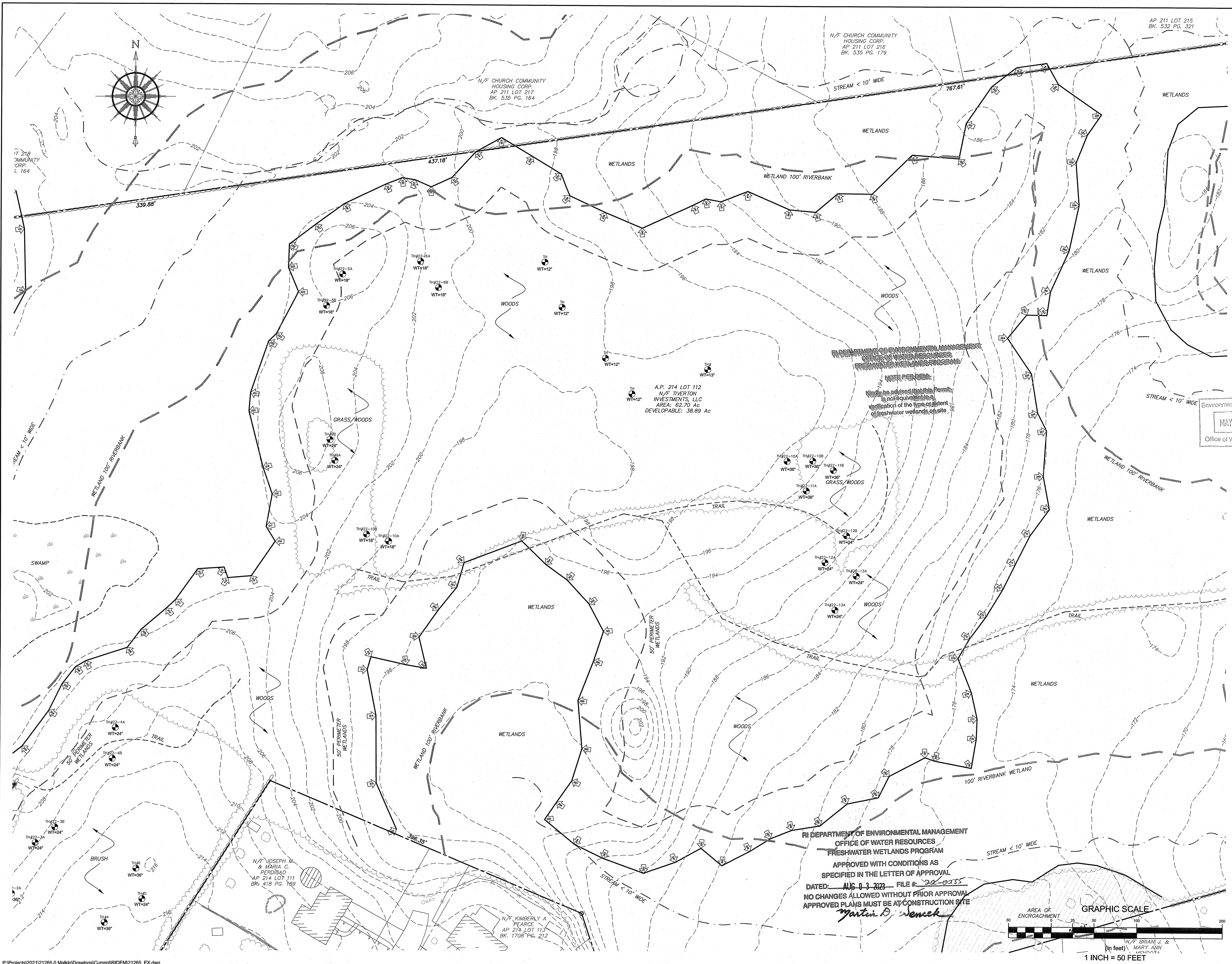
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LEGEND

---	PROPERTY LINE
---	ABUTTER PROPERTY LINE
---	TOPOGRAPHIC CONTOUR
---	STREAM
---	WETLAND BOUNDARY
---	PERIMETER WETLAND BOUNDARY
---	RIVERBANK WETLAND BOUNDARY
W	WATER LINE
W	WETLAND FLAG
U	UTILITY POLE

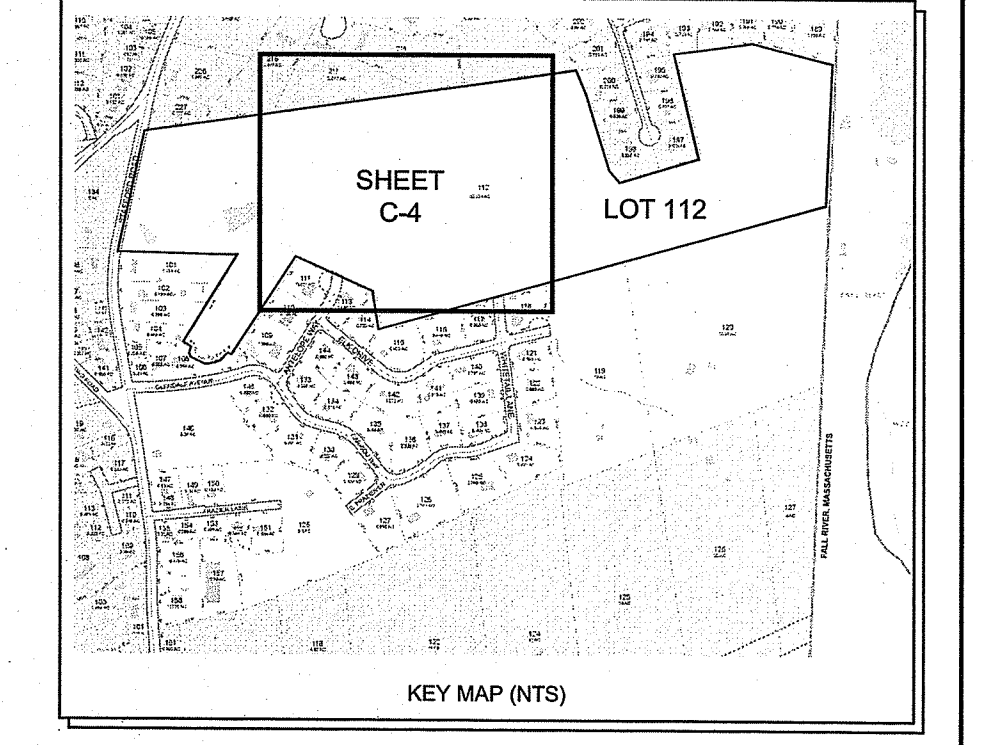
1	ADDED TEST HOLE LOCATIONS	09MAY23	
No.	Revision	Date	App.
Designed By:	JJR	Drawn by:	JJR
Checked by:	GES		
Scale:	1" = 50'	Date:	21JUN22
Project Title:	<b>FRIENDSHIP FARMS PHASE I</b> A.P. 214, LOT 112 STAFFORD ROAD TIVERTON, RHODE ISLAND		
Client/Owner:	TIVERTON INVESTMENTS, LLC 150 CHESTNUT STREET, 4TH FLOOR PROVIDENCE, RI 02903		
Issued for:	PERMITTING		
Drawing Title:	<b>EXISTING CONDITIONS SHEET 1</b>		
Drawing Number:	<b>C-3</b>		
Sheet	3 of 14		
Project Number:	21265.0		
Survey Index:	11 - 214 - 112		
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**LEGEND**

	PROPERTY LINE
	ADJUTER PROPERTY LINE
	TOPOGRAPHIC CONTOUR
	STREAM
	WETLAND BOUNDARY
	PERIMETER WETLAND BOUNDARY
	RIVERBANK WETLAND BOUNDARY
	WATER LINE
	WETLAND FLAG
	UTILITY POLE

1	ADDED TEST HOLE LOCATIONS	09MAY23
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<b>FRIENDSHIP FARMS PHASE I</b>		
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Client/Owner:		
TIVERTON INVESTMENTS, LLC 150 CHESTNUT STREET, 4TH FLOOR PROVIDENCE, RI 02903		
Issued for:		
PERMITTING		
Drawing Title:		
<b>EXISTING CONDITIONS SHEET 2</b>		
Drawing Number:		<b>C-4</b>
Sheet		4 of 14
Project Number:		<b>21265.0</b>
Survey Index:		11 - 214 - 112
<p>OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.</p>		

A.P. 213, LOT 134  
N/F AWASZONKS  
REALTY INC.  
BK. 1571, PG. 60

AP 214 LOT 112  
62.70+- ACRES  
DEVELOPABLE: 38.84+- ACRES  
ZONED: R60

AP 214 LOT 112  
62.70+- ACRES  
DEVELOPABLE: 38.84+- ACRES  
ZONED: R60

N/F ROSE L. ALEMIDA &  
SETHANY CARACCI  
AP 214 LOT 101  
BK. 1766 PG. 65

N/F JOSEPH M. &  
MARIA C. FERROGALO  
AP 214 LOT 111  
BK. 418 PG. 189

N/F KIMBERLY A.  
PEARCE  
AP 214 LOT 113  
BK. 1708 PG. 212

N/F MICHAEL F. & LISA  
M. CLEARY  
AP 214 LOT 110  
BK. 377 PG. 208

N/F BONITA G. CADE  
AP 214 LOT 109  
BK. 1675 PG. 194

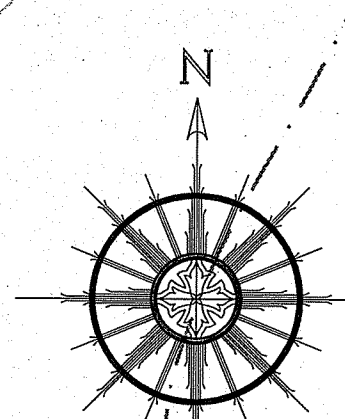
N/F THOMAS J.  
SYOE & KATHLEEN ANN  
SULLIVAN-SYOE  
AP 214 LOT 114  
BK. 605 PG. 248

N/F ANGE  
CALISTO AI  
LOT 21  
BK. 1237 F

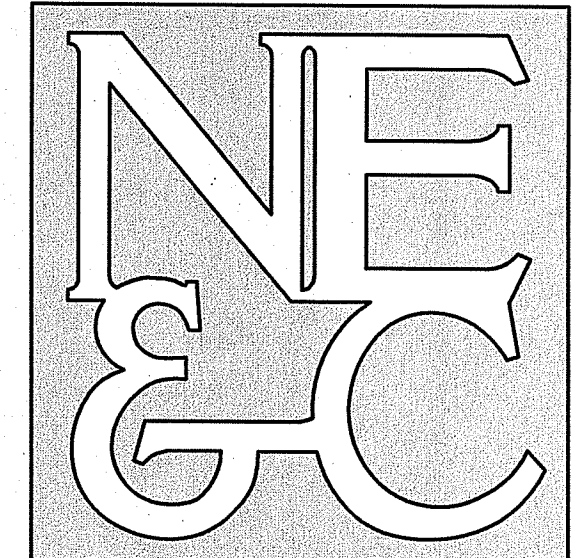
N/F KEVIN W.  
DEMELLO  
AP 214 LOT  
108  
BK. 1432  
PG. 180

N/F ALAN & MICHAELA  
MINNER  
AP 214 LOT 145

- LEGEND**
- PROPERTY LINE
  - - - ABUTTER PROPERTY LINE
  - - - TOPOGRAPHIC CONTOUR
  - - - STREAM
  - - - WETLAND BOUNDARY
  - - - PERIMETER WETLAND BOUNDARY
  - - - RIVERBANK WETLAND BOUNDARY
  - - - WATER LINE
  - - - WETLAND FLAG
  - - - UTILITY POLE
  - - - PROPOSED WATER LINE
  - - - PROPOSED ELEC CONDUIT
  - - - PROPOSED GATE VALVE/CURB STOP
  - - - PROPOSED HYDRANT
  - - - PROPOSED CONTOUR
  - - - PROPOSED SPOT ELEVATION
  - - - PROPOSED DRAIN LINE
  - - - PROPOSED CATCH BASIN
  - - - PROPOSED DRAIN MANHOLE
  - - - L.O.D. PROPOSED LIMIT OF DISTURBANCE

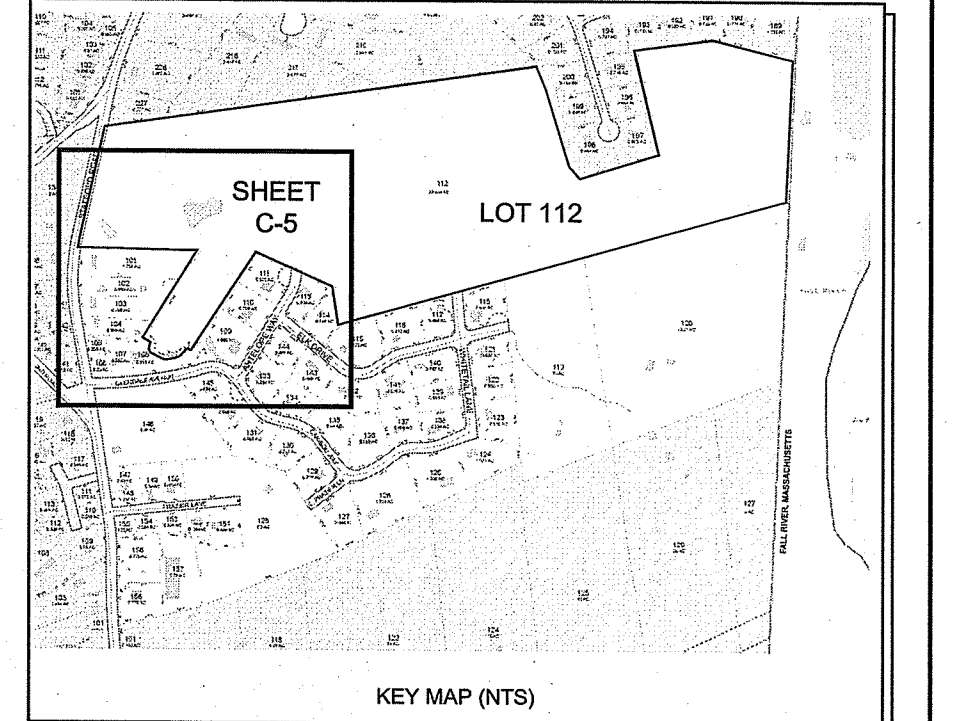


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Environmental Management  
MAY 15 2023  
Office of Water Resources

**NOTES:**  
1. REFER TO COMPLETE PROJECT NOTES ON SHEET C-2.

No.	Revision	Date	App.
1	REVISED PER RIDEM COMMENTS	09MAY23	

Designed By: JJR Drawn by: JJR Checked by: GES  
Scale: 1" = 50' Date: 21JUN22

Project Title:  
**FRIENDSHIP FARMS  
PHASE I**  
A.P. 214, LOT 112  
STAFFORD ROAD  
TIVERTON, RHODE ISLAND

Client/Owner:  
TIVERTON INVESTMENTS, LLC  
150 CHESTNUT STREET, 4TH FLOOR  
PROVIDENCE, RI 02903

Issued for:  
PERMITTING

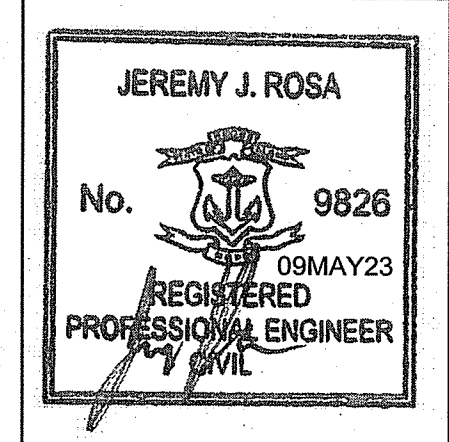
Drawing Title:  
**PROPOSED LAYOUT  
AND UTILITY  
SHEET 1**

Drawing Number:  
**C-5**

Sheet **5** of **14**

Project Number:  
**21265.0**

Survey Index:  
**11 - 214 - 112**

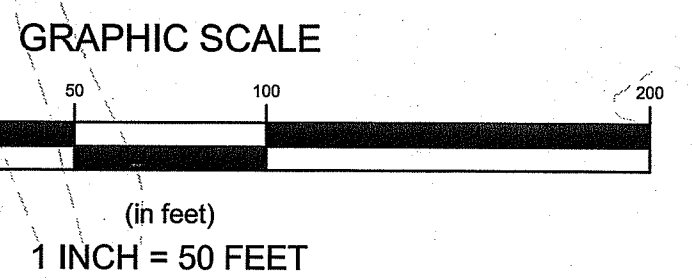


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OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: **AUG 03 2023** FILE # **23-0255**  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
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*Martin D. Wenczek*

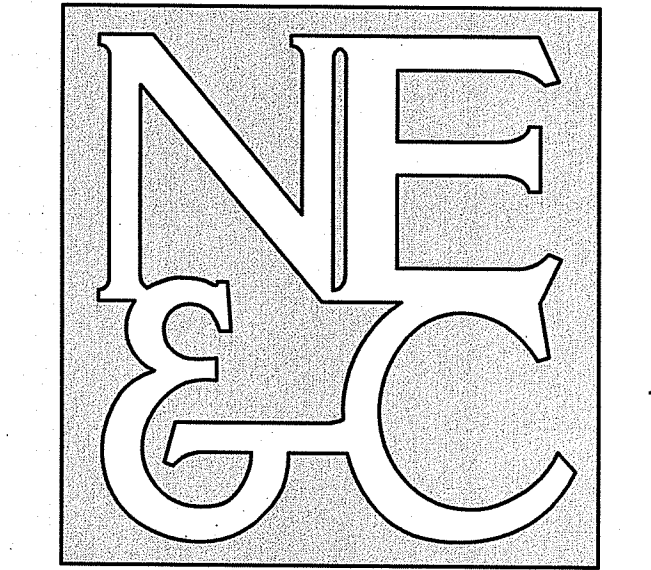
**NOTE PER DEM:** All evergreen screen plantings shall consist of a mix of eastern red cedar (*Juniperus virginiana*), rosebay rhododendron (*Rhododendron maximum*), and/or mountain laurel (*Kalmia latifolia*), to be planted six feet on center, and four feet tall after planting.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM AS  
APPROVED WITH CONDITIONS AS  
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- LEGEND**
- PROPERTY LINE
  - - - ABUTTER PROPERTY LINE
  - - - TOPOGRAPHIC CONTOUR
  - STREAM
  - - - WETLAND BOUNDARY
  - - - PERIMETER WETLAND BOUNDARY
  - - - RIVERBANK WETLAND BOUNDARY
  - W WATER LINE
  - W WETLAND FLAG
  - U UTILITY POLE
  - W PROPOSED WATER LINE
  - E PROPOSED ELEC CONDUIT
  - PROPOSED GATE VALVE/CURB STOP
  - PROPOSED HYDRANT
  - 100 PROPOSED CONTOUR
  - +100.0 PROPOSED SPOT ELEVATION
  - D PROPOSED DRAIN LINE
  - D PROPOSED CATCH BASIN
  - D PROPOSED DRAIN MANHOLE
  - L.O.D. PROPOSED LIMIT OF DISTURBANCE

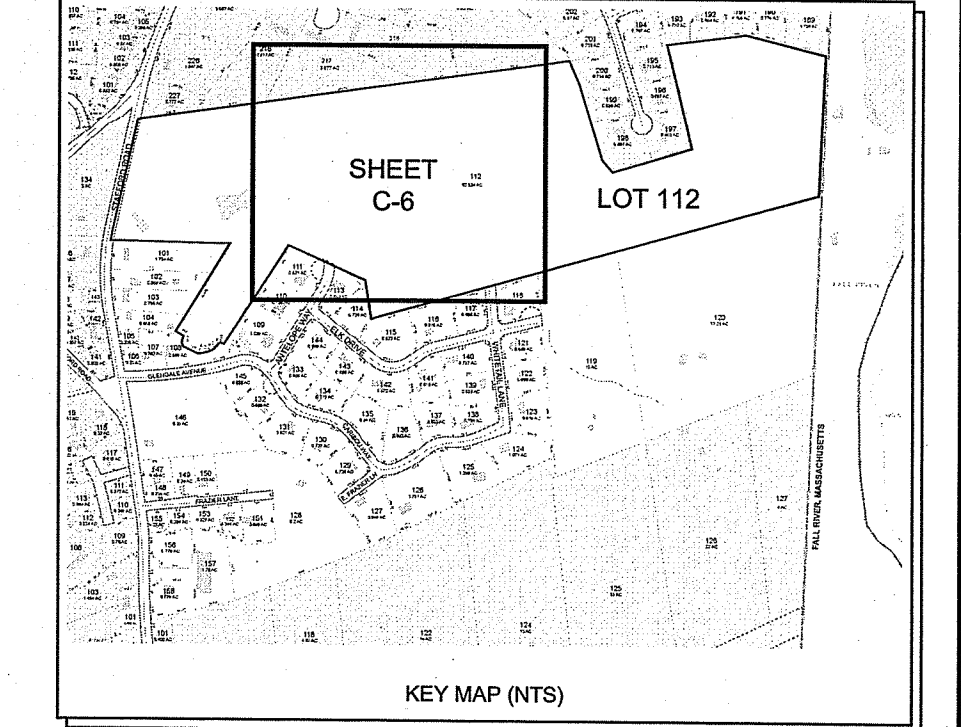
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- GEOTECHNICAL
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- TRANSPORTATION
- STRUCTURAL



Environmental Management  
 MAY 15 2023  
 Office of Water Resources

**NOTES:**

1. REFER TO COMPLETE PROJECT NOTES ON SHEET C-2.

1	REVISED PER RIDEM COMMENTS	09MAY23	
No.	Revision	Date	App.
Designed By:	JJR	Drawn by: JJR	Checked by: GES
Scale:	1" = 50'	Date:	21JUN22
Project Title:			
<b>FRIENDSHIP FARMS PHASE I</b>			
A.P. 214, LOT 112 STAFFORD ROAD TIVERTON, RHODE ISLAND			
Client/Owner:			
TIVERTON INVESTMENTS, LLC 150 CHESTNUT STREET 4TH FLOOR PROVIDENCE, RI 02903			
Issued for:			
PERMITTING			
Drawing Title:			
<b>PROPOSED LAYOUT AND UTILITY SHEET 2</b>			

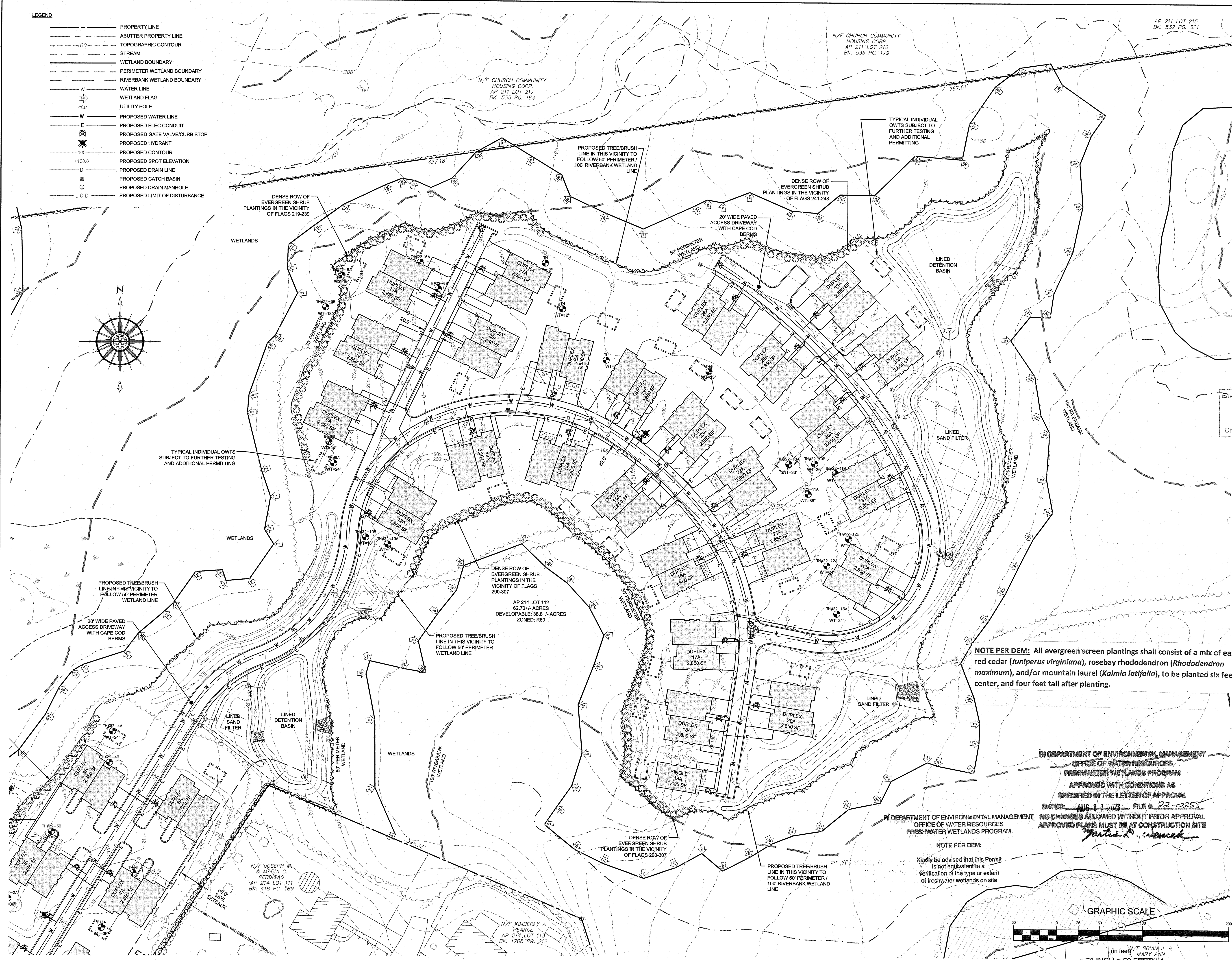
Client/Owner: TIVERTON INVESTMENTS, LLC  
 150 CHESTNUT STREET 4TH FLOOR  
 PROVIDENCE, RI 02903

Issued for: PERMITTING

Drawing Title: **PROPOSED LAYOUT AND UTILITY SHEET 2**

	Drawing Number:	C-6
	Sheet	6 of 14
	Project Number:	21265.0
	Survey Index:	11 - 214 - 112

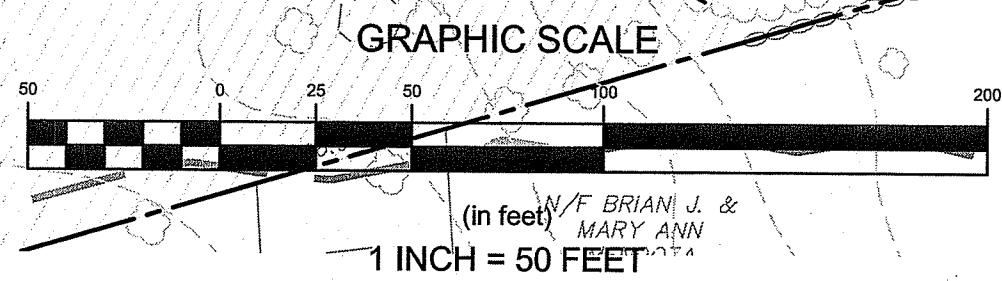
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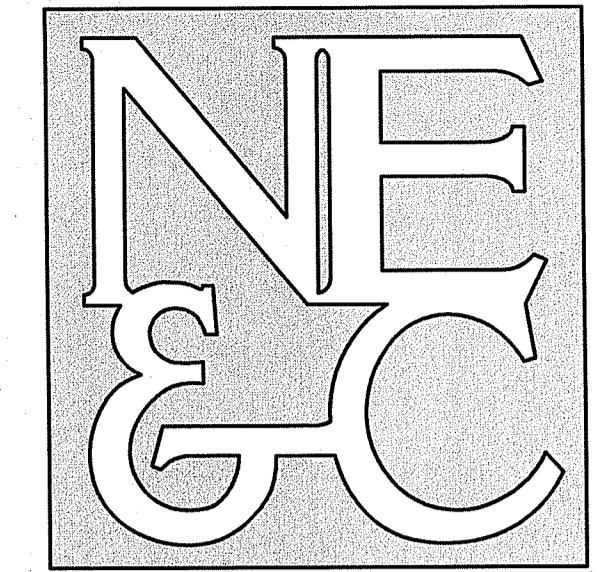


**NOTE PER DEM:** All evergreen screen plantings shall consist of a mix of eastern red cedar (*Juniperus virginiana*), rosebay rhododendron (*Rhododendron maximum*), and/or mountain laurel (*Kalmia latifolia*), to be planted six feet on center, and four feet tall after planting.

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 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: AUG 13 2023 FILE # 22-285  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**NOTE PER DEM:**  
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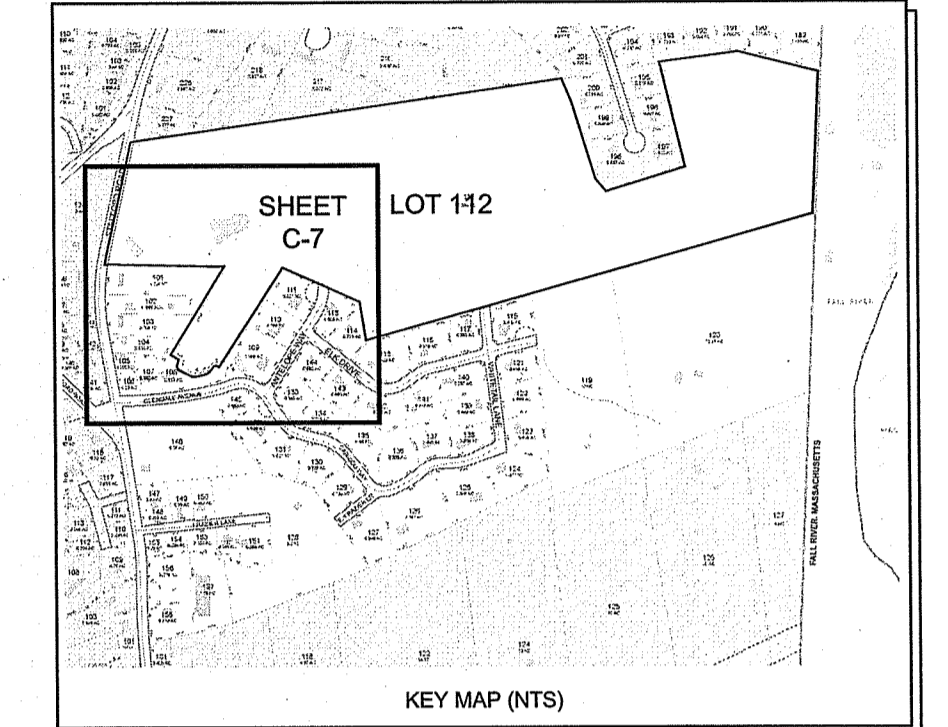




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TRANSPORTATION  
STRUCTURAL



Environmental Management  
MAY 15 2023  
Office of Water Resources

NOTES:

1. REFER TO COMPLETE PROJECT NOTES ON SHEET C-2.

No.	Revision	Date	App.
1	REVISED PER RIDEM COMMENTS	09MAY23	

Designed By: JJR Drawn by: JJR Checked by: GES  
Scale: 1" = 50' Date: 21JUN22

**FRIENDSHIP FARMS  
PHASE I**  
A.P. 214, LOT 112  
STAFFORD ROAD  
TIVERTON, RHODE ISLAND

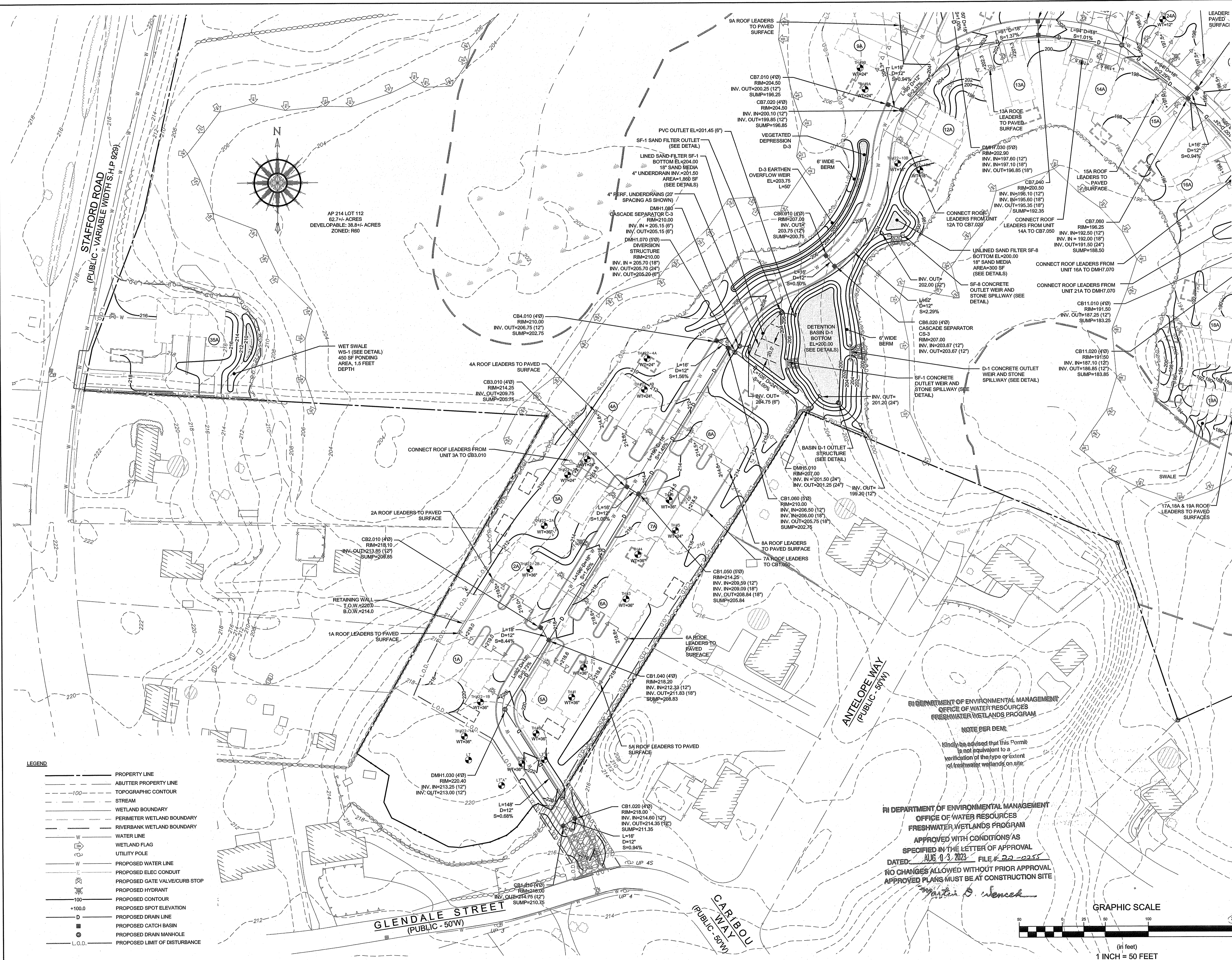
Client/Owner:  
TIVERTON INVESTMENTS, LLC  
150 CHESTNUT STREET, 4th FLOOR  
PROVIDENCE, RI 02903

Issued for:  
PERMITTING

**PROPOSED GRADING  
AND DRAINAGE**  
SHEET 1

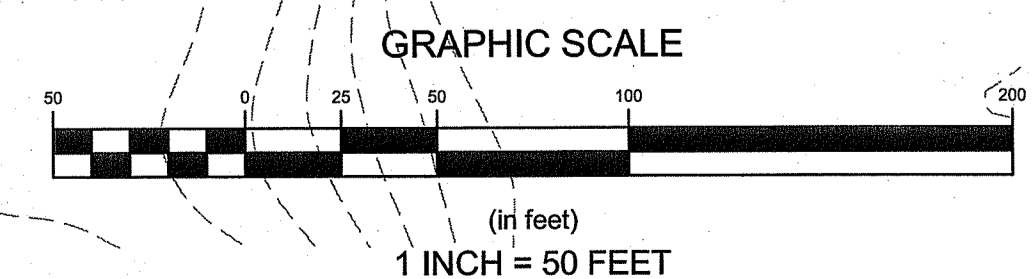
Drawing Number:  
**C-7**  
Sheet **7** of **14**  
Project Number:  
**21265.0**  
Survey Index:  
**11 - 214 - 112**

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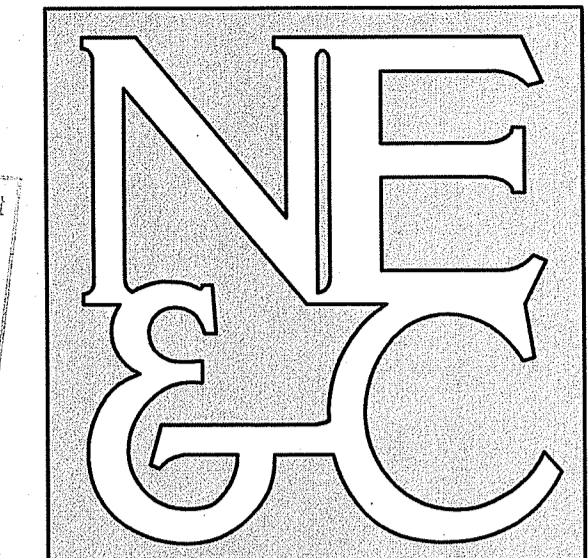
- LEGEND**
- PROPERTY LINE
  - - - ADJUTER PROPERTY LINE
  - - - TOPOGRAPHIC CONTOUR
  - - - STREAM
  - - - WETLAND BOUNDARY
  - - - PERIMETER WETLAND BOUNDARY
  - - - RIVERBANK WETLAND BOUNDARY
  - - - WATER LINE
  - - - WETLAND FLAG
  - - - UTILITY POLE
  - - - PROPOSED WATER LINE
  - - - PROPOSED ELEC CONDUIT
  - - - PROPOSED GATE VALVE/CURB STOP
  - - - PROPOSED HYDRANT
  - - - PROPOSED SPOT ELEVATION
  - - - PROPOSED DRAIN LINE
  - - - PROPOSED CATCH BASIN
  - - - PROPOSED DRAIN MANHOLE
  - - - PROPOSED LINE OF DISTURBANCE

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OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS/AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED **AUG 03 2023** FILE # **22-0255**  
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  - - - - - WETLAND BOUNDARY
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  - 100.0 PROPOSED CONTOUR
  - +100.0 PROPOSED SPOT ELEVATION
  - D PROPOSED DRAIN LINE
  - PROPOSED CATCH BASIN
  - PROPOSED DRAIN MANHOLE
  - L.O.D. PROPOSED LIMIT OF DISTURBANCE

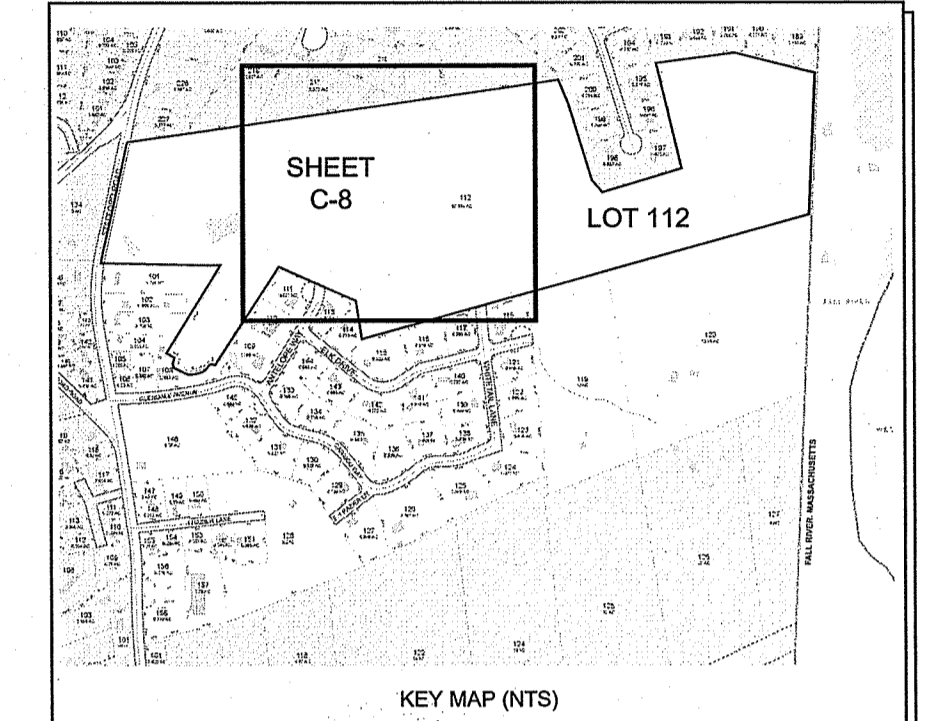
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APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: APR 11 2024 FILE # 22-025  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Martin D. Wenczek*  
NOTES:  
1. REFER TO COMPLETE PROJECT NOTES ON SHEET C-2.

No.	Revision	Date	App.
1	REVISED PER RIDEM COMMENTS	09MAY23	

Designed By: JJR Drawn by: JJR Checked by: GES  
Scale: 1" = 50' Date: 21JUN22

Project Title:  
**FRIENDSHIP FARMS  
PHASE I**  
A.P. 214, LOT 112  
STAFFORD ROAD  
TIVERTON, RHODE ISLAND

Client/Owner:  
TIVERTON INVESTMENTS, LLC  
150 CHESTNUT STREET, 4TH FLOOR  
PROVIDENCE, RI 02903

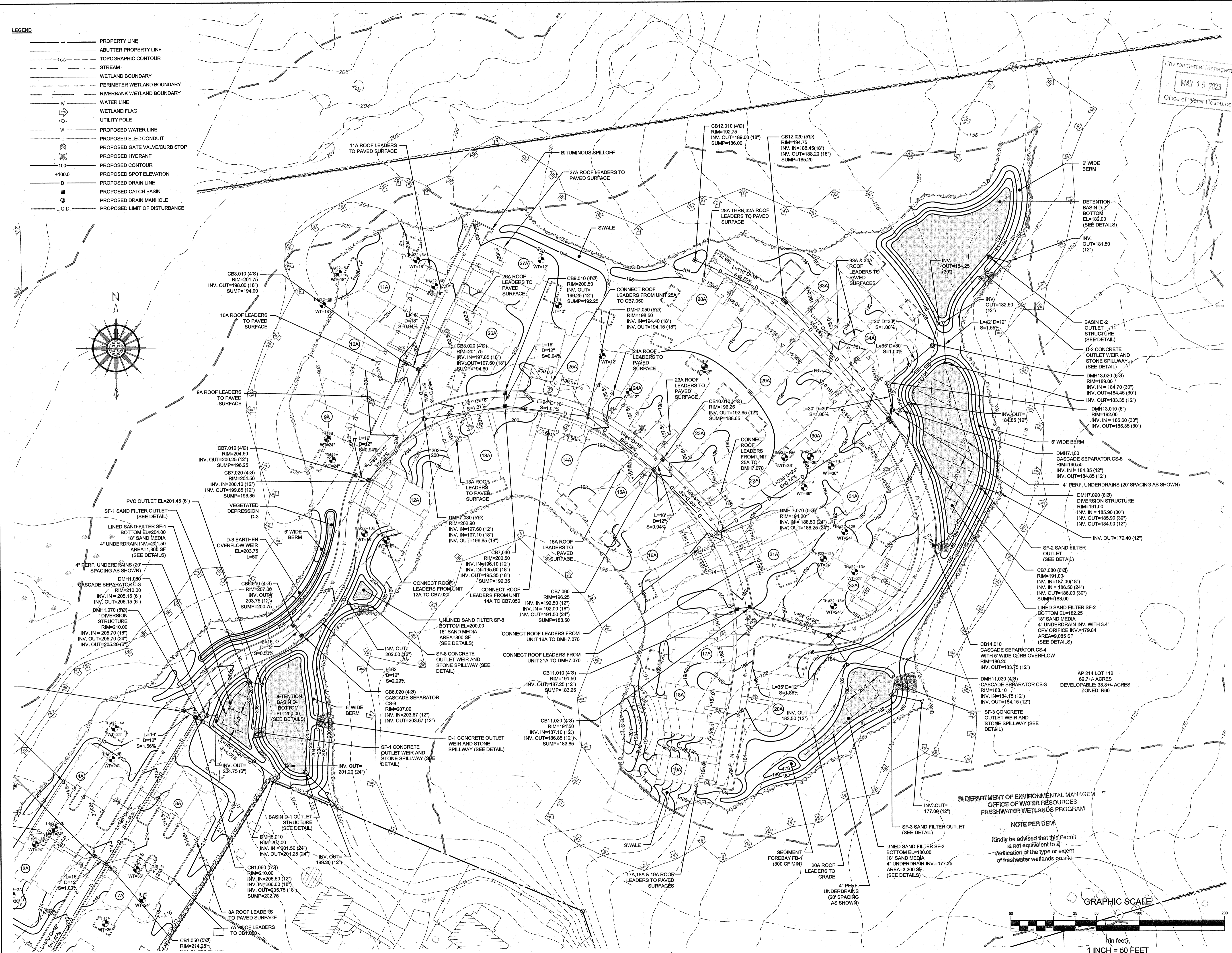
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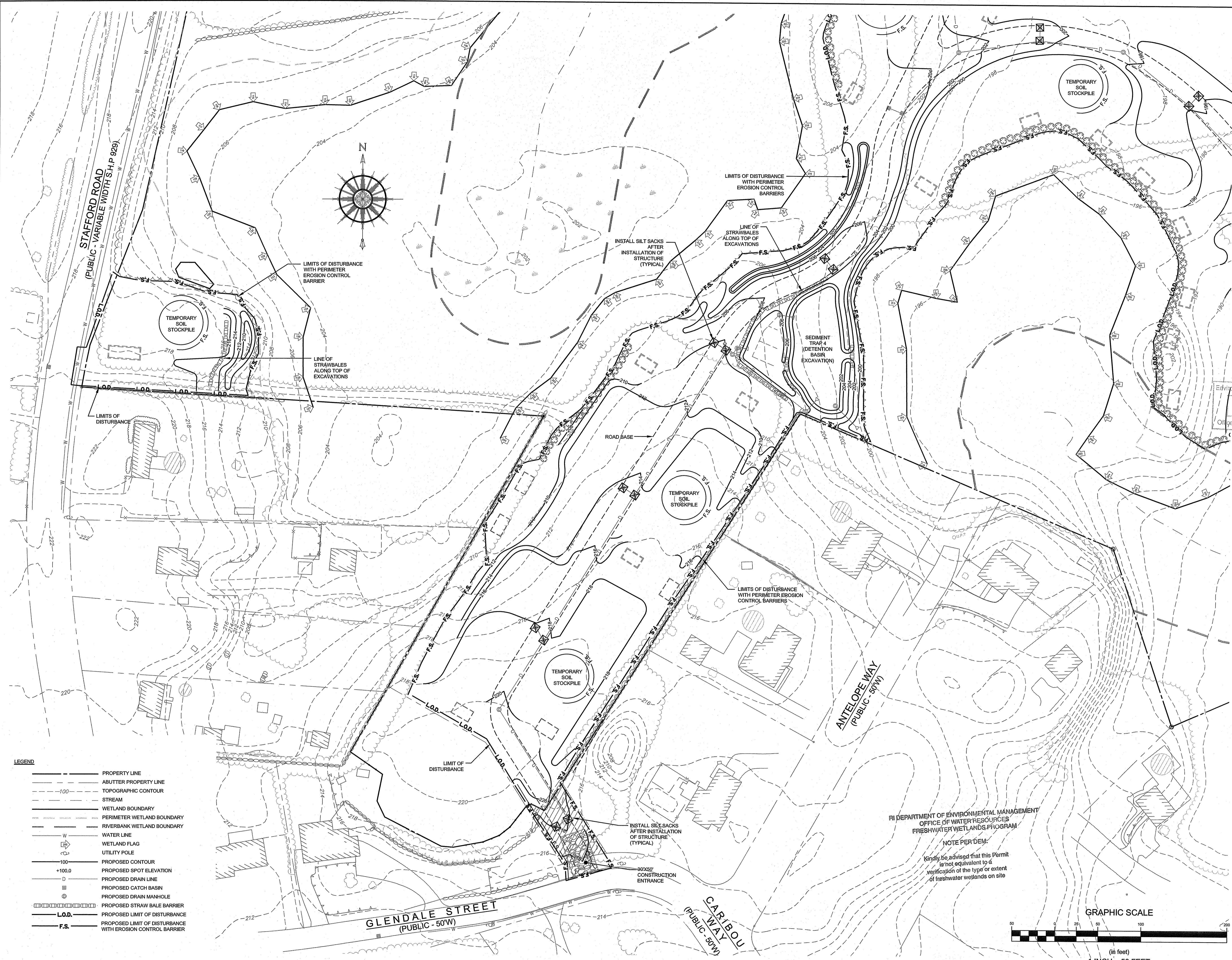
Drawing Title:  
**PROPOSED GRADING  
AND DRAINAGE**  
SHEET 2

Drawing Number: **C-8**  
Sheet **8** of **14**  
Project Number: **21265.0**  
Survey Index: **11 - 214 - 112**

**JEREMY J. ROSA**  
No. **9826**  
REGISTERED PROFESSIONAL ENGINEER  
09MAY23  
CIVIL

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**LEGEND**

---	PROPERTY LINE
---	ABUTTER PROPERTY LINE
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---	WETLAND BOUNDARY
---	PERIMETER WETLAND BOUNDARY
---	RIVERBANK WETLAND BOUNDARY
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---	PROPOSED CATCH BASIN
---	PROPOSED DRAIN MANHOLE
---	PROPOSED STRAW BALE BARRIER
---	PROPOSED LIMIT OF DISTURBANCE
---	PROPOSED LIMIT OF DISTURBANCE WITH EROSION CONTROL BARRIER

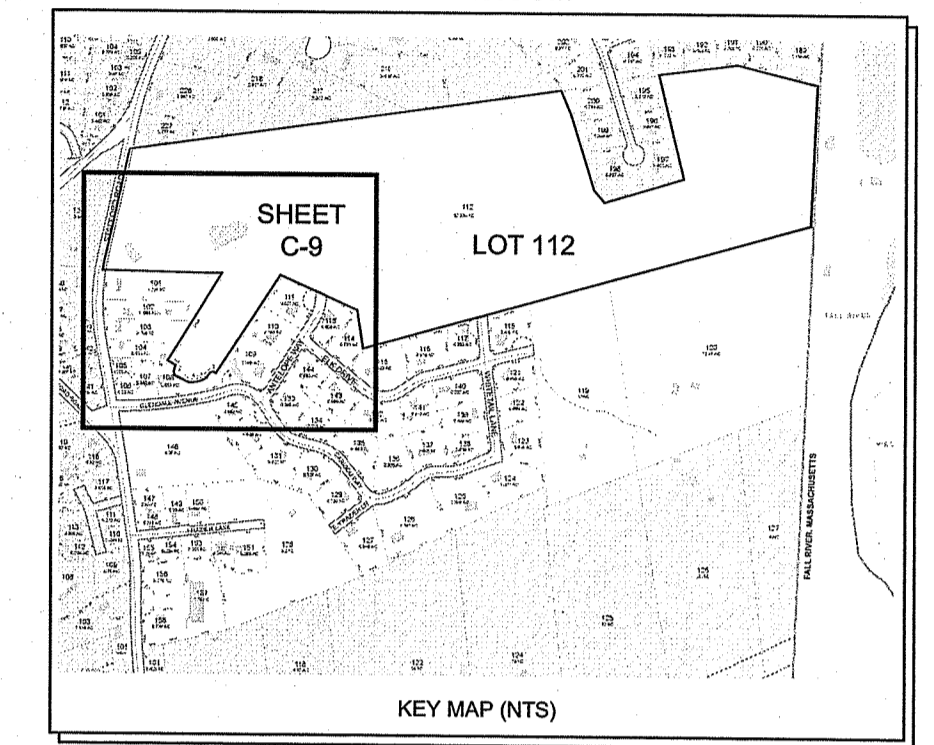
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 FRESHWATER WETLANDS PROGRAM

MAY 15 2023

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 03 2023 FILE # 22-0255

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*Walter B. Wenzel*

**NOTES:**  
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Scale:	1" = 50'	Date:	21JUN22

**FRIENDSHIP FARMS  
 PHASE I**  
 A.P. 214, LOT 112  
 STAFFORD ROAD  
 TIVERTON, RHODE ISLAND

Client/Owner:  
 TIVERTON INVESTMENTS, LLC  
 150 CHESTNUT STREET, 4th FLOOR  
 PROVIDENCE, RI 02903

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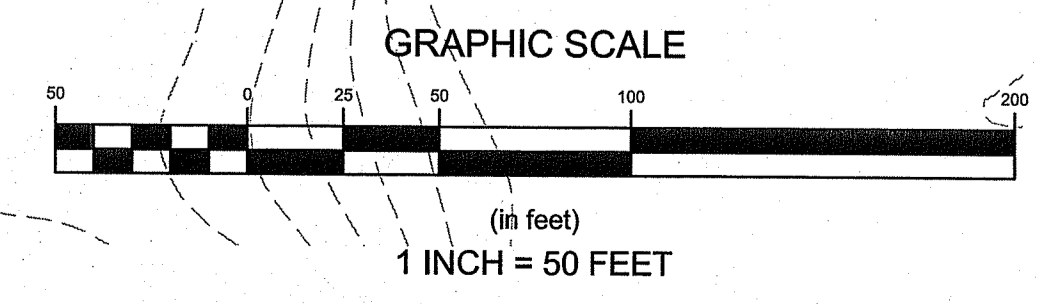
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**PROPOSED SOIL EROSION  
 AND SEDIMENT CONTROL**  
 SHEET 1

	Drawing Number:	<b>C-9</b>
	Sheet	9 of 14
	Project Number:	21265.0
	Survey Index:	11 - 214 - 112

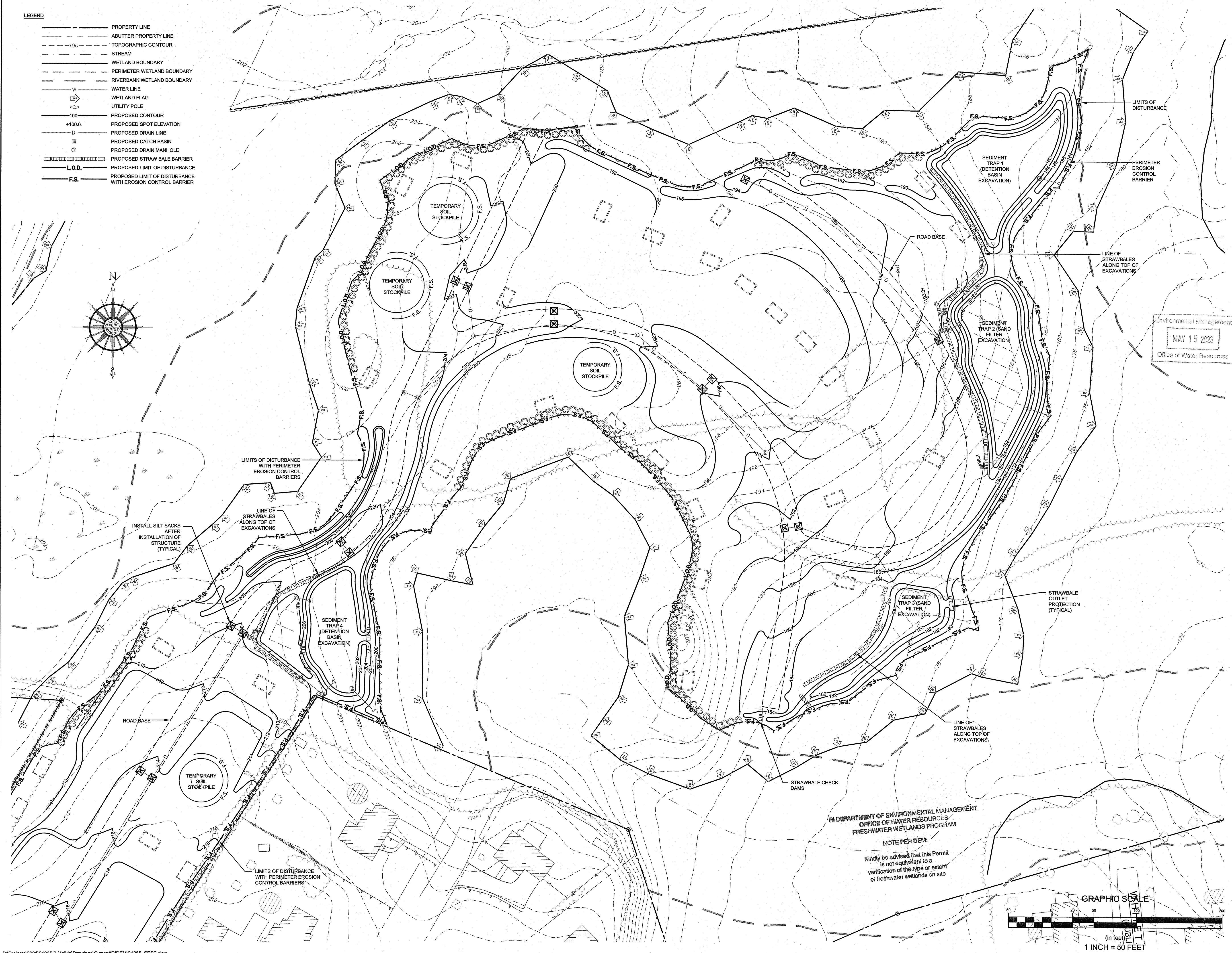
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  - L.O.D. PROPOSED LIMIT OF DISTURBANCE
  - F.S. PROPOSED LIMIT OF DISTURBANCE WITH EROSION CONTROL BARRIER



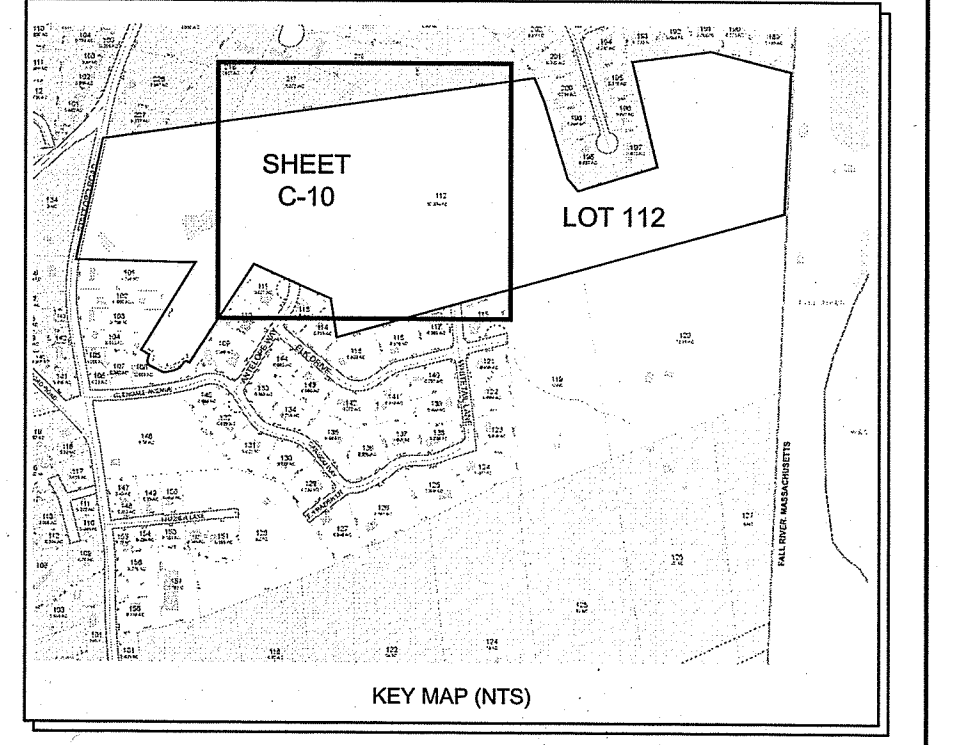
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*Martin D. Wencsek*

- NOTES:**
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Scale: 1" = 50'			

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 TIVERTON, RHODE ISLAND

Client/Owner:  
 TIVERTON INVESTMENTS, LLC  
 150 CHESTNUT STREET, 4th FLOOR  
 PROVIDENCE, RI 02903

Issued for:  
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Drawing Title:  
**PROPOSED SOIL EROSION AND SEDIMENT CONTROL**  
 SHEET 2

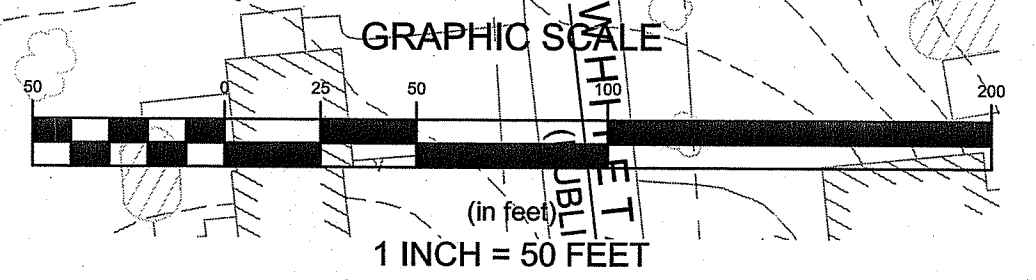
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	Sheet <b>10</b> of <b>14</b>
	Project Number: <b>21265.0</b>
	Survey Index: <b>11 - 214 - 112</b>

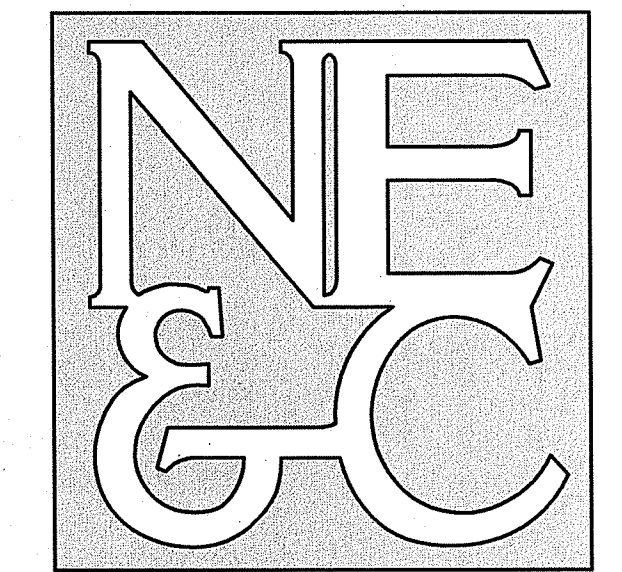
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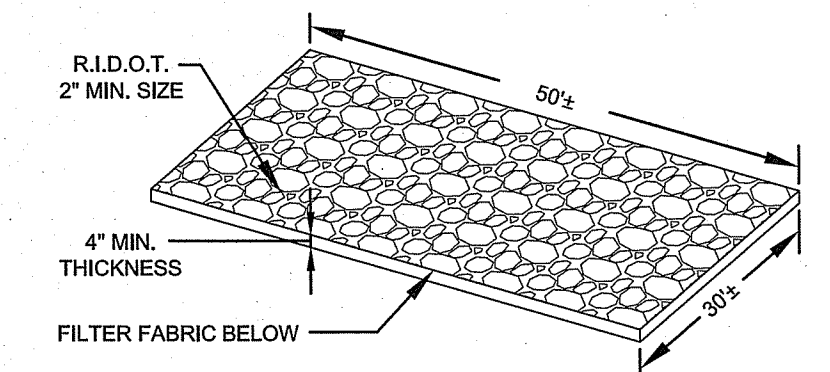
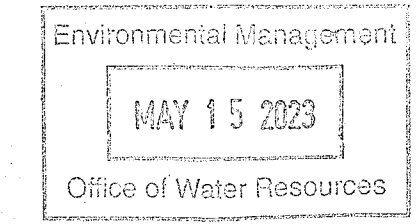




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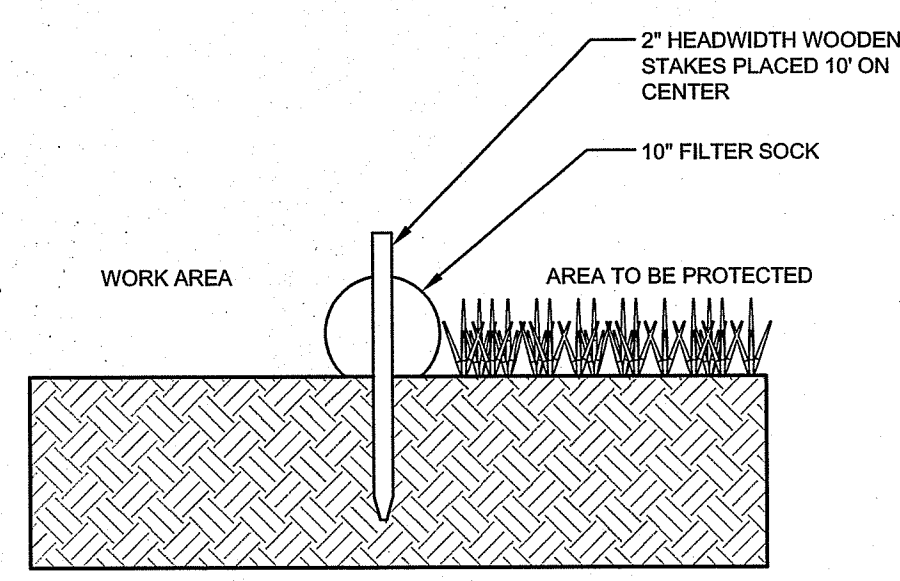
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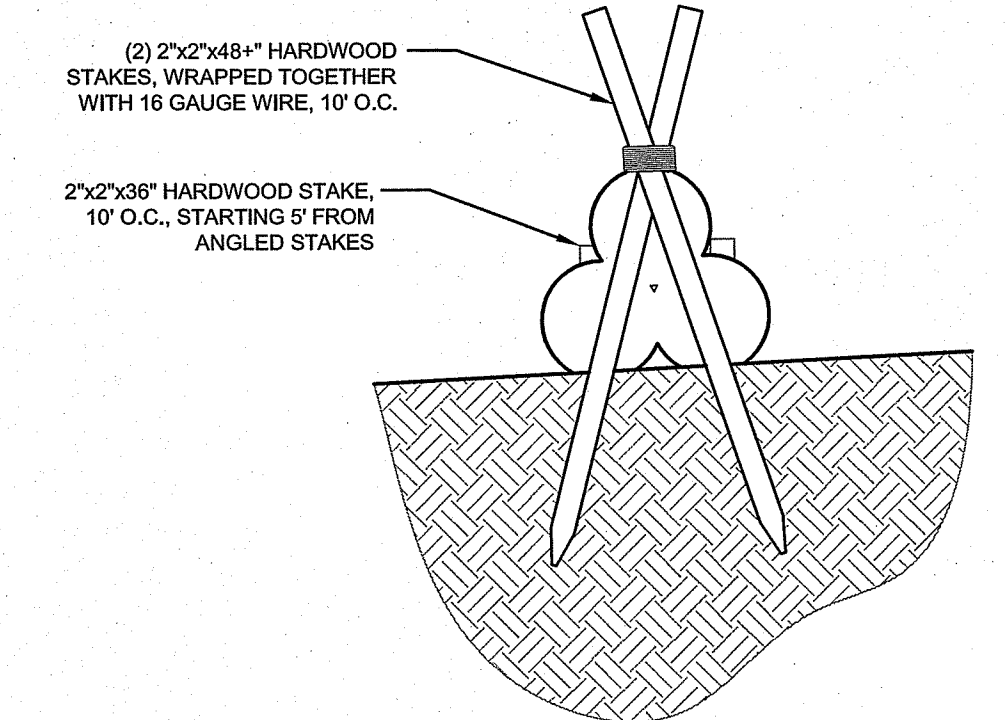
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**CONSTRUCTION ENTRANCE**  
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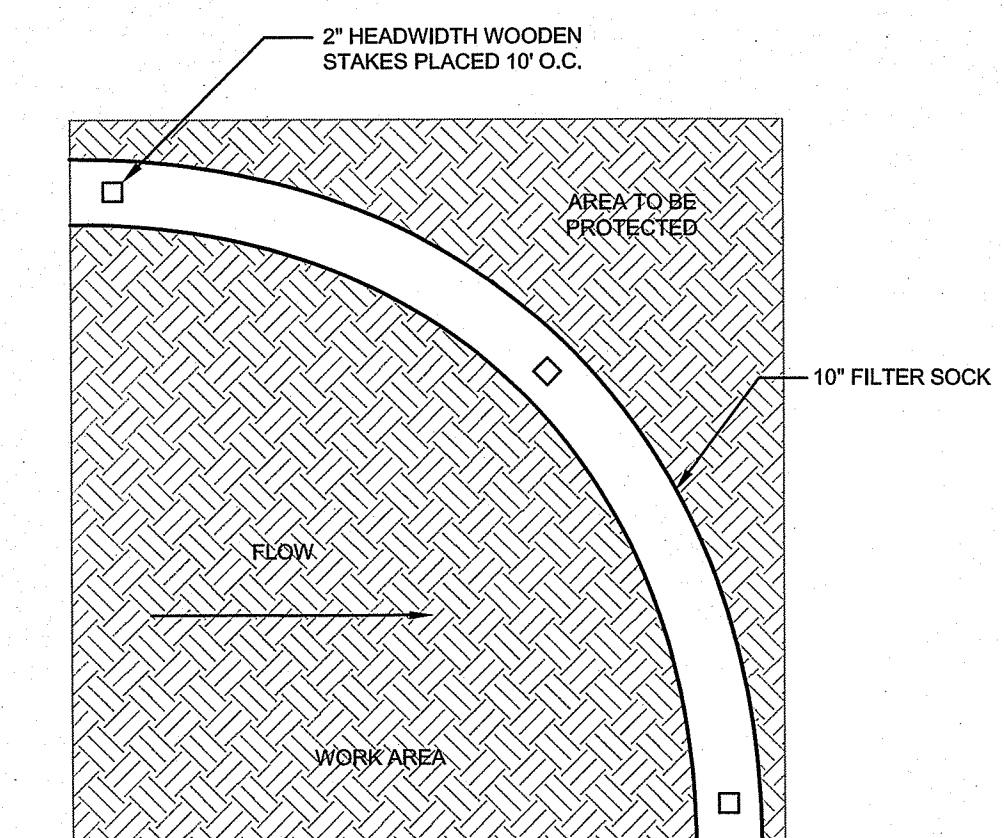
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*Martin D. Wencel*



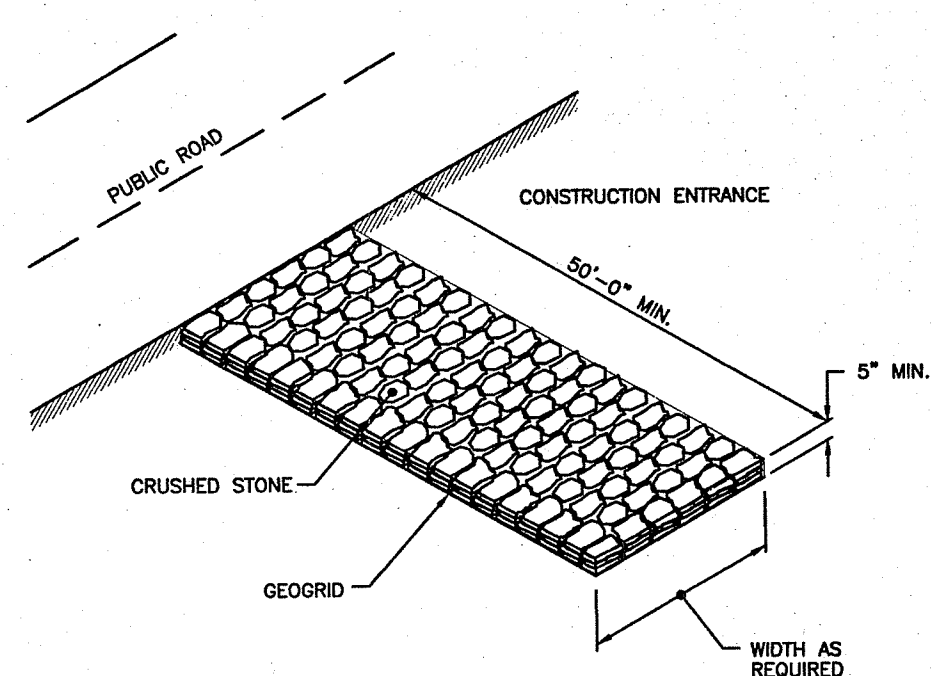
SECTION VIEW



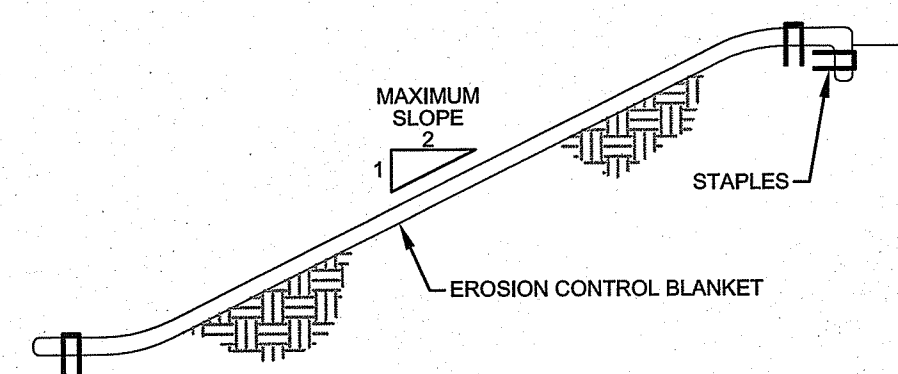
PYRAMID SECTION VIEW (FOR HIGH FLOW CONDITIONS)



**10" FILTER SOCK DETAIL**  
 SCALE: NOT TO SCALE



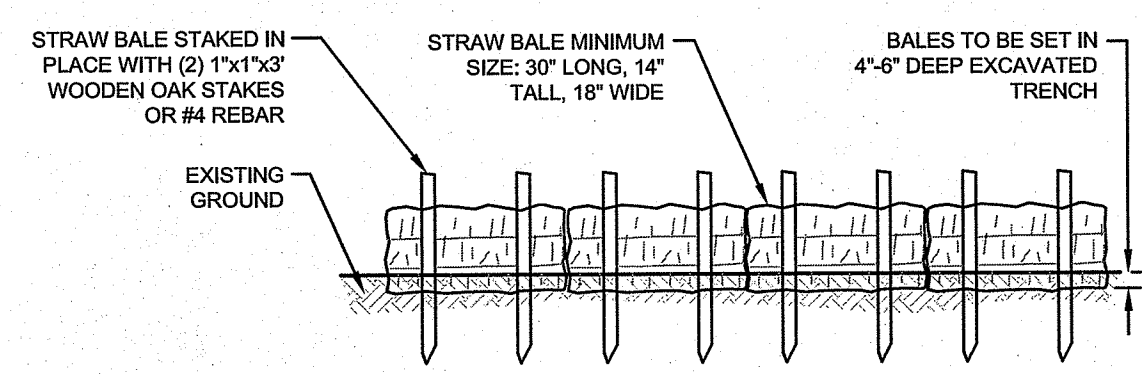
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 SCALE: NOT TO SCALE



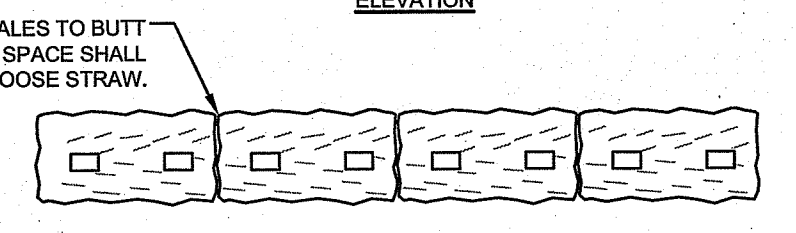
CROSS SECTION

- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
  2. ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
  3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
  4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
  5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

**EROSION CONTROL BLANKET**  
 SCALE: NOT TO SCALE



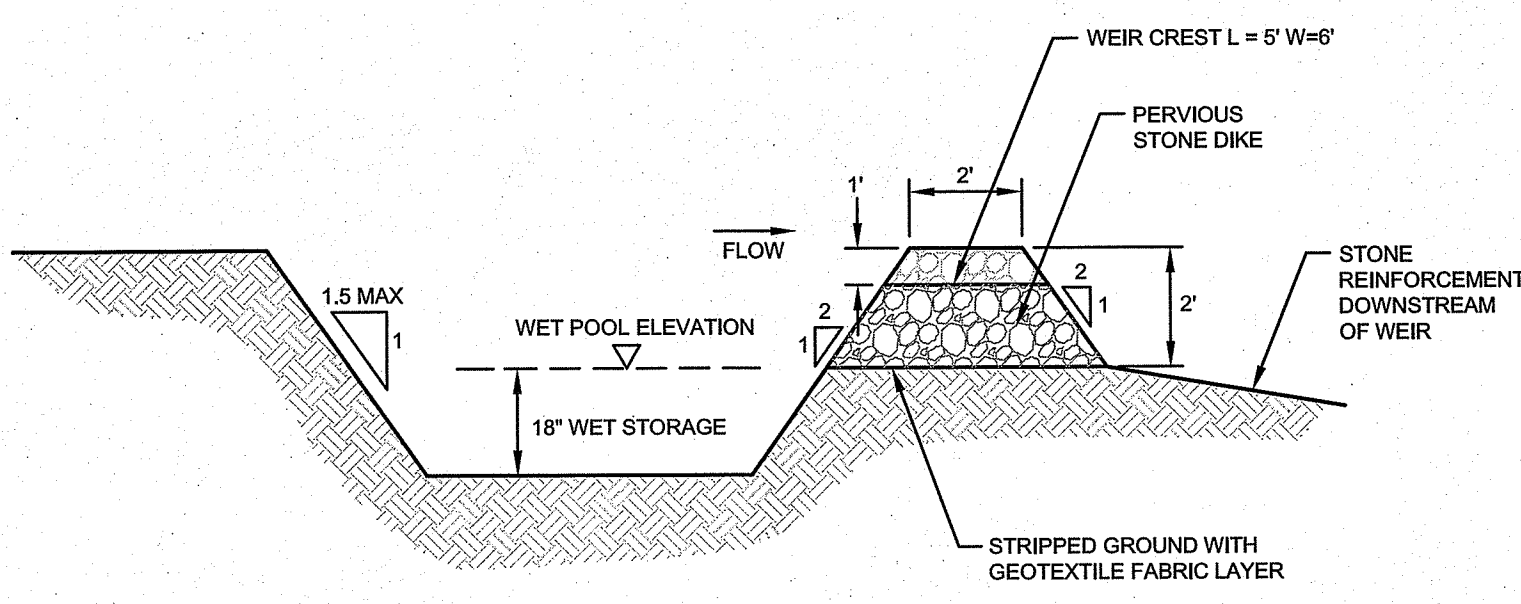
ELEVATION



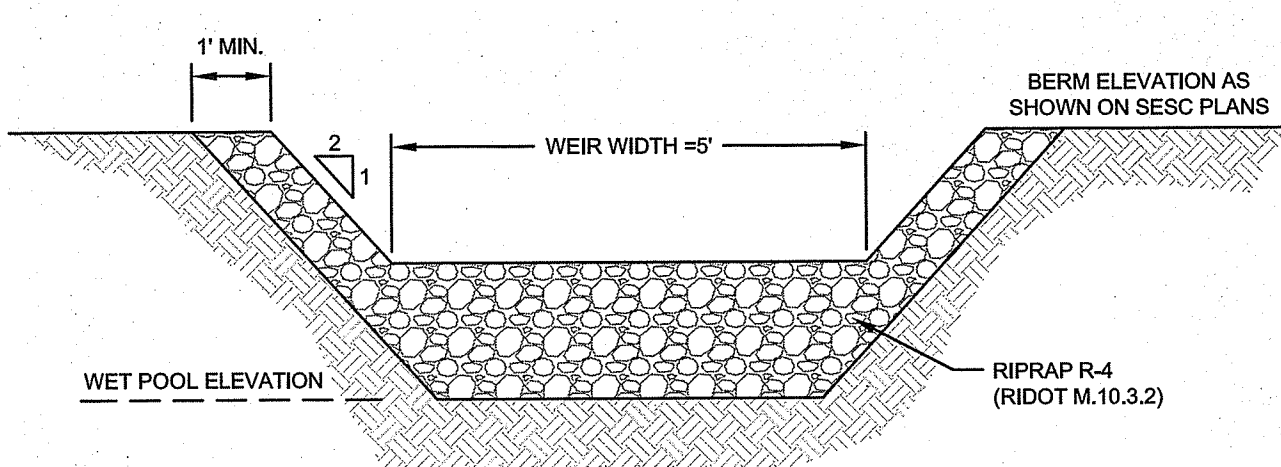
PLAN

- NOTES:**
1. BALE WEIGHT SHALL NOT BE LESS THAN 50 LBS AND SHALL BE BOUND WITH NO LESS THAN TWO STRINGS OR WIRES CONTAINING A MINIMUM OF FIVE (5) CUBIC FEET OF MATERIAL. MINIMUM DIMENSIONS SHOWN IN DETAIL.
  2. STRAW BALES SHALL BE CERTIFIED AS BEING NOXIOUS WEED-FREE BALES. TO BE "CERTIFIED" MEANS THAT THE PRODUCT IS FREE OF ANY NOXIOUS WEEDS.
  3. STAKES SHALL BE DRIVEN THROUGH STAKES AT A SLIGHT UPSTREAM ANGLE TO PREVENT BALE FROM OVERTURNING.
  4. LOOSE STRAW SHALL BE WEDGED BETWEEN BALES AFTER INSTALLATION.
  5. MATERIAL EXCAVATED FROM TRENCH SHALL BE BACKFILLED, COMPACTED, AND STABILIZED.

**BALED STRAW EROSION CONTROL BARRIER**  
 SCALE: NOT TO SCALE

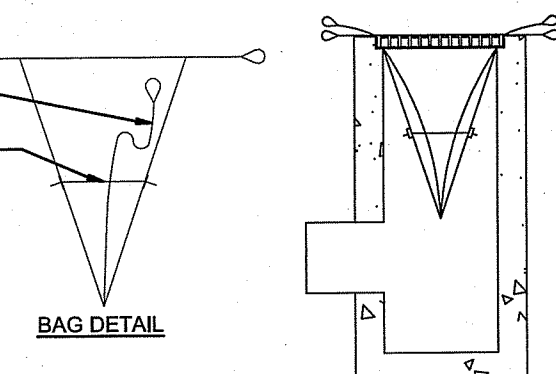
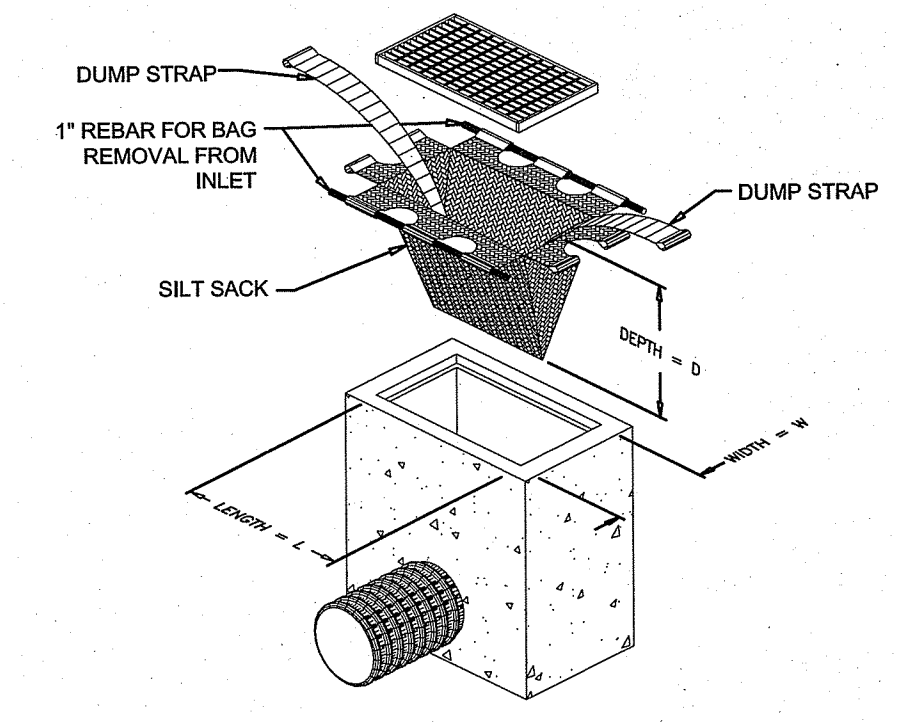


PROFILE SECTION



ELEVATION

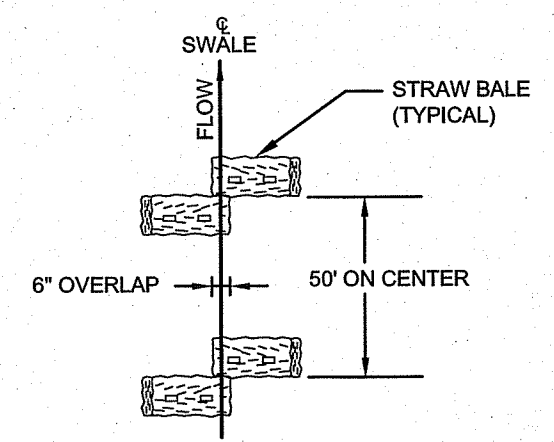
**STRAW BALE CHECK DAM**  
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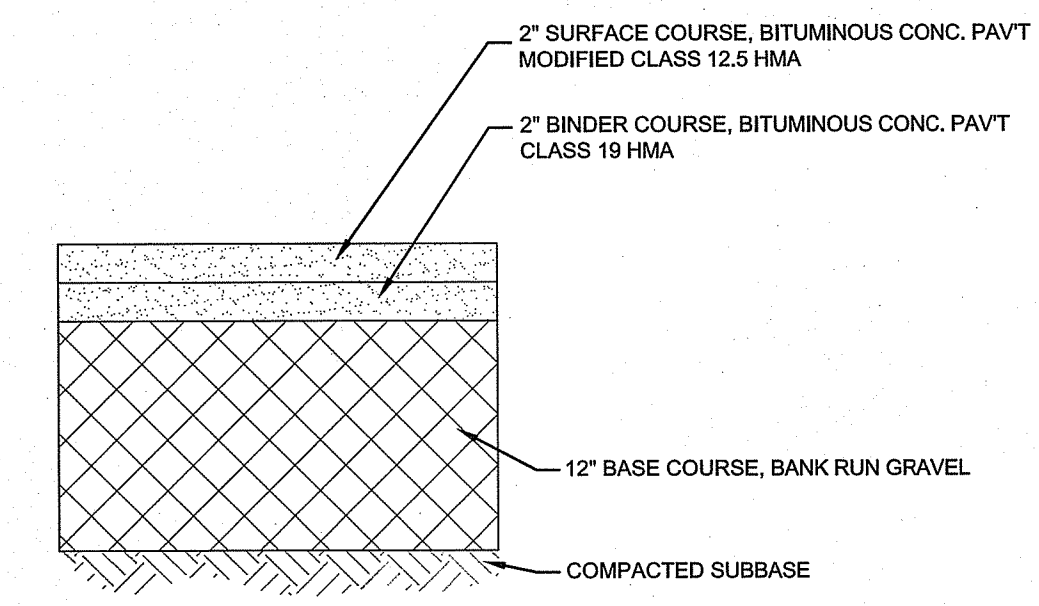
**SILT SACK DETAIL**  
 SCALE: NOT TO SCALE

- MAINTENANCE SCHEDULE:**
1. EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT (>0.25" OF PRECIPITATION IN 24 HOURS).
  2. IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACKS SHALL BE INSPECTED EVERY 2-3 WEEKS.
  3. THE YELLOW RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF THE CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

**TYPICAL TEMPORARY SEDIMENT TRAP DETAILS**  
 SCALE: NOT TO SCALE



PLAN



**TYPICAL BITUMINOUS PAVEMENT SECTION**  
 SCALE: NOT TO SCALE

1	REVISED PER RIDEM COMMENTS	09MAY23	
No.	Revision	Date	App.
Designed By:	JJR	Drawn by:	JJR
Checked by:	GES	Date:	21JUN22

Project Title:  
**FRIENDSHIP FARMS PHASE I**  
 A.P. 214, LOT 112  
 STAFFORD ROAD  
 TIVERTON, RHODE ISLAND

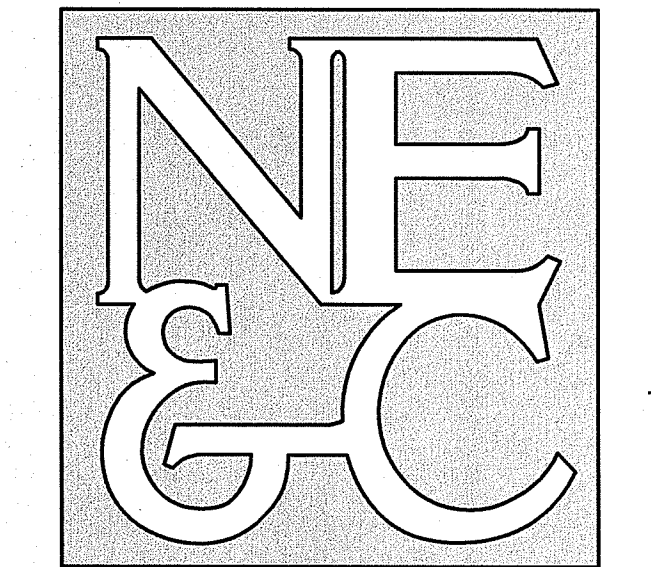
Client/Owner:  
 TIVERTON INVESTMENTS, LLC  
 150 CHESTNUT STREET, 4th FLOOR  
 PROVIDENCE, RI 02903

Issued for:  
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**SITE DETAILS**  
 SHEET 1

Drawing Number:	<b>C-11</b>
Sheet	<b>11 of 14</b>
Project Number:	<b>21265.0</b>
Survey Index:	<b>11 - 214 - 112</b>

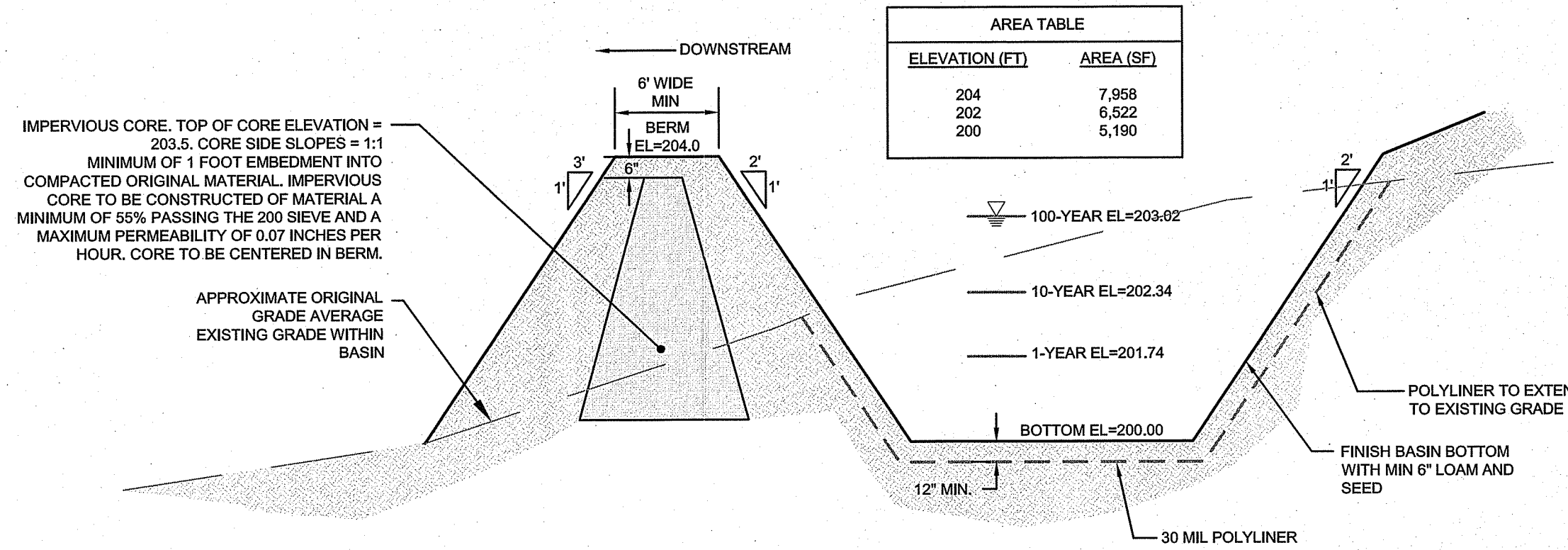
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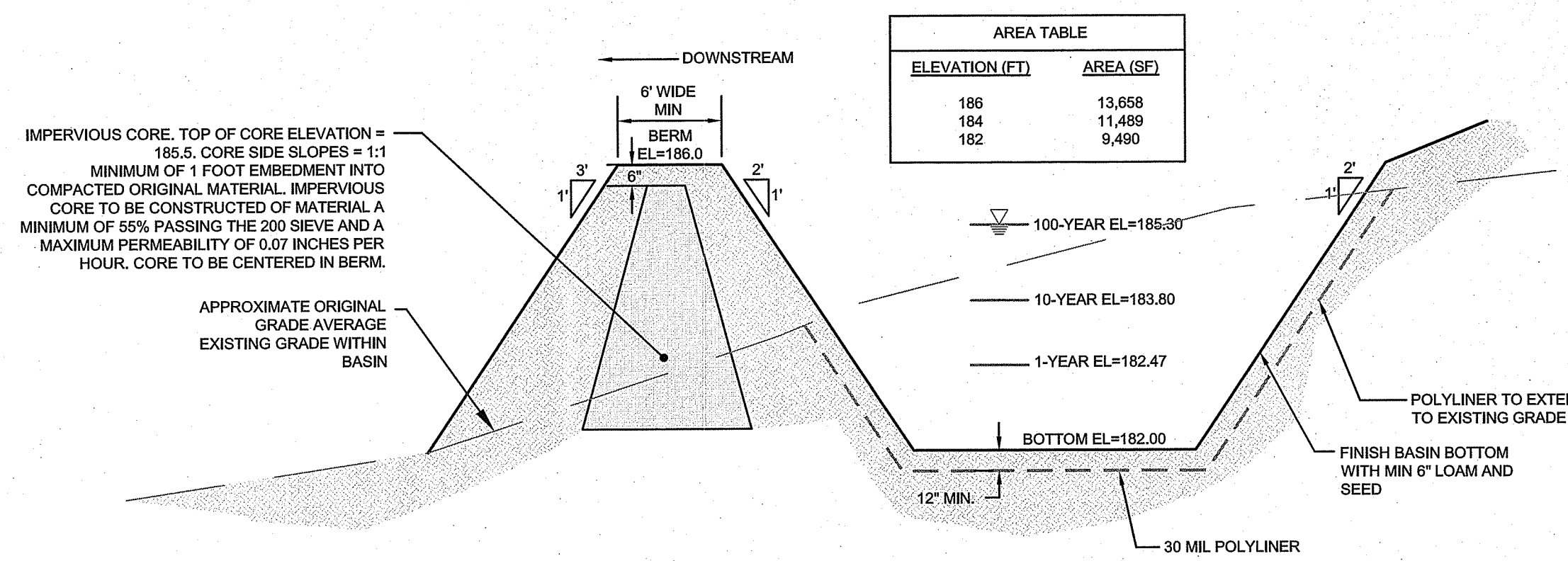
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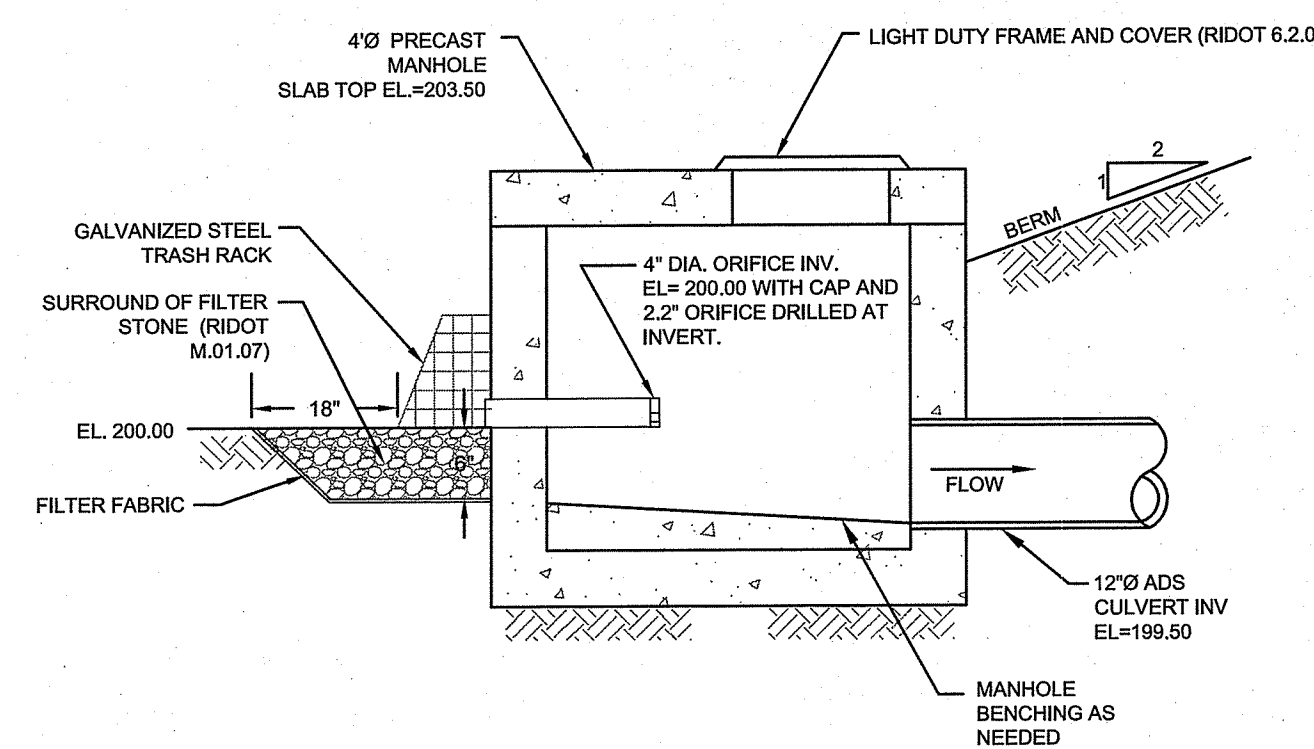
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LAND PLANNING  
WATERFRONT  
SURVEYING  
GEOTECHNICAL  
ENVIRONMENTAL  
TRANSPORTATION  
STRUCTURAL



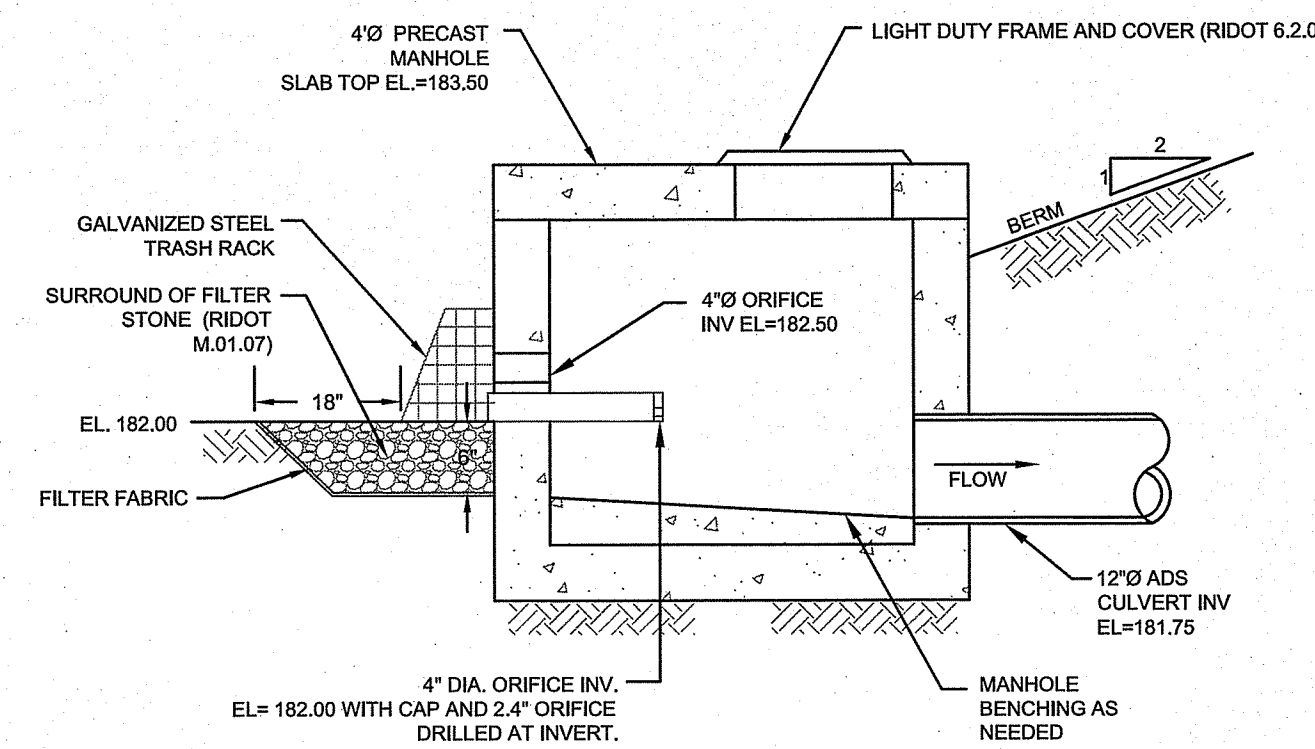
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SCALE: NOT TO SCALE



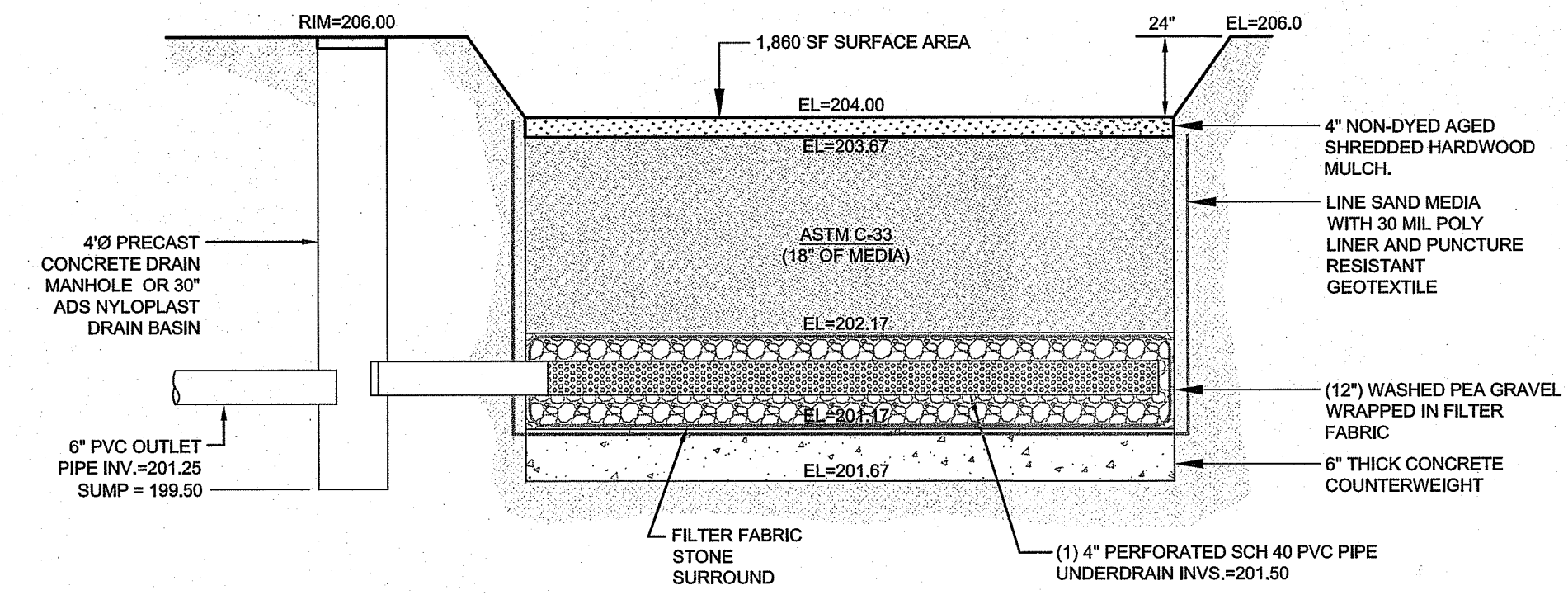
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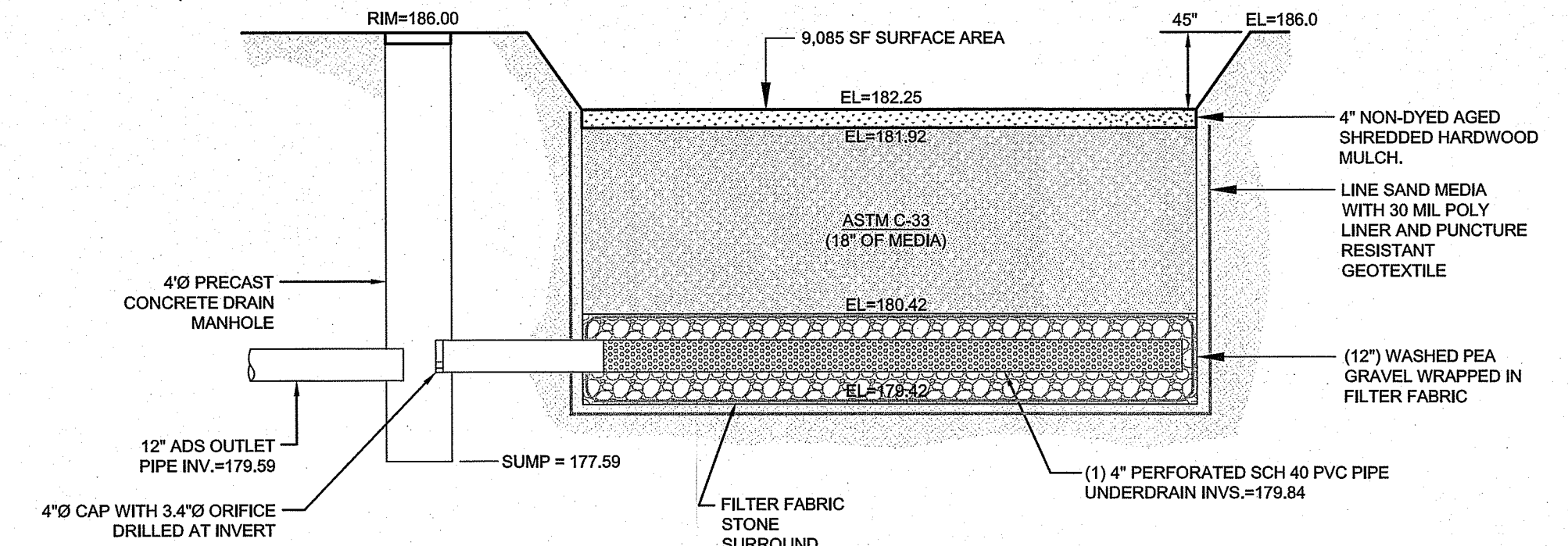
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SCALE: NOT TO SCALE



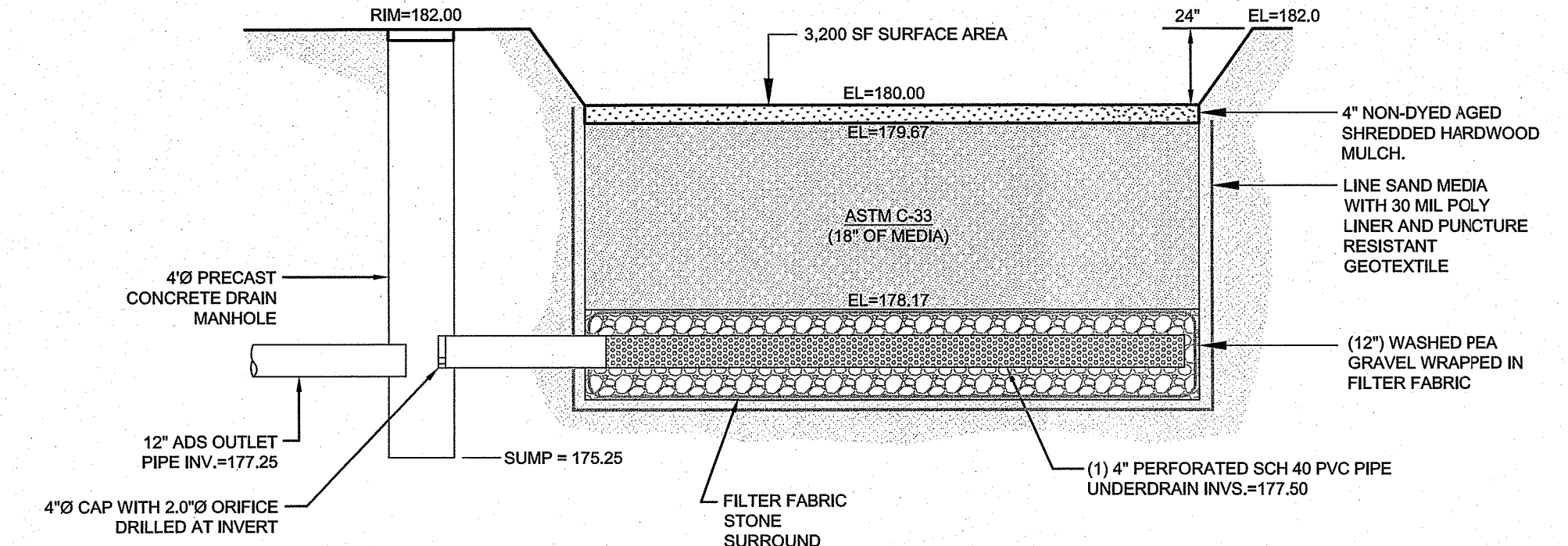
**DETENTION BASIN D-2 OUTLET STRUCTURE DETAIL**  
SCALE: NOT TO SCALE



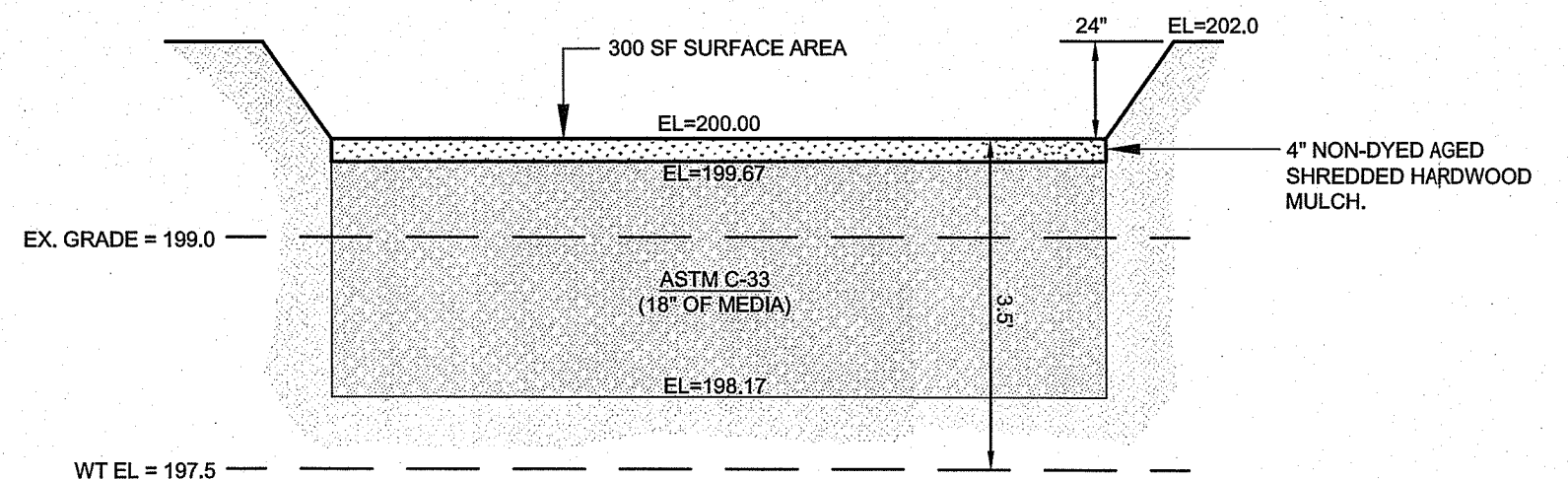
**SAND FILTER SF-1**



**SAND FILTER SF-2**



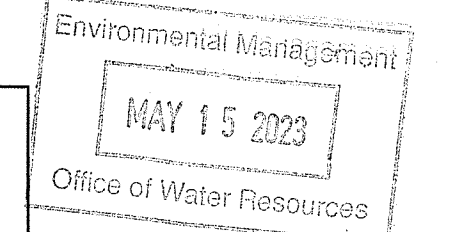
**SAND FILTER SF-3**



**SAND FILTER SF-8**

**SAND FILTER CROSS SECTIONS**  
SCALE: NOT TO SCALE

- SAND FILTER NOTES:**
- SAND FILTER SHALL BE PLANTED WITH NEW ENGLAND WETMIX (WETLAND SEED MIX) BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL.
  - SAND FILTER SAND TO BE CLEAN AASHTO M-6 OR ASTM C-33 CONCRETE SAND (0.075 TO 0.047), SAND SUBSTITUTIONS SUCH AS DABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO ROCK DUST CAN BE USED AS SAND.
  - UNDERDRAIN SHALL CONFORM TO AASHTO M-43, 0.25" TO 0.75". MATERIAL MUST BE WASHED CLEAN GRAVEL.
  - UNDERDRAIN SHALL BE SCHEDULE 40 PVC PIPE CONFORMING TO ASTM D-1785 OR AASHTO M-278. PERFORATIONS SHALL BE 3/8" @ 6" ON CENTER. PIPE SHALL HAVE 3" OF GRAVEL OVER PIPE. PIPE TO BE WRAPPED IN GEOTEXTILE FABRIC CONFORMING TO FLOWRATE INDICATED IN NOTE 5.
  - IMPERMEABLE LINER SHALL BE A 30 MIL POLY-LINER.



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OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
AUG 13 2023 FILE # 22-0251  
DATED: \_\_\_\_\_  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Martin Senech*

1	REVISED PER RIDEM COMMENTS	09MAY23	
No.	Revision	Date	App.
Designed By:	JJR	Drawn by:	JJR
Scale:	AS SHOWN	Date:	21JUN22
Checked by:	GES		

Project Title:  
**FRIENDSHIP FARMS  
PHASE I**  
A.P. 214, LOT 112  
STAFFORD ROAD  
TIVERTON, RHODE ISLAND

Client/Owner:  
TIVERTON INVESTMENTS, LLC  
150 CHESTNUT STREET, 4th FLOOR  
PROVIDENCE, RI 02903

Issued for:  
**PERMITTING**

Drawing Title:  
**SITE DETAILS**

**SHEET 2**

Drawing Number:  
**C-12**

Sheet **12** of **14**

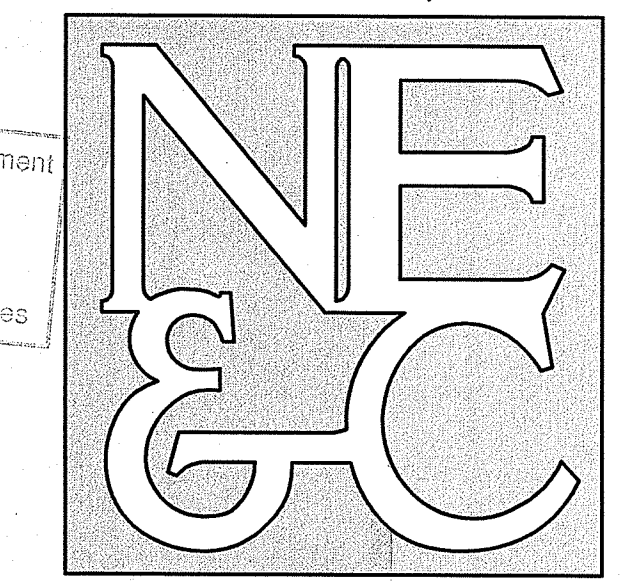
Project Number:  
**21265.0**

Survey Index:  
**11 - 214 - 112**

**JEREMY J. ROSA**  
No. **9826**  
REGISTERED PROFESSIONAL ENGINEER  
09MAY23

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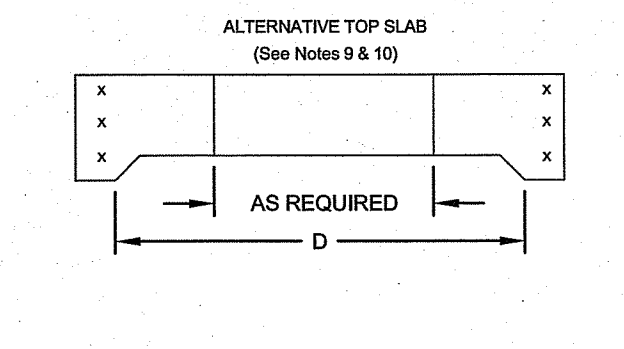
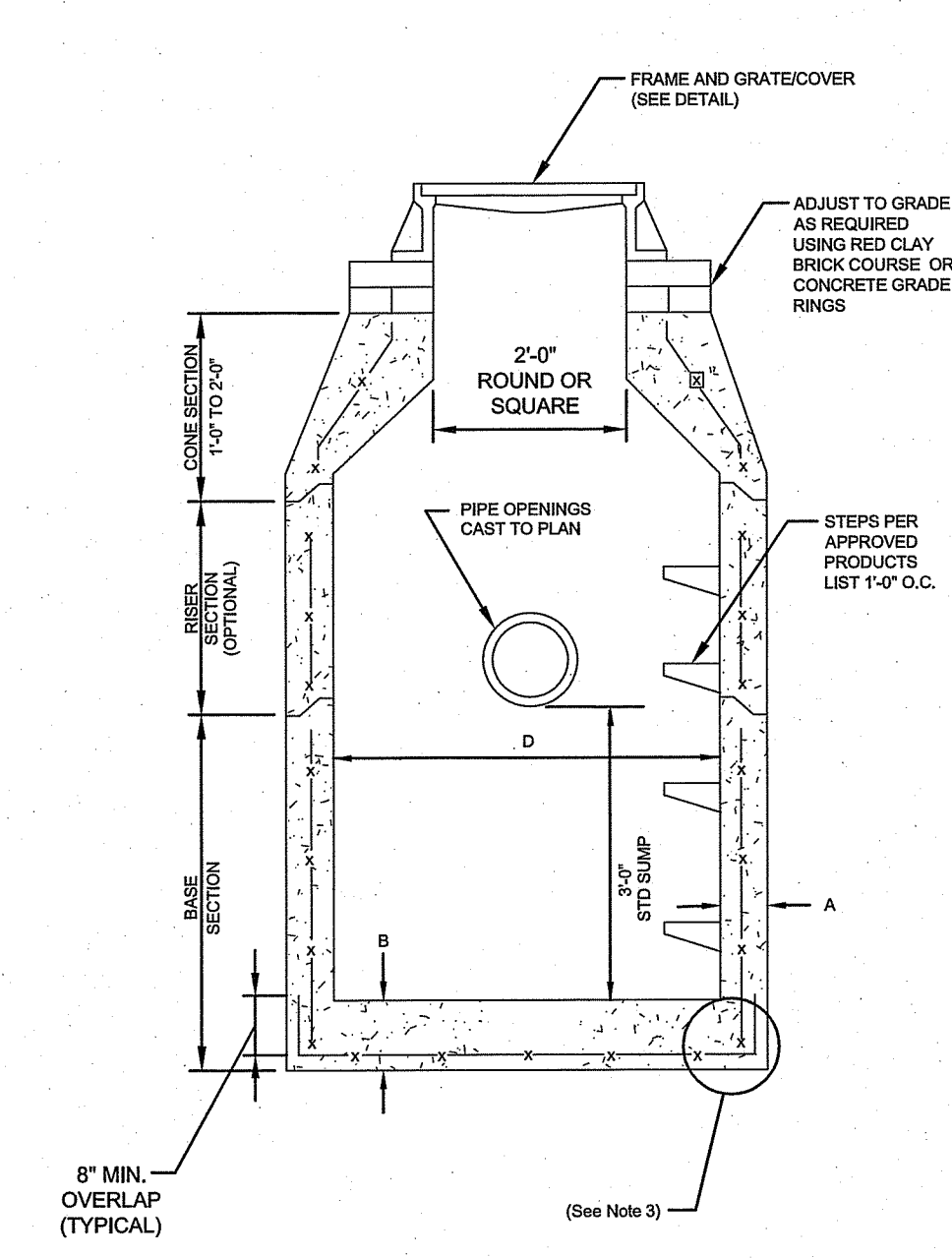
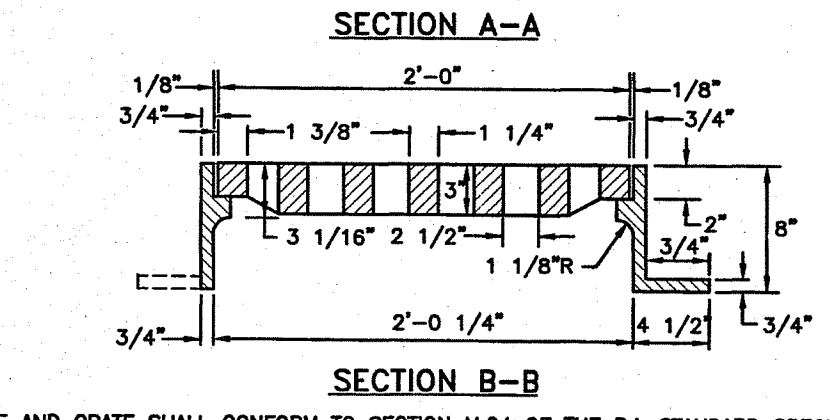
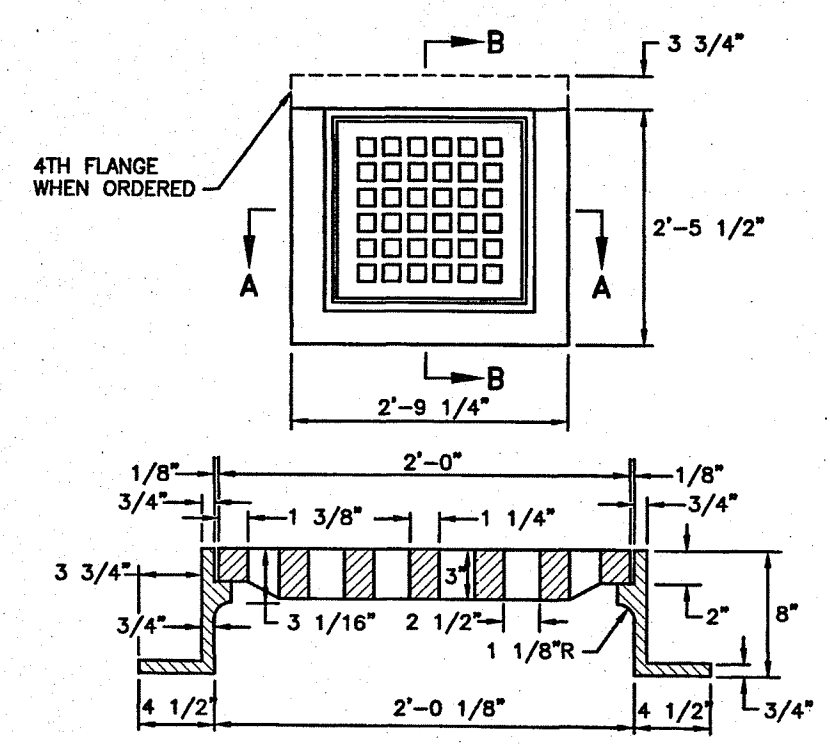


TABLE 1		CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*	
CATCH BASIN DIAMETER (D)	A	B	
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.
8'-0"	9"	8"	REFER TO MANUFACTURER

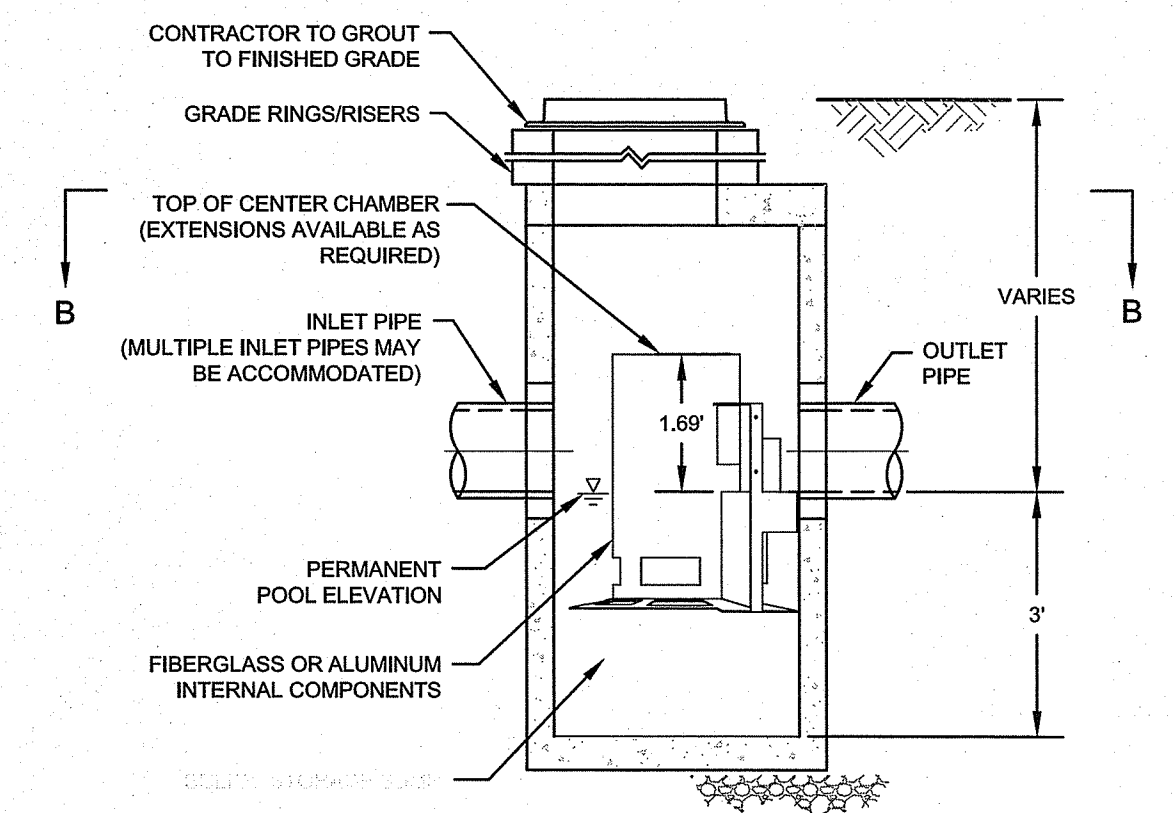
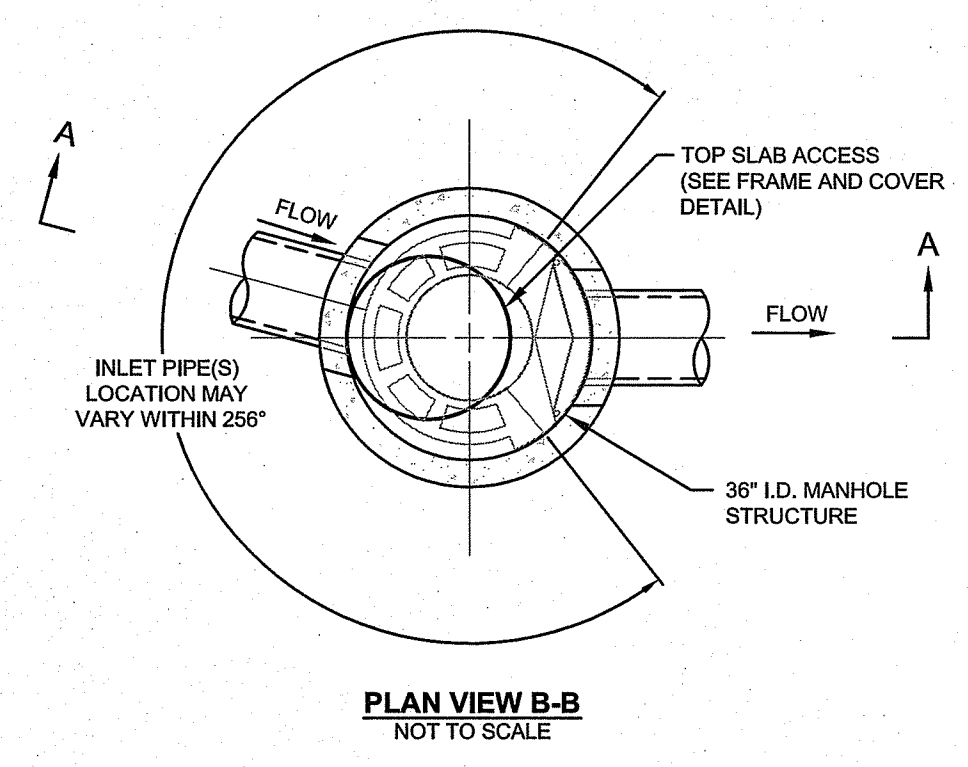
- NOTES:
- SHALL BE ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATION.
  - SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
  - STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
  - STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
  - ONE POUR MONOLITHIC BASE SECTION.
  - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY; NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
  - CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
  - THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
  - ALTERNATIVE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
  - ALTERNATIVE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
  - REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

PRECAST ROUND CATCH BASIN & DRAIN MANHOLE (RIDOT 4.4.0)  
SCALE: NOT TO SCALE

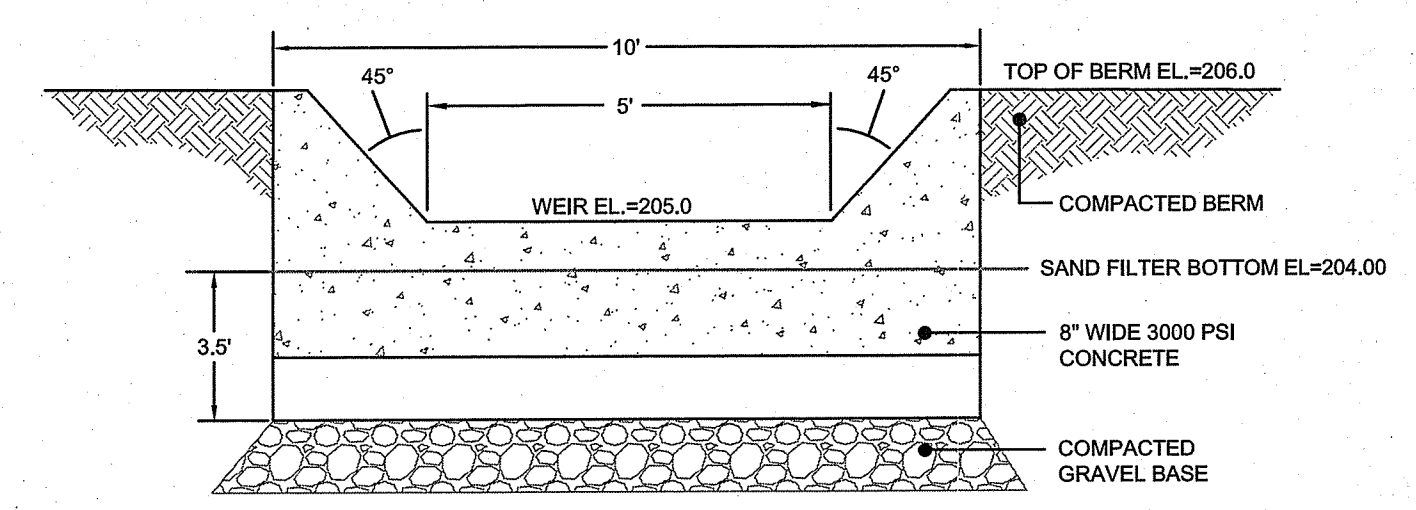


NOTE: FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

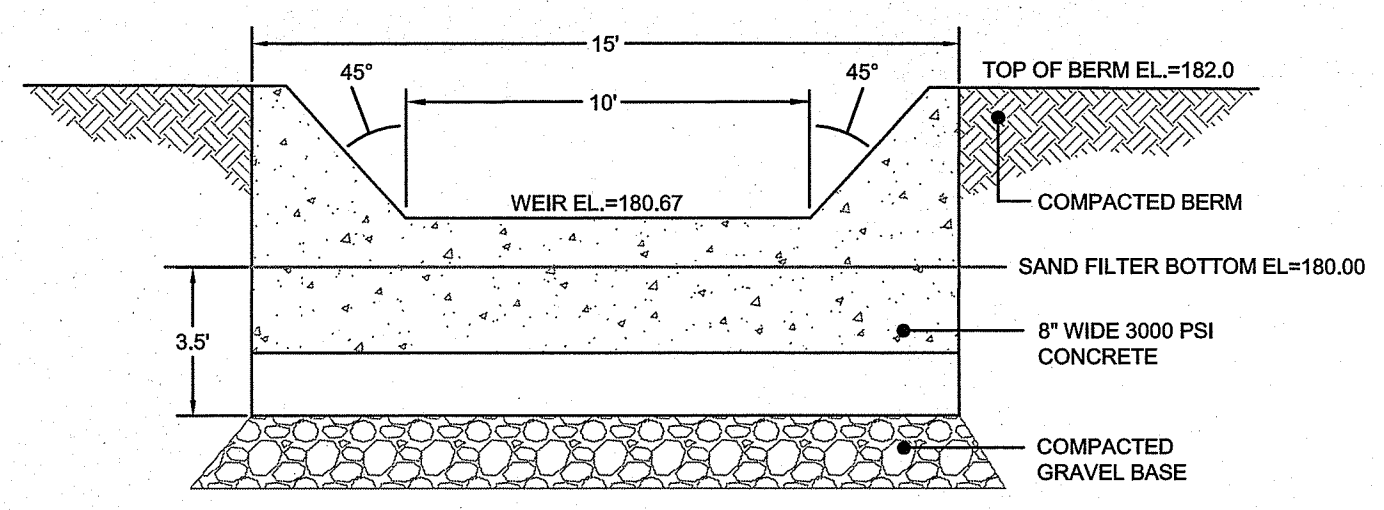
SQUARE FRAME AND GRATE (RIDOT 6.3.0)  
SCALE: NOT TO SCALE



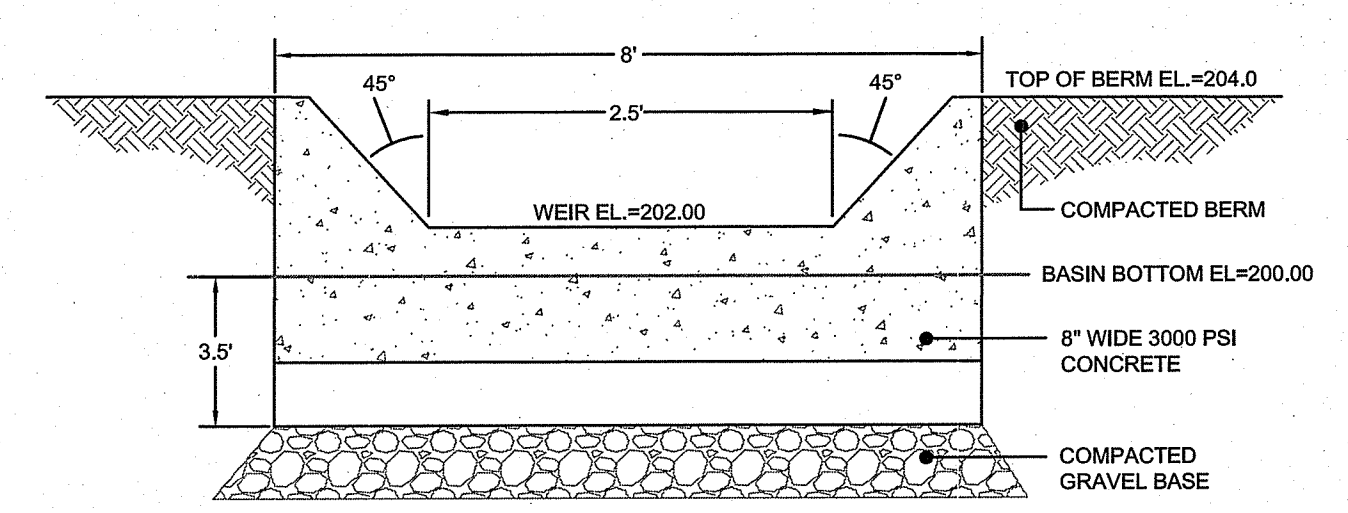
CASCADE SEPARATOR MODEL CS-3 DETAIL  
SCALE: NOT TO SCALE



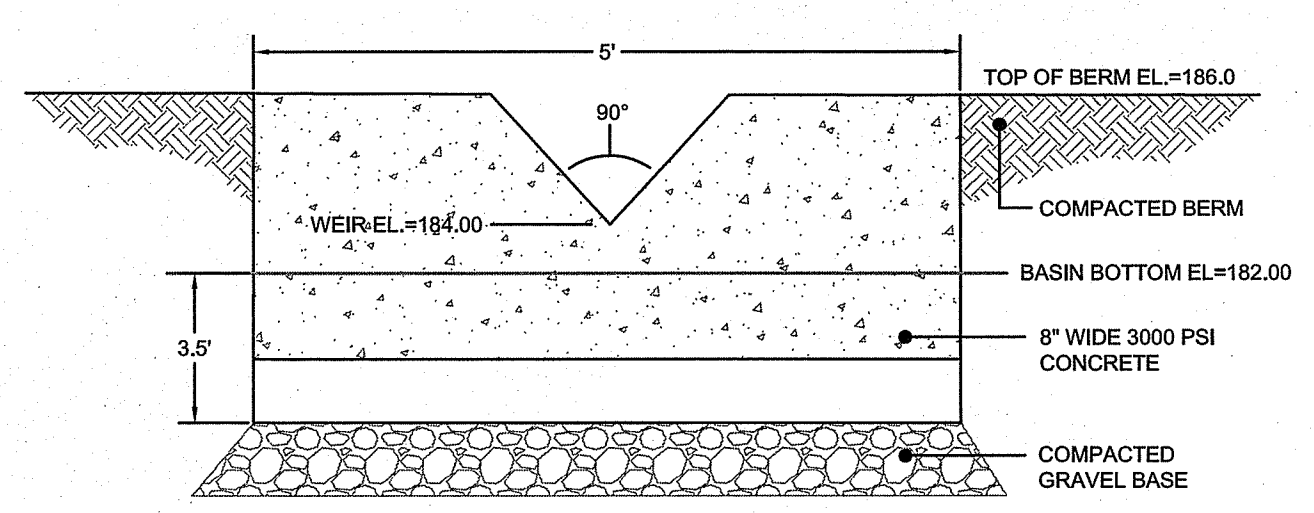
SAND FILTER SF-1 CONCRETE WEIR DETAIL  
SCALE: NOT TO SCALE



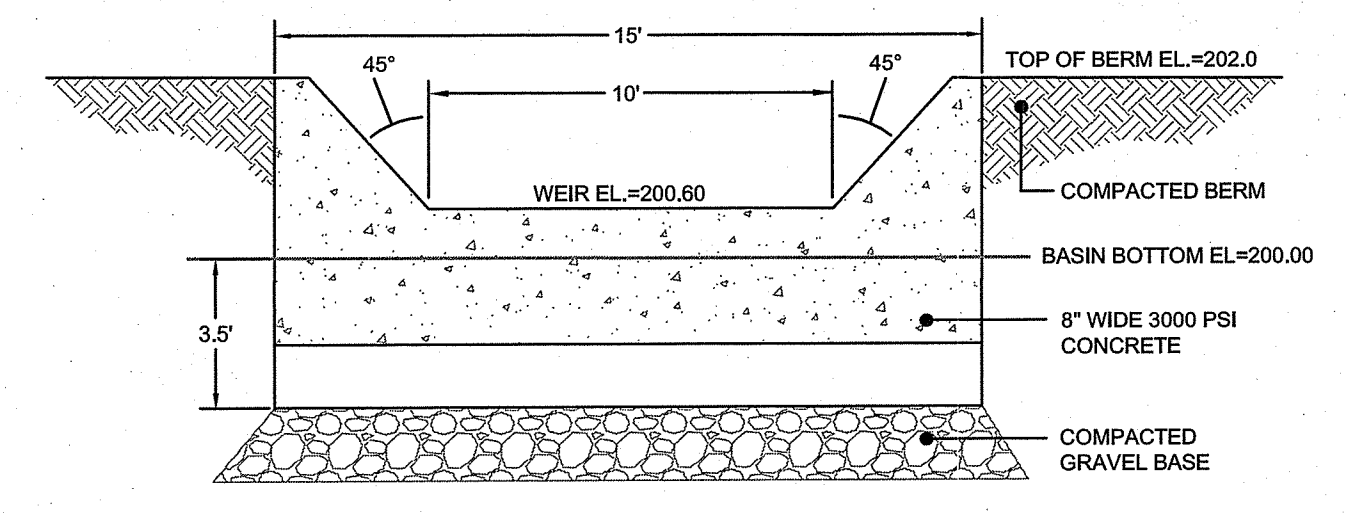
SAND FILTER SF-3 CONCRETE WEIR DETAIL  
SCALE: NOT TO SCALE



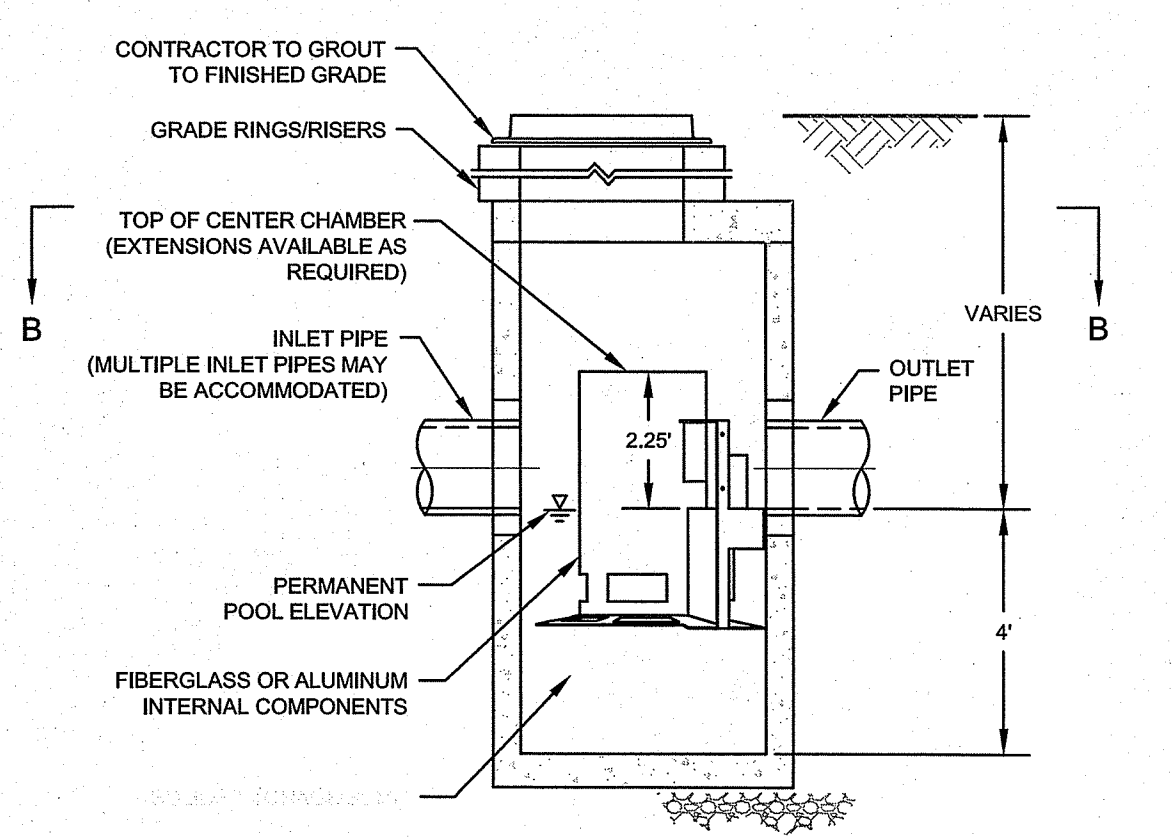
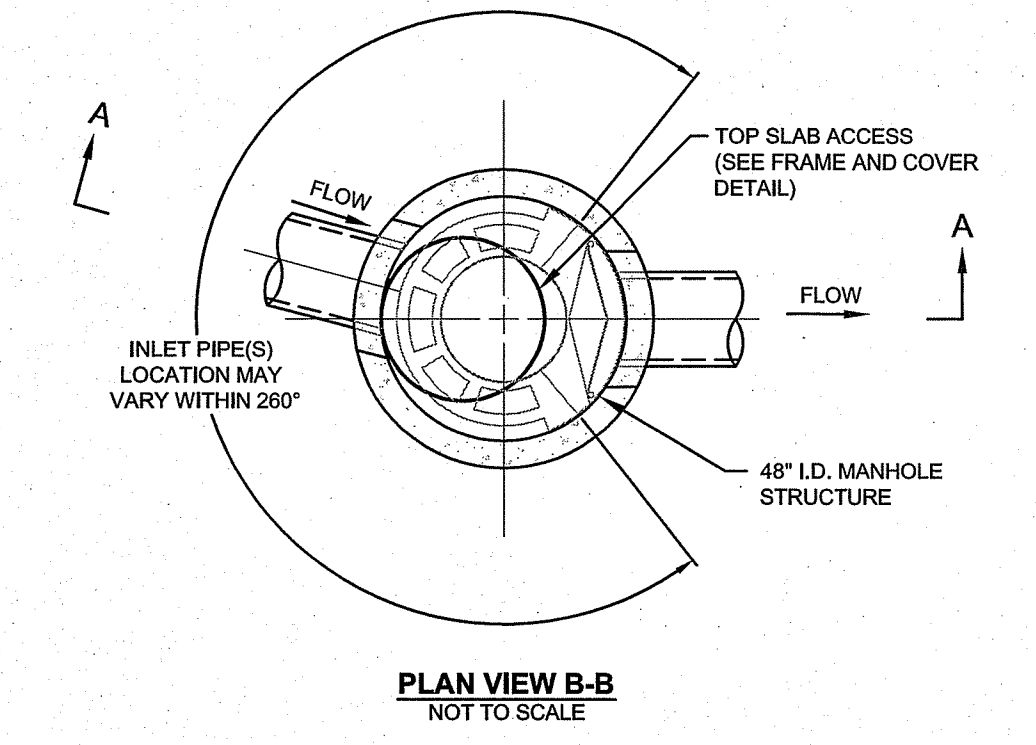
DETENTION BASIN D-1 CONCRETE WEIR DETAIL  
SCALE: NOT TO SCALE



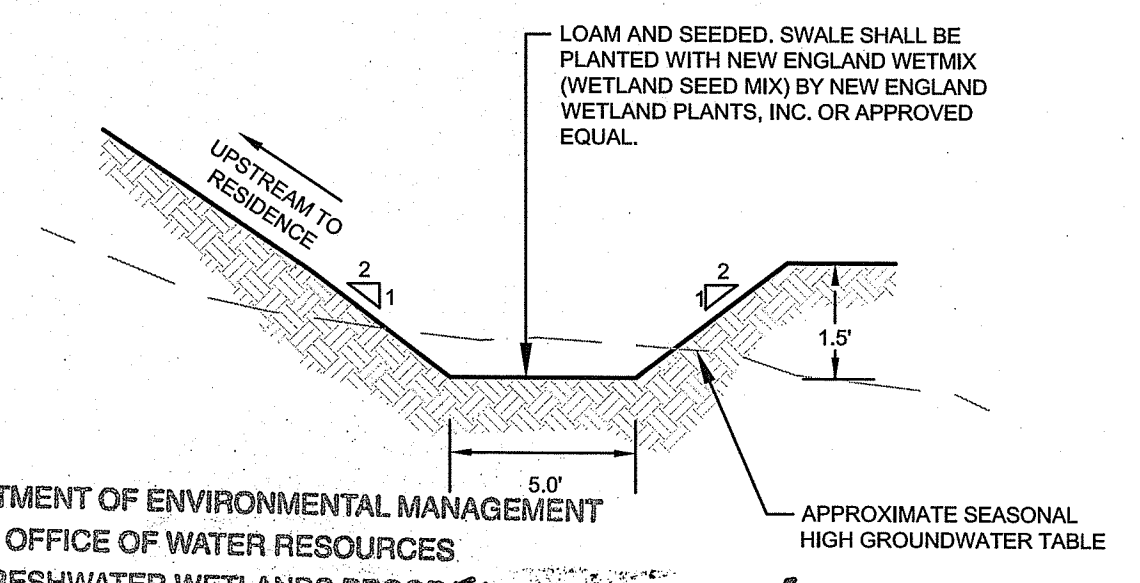
DETENTION BASIN D-2 CONCRETE WEIR DETAIL  
SCALE: NOT TO SCALE



DETENTION BASIN SF-8 CONCRETE WEIR DETAIL  
SCALE: NOT TO SCALE



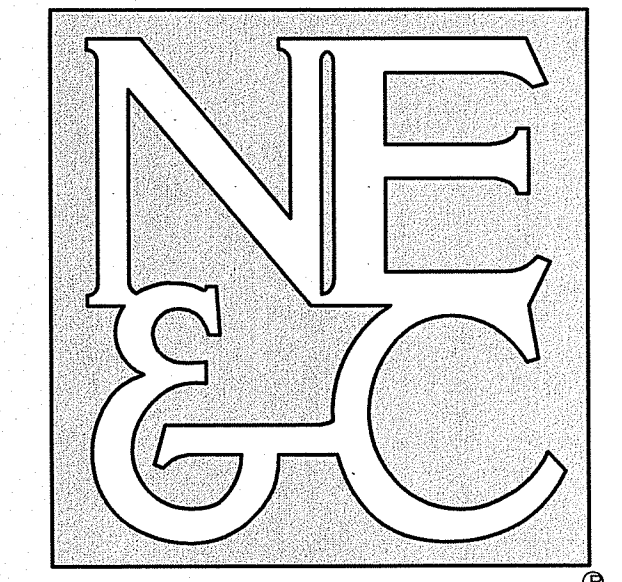
CASCADE SEPARATOR MODEL CS-4 DETAIL  
SCALE: NOT TO SCALE



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WET SWALE WS-1 CROSS SECTION  
SCALE: NOT TO SCALE

1	REVISED PER RIDEM COMMENTS	09MAY23	
No.	Revision	Date	App.
Designed By:	JJR	Drawn by:	JJR
Scale:	AS SHOWN	Date:	21JUN22
Checked by:	GES		
Project Title:			
<b>FRIENDSHIP FARMS PHASE I</b> A.P. 214, LOT 112 STAFFORD ROAD TIVERTON, RHODE ISLAND			
Client/Owner:			
TIVERTON INVESTMENTS, LLC 150 CHESTNUT STREET, 4th FLOOR PROVIDENCE, RI 02903			
Issued for:			
PERMITTING			
Drawing Title:			
<b>SITE DETAILS</b> SHEET 3			
Drawing Number:		C-13	
Sheet		13 of 14	
Project Number:		21265.0	
Survey Index:		11-214-112	
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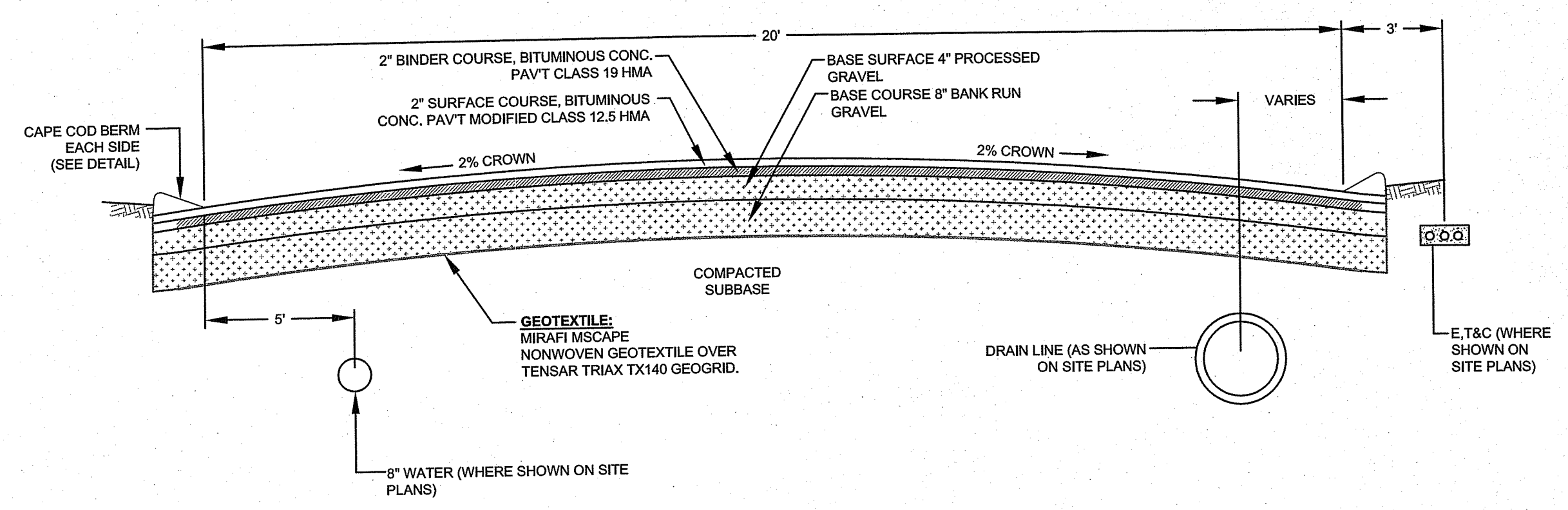


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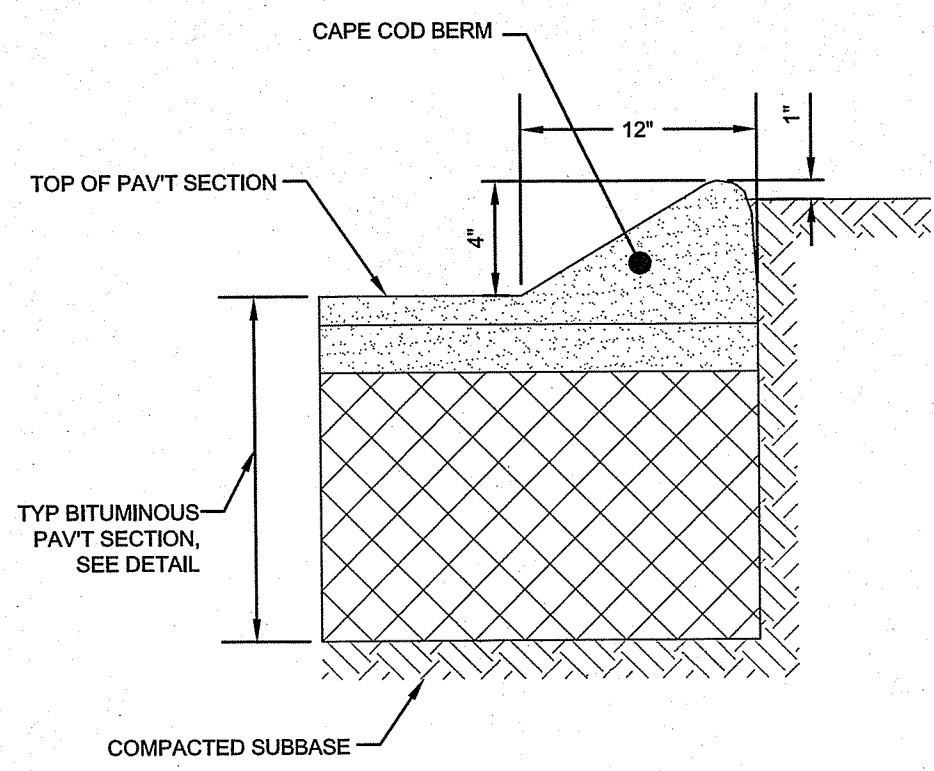
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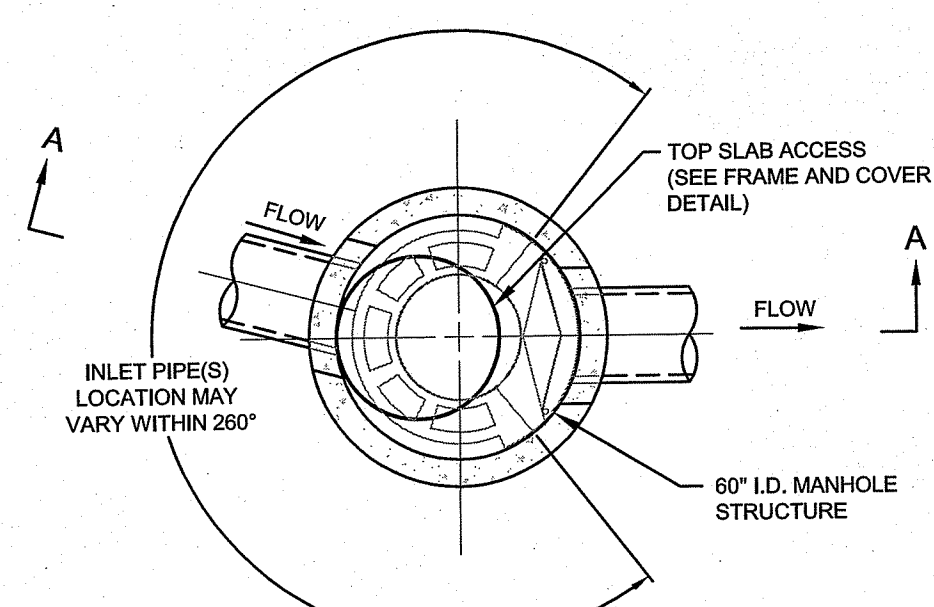
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*Martin B. Wenzel*



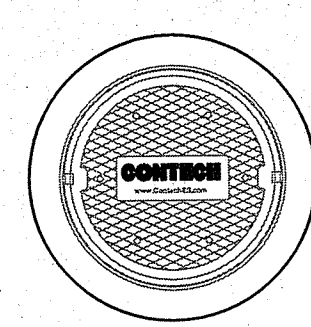
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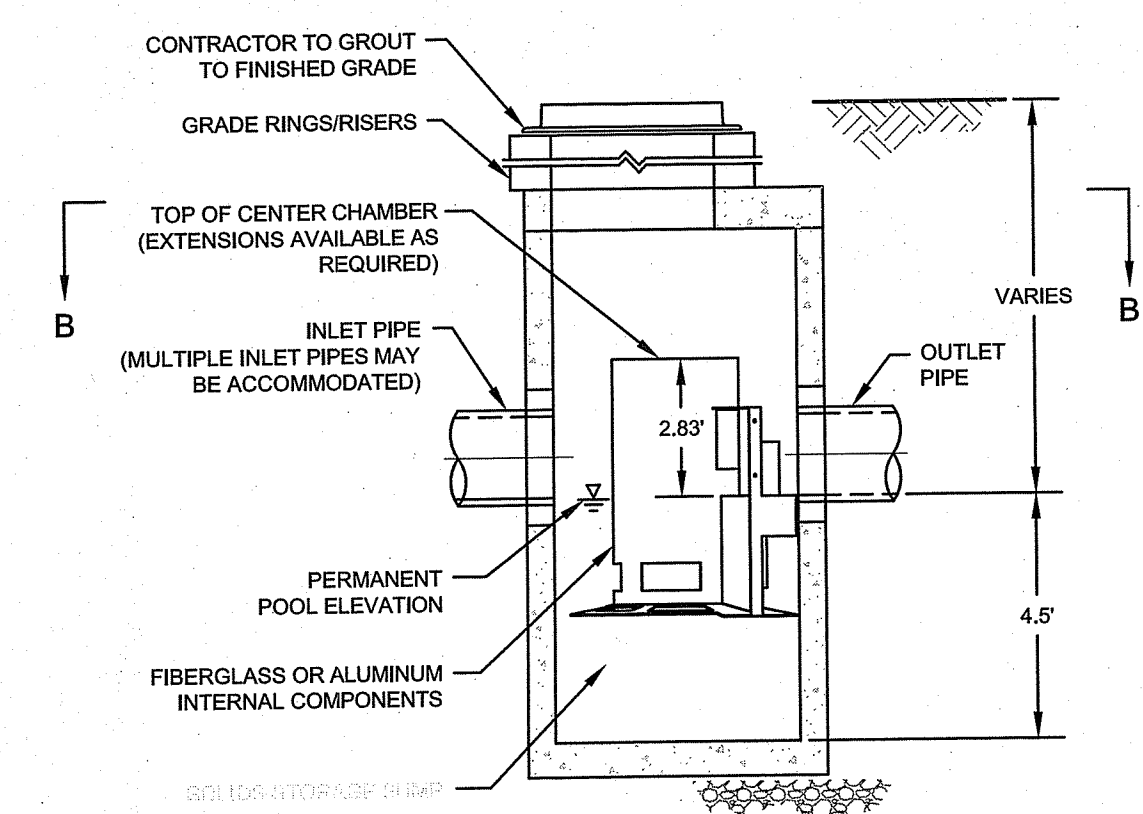
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PLAN VIEW B-B  
NOT TO SCALE



FRAME AND COVER  
(DIAMETER VARIES)  
NOT TO SCALE



ELEVATION A-A  
NOT TO SCALE

CASCADE SEPARATOR MODEL CS-5 DETAIL  
SCALE: NOT TO SCALE

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<b>SITE DETAILS</b> SHEET 4			
Drawing Number:		C-14	
Sheet		14 of 14	
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