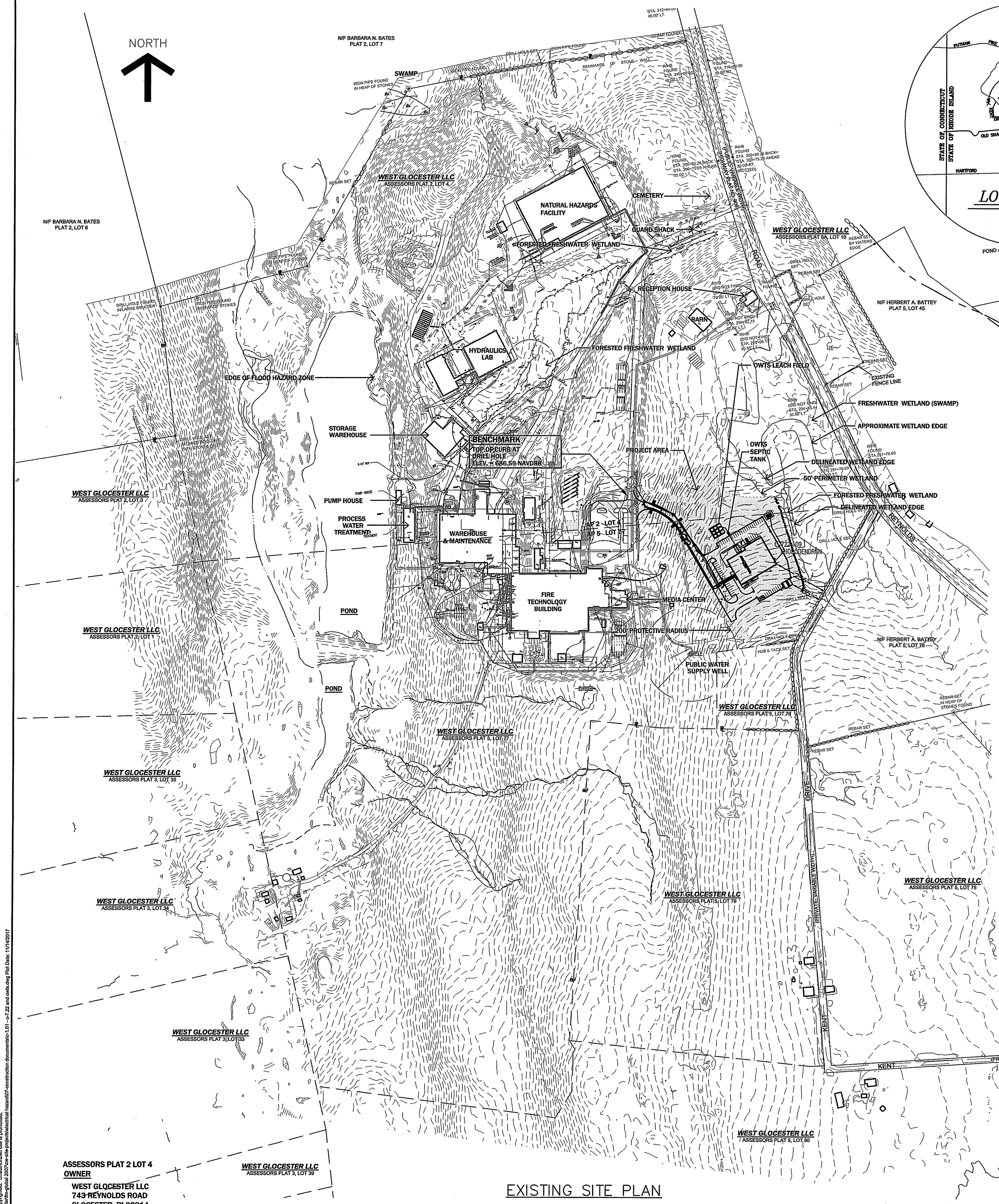
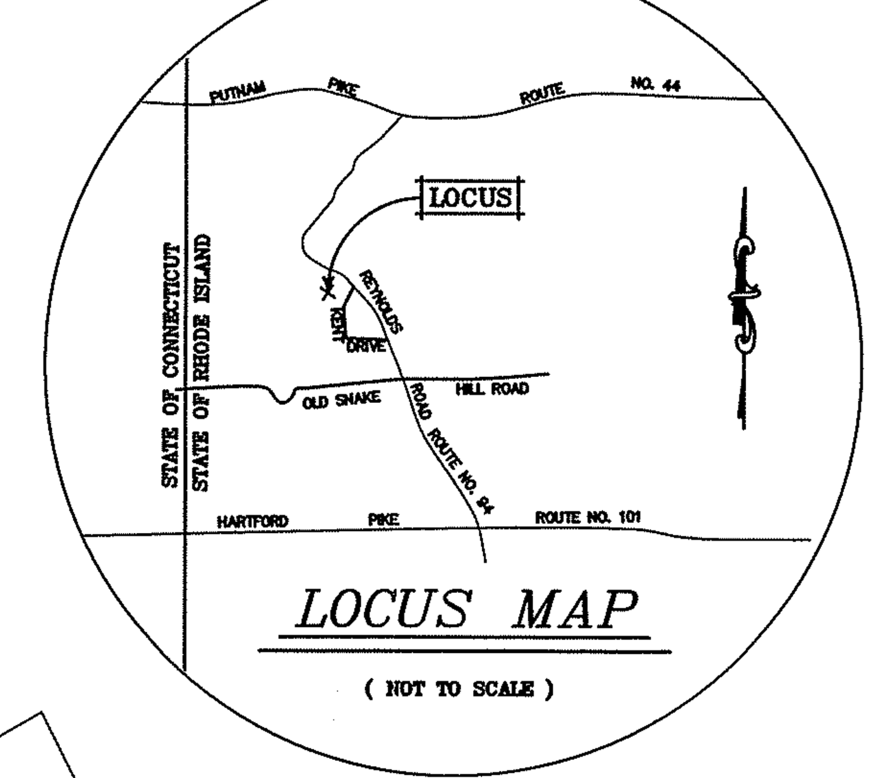


ASSESSORS PLAT 2 LOT 4
OWNER
WEST GLOCESTER LLC
743 REYNOLDS ROAD
GLOCESTER, RI 02814
ZONED "INDUSTRIAL"

EXISTING SITE PLAN



LEGEND:

■	GB FND	GRANITE BOUND FOUND
■	RIHB FND	RI HIGHWAY BOUND FOUND
◉	IP FND	IRON PIPE FOUND
O	IR SET	IRON ROD SET
O	DH SET	DRILL HOLE SET
		STONE WALL
	AP	TAX ASSESSOR'S PLAT
	DB PG	DEED BOOK AND PAGE
	PB PG	PLAT BOOK AND PAGE
	N/F	NOW OR FORMERLY
	SQ. FT.	SQUARE FEET
	AC.	ACRES
	P#	UTILITY POLE AND NUMBER
		TRAILS
		APPROXIMATE LIMITS OF 100 YEAR FLOODPLAIN BASED ON FIRM MAP, TOWN OF GLOCESTER, RI.
		WETLAND EDGE & DELINEATION MARKER
		50' PERIMETER WETLAND
		100' OR 200' RIVERBANK WETLAND
		AREA SUBJECT TO STORM FLOWAGE (ASSF)
		STREAM (<10' WIDE)
		PROJECT LIMITS OF DISTURBANCE
		SILT FENCE WITH STRAW BALES
		COMPOST FILTER SOCK

	PAVEMENT EDGE
	CURB
	FENCE
	WALL, RETAINING
	TREELINE
	PROPERTY LINE
700	EXISTING CONTOUR
700	PROPOSED CONTOUR
E	UNDERGROUND ELECTRIC
FS	FIRE SUPPLY
W	DOMESTIC WATER
D	DRAIN
PWD	PROCESSED WATER DRAIN
PWS	PROCESSED WATER SUPPLY
PWR	PROCESSED WATER RETURN
S	SANITARY
G	GAS
//	OVERHEAD WIRES

GV	GAS GATE
GM	GAS METER
WV	WATER GATE
+ 24.50	SPOT ELEVATION
SMH	SEWER MANHOLE
EXIST.	EXISTING
N	NORTH
S	SOUTH
E	EAST
W	WEST
CONC.	CONCRETE
℄	CENTER LINE
UP	UTILITY POLE
LP	LIGHT POLE
B	BOLLARD
CB	CATCH BASIN
INV	INVERT
ELEV.	ELEVATION
MH	MANHOLE
UNDERGRD.	UNDERGROUND
TRF	TRANSFORMER
ELEC.	ELECTRIC
REC.	RECORD MEASUREMENT
MEAS.	FIELD MEASUREMENT
CALC.	CALCULATED
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
S.F.	SQUARE FEET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0212
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

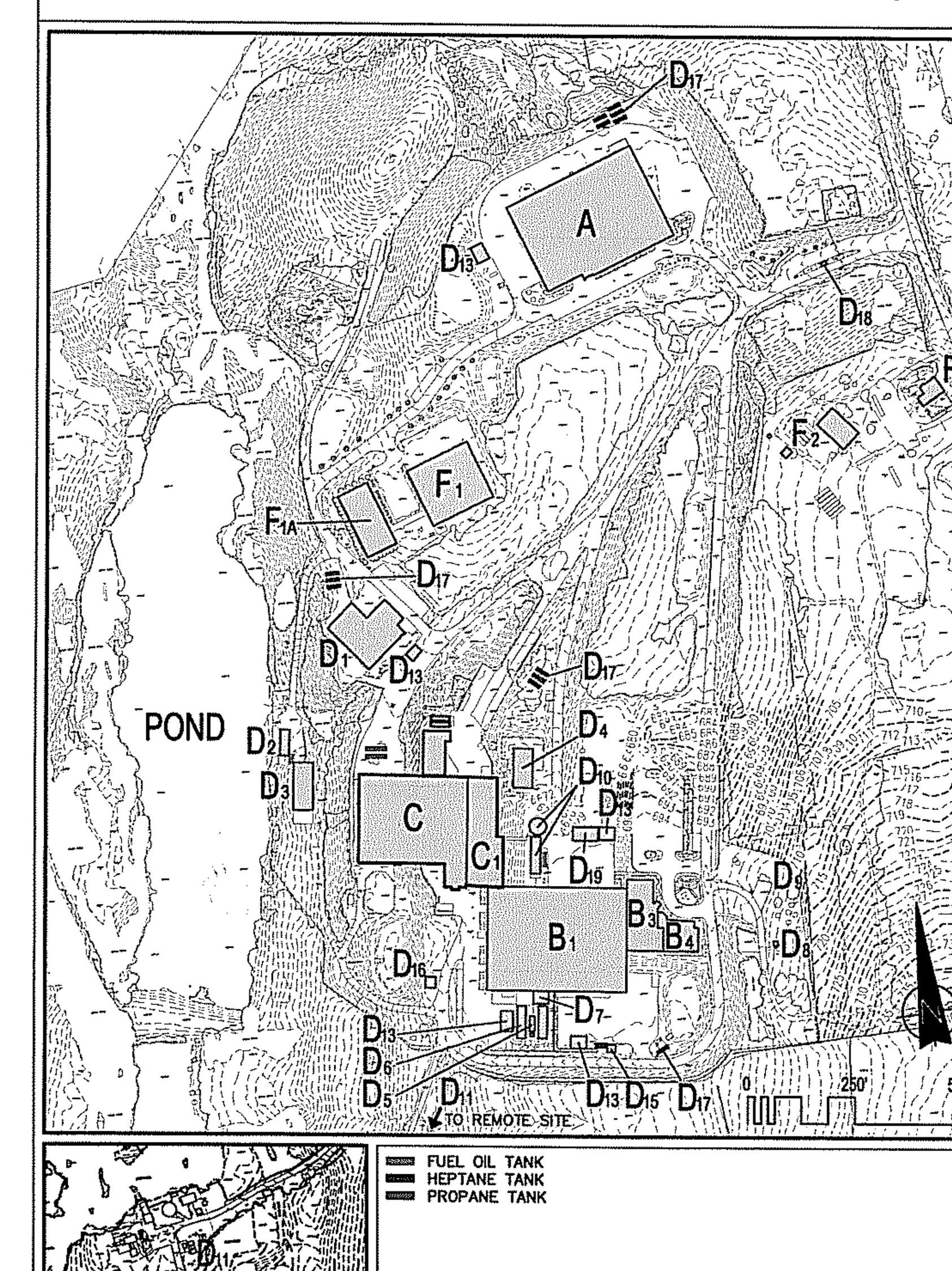
NOTES:

1. UNDERGROUND UTILITIES DEPICTED HEREON ARE TO BE CONSIDERED APPROXIMATE. ALL UNDERGROUND UTILITIES ARE NOT SHOWN ON THIS MAP.
2. GPS OBSERVATIONS WERE CONDUCTED ON MARCH 30, 2017 AND APRIL 14, 2017. OBSERVATIONS WERE OBTAINED UTILIZING MAINE TECHNICAL SOURCE RTK NETWORK AND STATIC OBSERVATIONS PROCESSED USING NGS BASE OPUS STATIC ONLINE POSITIONING USER SERVICES. GRID BEARINGS ARE RI NAD83, EPOCH 2010 AND ORTHOMETRIC HEIGHT WAS COMPUTED USING GEOID 12B.
3. PORTIONS OF THE SITE OUTSIDE THE PROJECT AREA ARE SUPPLEMENTED WITH AN AERIAL TOPOGRAPHIC SURVEY PREPARED BY COL-EAST INTERNATIONAL LTD. DATED JUNE 1, 2017.
4. SEE BOUNDARY SURVEY FOR WEST GLOCESTER, LLC PREPARED BY NATIONAL SURVEYORS-DEVELOPERS INC. DATED FEBRUARY, 2012.

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

NOV 15 2017

SITE-KEY PLAN February, 2013



KEY AND BUILDING LEGEND:

A	NATURAL HAZARDS TEST BUILDING	D9	DUST EXPLOSION CHAMBER & VIEWING AREA
B1	BURN AND MATERIALS TEST BUILDING	D10	PROCESS (BLUE) WATER PUMP HOUSE & TANKS
B3	OFFICE AND VISITOR BUILDING	D11	REMOTE TEST SITE
B4	MEDIA CENTER	D13	DUMPSTER CANOPY
C	WAREHOUSE BUILDING	D15	HEPTANE PUMP HOUSE
C1	WAREHOUSE CONNECTOR	D16	STILLING BASIN
C2	IGNITABLE LIQUIDS STORAGE BUILDING	D17	PROPANE TANKS
D1	MAINTENANCE AND FITNESS FACILITY	D18	GUARD HOUSE
D2	FIRE PROTECTION (RED) WATER PUMP HOUSE	D19	STORAGE BUILDING
D3	WASTE WATER TREATMENT BUILDING	F1	FIRE PROTECTION LAB
D4	ELECTRICAL HAZARDS LAB	F1A	FIRE PROTECTION OFFICE BUILDING
D5	AECS ELECTRIC CONTROL BUILDING	F2	BARN
D6	AECS STRUCTURE (WESP)	F3	RECEPTION HOUSE
D7	AECS TANKS		
D8	EXPLOSIVES STORAGE BOX		

DRAWING INDEX

DAVID T. BRAY
No. 1899
PROFESSIONAL LAND SURVEYOR

SHEET C-3.01

ALLAN L. SHEAR
No. 6795
REGISTERED PROFESSIONAL ENGINEER

RIDEM PERMIT SET

Ed Wojcik architect, ltd
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Environmental Services
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Fax.: 401-434-1615
mail@cwltd.net
www.cwltd.net

FM GLOBAL Electrical Hazards Laboratory
743 Reynolds Road
West Glocester, RI 02814

SHEET CONTENTS:

TITLE SHEET/
EXISTING SITE PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-1.01

SITE CONSTRUCTION NOTES:

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM WITH THE PROVISIONS OF THE RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2010), AND THE PROJECT SPECIFICATIONS.
2. UNDERGROUND UTILITY INFORMATION SHOWN ON THE DRAWINGS HAS BEEN PLOTTED BY THE SURVEYOR FROM RECORD DATA AND MAY NOT BE CORRECT. PRIOR TO ANY EXCAVATION, CONTACT DIG SAFE TO ESTABLISH MORE PRECISE LOCATIONS ON THE GROUND.
3. INSTALL 6 INCHES OF LOAM AND SEED IN ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE NOT DESIGNATED FOR ANOTHER SURFACE TREATMENT.
4. ANY DAMAGE TO EXISTING UTILITIES OR PRIVATE PROPERTY CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. ALL CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AT APPROVED LOCATIONS WITHIN THE SITE. SIDEWALKS, PARKING AND ROADWAY AREAS MUST BE MAINTAINED TO AVOID INTERFERENCE WITH VEHICULAR OR PEDESTRIAN TRAFFIC.
6. THE AREA OF THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM LEACHING AREA SHALL BE PROTECTED FROM COMPACTION OF SOIL BEFORE, DURING, AND AFTER SYSTEM CONSTRUCTION. SEE OWTS PLANS.

GENERAL CONSTRUCTION REQUIREMENTS:

1. THE SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN PREPARED FOR THE PROJECT SHALL REMAIN ON SITE AND MUST BE ADHERED TO THROUGH ALL STAGES OF WORK. SITE MONITORING AND REPORTING SHALL BE AS SPECIFIED ON THESE SITE DRAWINGS, IN THE SESC PLAN, AND IN ACCORDANCE WITH APPLICABLE REGULATIONS. WATERSHED MAPPING IN PART XII OF THE SESC PLAN ILLUSTRATES SITE FLOW PATTERNS, PART XIII OF THE SECS PLAN PROVIDES CODED DRAINAGE STRUCTURE MAPPING TO ASSIST INSPECTIONS, AND PART XIV OF THE SESC PLAN PROVIDES THE STORMWATER FIELD OBSERVATION REPORT FORM THAT MUST BE USED FOR THE PROJECT.
2. ANY REFUELING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL NOT OCCUR NEAR THE ENTRANCE TO ANY STORM DRAINAGE SYSTEM OR NEAR THE DOWNSLOPE PERIPHERY OF THE PROJECT AREA.
3. ANY ON-SITE DISPOSAL OF SOLID WASTE, INCLUDING EARTH MATERIALS, SHALL OCCUR WITHIN THE CONSTRUCTION AREA (UNLESS OTHERWISE DESIGNATED). ANY MATERIAL NOT RE-USED ON SITE SHALL BE HAULED OFF SITE TO AN AUTHORIZED, LEGAL LOCATION.
4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE INFORMED THAT THE CLEANING OF EQUIPMENT IS PROHIBITED IN AREAS WHERE THE WASH-WATER WILL DRAIN DIRECTLY TO SITE DRAINAGE SYSTEMS.
5. VEHICLE AND CONCRETE WASHOUT IS PROHIBITED ON PAVED SURFACES. IF REQUIRED ON SITE, ALL WASHOUT LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.
6. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL. THIS OPERATION SHALL INCLUDE SWEEPING ALL PAVED SURFACES LOCATED IN THE SITE AREA AND ANY OFF-SITE AREAS THAT ARE IMPACTED BY SITE CONSTRUCTION ON A REGULAR BASIS.
7. THE CONTRACTOR SHALL LIMIT OPERATIONS THAT RESULT IN THE GENERATION OF AIRBORNE SEDIMENT. ONLY CLEAN, POTABLE WATER SHALL BE USED TO CONTROL DUST.

SOIL STABILIZATION AND SEEDING NOTES:

1. SEEDING SHALL OCCUR IMMEDIATELY FOLLOWING FINAL GRADING IN DISTURBED AREAS THAT WILL NOT BE SUBJECT TO FURTHER DISTURBANCE.
2. AREAS THAT WILL BE SUBJECT TO FURTHER DISTURBANCE BUT WILL REMAIN IDLE FOR MORE THAN 21 DAYS SHALL BE SEEDED WITH ANNUAL RYE OR OTHERWISE PROTECTED TO PROVIDE TEMPORARY STABILIZATION.
3. ALL DISTURBED SLOPES SHALL BE IMMEDIATELY STABILIZED WITH APPROPRIATE METHODS AND MATERIALS AS APPROVED BY THE ENGINEER.
4. IF ADVERSE WEATHER CONDITIONS DO NOT ALLOW PROPER GRASS GERMINATION AND GROWTH WHERE REQUIRED, THEN TEMPORARY MULCHING WITH STRAW OR EQUIVALENT METHOD SHALL BE UTILIZED.
5. ALL DISTURBED SURFACES TO BE SEEDED SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL WITH THE SURFACE FINE GRADED.
6. FOR AREAS TO BE HYDROSEEDED, THE HYDROSEED MIX SHALL CONTAIN AN APPROPRIATE TACIFYING AGENT.
7. ALL DISTURBED SOILS EITHER NEWLY CREATED, OR EXPOSED, LOCATED WITHIN 50 FEET OF WETLANDS SHALL BE SEEDED OR PROTECTED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR. ANY AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15 OF THE SAME YEAR MUST BE STABILIZED BY INSTALLING EROSION CONTROL MATTING, STRAW MULCH, OR EQUIVALENT.
8. SEED APPLICATION SHALL OCCUR IN ACCORDANCE WITH SUPPLIER SPECIFICATIONS AND RECOMMENDATIONS. RECOMMENDED SEED MIXTURES ARE LISTED BELOW.

SEEDING MATERIALS

1. PERMANENT SEED MIXTURE

A. MOWED AREA (ALL FLATS OR SLOPES LESS THAN 3:1)

MIXTURE:	% BY WEIGHT:
RED FESCUE	70
KENTUCKY BLUEGRASS	15
PERENNIAL RYEGRASS	15

TOTAL 200 LBS./ACRE
SEEDING DATES: APRIL 1 - JUNE 15; AUGUST 15 - OCTOBER 15

B. UNMOWED AREA OR INFREQUENTLY MOWED (ALL SLOPES GREATER THAN 3:1 NOT STONE COVERED) INCLUDING DRAINAGE SWALE, GRASS CHANNELS, INFILTRATION BASIN, AND DETENTION BASIN

MIXTURE:	% BY WEIGHT:
RED FESCUE	70
KENTUCKY BLUEGRASS	15
BIRDSFOOT TREFOIL	15

TOTAL 200 LBS./ACRE
SEEDING DATES: APRIL 1 - JUNE 15; AUGUST 15 - OCTOBER 15

C. QUALIFYING PERVIOUS AREA

MIXTURE:	% BY WEIGHT:
RED FESCUE	30
KENTUCKY BLUEGRASS	10
PERENNIAL RYEGRASS	20
LITTLE BLUESTEM	20
TIMOTHY	20

TOTAL 200 LBS./ACRE
SEEDING DATES: APRIL 1 - JUNE 15; AUGUST 15 - OCTOBER 15

2. TEMPORARY SEED MIXTURE (CONSTRUCTION CONDITIONS)

MIXTURE:	LBS. / 1,000 S.F.	LBS. / AC.	SEEDING DATES:
ANNUAL RYEGRASS	1.0 - 1.5	40 - 60	1/1 - 6/1
PERENNIAL RYEGRASS	1.0 - 1.5	40 - 60	3/1 - 6/1
SUDAN GRASS	0.7 - 1.0	30 - 40	5/15 - 8/15
MILLET	0.7 - 1.0	30 - 40	5/15 - 8/15
WINTER RYE	3.0	120	1/1 - 6/15 or 10/15 -12/31
OATS	0.5 - 5.0	86 - 120	3/1 - 6/15
WEEPING COVER GRASS	0.5 - 5.0	15 - 50	5/1 - 7/1

TEMPORARY TREATMENTS SHALL INCLUDE A STRAW, FIBER MULCH OR OTHER PROTECTIVE COVER SUCH AS A MAT OR FIBER COVER (BURLAP, JUTE, EXCELSIOR BLANKET, ETC.) STRAW APPLICATIONS SHOULD BE APPLIED AT 3,000 - 4,000 LBS/AC.

DEWATERING NOTES:

1. EARTHEN MATERIAL EXCAVATED IN GROUNDWATER, OR OTHERWISE DETERMINED TO BE SATURATED, MUST BE PLACED IN DEWATERING AREAS ACCEPTED BY THE ENGINEER AND MUST REMAIN IN PLACE FOR A MINIMUM 72 HOURS IF IT IS TO BE HAULED OFF SITE. SEE DETAILS FOR DEWATERING BASIN.
2. DEWATERED MATERIAL NOT TO BE REUSED AS PART OF THE ACTIVITIES PROPOSED UNDER THIS PROJECT IS TO BE RESPONSIBLY HAULED TO A LEGAL, NON-WETLAND DISPOSAL SITE.
3. IF TRENCH DEWATERING IS REQUIRED, THEN PUMP WATERS MUST BE DIRECTED TO A STONE OR STRAW BALE ENCLOSURE (SEE DETAILS), SILT BAG, SEDIMENT TRAP, OR EQUIVALENT. PUMP WATER DISCHARGE DIRECTLY TO A DRAINAGE INLET STRUCTURE OR BEYOND PROJECT LIMITS IS PROHIBITED AND WILL NOT BE AUTHORIZED UNDER ANY CIRCUMSTANCE.

SITE CONSTRUCTION NOTES:

EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR PROPER EROSION CONTROL AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE CONTROLS ARE SPECIFIED IN THE CONTRACT DOCUMENTS.
2. APPROPRIATE PRECAUTIONS SHALL BE TAKEN TO PREVENT THE TRACKING OF SOIL FROM CONSTRUCTION EQUIPMENT ONTO PAVED SURFACES. THE STONE CONSTRUCTION ENTRANCES SHOWN ON THE PLANS MUST BE PROPERLY INSTALLED AND MAINTAINED. STONE IS TO BE REPLACED WHEN IT BECOMES LADEN WITH SEDIMENT AND LOOSES IT'S EFFECTIVENESS.
3. ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF EARTHWORK AT THE SPECIFIC AREAS INDICATED ON THE PLANS. ANY TREE AND SHRUB REMOVAL MAY OCCUR PRIOR TO INSTALLATION OF SUCH CONTROLS, BUT NO GRUBBING, STUMP REMOVAL, GRADING, FILLING, OR OTHER SOIL DISTURBANCE SHALL OCCUR PRIOR TO CONTROL INSTALLATION.
4. ALL COMPOST FILTER SOCK, STRAW BALES AND SILT FENCE ARE TO BE INSTALLED IN ACCORDANCE WITH THE DETAILS. STRAW BALES AND SILT FENCE ARE TO REMAIN FIRMLY AND SECURELY TRENCHED AND WELL STAKED. COMPOST FILTER SOCK IS TO REMAIN WELL STAKED AND IN TIGHT GROUND CONTACT.
5. ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE PROPERLY MAINTAINED AND MUST REMAIN IN PLACE UNTIL SOILS HAVE STABILIZED TO THE SATISFACTION OF THE ENGINEER, OR RIDEM. CONTROLS ARE TO BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING ALL PRECIPITATION EVENTS THAT RESULT IN RAINFALL OF 0.25" OR MORE.
6. DUE TO THE GRADE DIFFERENCE ACROSS THE PROJECT AREA, THE CONTRACTOR SHALL PROVIDE ADDITIONAL STRAW BALES AND SILT FENCE IN ORDER TO PROVIDE ADEQUATE EROSION AND SEDIMENT CONTROL AS WORK IS SEQUENCED THROUGH THE VARIOUS STAGES OF SITE DEVELOPMENT.
7. THE ENGINEER RESERVES THE RIGHT TO SPECIFY ADDITIONAL CONTROLS AS CONDITIONS MAY WARRANT. ACCESSIBLE RESERVES OF COMPOST FILTER SOCK, STRAW BALES, STAKES, AND 1.5" CRUSHED STONE ARE TO BE MAINTAINED ON SITE FOR ROUTINE MAINTENANCE AND IN THE EVENT OF UNANTICIPATED PROBLEMS REQUIRING IMMEDIATE RESPONSE.
8. NO EARTHWORK IS TO OCCUR ON THE DOWNGRADIENT SIDE OF PERIMETER EROSION AND SEDIMENTATION CONTROLS UNLESS OTHERWISE SPECIFIED.
9. STONES, CONSTRUCTION DEBRIS, LITTER, OR OTHER SUCH MATERIALS SHALL NOT BE DEPOSITED OUTSIDE OF DESIGNATED PROJECT LIMITS.
10. ALL EARTHEN MATERIAL SHALL REMAIN AT LEAST ONE FOOT INSIDE OF ALL PERIMETER EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE EROSION CONTROLS BE COVERED WITH EARTHEN MATERIAL. ANY EARTHEN MATERIAL THAT IS PLACED ON OR AGAINST EROSION CONTROLS SHALL BE IMMEDIATELY REMOVED.
11. COMPOST FILTER SOCK OR STRAW BALE CHECK DAMS SHALL BE INSTALLED PERPENDICULAR TO THE PERIMETER CONTROLS AT THE BASE OF SLOPES AT ANY AREA WHERE STORM WATER TRAVELING ALONG THE PERIMETER CONTROLS IS BEGINNING TO SCOUR A CHANNEL DUE TO VELOCITY.
12. SOIL STOCKPILES TO REMAIN IDLE MORE THAN 21 CALENDAR DAYS ARE TO BE RINGED WITH EITHER COMPOST FILTER SOCK OR STAKED STRAW BALES AND SEEDED WITH A CONSERVATION GRASS MIX.
13. ANY DISTURBED SOILS NOT DESIGNATED FOR OTHER SURFACE TREATMENT ALONG THE SITE PERIPHERY ARE TO BE LOAMED (MIN. 6 INCHES) AND SEEDED IMMEDIATELY FOLLOWING FINAL GRADING.
14. ALL CATCH BASINS AND DRAIN INLETS MUST BE ADEQUATELY PROTECTED FROM SEDIMENT INTRUSION AT LEAST UNTIL ALL AREAS TO BE PAVED IN THE CONTRIBUTING WATERSHEDS HAVE RECEIVED BINDER COAT.
15. AT NO TIME DURING CONSTRUCTION SHALL TURBID STORMWATER BE ALLOWED TO FLOW BEYOND PROJECT LIMITS. IF ANY TURBID STORMWATER SHOULD TRAVEL BEYOND PERIMETER CONTROLS, THEN CORRECTIVE ACTION MUST BE IMPLEMENTED IMMEDIATELY. SEE SESC PLAN FOR REPORTING REQUIREMENTS IN THE EVENT THAT TURBID STORMWATER SHOULD ENTER ANY CLOSED DRAINAGE SYSTEM.
16. DRAINAGE STRUCTURES AND THEIR INLET AND OUTLET CONTROLS ARE TO BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING PRECIPITATION EVENTS RESULTING IN RAINFALL OF >0.25". THE SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) PREPARED FOR THE PROJECT SHALL REMAIN ON SITE AND MUST BE ADHERED TO THROUGH ALL STAGES OF CONSTRUCTION. SITE MONITORING AND REPORTING SHALL BE AS SPECIFIED IN THE SESC PLAN AND ON THESE PLANS AND IN ACCORDANCE WITH APPLICABLE REGULATIONS.
17. THE SESC PLAN PREPARED FOR THE PROJECT MUST BE CLOSELY ADHERED TO INCLUDING ALL MONITORING AND REPORTING REQUIREMENTS.

DRAINAGE CONSTRUCTION NOTES:

1. THE DRAINAGE SYSTEMS SHALL BE INSTALLED BY STARTING AT THE DOWNGRADIENT END AND WORKING UPGRADIENT.
2. RIP-RAP SHALL BE INSTALLED AT PIPE INLETS AND OUTLETS WHERE SHOWN IMMEDIATELY AFTER INSTALLING PIPE. COMPOST FILTER SOCK SHALL BE INSTALLED AT THE OUTFALL OF ALL TEMPORARY BASINS AND SWALES AND SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY AREAS ARE STABILIZED.
3. RUNOFF FROM UN-STABILIZED SURFACES SHALL NOT BE ALLOWED TO ENTER DRAINAGE PIPES.
4. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY PIPE INSTALLATION. ALL TRENCHES SHALL BE BACK FILLED AS SOON AS POSSIBLE. THE UPSTREAM ENDS OF PIPES SHALL BE CLOSED NIGHTLY WITH PLYWOOD CAPS.
5. IT IS IMPORTANT THAT BINDER COURSE BE INSTALLED IN PROPOSED PAVED AREAS AS SOON AS FEASIBLE AS THESE AREAS WILL FUNCTION AS A CONDUIT FOR RUNOFF. FRAME ¢ GRATE/COVER SETS MUST BE INSTALLED TO THE ELEVATION OF THE TOP OF THE BINDER COURSE. A SECOND ADJUSTMENT WILL BE NECESSARY PRIOR TO INSTALLING THE SURFACE COURSE.
6. ALL DRAIN PIPE SHALL BE CORRUGATED POLYETHYLENE (CPEP), UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEANING DRAINAGE STRUCTURES AND PIPES, AS NECESSARY, BEFORE ACCEPTANCE BY THE OWNER. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, MAINTAINING, AND REMOVING ALL SEDIMENT CONTROL MEASURES DURING CLEANING.
8. ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, TREE ROOTS, LARGE STONES AND ANY OTHER IMPERVIOUS OR SPECIFIED SOIL IN THE AREA OF THE DRAINAGE INFILTRATION BASIN AND BIORETENTION FILTER SHALL BE STRIPPED, AS WELL AS THE AREA 5 FEET HORIZONTALLY BEYOND THEIR EDGES IN ALL DIRECTIONS. MATERIAL SHALL BE STRIPPED VERTICALLY 3" MINIMUM INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL (C HORIZON). REPLACE WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF RI-OWTS SAND FILL.

WATER SUPPLY, SEWER AND SITE UTILITIES CONSTRUCTION NOTES:

1. CARE SHALL BE TAKEN TO ASSURE THAT UTILITY TRENCHES DO NOT CHANNELIZE RUNOFF TOWARDS SENSITIVE AREAS.
2. WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.
3. SEWER LINES, MANHOLES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.

LANDSCAPING CONSTRUCTION NOTES:

1. LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE AFTER GENERAL CONSTRUCTION OPERATIONS IN ORDER TO PROVIDE PERMANENT STABILIZATION OF DISTURBED SURFACES.
2. THE CONTRACTOR SHALL UTILIZE SLOPE STABILIZATION METHODS AND MATERIALS THAT MAY BE ADJUSTED TO VARYING SITE CONDITIONS.
3. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT PERMIT PROPER GROWTH OF VEGETATION, TEMPORARY MULCHING WITH STRAW OR OTHER METHODS SHALL BE PROVIDED.
4. ALL DISTURBED SURFACES TO BE PLANTED SHALL RECEIVE A MINIMUM OF 6" OF LOAM WITH THE SURFACE SMOOTHED TO THE SPECIFIED GRADES.
5. SEED APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS.

BIORETENTION SOIL NOTES:

THE BIORETENTION SOIL SHALL BE A LOAM/SAND MIX, CONTAINING 85-88% SAND, BY VOLUME, THE CLAY CONTENT FOR THESE SOILS SHALL BE LESS THAN 2% BY VOLUME. A PERMEABILITY OF AT LEAST 1.0 FOOT PER DAY (0.5 IN/HR) IS REQUIRED. THE SOIL MUST BE FREE OF STONES, STUMPS, ROOTS, OTHER WOODY MATERIAL OVER 1 INCH IN DIAMETER, OR SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE BIORETENTION SOIL SHALL BE IN LIFTS OF 12 TO 18 INCHES, LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET). THE SPECIFIC CHARACTERISTICS ARE PRESENTED IN THE TABLE BELOW.

PLANTING SOIL:

PARAMETER	VALUE
ORGANIC MATTER*	3 TO 5%
CLAY	0 TO 2%
SILT	0 TO 12%
SAND	85-88%

* AGED LEAF COMPOST AT THE PERCENTAGE LISTED.

DRAINAGE SYSTEM AND STORMWATER BEST MANAGEMENT PRACTICES - OPERATION ¢ MAINTENANCE NOTES

UPON SITE-WORK COMPLETION, THE CONTRACTOR SHALL CLEAN THE DRAINAGE SYSTEMS AND ALL ASSOCIATED STRUCTURES, REPAIR ANY VEGETATIVE SOIL EROSION AND SEDIMENT CONTROL MEASURES WHERE REQUIRED (GRASS COVER, GROUNDCOVER PLANTINGS, ETC.), AND REPAIR OR REMOVE AS APPROPRIATE THE TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES (STRAW BALES, COMPOST FILTER SOCK, CHECK DAMS, ETC.). AFTER PERMANENT SOIL STABILIZATION HAS OCCURRED TO THE SATISFACTION OF FM GLOBAL (OWNER) AND THE DESIGN ENGINEER, ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED BY THE CONTRACTOR.

PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION OF ALL DRAINAGE-SYSTEM COMPONENTS IN THE PRESENCE OF THE OWNER. UPON ACCEPTANCE BY THE OWNER, PERPETUAL MAINTENANCE OF THE DRAINAGE SYSTEM WILL BECOME THE RESPONSIBILITY OF FM GLOBAL, EXCEPTING ANY WARRANTEES PROVIDED BY MANUFACTURERS OR BY THE CONTRACTOR IN ACCORDANCE WITH THE PROJECT CONTRACT AND SPECIFICATIONS. THE CONSTRUCTED STORMWATER-MANAGEMENT SYSTEMS RELY UPON PROPER MONITORING AND MAINTENANCE TO OPERATE AS DESIGNED AND INTENDED, AND A MONITORING AND MAINTENANCE PROGRAM MUST BE IMPLEMENTED AND REMAIN ON-GOING THROUGHOUT THE LIFE OF THE SYSTEMS. TO PROVIDE A FRAMEWORK FOR AN EFFECTIVE PROGRAM, A DRAINAGE SYSTEM AND STORMWATER BEST MANAGEMENT PRACTICES OPERATION AND MAINTENANCE PLAN (O¢M PLAN) DOCUMENT HAS BEEN PREPARED SPECIFICALLY FOR THE PROJECT FOR USE BY THE OWNER. THE O¢M PLAN DOCUMENT BECOMES EFFECTIVE IMMEDIATELY UPON PROJECT ACCEPTANCE BY THE OWNER, AND ADHERENCE TO THE DOCUMENT IS THE RESPONSIBILITY OF THE OWNER.

THE ACTIVITIES LISTED BELOW HAVE BEEN INCORPORATED INTO THE O¢M PLAN DOCUMENT. THEY ARE NOT DIRECTLY RELATED TO THE CONSTRUCTION PERIOD, EXCEPT UP THROUGH THE PERIOD WHEN DRAINAGE SYSTEMS ARE ACCEPTED BY THE OWNER AT PROJECT COMPLETION. THAT IS, THE CONTRACTOR SHALL MAINTAIN THE OPERATIONAL SYSTEMS IN GOOD WORKING ORDER UNTIL THE MONITORING AND MAINTENANCE RESPONSIBILITIES ARE TRANSFERRED TO THE OWNER. THE MONITORING AND MAINTENANCE OF THE STORMWATER SYSTEMS SHALL BE ADDRESSED AS INDICATED BELOW. THE MONITORING AND MAINTENANCE SCHEDULE SHALL BE CONSIDERED AS A MINIMUM, AND SHALL BE ADJUSTED AS CONDITIONS WARRANT.

MONITORING:

THE DRAINAGE SYSTEMS ARE TO BE MONITORED BY THE OWNER, WHO SHALL DIRECT AN INDIVIDUAL TO ACT AS THE DRAINAGE SYSTEM MANAGER. THIS INDIVIDUAL SHALL KEEP A LOG OF ALL INSPECTIONS, NOTABLE OBSERVATIONS, AND MAINTENANCE ACTIVITIES. THE LOG SHALL BE MADE AVAILABLE TO RIDEM WITHIN TEN (10) DAYS OF ANY WRITTEN REQUEST BY RIDEM. THE O¢M PLAN DOCUMENT CONTAINS FORMS FOR THE OWNER'S USE IN RECORDING THE MONITORING AND MAINTENANCE ACTIVITIES PERFORMED.

1. ALL CATCH BASINS AND NYLOPLAST DRAINS SHALL BE INSPECTED SEMI-ANNUALLY TO ENSURE THAT THEY ARE DRAINING FREELY, THEY HAVE ADEQUATE SUMP CAPACITY, ALL OIL/GAS TRAPS ARE IN-PLACE, AND ALL GRATES AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE.
2. ALL DRAINAGE MANHOLES AND CONNECTING PIPING SHALL BE ANNUALLY INSPECTED TO ENSURE THAT THEY ARE FREE FROM STRUCTURAL DAMAGE, ARE DRAINING FREELY, ARE NOT PONDING WATER OR ACCUMULATING SEDIMENT OR DEBRIS.
3. ALL DRAINAGE OUTLETS SHALL BE INSPECTED ANNUALLY TO ENSURE THAT NO SCOUR OR EROSION IS OCCURRING, THAT PIPES REMAIN FREE-FLOWING, AND THAT NO DAMAGE HAS OCCURRED AS PART OF ROUTINE GROUNDS MAINTENANCE OR RELATED ACTIVITIES.

THE OPERATION AND MAINTENANCE SCHEDULE SHALL CONSIST OF THE FOLLOWING:

1. THE ACCESS ROADWAYS, PARKING AREAS, AND WALKWAYS SHALL BE SWEPT CLEAN ON A SEMI-ANNUAL BASIS TO REMOVE CONTAMINANTS AND SOIL FINES. THE METHOD OF SWEEPING SHALL BE BY EITHER HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. IT IS PARTICULARLY IMPORTANT TO SCHEDULE SPRING SWEEPING TO REMOVE RESIDUAL SAND RESULTING FROM WINTER SNOW AND ICE REMOVAL OPERATIONS.
2. INSPECT DEEP SUMP CATCH BASINS AND NYLOPLAST DRAIN BASINS AT LEAST TWICE PER YEAR AND REMOVE SEDIMENT, LEAVES, FLOATABLES, AND DEBRIS AS NECESSARY. BASIN SEDIMENT SHALL BE REMOVED WHEN THE DEPOSIT IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE SUMP TO THE INVERT OF THE LOWEST PIPE IN THE BASIN. IT IS IMPORTANT THAT THE SUMPS BE PROPERLY MAINTAINED TO PREVENT DISCHARGE OF FINES INTO THE STORMWATER SYSTEMS.
3. INSPECT DRAIN MANHOLES AND INTERCONNECTION PIPING ON AN ANNUAL BASIS AND REMOVE ALL FINES AND/OR OTHER CONTAMINANTS. A LATE SPRING OR EARLY SUMMER INSPECTION SCHEDULE IS CONSIDERED PREFERABLE.
4. ANY BROKEN OR DAMAGED PIPES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY, IN KIND.
5. ALL BROKEN, LEAKING, OR OTHERWISE DAMAGED STRUCTURES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY. DRAIN BASIN AND CATCH BASIN GRATES OR MANHOLE COVERS SHALL BE REPLACED WITH SIMILAR WEIGHT AND LOADING-CHARACTERISTIC REPLACEMENT PARTS. THE REPLACEMENT PARTS FOR ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.
6. INSPECT THE GRASS CHANNEL ON A SEMI-ANNUAL BASIS. REMOVE ANY SEDIMENT, LEAVES, AND DEBRIS AS NECESSARY.
7. INSPECT THE INFILTRATION BASIN AFTER AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF ONE INCH OR MORE DURING THE SIX MONTHS FOLLOWING CONSTRUCTION COMPLETION. THEREAFTER, INSPECT THE INFILTRATION BASIN ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2.7 INCHES (THE 1-YEAR, 24-HOUR III PRECIPITATION EVENT). A LATE SPRING OR EARLY SUMMER ANNUAL INSPECTION SCHEDULE IS CONSIDERED PREFERABLE. MOW THE BASIN SIDE SLOPES AND BOTTOM TWICE PER YEAR. RAKE BOTTOM BED, AND REMOVE TRASH AND DEBRIS TWICE A YEAR. EXAMINE OUTLET CONTROL STRUCTURE FOR EVIDENCE OF CLOGGING OR OUTFLOW RELEASE VELOCITIES THAT ARE GREATER THAN DESIGN FLOW. IN THE EVENT THAT SEDIMENT ACCUMULATES IN THE DETENTION BASIN, IT SHALL BE REMOVED (AND LAWFULLY DISPOSED OF) ONCE ITS VOLUME EXCEEDS 10% OF THE TOTAL BASIN VOLUME.
8. INSPECT THE BIORETENTION FILTER AFTER AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF ONE INCH OR MORE DURING THE SIX MONTHS FOLLOWING CONSTRUCTION COMPLETION. THEREAFTER, INSPECT THE FILTER ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2.7 INCHES (THE 1-YEAR, 24-HOUR III PRECIPITATION EVENT). A LATE SPRING OR EARLY SUMMER ANNUAL INSPECTION SCHEDULE IS CONSIDERED PREFERABLE. EXAMINE OUTLET STRUCTURE FOR EVIDENCE OF CLOGGING. MOW EMBANKMENT SIDE SLOPES TWICE A YEAR. REMOVE ACCUMULATED SILT AND SEDIMENT FROM THE FILTER BED ONCE SILT/SEDIMENT ACCUMULATION EXCEEDS ONE INCH IN DEPTH. REPLACE WOOD CHIPS WHEN THEY BECOME DETERIORATED OR EVERY THREE YEARS. IF WATER SHOULD POND ON THE SURFACE OF THE FILTER BED FOR MORE THAN 48 HOURS PRIOR TO THE FULL WOOD-CHIP REPLACEMENT CYCLE, THEN THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED (AND LAWFULLY DISPOSED OF) AND REPLACED WITH FRESH WOOD CHIPS. ALTERNATIVELY, TILLING MAY BE PERFORMED, AS INDICATED IN NOTE 10 BELOW.
9. INSPECT THE DETENTION BASIN AFTER EVERY MAJOR STORM EVENT DURING THE FIRST THREE MONTHS OF OPERATION AND TWICE PER YEAR THEREAFTER. A LATE SPRING (OR EARLY SUMMER) AND LATE FALL ANNUAL INSPECTION SCHEDULE IS CONSIDERED PREFERABLE. MOW THE SIDE SLOPES AND BOTTOM TWICE PER YEAR. RAKE BOTTOM BED, AND REMOVE TRASH AND DEBRIS TWICE A YEAR. EXAMINE OUTLET CONTROL STRUCTURE FOR EVIDENCE OF CLOGGING AND FOR OUTFLOW RELEASE VELOCITIES THAT ARE GREATER THAN DESIGN FLOW. IN THE EVENT THAT SEDIMENT ACCUMULATES IN THE DETENTION BASIN, IT SHALL BE REMOVED (AND LAWFULLY DISPOSED OF) ONCE ITS VOLUME EXCEEDS 10% OF THE TOTAL BASIN VOLUME.
10. TILLING OF THE INFILTRATION BASIN AND BIORETENTION FILTER FLOORS SHALL BE PERFORMED WHEN AN OBVIOUS LOSS OF INFILTRATION OCCURS, AND PARTICULARLY IF STANDING WATER IS PRESENT FOR MORE THAN 48 HOURS AFTER A RAINFALL EVENT. AFTER REMOVAL OF ACCUMULATED SEDIMENT AND ANY MULCH BED (IN BIORETENTION FILTER), TILLING CAN BE ACCOMPLISHED WITH A ROTARY TILLER OR DISC HARROW, AND SAND CAN BE ADDED TO RESTORE INFILTRATION CAPACITY. FOR THE BIORETENTION FILTER, INSTALL NEW MULCH TO THE DISTURBED AREAS AS DEPICTED IN THE DETAILS. FOR THE INFILTRATION BASIN, RESEED WITH THE SEED MIXTURE SPECIFIED IN SEEDING MATERIAL NOTES.
11. IF TILLING THE BOTTOM OF INFILTRATION BASIN FAILS TO IMPROVE INFILTRATION, REMOVE AT LEAST FOUR INCHES OF SOIL FROM THE BOTTOM OF THE BASIN AND REPLACE WITH LOAMY-SAND TEXTURED SOIL. RESEED WITH THE SEED MIXTURE SPECIFIED IN THE INFILTRATION BASIN DETAIL.
12. IF TILLING THE BOTTOM OF BIORETENTION FILTER FAILS TO IMPROVE INFILTRATION, REMOVE AT LEAST FOUR INCHES OF SOIL FROM BELOW THE MULCH BED AND REPLACE WITH BIORETENTION SOIL. MULCH THE DISTURBED AREAS AS DEPICTED IN THE DETAILS AND MAINTAIN UNTIL STABILIZED.
13. IF UPON INSPECTION, EVIDENCE OF HYDROCARBONS (OIL AND GASOLINE) SHOULD BE OBSERVED, THEN STEPS SHALL BE INITIATED IMMEDIATELY TO REMOVE AND LAWFULLY DISPOSE OF THE MATERIAL. THE FULL EXTENT OF THE MATERIAL SHALL BE ASSESSED, AND THE MATERIAL SHALL BE REMOVED FROM ALL AFFECTED AREAS. AT NO TIME SHALL HYDROCARBON-BASED MATERIALS BE ALLOWED TO REMAIN IN ANY DRAINAGE STRUCTURE OR STORMWATER MANAGEMENT FEATURE. COORDINATE WITH ENGINEER FOR FURTHER INFORMATION REGARDING SPILL PREVENTION AND AN OVERVIEW OF RESPONSE AND REPORTING REQUIREMENTS IN THE EVENT THAT A SPILL SHOULD OCCUR.
14. THE TREE FILTERS SHALL BE INSPECTED TWICE ANNUALLY. INCLUDED IN THE INSPECTION SHALL BE A REVIEW OF THE ADJACENT CURBING, THE OVERFLOW OUTLET AREA, AND THE HEALTH OF THE TREE. REPLACE THE TOP THREE INCHES OF SOIL MEDIA WHEN PONDING ON THE SURFACE OF THE SOIL MEDIA IS OBSERVED, AND REPLACE THE ENTIRE VOLUME OF SOIL MEDIA AND THE TREE WHEN THE TREE IS OBSERVED TO BE IN A STATE OF DECLINE. ACCUMULATED SEDIMENTS AND DEBRIS SHALL BE REMOVED FROM THE PRE-TREATMENT CHAMBER (AND LAWFULLY DISPOSED OF) WHEN THE SEDIMENT REACHES A DEPTH OF 30 INCHES, OR WHEN THE UPPER LIMIT OF ACCUMULATED SEDIMENT IS OBSERVED TO BE WITHIN SIX INCHES BELOW THE INLET OF THE VERTICAL PIPE. ANY SAND OR DEBRIS ACCUMULATION ON THE PAVEMENT ADJACENT TO THE STRUCTURE SHALL BE SWEPT PROMPTLY.

GENERAL MAINTENANCE:

1. GRASSED SLOPES SHALL REMAIN WELL STABILIZED WITH CONTINUOUS GRASS COVER OR OTHER DESIGNATED SURFACE TREATMENT TO PREVENT EROSION AND CONSEQUENT SEDIMENT CONTRIBUTIONS TO DRAINAGE STRUCTURES. EXPOSED AREAS SHALL BE RESEEDED IMMEDIATELY TO STABILIZE EXPOSED SOILS.
2. SHOULD PAVEMENT SEAL COATING AND CRACK REPAIR BE REQUIRED, THE USE OF COAL-TAR BASED SEALANTS SHALL BE PROHIBITED (DUE TO HIGH CONTENT OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)). THE USE OF ASPHALT-BASED SEALANTS IS ACCEPTABLE.
3. TRASH RECEPTACLES SHALL BE SITED AT LOCATIONS THAT ARE DISTANT FROM DRAIN INLETS AND SHALL BE EMPTIED REGULARLY AND FOLLOWING EVENTS.
4. THE TRASH DUMPSTER TO BE LOCATED ON SITE SHALL REMAIN UNDER COVER AND SHALL BE EMPTIED ROUTINELY. OVERFLOW AND LEAKAGE ARE PROHIBITED, BUT INADVERTENT LEACHATE SHALL BE ALLOWED TO DRAIN TO THE PROCESSED WATER SYSTEM AS INTENDED.
5. DURING SNOW-REMOVAL OPERATIONS IN ACCESS ROADWAYS AND PARKING AREAS, CARE SHALL BE TAKEN TO CLEAR CATCH BASIN AND TREE-FILTER INLETS AND TO ENSURE THAT THE INLETS ARE NOT COVERED BY SNOW PILES.
6. GRASS AREAS ADJACENT TO ROADWAYS AND PARKING AREAS HAVE BEEN GRADED TO DRAIN TOWARD THE PAVED AREAS TO ALLOW TREATMENT OF SNOW MELT WATER BY THE BMP'S.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0212
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Environmental Management
NOV 15 2017
Office of Water Resources

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SHEET CONTENTS:

DRAINAGE SYSTEM
OPERATION AND
MAINTENANCE/
CONSTRUCTION
NOTES

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-2.01

SHEET 2 OF 16

j:\rhodeisland\glocester\fm-global 2007\cw-site-projects\electrical hazard\07-construction documents\c-1.01 - c-7.22 and owts.dwg Plot Date: 11/14/2017

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOW:

TYPE OF BOUNDARY SURVEY:	NOT A BOUNDARY SURVEY
OTHER TYPE OF SURVEY:	DATA ACCUMULATION SURVEY (TOPOGRAPHY) COMPILATION PLAN (UTILITIES)
MEASUREMENT SPECIFICATION:	HORIZONTAL ACCURACY: CLASS III VERTICAL ACCURACY : CLASS V-1 TOPOGRAPHIC ACCURACY: CLASS T-2

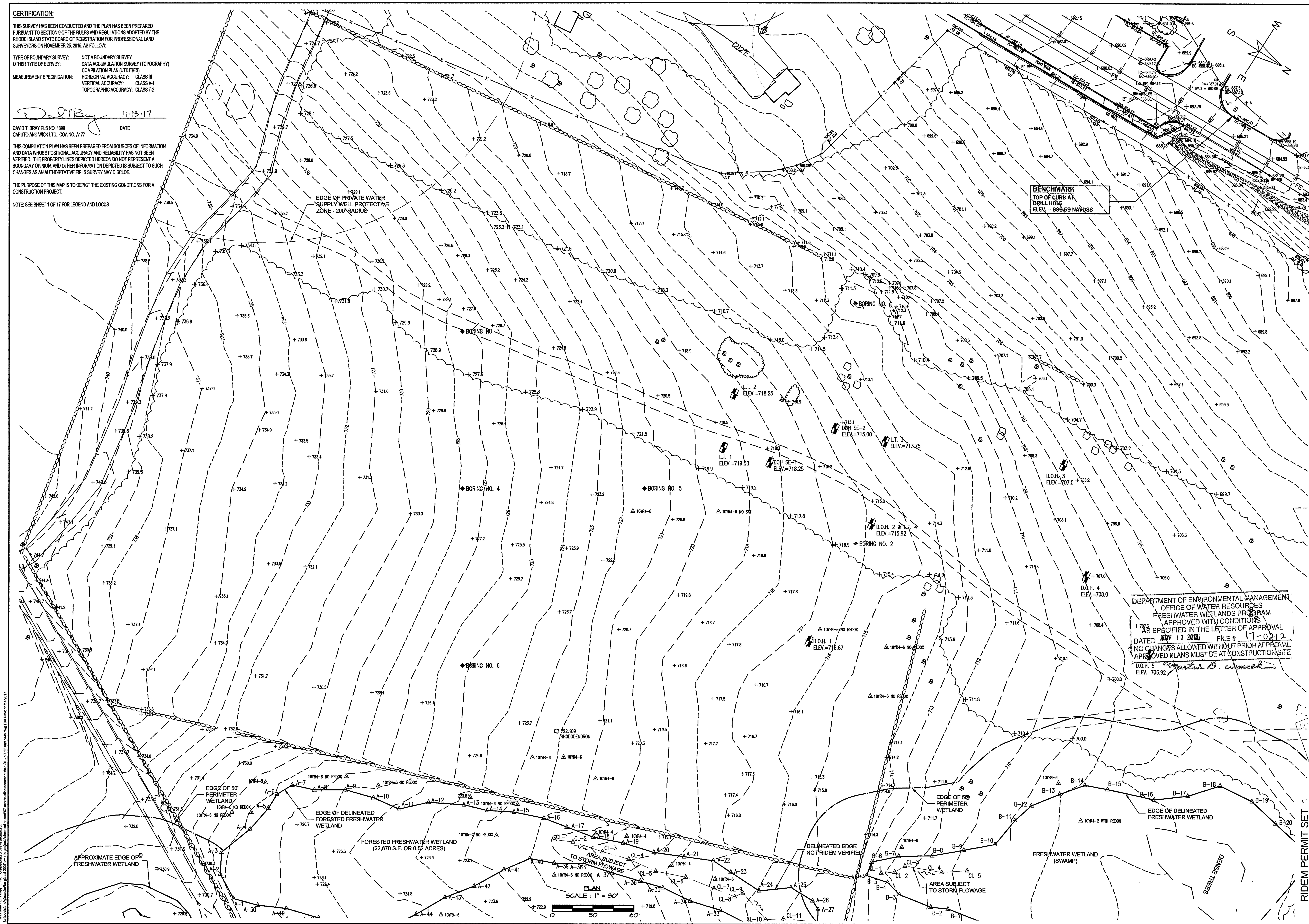
[signature] 11·13·17

DAVID T. BRAY PLS NO. 1899 DATE
CAPUTO AND WICK LTD., COA NO. A177

THIS COMPILATION PLAN HAS BEEN PREPARED FROM SOURCES OF INFORMATION AND DATA WHOSE POSITIONAL ACCURACY AND RELIABILITY HAS NOT BEEN VERIFIED. THE PROPERTY LINES DEPICTED HEREON DO NOT REPRESENT A BOUNDARY OPINION, AND OTHER INFORMATION DEPICTED IS SUBJECT TO SUCH CHANGES AS AN AUTHORITATIVE FIRLS SURVEY MAY DISCLOE.

THE PURPOSE OF THIS MAP IS TO DEPICT THE EXISTING CONDITIONS FOR A CONSTRUCTION PROJECT.

NOTE: SEE SHEET 1 OF 17 FOR LEGEND AND LOCUS



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DAVID T. BRAY
No. 1899
PROFESSIONAL LAND SURVEYOR

Environmental Management
NOV 15 2017
Office of Water Resources

SHEET CONTENTS:

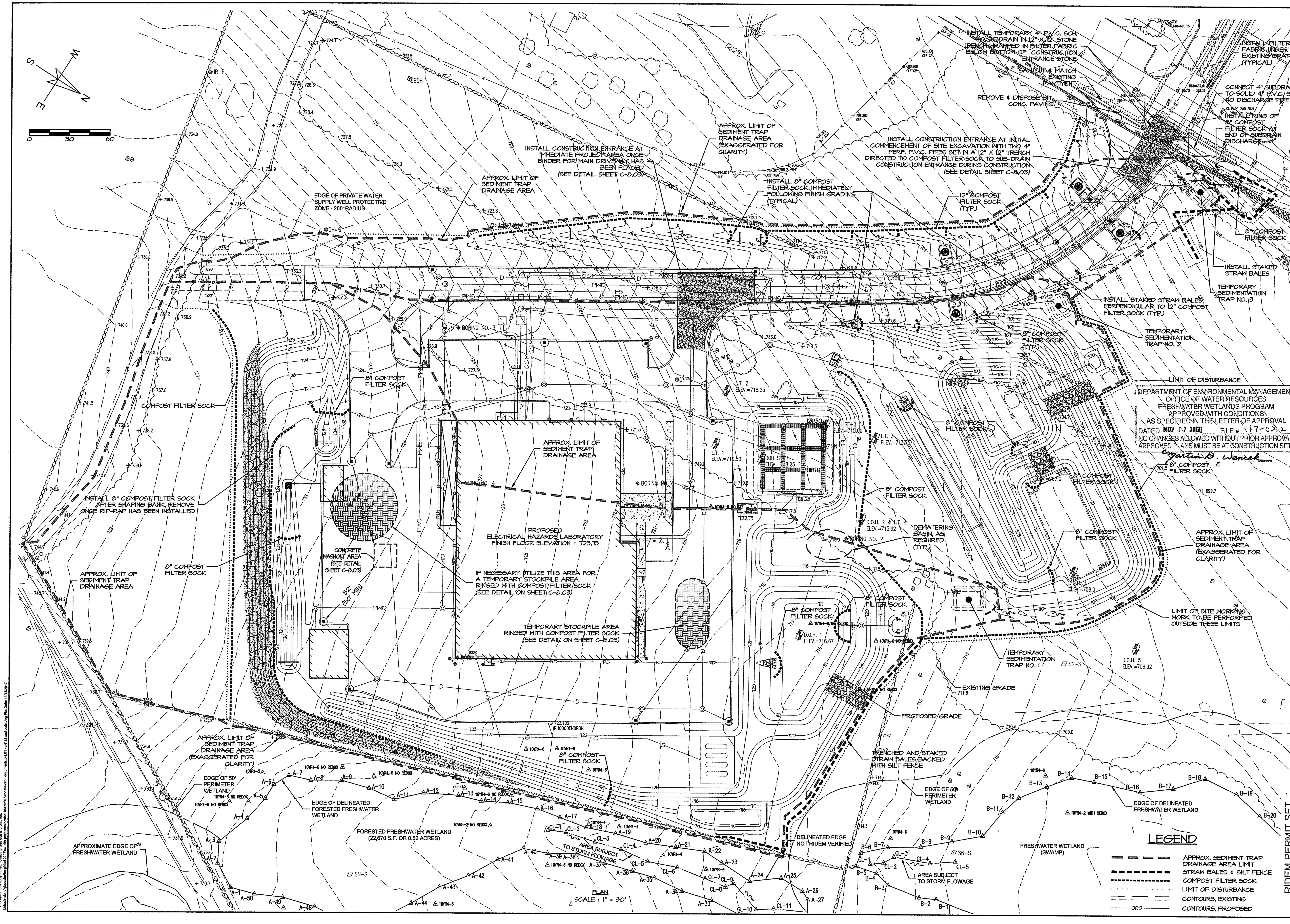
EXISTING CONDITIONS PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-3.01

SHEET 3 OF 16



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SHEET CONTENTS:

EROSION CONTROL PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-4.01

SHEET 4 OF 16

PLANTING SCHEDULE

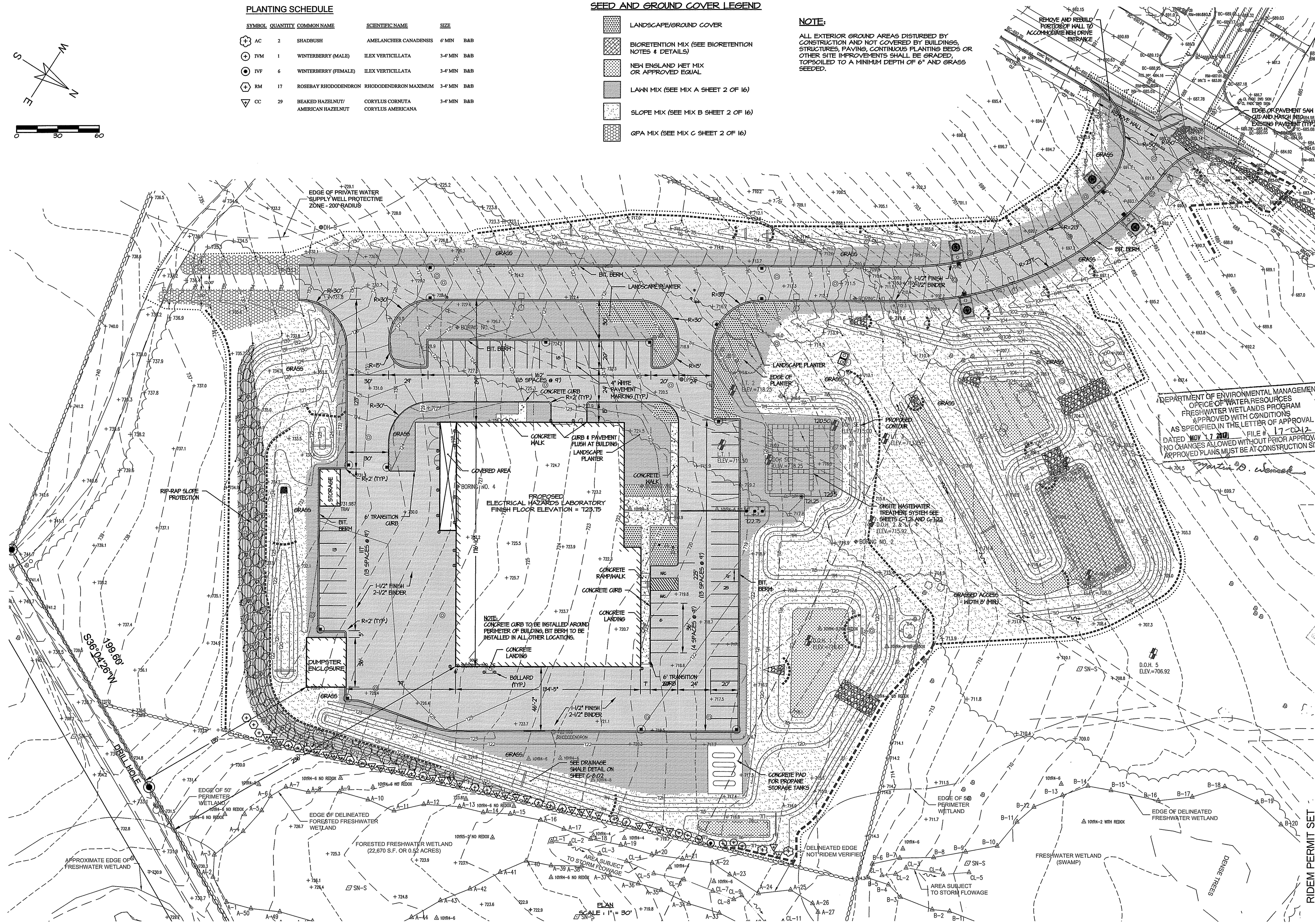
SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE	
AC	2	SHADBUSH	AMELANCHIER CANADENSIS	6' MIN	B&B
IVM	1	WINTERBERRY (MALE)	ILEX VERTICILLATA	3-4' MIN	B&B
IVF	6	WINTERBERRY (FEMALE)	ILEX VERTICILLATA	3-4' MIN	B&B
RM	17	ROSEBAY RHODODENDRON	RHODODENDRRON MAXIMUM	3-4' MIN	B&B
CC	29	BEAKED HAZELNUT/ AMERICAN HAZELNUT	CORYLUS CORNUTA CORYLUS AMERICANA	3-4' MIN	B&B

SEED AND GROUND COVER LEGEND

- LANDSCAPE/GROUND COVER
- BIORETENTION MIX (SEE BIORETENTION NOTES & DETAILS)
- NEW ENGLAND WET MIX OR APPROVED EQUAL
- LAWN MIX (SEE MIX A SHEET 2 OF 16)
- SLOPE MIX (SEE MIX B SHEET 2 OF 16)
- GPA MIX (SEE MIX C SHEET 2 OF 16)

NOTE:

ALL EXTERIOR GROUND AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY BUILDINGS, STRUCTURES, PAVING, CONTINUOUS PLANTING BEDS OR OTHER SITE IMPROVEMENTS SHALL BE GRADED, TOPSOILED TO A MINIMUM DEPTH OF 6" AND GRASS SEEDED.



0 30 60
EDGE OF PRIVATE WATER SUPPLY WELL PROTECTIVE ZONE - 200' RADIUS
RIP-RAP SLOPE PROTECTION
PROPOSED ELECTRICAL HAZARDS LABORATORY FINISH FLOOR ELEVATION = 723.75
COVERED AREA
CONCRETE WALK
CURB & PAVEMENT FLUSH AT BUILDING
LANDSCAPE PLANTER
CONCRETE RAMP/WALK
CONCRETE CURB
CONCRETE LANDING
NOTE: CONCRETE CURB TO BE INSTALLED AROUND PERIMETER OF BUILDING, BIT BERM TO BE INSTALLED IN ALL OTHER LOCATIONS.
DUMPSTER ENCLOSURE
STORAGE
BOLLARD (TYP.)
1-1/2" FINISH 2-1/2" BINDER
6' TRANSITION CURB
4" WHITE PAVEMENT MARKING (TYP.)
BIT. BERM
GRASS
ONSITE WASTEWATER TREATMENT SYSTEM SEE SHEETS C-1.21 AND C-1.22
PROPOSED CONTOUR
GRASSED ACCESS - WIDTH 8' (MIN.)
CONCRETE PAD FOR PROPANE STORAGE TANKS
SEE DRAINAGE SWALE DETAIL ON SHEET C-8.02
REMOVE AND REBUILD PORTION OF WALL TO ACCOMMODATE NEW DRIVE ENTRANCE
EDGE OF PAVEMENT SAW CUT AND MATCH INTO EXISTING PAVEMENT (TYP)
EDGE OF 50' PERIMETER WETLAND
EDGE OF DELINEATED FORESTED FRESHWATER WETLAND
FORESTED FRESHWATER WETLAND (22,670 S.F. OR 0.52 ACRES)
APPROXIMATE EDGE OF FRESHWATER WETLAND
AREA SUBJECT TO STORM FLOWAGE
DELINEATED EDGE NOT RIDEM VERIFIED
EDGE OF DELINEATED FRESHWATER WETLAND
FRESHWATER WETLAND (SWAMP)
DENSE TREES
DRILL HOLE
S36°04'26"W 199.60'
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0212
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE
PLAN SCALE: 1" = 30'
RIDEM PERMIT SET

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Office of Water Resources NOV 15 2017

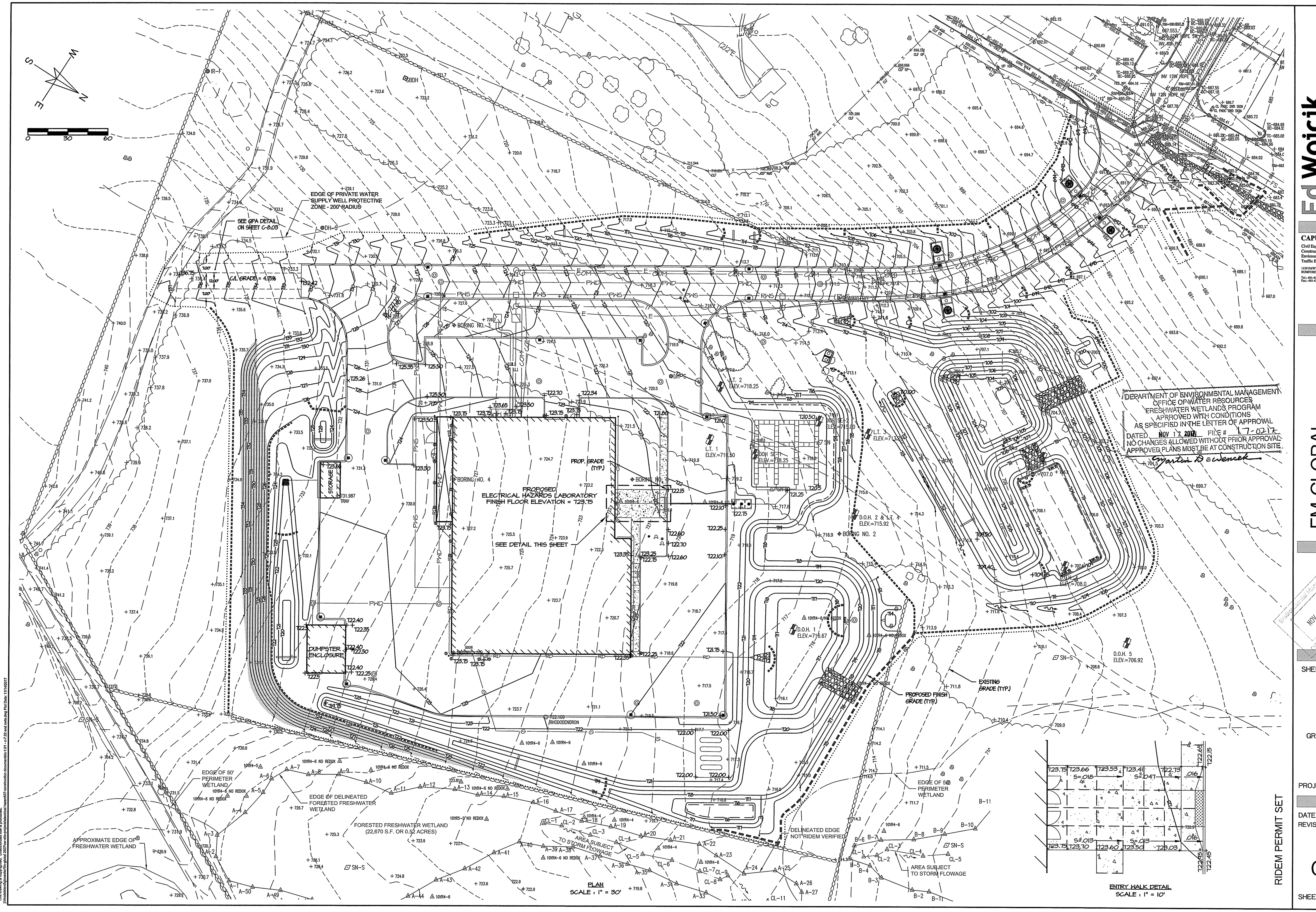
SHEET CONTENTS:

LAYOUT AND PLANTING PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-5.01



EDGE OF PRIVATE WATER SUPPLY WELL PROTECTIVE ZONE - 200' RADIUS
SEE GPA DETAIL ON SHEET C-8.03
PROPOSED ELECTRICAL HAZARDS LABORATORY FINISH FLOOR ELEVATION = 723.15
SEE DETAIL THIS SHEET
PROP. GRADE (TYP.)
DUMPSTER ENCLOSURE
STORAGE
EXISTING GRADE (TYP.)
PROPOSED FINISH GRADE (TYP.)
EDGE OF 50' PERIMETER WETLAND
EDGE OF DELINEATED FORESTED FRESHWATER WETLAND
FORESTED FRESHWATER WETLAND (22,670 S.F. OR 0.52 ACRES)
APPROXIMATE EDGE OF FRESHWATER WETLAND
AREA SUBJECT TO STORM FLOWAGE
DELINEATED EDGE NOT RIDEM VERIFIED
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0217
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
NOV 15 2017
PLAN
SCALE : 1" = 30'
ENTRY WALK DETAIL
SCALE : 1" = 10'

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SHEET CONTENTS:

GRADING PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-6.01

PROPOSED
ELECTRICAL HAZARDS LABORATORY
FINISH FLOOR ELEVATION = 723.75

PLAN
SCALE : 1" = 30'

RIDEM PERMIT SET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
D.O.H. DATED NOV 17 2017 FILE # 17-0212
ELEV.=705.92 CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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SHEET CONTENTS:

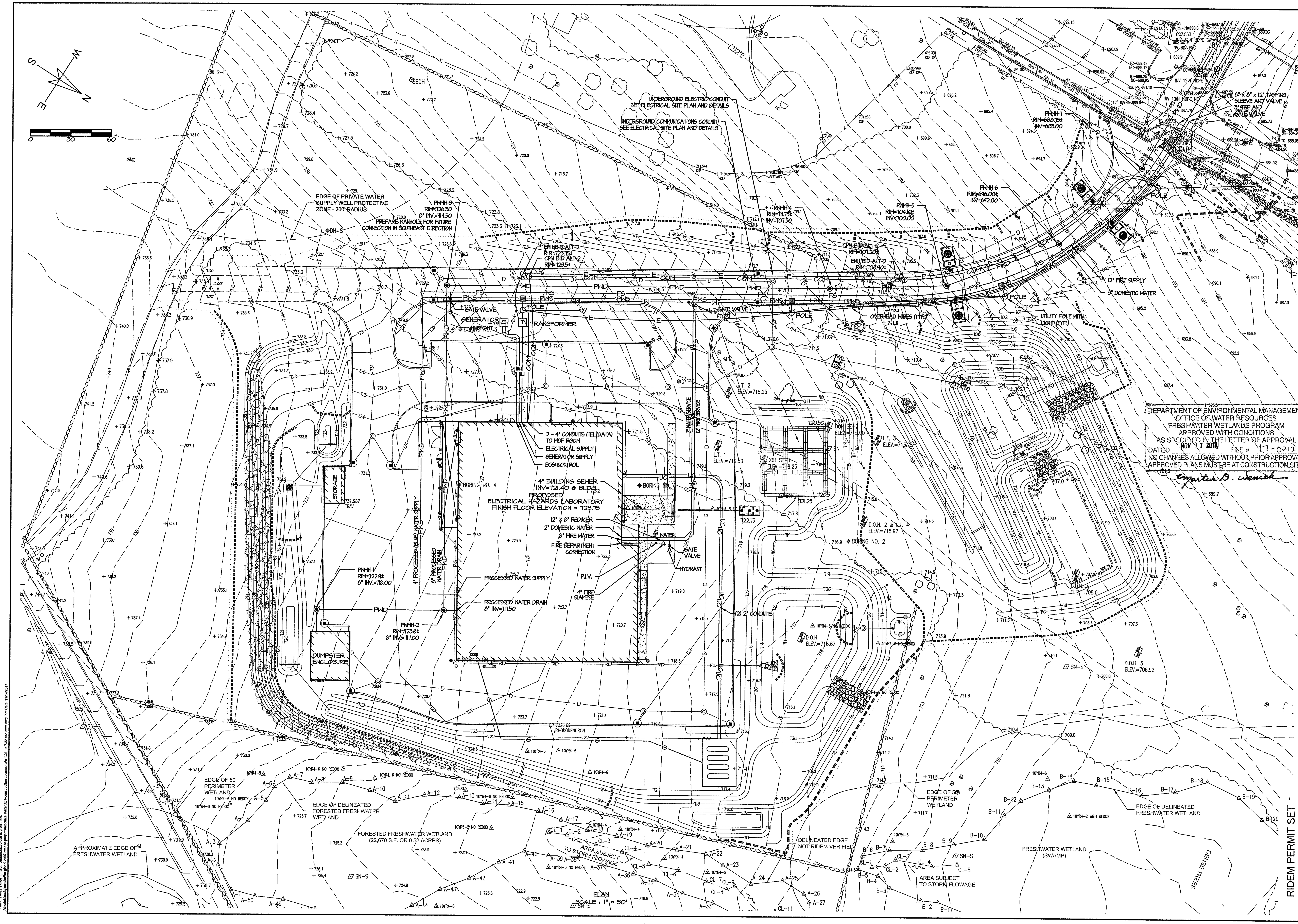
DRAINAGE PLAN

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-7.01

SHEET 7 OF 16


UNDERGROUND ELECTRIC CONDUIT SEE ELECTRICAL SITE PLAN AND DETAILS
UNDERGROUND COMMUNICATIONS CONDUIT SEE ELECTRICAL SITE PLAN AND DETAILS
EDGE OF PRIVATE WATER SUPPLY WELL PROTECTIVE ZONE - 200' RADIUS
PREPARE MANHOLE FOR FUTURE CONNECTION IN SOUTHEAST DIRECTION
GATE VALVE
GENERATOR
TRANSFORMER
HYDRANT
POLE
OVERHEAD WIRES (TYP.)
UTILITY POLE WITH LIGHT (TYP.)
12" FIRE SUPPLY
3" DOMESTIC WATER
2 - 4" CONDUITS (TEL/DATA) TO MDF ROOM
ELECTRICAL SUPPLY
GENERATOR SUPPLY
BOS/CONTROL
4" BUILDING SEWER INV=721.40 @ BLDG.
PROPOSED ELECTRICAL HAZARDS LABORATORY FINISH FLOOR ELEVATION = 723.75
12" X 8" REDUCER
2" DOMESTIC WATER
8" FIRE WATER
FIRE DEPARTMENT CONNECTION
P.I.V.
4" FIRE SIAMESE
PROCESSED WATER SUPPLY
PROCESSED WATER DRAIN
STORAGE
DUMPSTER ENCLOSURE
(2) 2" CONDUITS
EDGE OF 50' PERIMETER WETLAND
EDGE OF DELINEATED FORESTED FRESHWATER WETLAND
FORESTED FRESHWATER WETLAND (22,670 S.F. OR 0.52 ACRES)
APPROXIMATE EDGE OF FRESHWATER WETLAND
AREA SUBJECT TO STORM FLOWAGE
DELINEATED EDGE NOT RIDEM VERIFIED
EDGE OF DELINEATED FRESHWATER WETLAND
FRESHWATER WETLAND (SWAMP)
DENSE TREES
PLAN
SCALE : 1" = 30'
RIDEM PERMIT SET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0212
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wencek

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

CAPUTO AND WICK LTD.
Civil Engineering and Land Surveying
Construction Engineering
Environmental Services
Traffic Engineering
1150 PAWTUCKET AVE.
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Tel.: 401-434-8880
Fax.: 401-434-1615
mail@cwltd.net
www.cwltd.net

FM GLOBAL Electrical Hazards Laboratory

743 Reynolds Road
West Glocester, RI 02814

SHEET CONTENTS:

UTILITY PLAN NO. 1

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-7.11

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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NOV 15 2017

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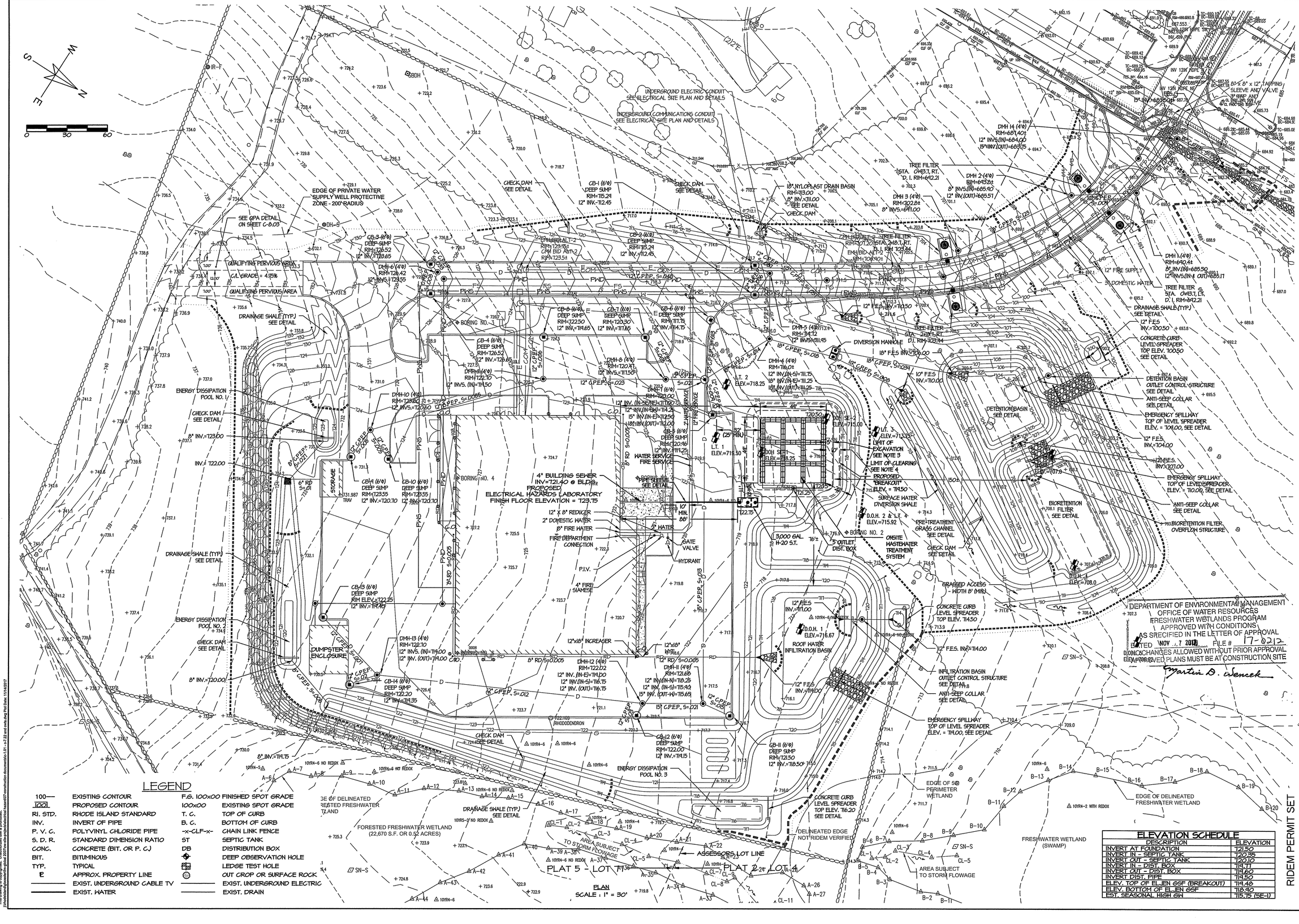
SHEET CONTENTS:

UTILITY PLAN NO. 2

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-7.12



LEGEND

100—	EXISTING CONTOUR	F.G. 100x00	FINISHED SPOT GRADE
100	PROPOSED CONTOUR	100x00	EXISTING SPOT GRADE
RI. STD.	RHODE ISLAND STANDARD	T. C.	TOP OF CURB
INV.	INVERT OF PIPE	B. C.	BOTTOM OF CURB
P. V. C.	POLYVINYL CHLORIDE PIPE	-x-CLF-x-	CHAIN LINK FENCE
S. D. R.	STANDARD DIMENSION RATIO	ST	SEPTIC TANK
CONC.	CONCRETE (BIT. OR P. C.)	DB	DISTRIBUTION BOX
BIT.	BITUMINOUS	⊕	DEEP OBSERVATION HOLE
TYP.	TYPICAL	▨	LEDGE TEST HOLE
ℙ	APPROX. PROPERTY LINE	●	OUT CROP OR SURFACE ROCK
——	EXIST. UNDERGROUND CABLE TV	——	EXIST. UNDERGROUND ELECTRIC
——	EXIST. WATER	——	EXIST. DRAIN

ELEVATION SCHEDULE

DESCRIPTION	ELEVATION
INVERT AT FOUNDATION	721.50
INVERT IN - SEPTIC TANK	720.35
INVERT OUT - SEPTIC TANK	720.10
INVERT IN - DIST. BOX	719.77
INVERT OUT - DIST. BOX	719.60
INVERT DIST. PIPE	719.50
ELEV. TOP OF ELJEN GSF (BREAKOUT)	719.48
ELEV. BOTTOM OF ELJEN GSF	718.90
EST. SEASONAL HIGH GW	715.75 (SE-1)

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RIDEM PERMIT SET

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No. 4795
REGISTERED PROFESSIONAL ENGINEER
D 3023

SHEET CONTENTS:

NOV 15 2017

ONSITE WASTE WATER TREATMENT DESIGN PLAN NO.1

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-7.21

SOIL EVALUATION TEST HOLE 1										
ORIGINAL ELEVATION – 717±										
HORIZON	DEPTH	HORIZON BOUNDARIES		SOIL COLORS		RE-DOX. DESCRIPTION	TEXTURE	STRUCTURE	CONSISTENCE	SOIL CATEGORY
		DIST.	TOPO.	MATRIX	RE-DOX. FEATURES	AB. S. CON.				
Ap	0 – 7"	a	s	10 YR 3/3			F. SANDY LOAM	1 SBK F	FRIABLE	4
Bw1	7" – 13"	c	s	7.5 YR 4/6			F. SANDY LOAM	1 SBK F	FRIABLE	4
Bw2	13" – 30"	a	w	10 YR 4/6			F. SANDY LOAM	1 SBK F	FRIABLE	4
C	30" – 102"			2.5 Y 5/3	2.5 Y 5/1	C – M – F	GLS	0 – M	FRIABLE	6M

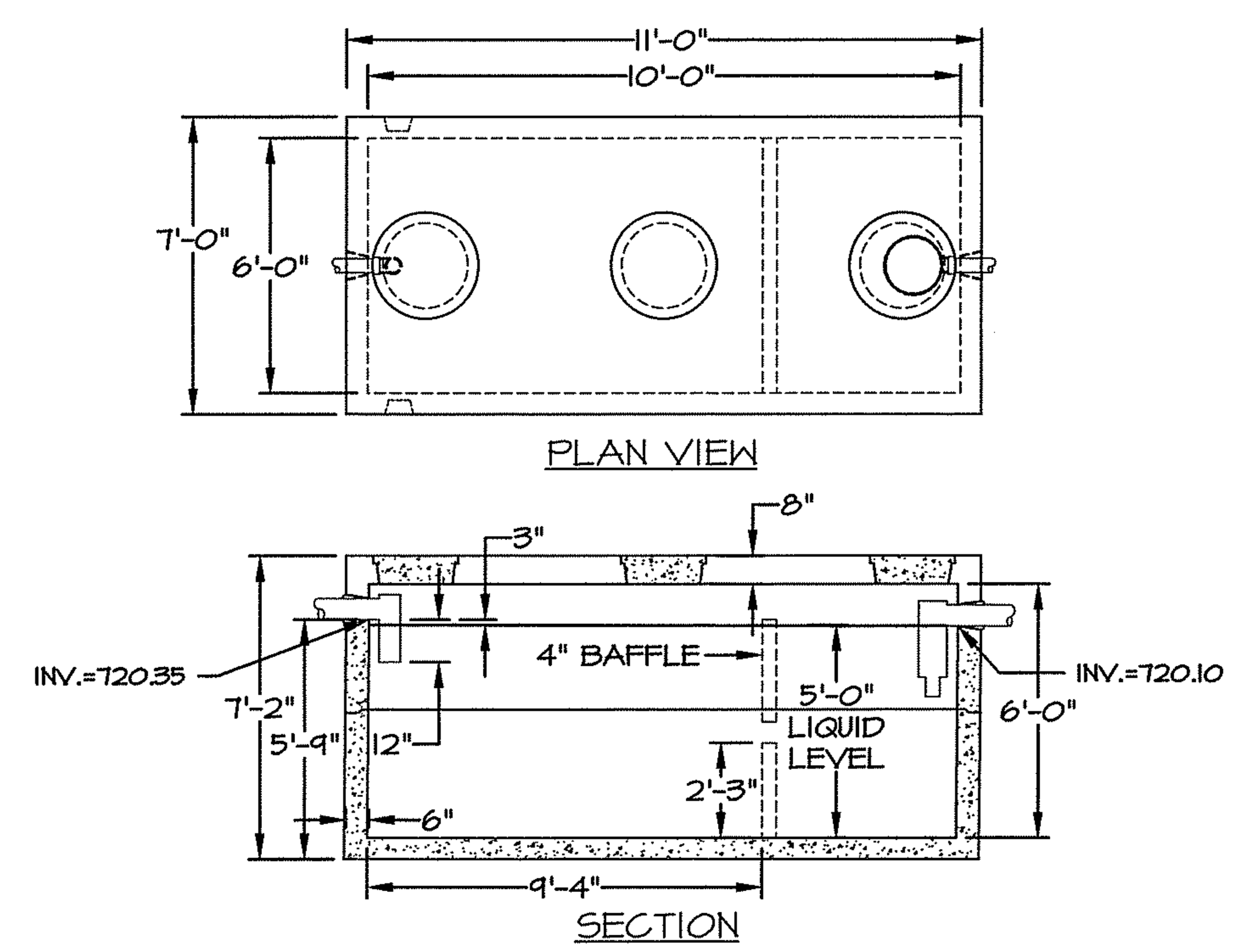
OBSERVED STANDING GROUNDWATER – 80" (JUNE 29, 2017) ELEV. = XX   REFUSAL ELEV. NONE
ASSIGNED LOADING RATE – 0.70 GALLONS PER S. F.   REMOVE TO C HORIZON

SOIL EVALUATION TEST HOLE 2										
ORIGINAL ELEVATION – 716±										
HORIZON	DEPTH	HORIZON BOUNDARIES		SOIL COLORS		RE-DOX. DESCRIPTION	TEXTURE	STRUCTURE	CONSISTENCE	SOIL CATEGORY
		DIST.	TOPO.	MATRIX	RE-DOX. FEATURES	AB. S. CON.				
Ab	0 – 6"	a	s	10 YR 3/3			F. SANDY LOAM	1 SBK F	FRIABLE	4
Bw1	3" – 18"	a	s	10 YR 4/6			F. SANDY LOAM	1 SBK F	FRIABLE	4
C	18" – 96"	a	s	2.5 Y 5/3	2.5 Y 5/1 7.5 YR 5/6	C – M – F F – M – P	GLS	0 – M	FRIABLE	6M

OBSERVED STANDING GROUNDWATER – 79.5" (JUNE 29, 2017) ELEV. = XX   REFUSAL ELEV. NONE
ASSIGNED LOADING RATE – 0.70 GALLONS PER S. F.   REMOVE TO C HORIZON

LEDGE TEST 1	LEDGE TEST 2	LEDGE TEST 3	LEDGE TEST 4
ORIGINAL GRADE – 410.62	ORIGINAL GRADE – 410.0	ORIGINAL GRADE – 407.7	ORIGINAL GRADE – 407.8
DEPTH TO REFUSAL – NONE	DEPTH TO REFUSAL – NONE	DEPTH TO REFUSAL – NONE	DEPTH TO REFUSAL – NONE

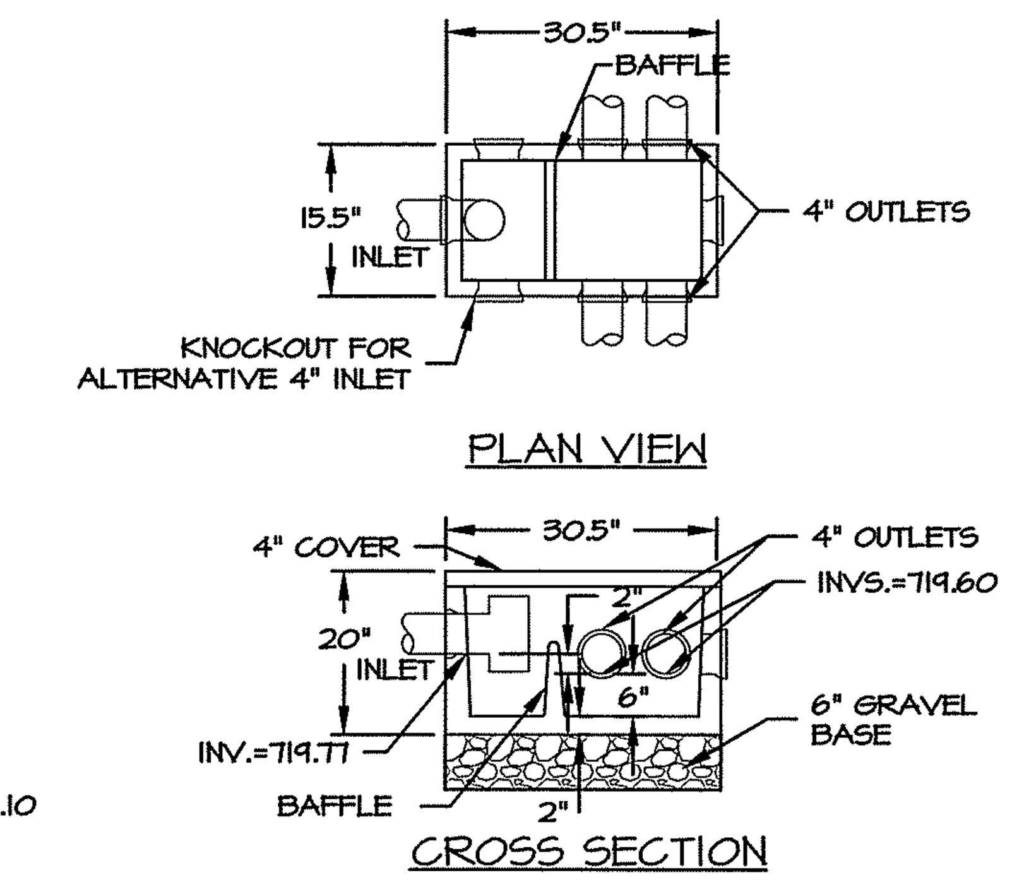
WITNESS: ALAN PITMAN, RIDEM   TESTING PERFORMED BY: KEVIN FETZER – D-4029   DATE OF SOIL TEST – JUNE 10, 2016



SEPTIC TANK - JOLLEY PRECAST INC. 3000 GALLON H-20 TWO COMPARTMENT TANK, OR APPROVED EQUAL

3,000 GALLON, 2 COMPARTMENT SEPTIC TANK

SCALE 1" - 4'



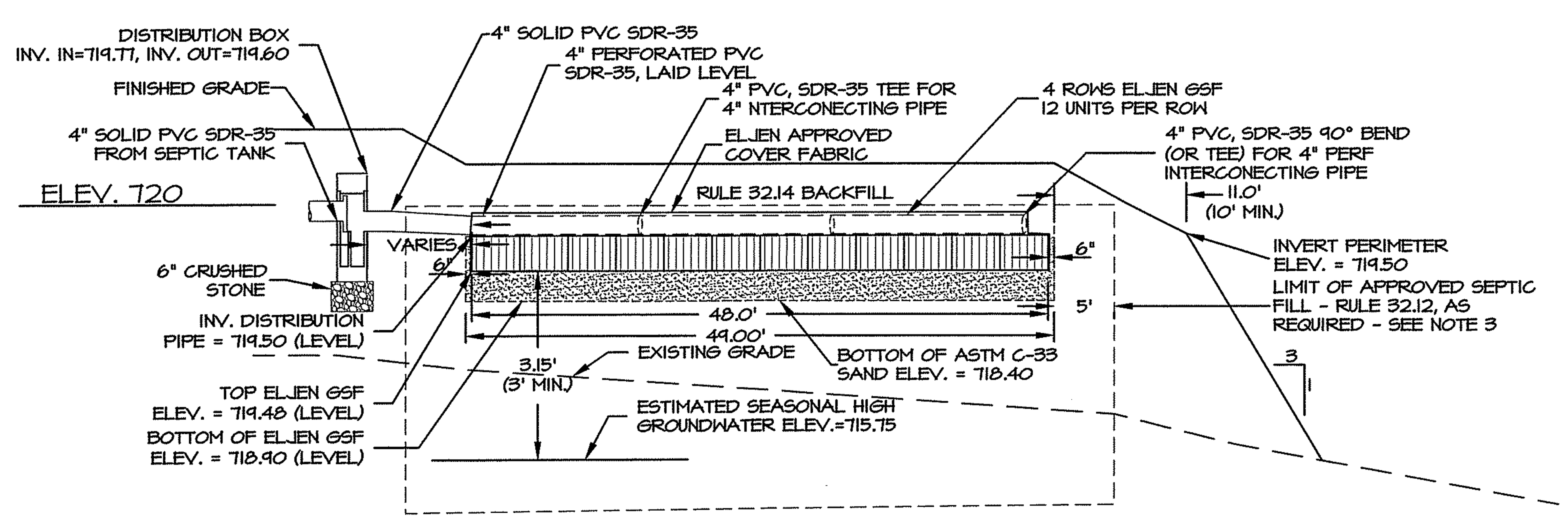
CONCRETE PRODUCTS DISTRIBUTION BOX 5, OR EQUAL

5 OUTLET DISTRIBUTION BOX

NOT TO SCALE

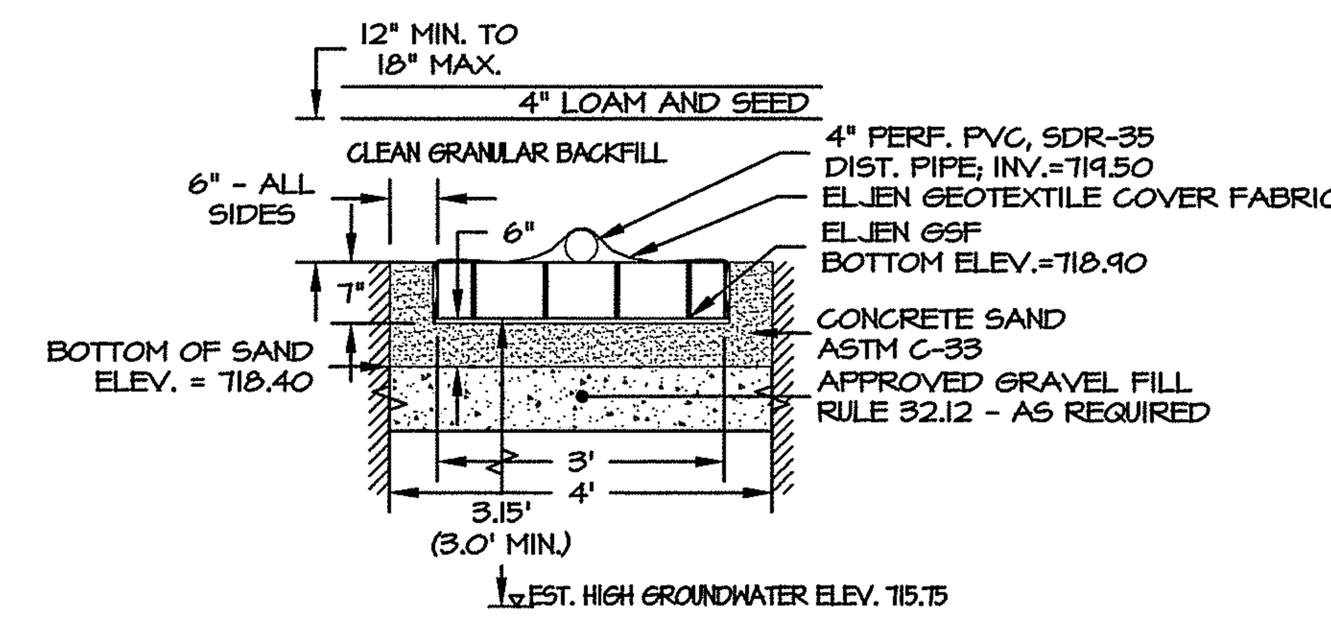
NOTES:

1. ALL WORK SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WATER RESOURCES "RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS", LATEST EDITION.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CAPUTO AND WICK LTD. FOR APPROVAL OF ALL PROPOSED CONSTRUCTION MATERIALS AND EQUIPMENT PRIOR TO ANY CONSTRUCTION.
3. STRIP ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, TREE ROOTS AND STUMPS AND ANY OTHER IMPERVIOUS OR SPECIFIED SOIL TO AT LEAST 5 FEET OF THE LIMITS OF THE SAND SURROUNDING THE GEOTEXTILE SAND FILTER (GSF) IN ALL DIRECTIONS (MIN.). BOTTOM OF EXCAVATION SHALL BE SCARIFIED AND BACK FILLED WITH COARSE GRAVEL AS SPECIFIED IN RULE 32.12 OF THE ABOVE REFERENCED REGULATIONS, AS REQUIRED. TREES AND BRUSH SHOULD BE REMOVED TO 10 FEET BEYOND ALL SIDES OF THE IN-DRAIN UNITS.
4. ALL PIPE TO BE 4" P. V. C. S.D.R.-35 UNLESS OTHERWISE NOTED.
5. PLACE 6" MINIMUM COMPACTED CRUSHED STONE UNDER SEPTIC TANK AND DISTRIBUTION BOX.
6. INLET AND OUTLET TEES FOR SEPTIC TANK ARE TO BE LOCATED DIRECTLY BELOW ACCESS COVERS.
7. DISTRIBUTION BOX SHALL BE DESIGNED FOR MINIMUM 300 POUNDS PER SQUARE FOOT LOADING.
8. IF CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY SUBSTANTIALLY FROM THOSE SHOWN ON THIS PLAN, NOTIFY CAPUTO AND WICK, LTD. BEFORE PROCEEDING WITH CONSTRUCTION. IF IN DOUBT, ASK
9. GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN.
10. ONLY WASTEWATER, AS DEFINED IN RULE 7 OF THE ABOVE REFERENCED RULES, SHALL BE ALLOWED TO ENTER THE PROPOSED OWTS.
11. IT IS RECOMMENDED THAT THE SEPTIC TANK BE INSPECTED TWICE A YEAR, AND BE CLEANED WHEN THE SOLIDS EQUAL ONE THIRD THE LIQUID DEPTH.
12. DISTRIBUTION LINE INVERT ELEVATION = 719.50. NO FINISHED GRADE BELOW 719.50 FOR 10 FEET (MINIMUM) FROM THE EDGE OF THE ELJEN GSF.
13. THE SAND MEDIA USED IN CONSTRUCTION SHALL MEET THE ASTM C-33 SPECIFICATIONS AND ANY OTHER REQUIREMENTS STATED IN THE ELJEN GSF SYSTEM MANUAL. SIEVE ANALYSIS FROM PROPOSED SOURCE TO BE SUBMITTED TOGETHER WITH SHOP DRAWINGS. TESTING OF SAND MATERIAL DELIVERED TO THE SITE WILL BE REQUIRED.
14. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE APPROVED ELJEN GSF SYSTEM DESIGN AND INSTALLATION MANUAL. THE INSTALLATION SHALL ONLY BE PERFORMED BY A RHODE ISLAND DEM LICENSED INSTALLER WHO HAS RECEIVED TRAINING AND IS AUTHORIZED IN WRITING BY THE VENDOR TO INSTALL THE SYSTEM. AUTHORIZATION FROM VENDOR SHALL BE SUBMITTED TO ENGINEER PRIOR TO ANY CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE DESIGN ENGINEER IN ORDER TO FACILITATE WITNESSING THE REQUIRED PHASES OF THE SYSTEM INSTALLATION AS STATED IN RULE 43.6 OF THE "REGULATIONS". FAILURE OF THE CONTRACTOR TO NOTIFY THE DESIGN ENGINEER IN A TIMELY MANNER MAY REQUIRE THE CONTRACTOR TO EXCAVATE AND EXPOSE SYSTEM COMPONENTS FOR OBSERVATION.
16. THE DESIGNER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY FOR THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO CONSTRUCT THE SYSTEM IN ACCORDANCE WITH THE ABOVE REFERENCED REGULATIONS.
17. CONTRACTOR SHALL CONTACT "DIG-SAFE" PRIOR TO CONSTRUCTION. LOCATION OF UTILITIES ON THIS PLAN ARE FROM EXISTING INFORMATION, BUT ARE ONLY TO BE CONSIDERED APPROXIMATE.
18. ALL PUBLIC WELLS, EXISTING OR PROPOSED, FOUND TO BE LOCATED WITHIN 500 FEET OF THE PROPOSED ISDS ARE SHOWN ON THE SITE PLAN.
19. ALL WETLANDS OBSERVED WITHIN 200 FEET OF THE PROPOSED ISDS ARE SHOWN ON THE SITE PLAN. THIS SITE DOES NOT LIE WITHIN A CRITICAL RESOURCE AREA.
20. I CERTIFY THAT THERE ARE NO WELLS FOUND TO BE LOCATED WITHIN 200 FEET OF THE PROPOSED LEACHING AREA, OTHER THAN AS SHOWN ON THIS PLAN. I ALSO CERTIFY THAT THERE ARE NO EXISTING OR PROPOSED DRAINS, FOUNDATION DRAINS OR SUB DRAINS FOUND TO BE LOCATED WITHIN 25 FEET OF THIS PROPOSED OWTS.
21. CONTRACTOR TO PAY ANY REQUIRED INSTALLATION PERMIT FEES.
22. ALL STORM DRAIN PIPES ARE TO BE ADS N-12 WT, OR EQUAL, WATERTIGHT CORRUGATED POLYETHYLENE PIPE WITH A BANK RUN GRAVEL BEDDING. SEE DETAIL.



SEWAGE DISPOSAL SYSTEM PROFILE

SCALES {HORIZONTAL 1"=10' / VERTICAL 1"=2'



DETAIL - ELJEN GEOTEXTILE SAND FILTER

SCALE 1" =2'

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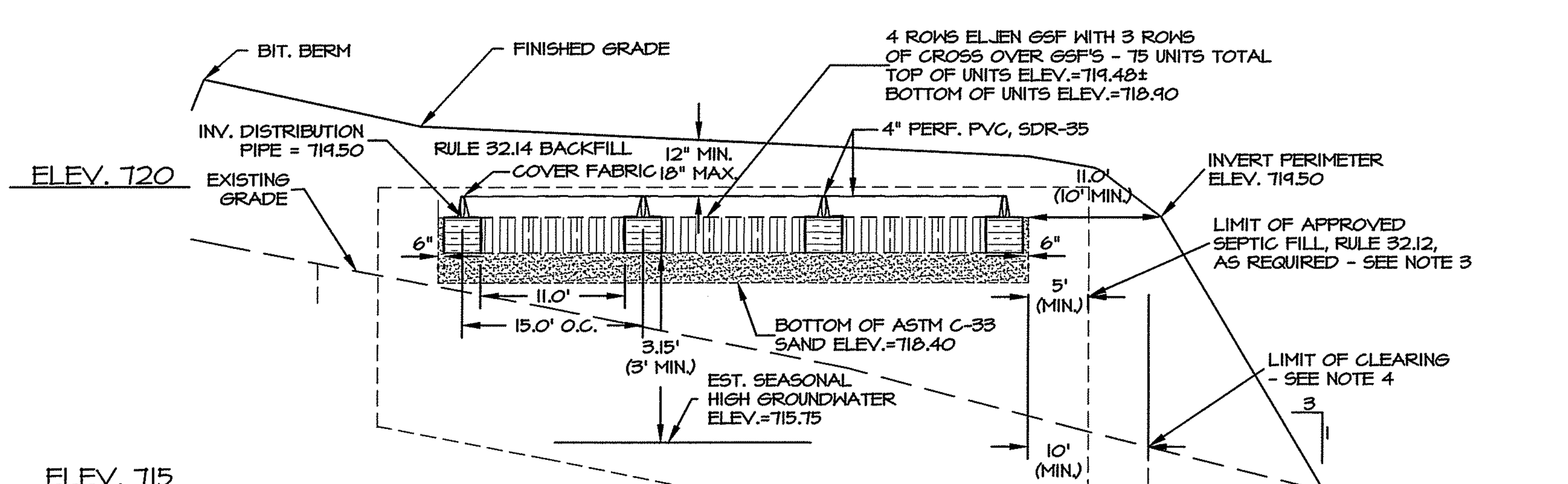
Martin D. Wencek

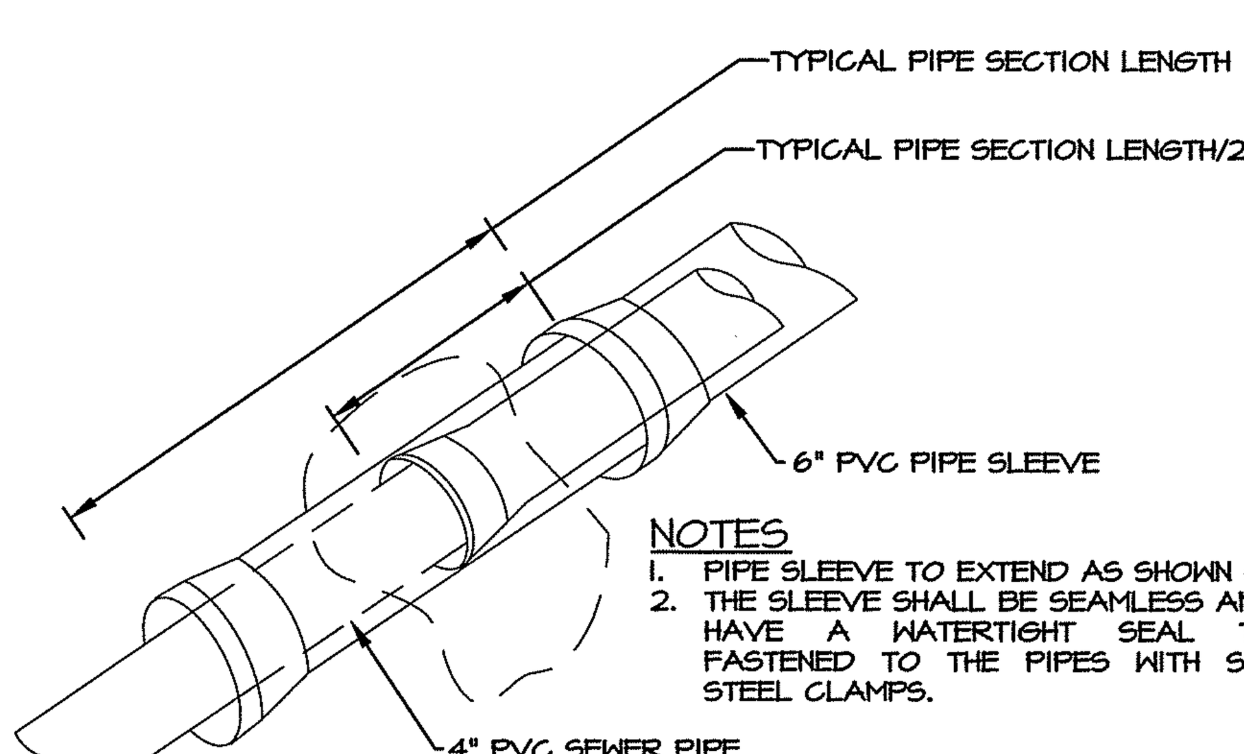
DESIGN DATA

DAILY SEWAGE FLOW DAILY FLOW = 15 GAL./PERSON/DAY (FACTORY/INDUSTRIAL) x 75 WORKERS
= 1125 GALLONS PER DAY
SEPTIC TANK REQUIREMENTS VOLUME = 2 X 1125 = 2250 GALLONS MINIMUM
USE 3,000 GALLONS TANK
LEACHING AREA REQUIREMENTS
ASSIGNED LOADING RATE = 0.61 GALLONS PER S. F. (SOIL CATEGORY 4)
LEACHING AREA REQUIRED = 1125 GPD / 0.61 GPD PER S.F. = 1844 S.F.
ELJEN GSF SIZING
CREDIT = 7.0 SQ. FT. PER LIN. FT.
MINIMUM LENGTH OF ELJEN GSF REQUIRED = 1844 S.F. / 7.0 S.F. PER LIN. FT.= 263 LIN. FT.
MINIMUM NUMBER OF ELJEN GSF UNITS REQUIRED = 263 LIN. FT./ 4 L.F./UNIT
= 66 UNITS (75 PROVIDED)
TOTAL LEACHING AREA = 75 UNITS X 4 L.F./UNIT X 7 S.F./L.F. = 2100 S.F.
TOTAL LEACHING CAPACITY = 2100 S. F. x 0.61 GAL/DAY/S. F.
= 1281 GAL./DAY > 1125 GPD



SEWAGE DISPOSAL SYSTEM SECTION

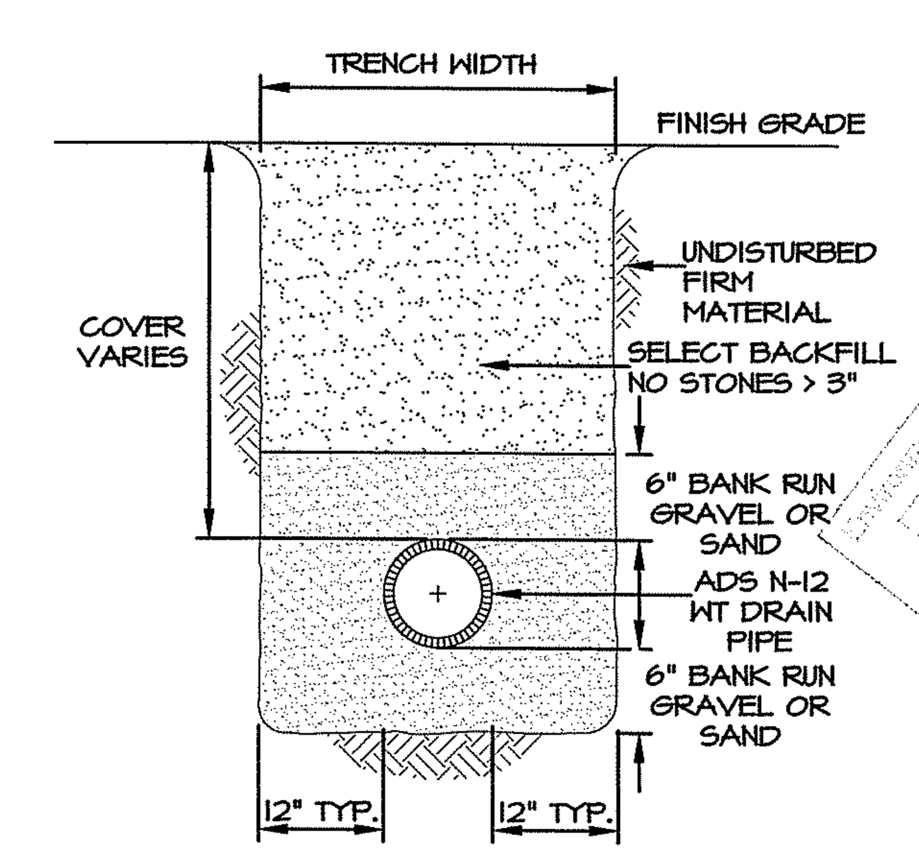
SCALES {HORIZONTAL 1"=10' / VERTICAL 1"=2'



NOTES
1. PIPE SLEEVE TO EXTEND AS SHOWN ON PLAN.
2. THE SLEEVE SHALL BE SEAMLESS AND SHALL HAVE A WATERTIGHT SEAL THAT IS FASTENED TO THE PIPES WITH STAINLESS STEEL CLAMPS.

PIPE SLEEVE DETAIL

NOT TO SCALE



GENERAL NOTE:
FINISH GRADE MATERIAL VARIES (SEE SITE PLAN)

DRAIN TRENCH DETAIL

NOT TO SCALE

RIDEM PERMIT SET

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One Richmond Square
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ALLAN L. SHEAR
No. 4795
REGISTERED PROFESSIONAL ENGINEER
D 3023

NOV 15 2017

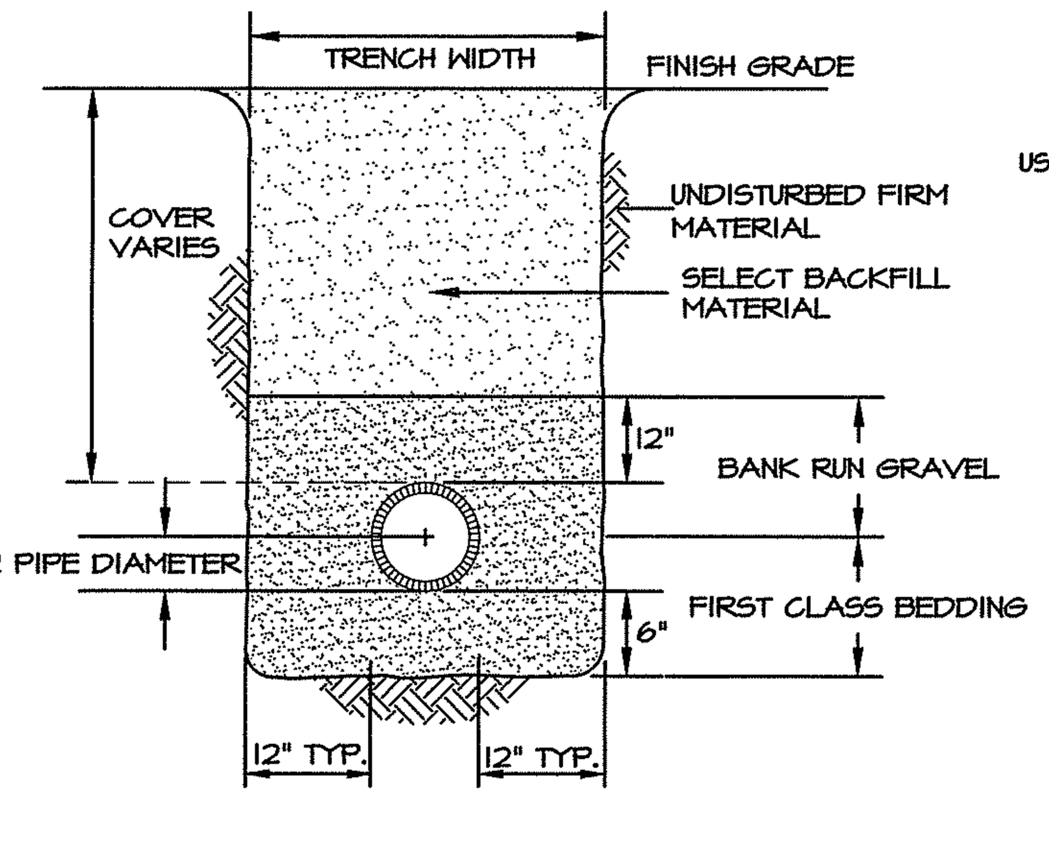
SHEET CONTENTS:

ONSITE WASTE WATER TREATMENT DETAIL SHEET

PROJECT # 3216

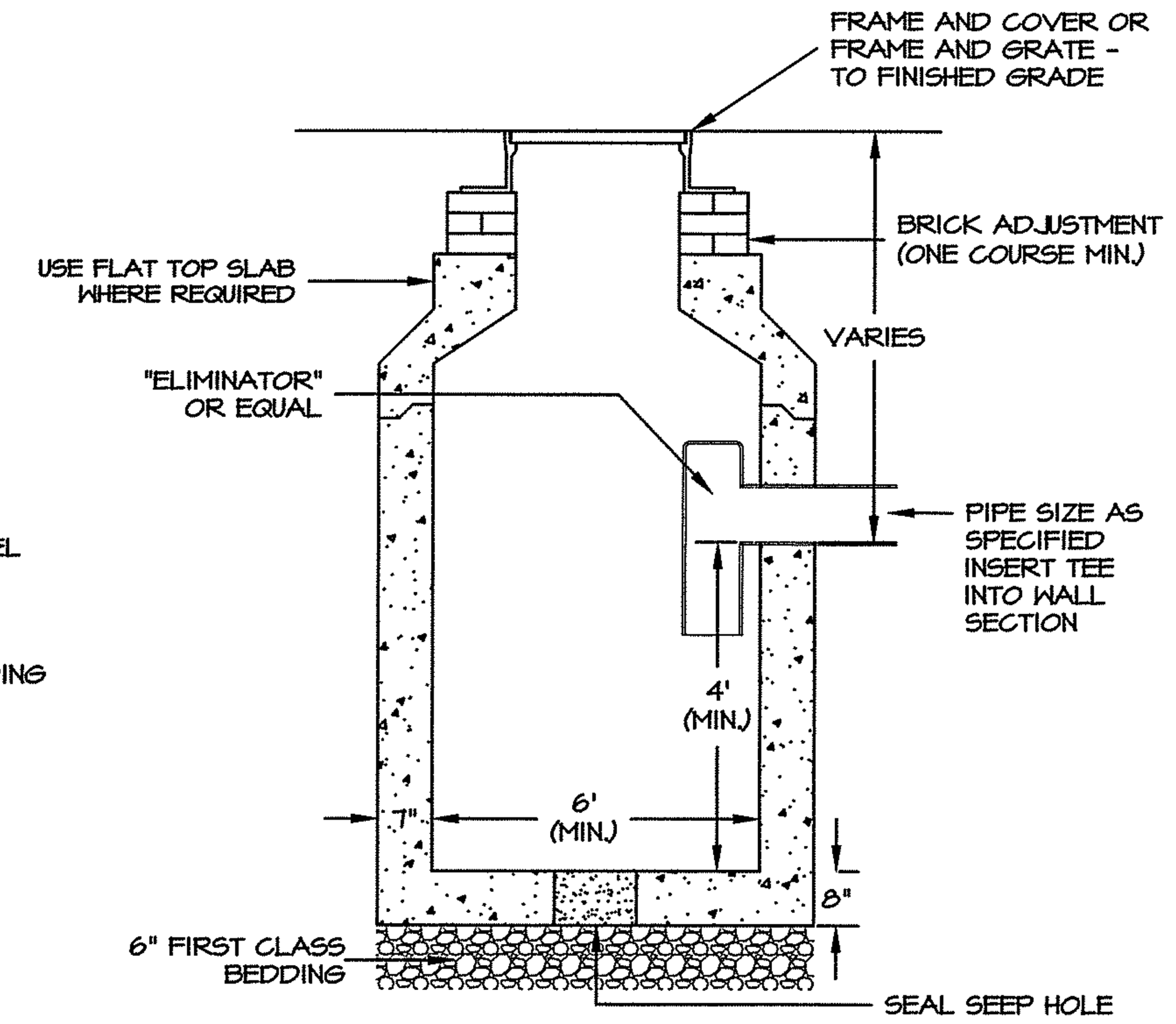
DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-7.22

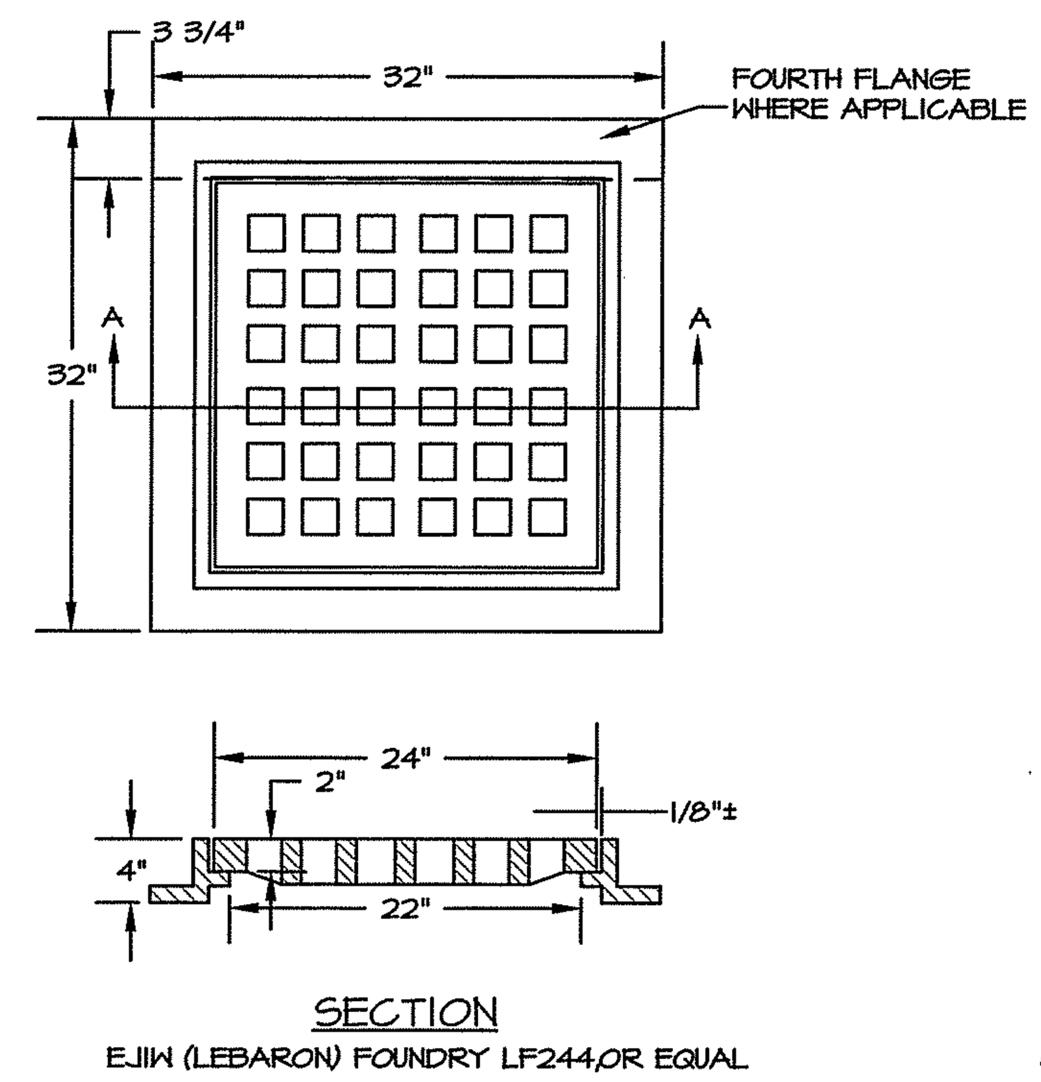


GENERAL NOTES:
FINISH GRADE MATERIAL VARIES (SEE SITE PLAN).
COMPACT BACKFILL IN 8" LIFTS TO 95% OF MAX. DRY DENSITY.

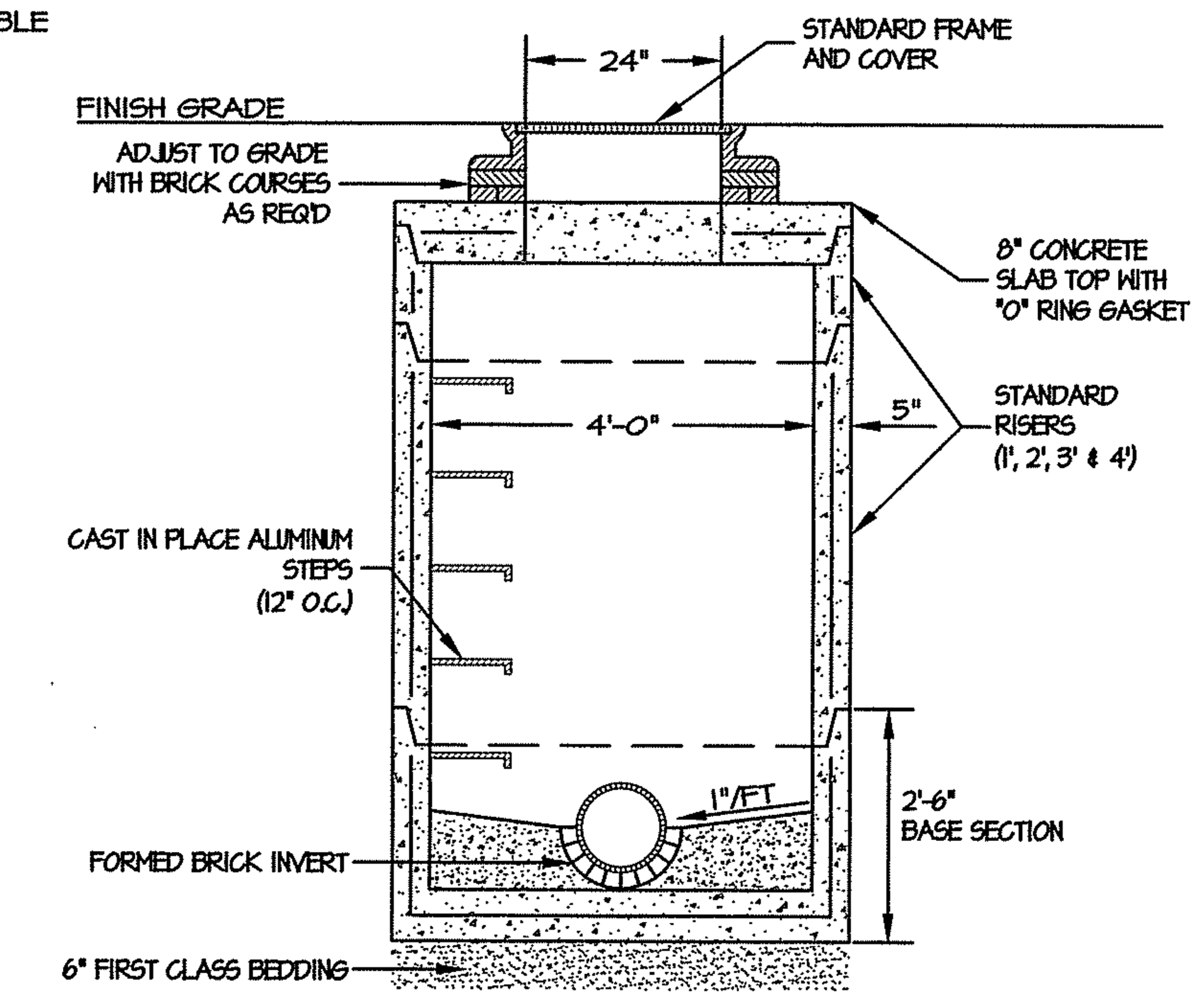
UTILITY TRENCH DETAIL
NOT TO SCALE



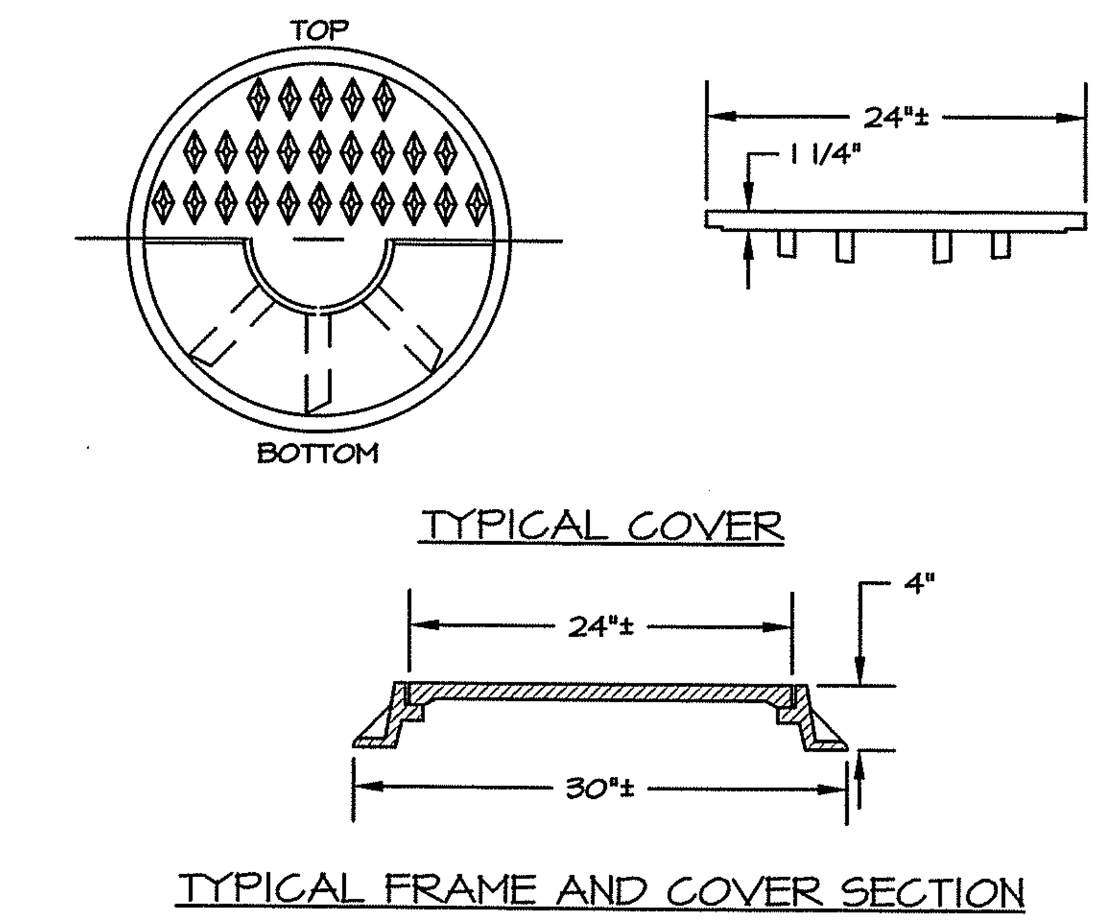
6' DIAMETER DEEP SUMP CATCH BASIN
NOT TO SCALE



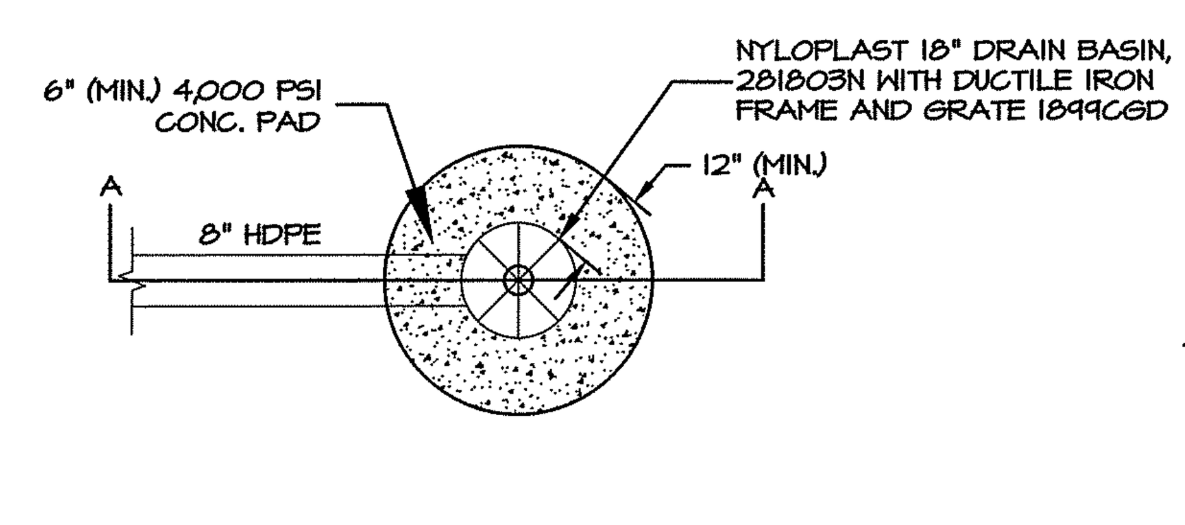
SQUARE CATCH BASIN FRAME & GRATE
NOT TO SCALE



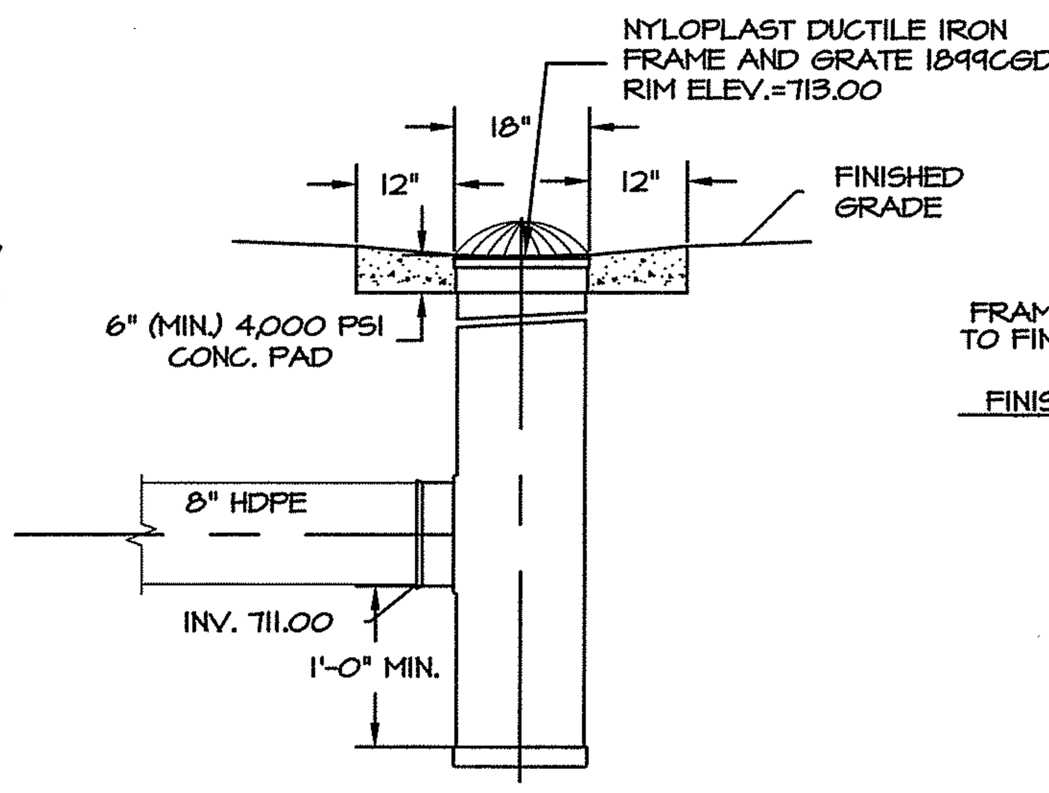
DRAIN MANHOLE DETAIL
NOT TO SCALE



ROUND MANHOLE FRAME AND COVER
(HEAVY DUTY)
NEENAH R-1706-1 OR EQUAL
NOT TO SCALE



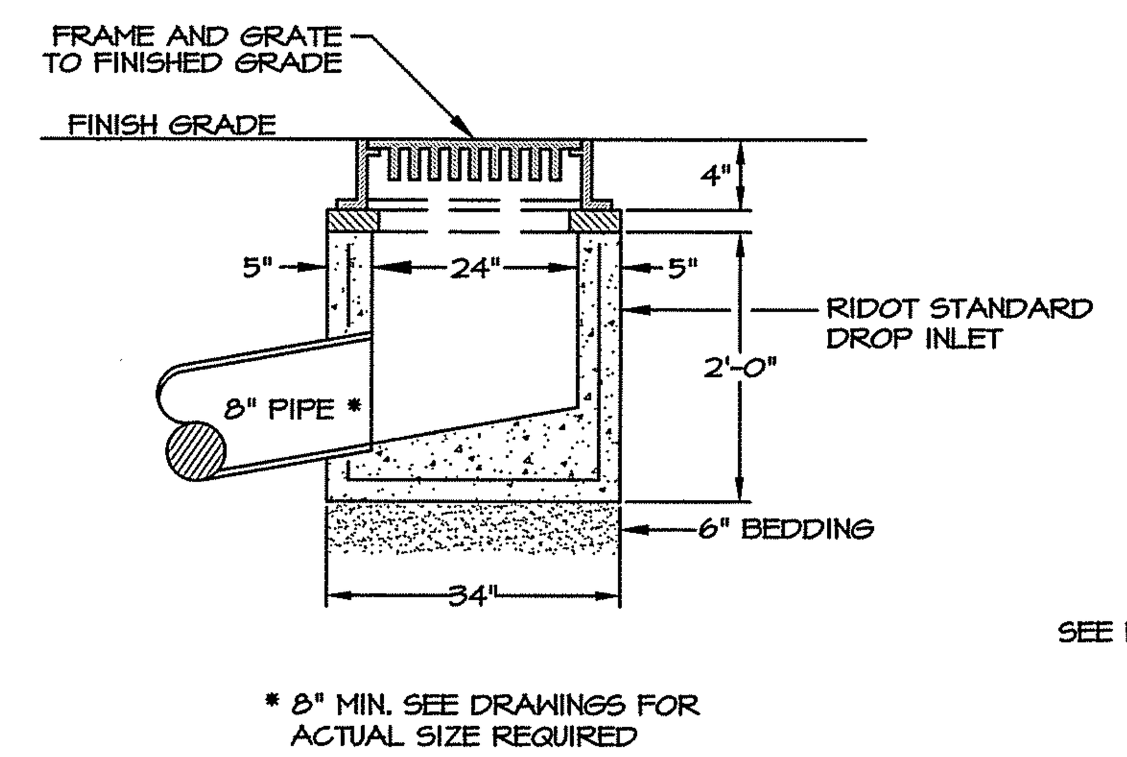
CATCH BASIN PLAN VIEW



18" DRAIN BASIN - 2818O3N
SECTION A-A

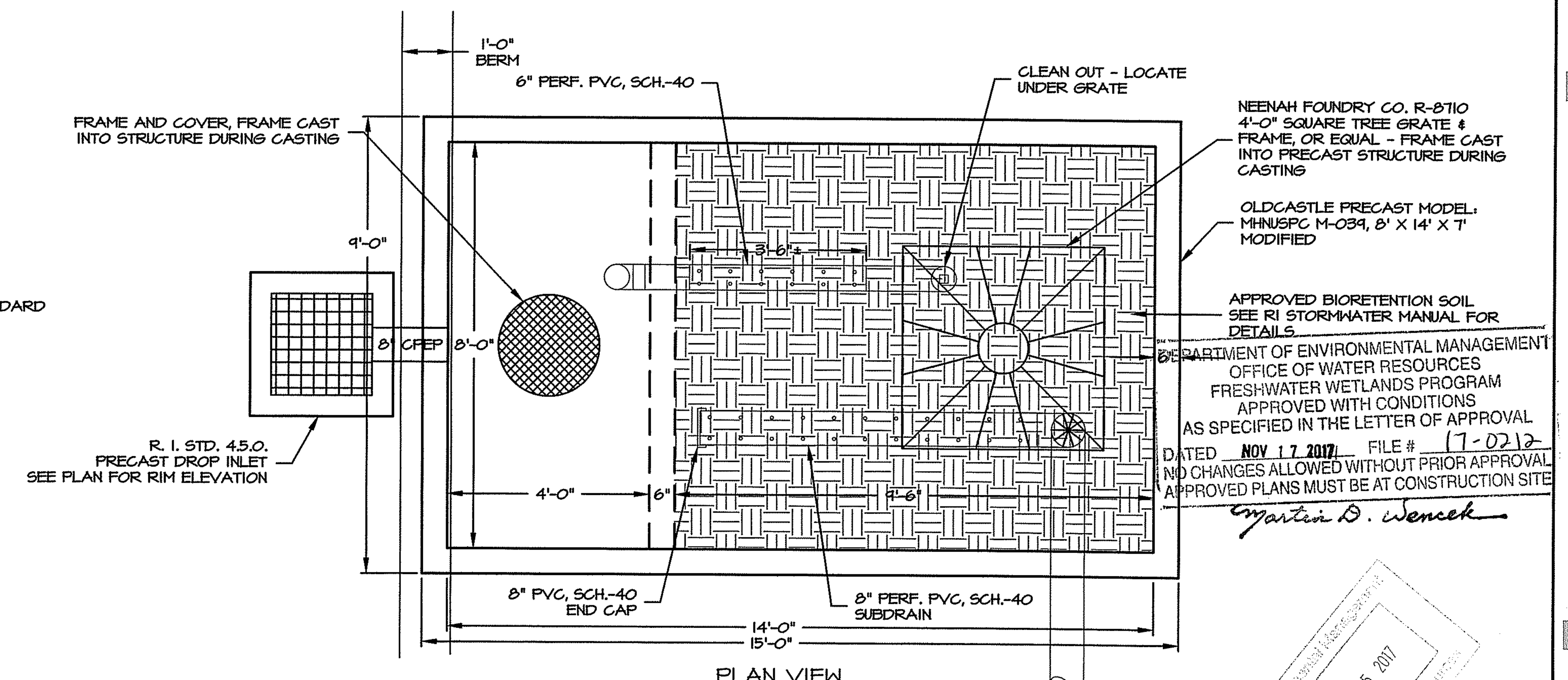
COMPONENTS MANUFACTURERED BY
NYLOPLAST - A DIVISION OF ADVANCED DRAINAGE SYSTEMS, INC.
180 RUMFORD AVENUE
MANSFIELD, MA. 02048
781-223-1496

DRAIN BASIN "A" DETAIL
NOT TO SCALE

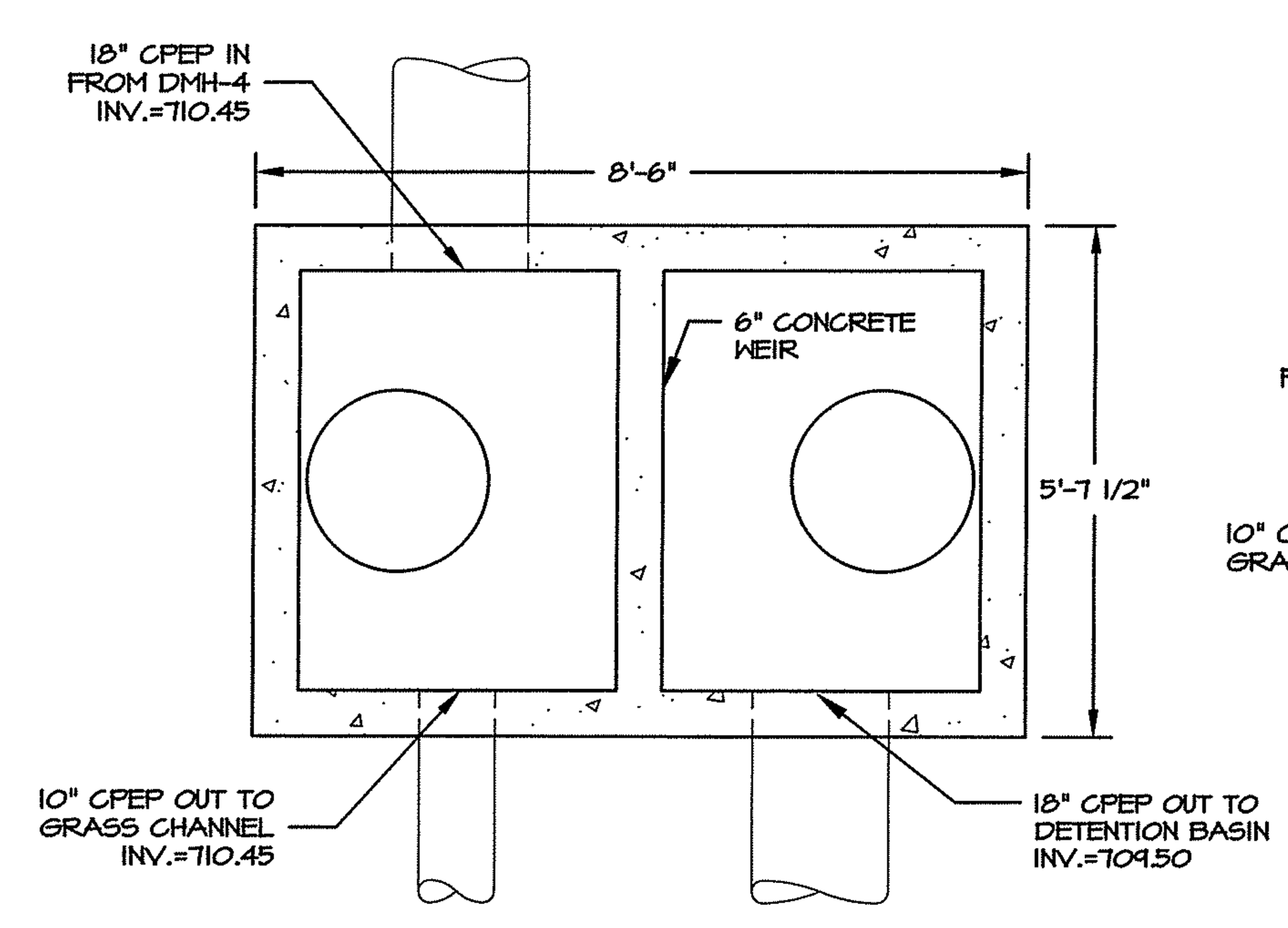


* 8" MIN. SEE DRAWINGS FOR ACTUAL SIZE REQUIRED

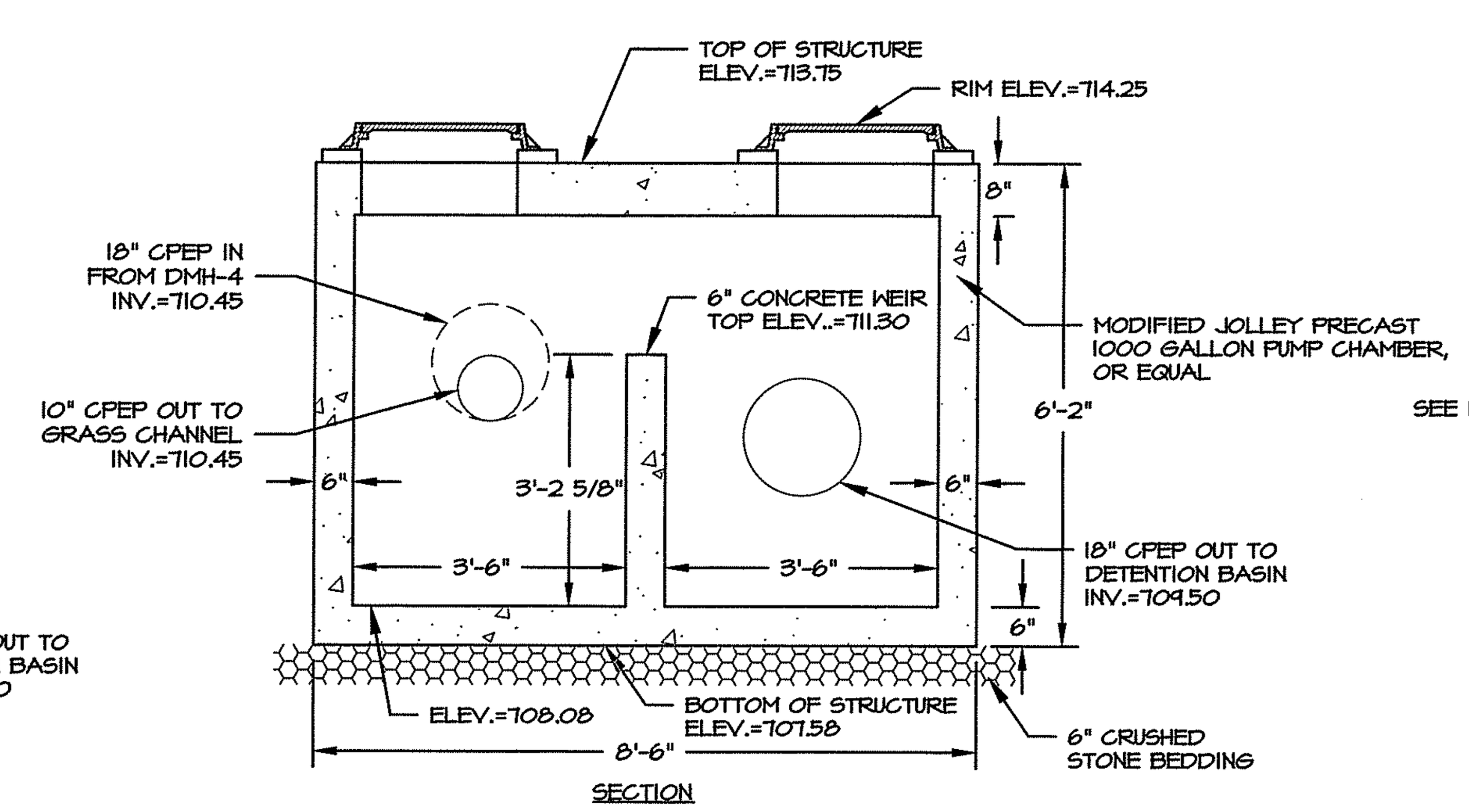
PRECAST CONCRETE DROP INLET
NOT TO SCALE



PLAN VIEW

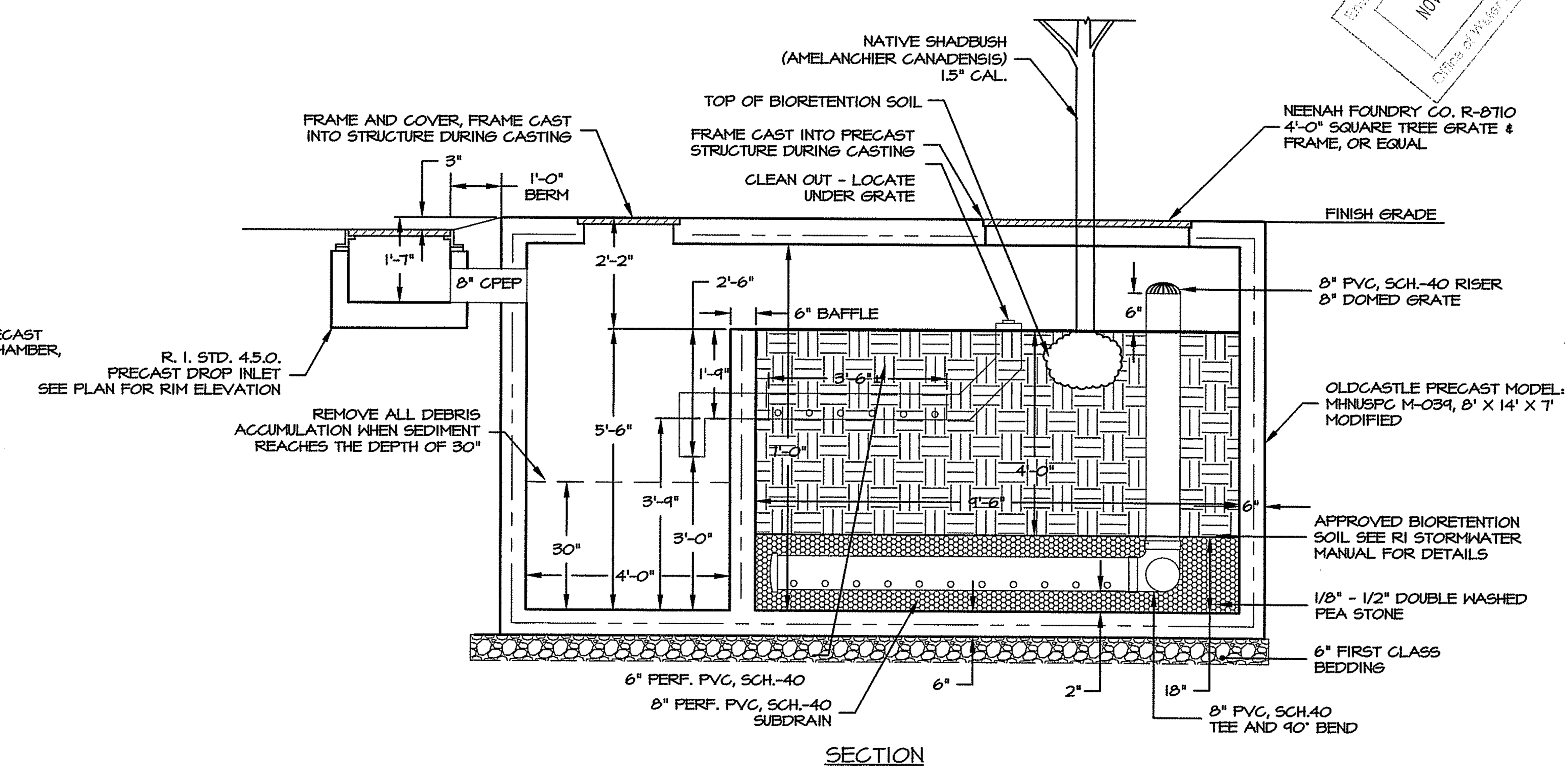


PLAN



SECTION

FLOW DIVERSION STRUCTURE
SCALE: 1"=2'



SECTION

TREE FILTER DETAIL
SCALE 1" = 2'

RIDEM PERMIT SET

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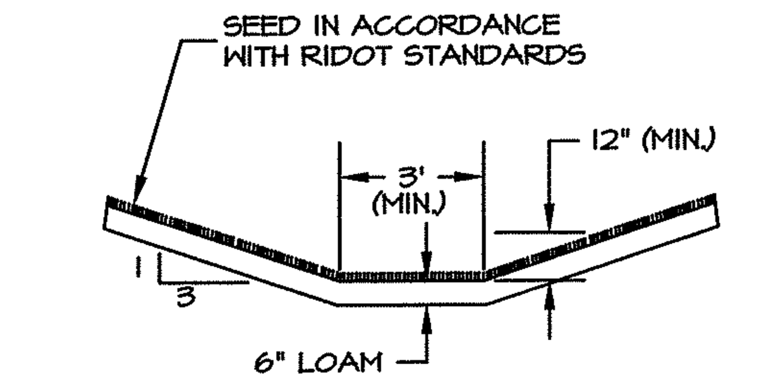
SHEET CONTENTS:

DETAILS

PROJECT # 3216

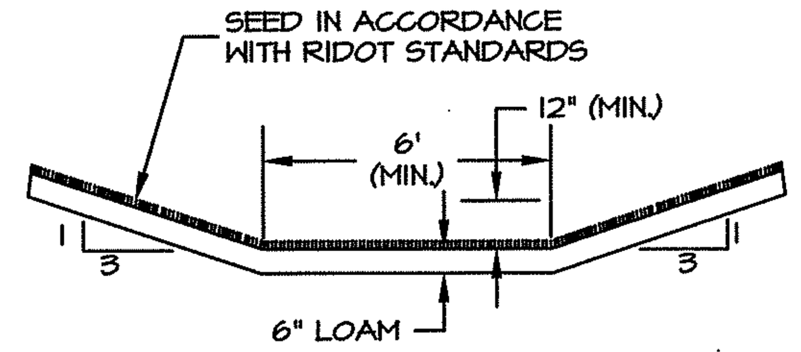
DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-8.01



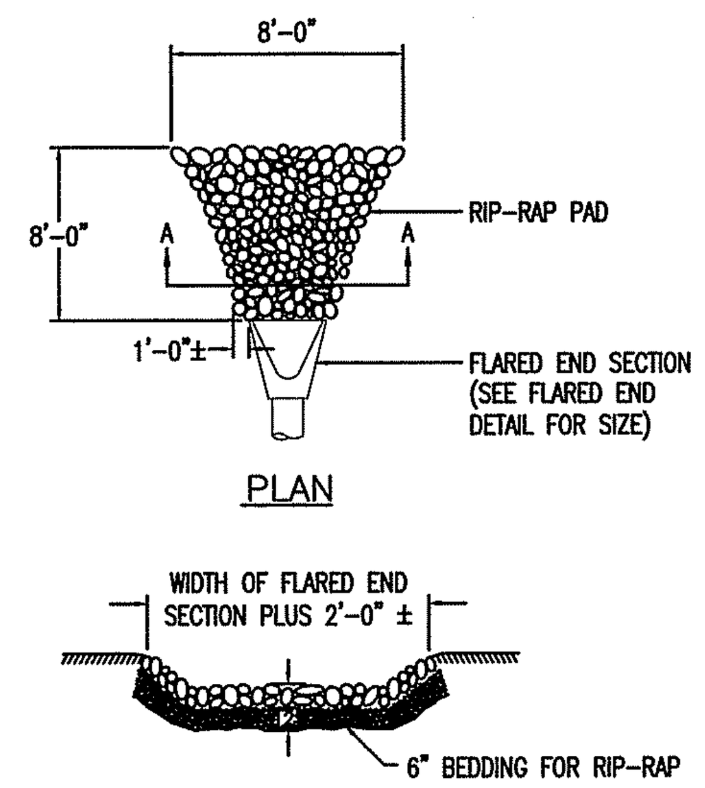
SEED MIXTURE:
SLOPES AND BOTTOM
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
* SEE PLANTING PLAN

DRAINAGE SWALE DETAIL
SCALE 1"=4'



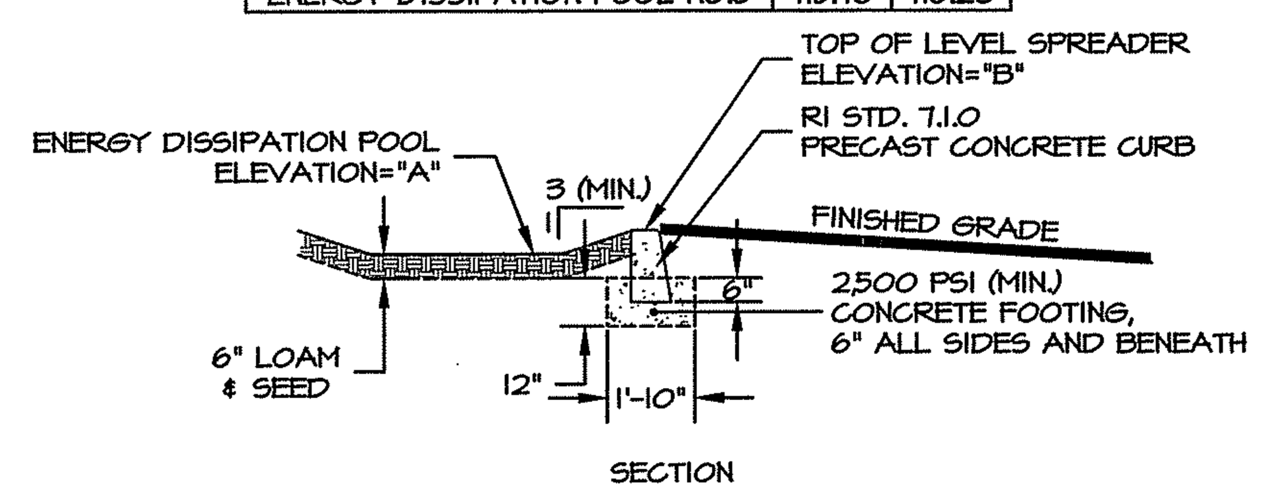
SEED MIXTURE:
SLOPES
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
BOTTOM
NEW ENGLAND WET MIX
* SEE PLANTING PLAN

GRASS CHANNEL DETAIL
SCALE 1"=4'

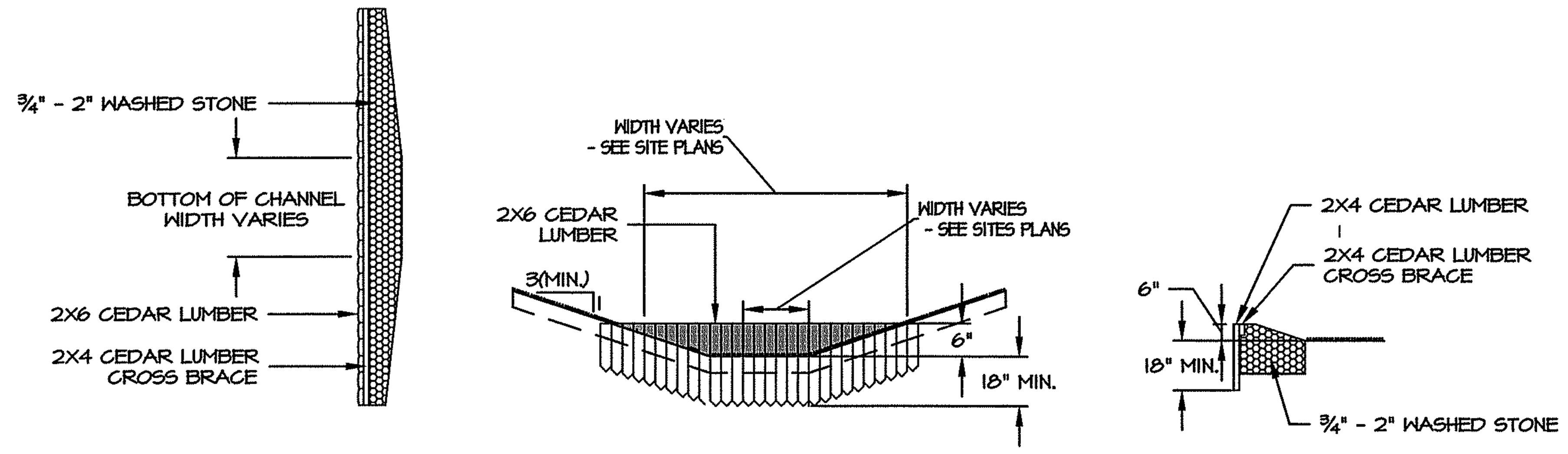


RIP-RAP AT FLARED END SECTION

LEVEL SPEADER ELEVATIONS		
BMP	"A"	"B"
ROOFWATER INFILTRATION BASIN	714.00	714.50
DETENTION BASIN	700.00	700.50
ENERGY DISSIPATION POOL NO.3	715.70	716.20

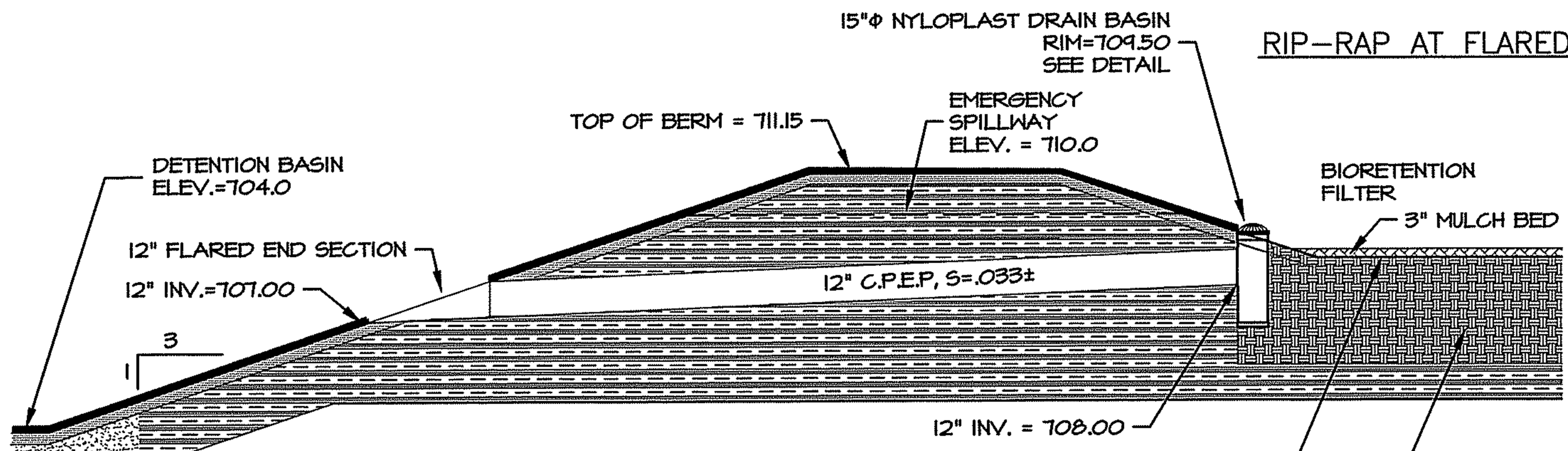


LEVEL SPREADER DETAIL
SCALE 1"=4'



NOTE: ALL HARDWARE TO BE STAINLESS STEEL

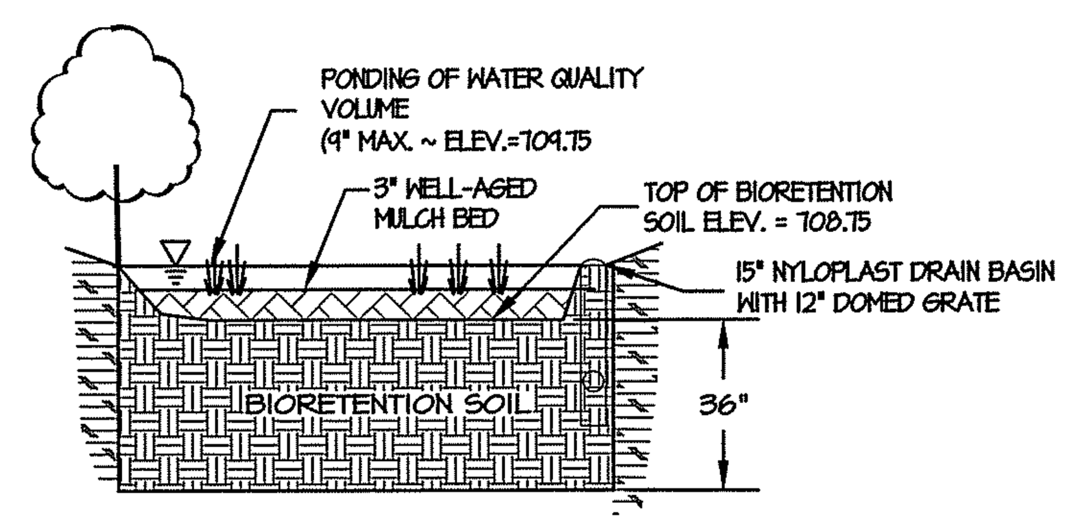
LOG CHECK DAM
NOT TO SCALE



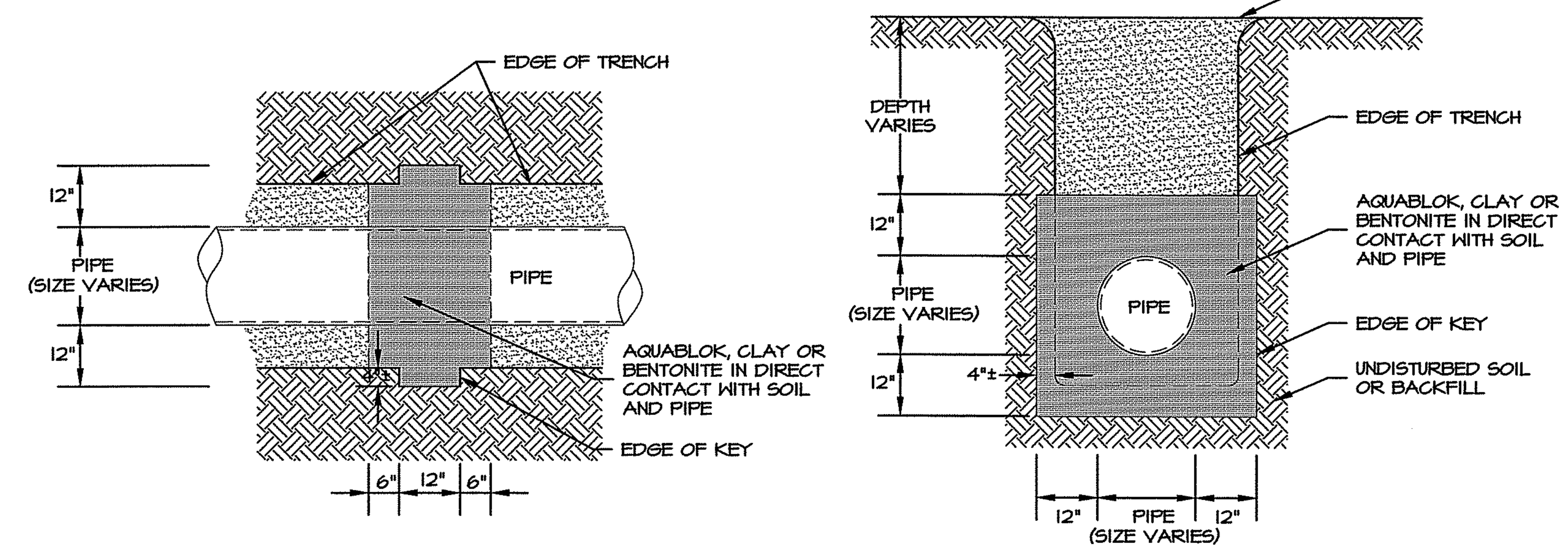
SEED MIXTURE:
SLOPES
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
BOTTOM
3" WELL AGED MULCH BED
SEE PLANTING PLAND AND DETAIL

BIORETENTION FILTER OUTLET DETAIL
SCALE: 1"=4'

BIORETENTION BASIN ELEVATIONS								
HYDROCAD STRUCTURE	SHGWT ELEVATION	TOP OF BIORETENTION SOIL ELEVATION	OUTLET ELEVATION	WATER QUALITY VOLUME ELEV.	1-YEAR PEAK ELEV.	10-YEAR PEAK ELEV.	100-YEAR PEAK ELEV.	TOP OF BERM
11P	705.75	708.75	709.50	708.87	709.60	709.81	709.97	711.15



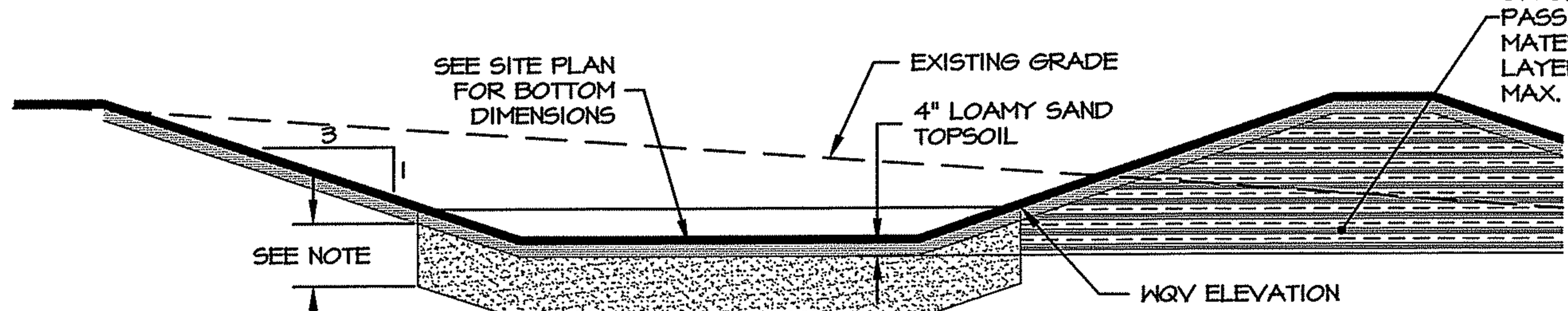
BIORETENTION SYSTEM DETAIL
NOT TO SCALE



ANTI-SEEP COLLAR
SCALE 1" = 2'±

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 17 2017 FILE # 17-0212
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

INFILTRATION BASIN ELEVATION							
HYDROCAD STRUCTURE	SHGWT ELEVATION	BOTTOM ELEVATION	1-YEAR PEAK ELEV.	10-YEAR PEAK ELEV.	100-YEAR PEAK ELEV.	TOP OF BERM	EMERGENCY SPILLWAY
4P	714.00	717.00	717.83	718.67	719.00	720.15	719.00

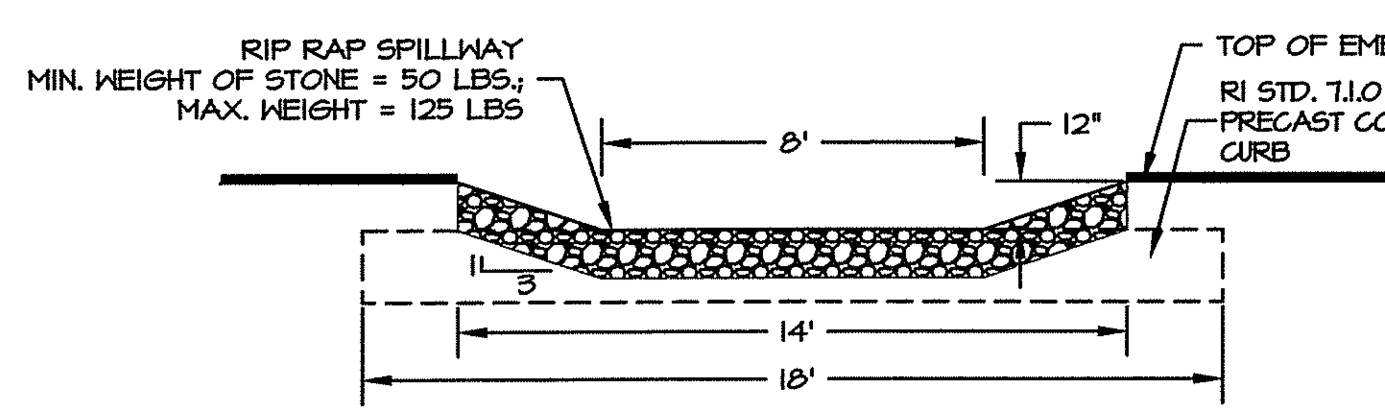


FILL MATERIAL SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. FILL MATERIAL SHALL BE PLACED IN 8" LAYERS AND BE COMPACTED TO 98% MAX. DRY DENSITY. NO STONES > 4"

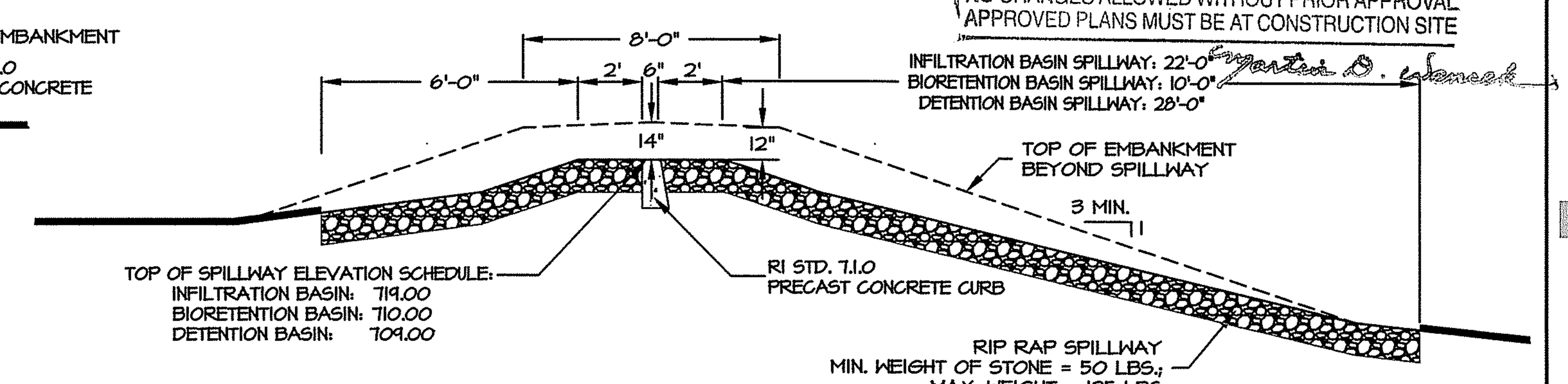
NOTE:
STRIP ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, TREE ROOTS AND STUMPS AND ANY OTHER IMPERVIOUS OR SPECIFIED SOIL TO AT LEAST FOOTPRINT PROJECTION OF ELEVATION OF THE WATER QUALITY VOLUME (ELEVATION 717.74). BOTTOM OF EXCAVATION SHALL BE A MINIMUM OF 3" INTO THE C HORIZON AND BE SCARIFIED AND BACK FILLED WITH COARSE GRAVEL AS SPECIFIED IN RULE 32.12 OF THE RIDEM OWTS REGULATIONS, AS REQUIRED. TREES AND BRUSH SHOULD BE REMOVED TO 10 FEET BEYOND ALL SIDES INFILTRATION BASIN.

SEED MIXTURE:
SLOPES
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
BOTTOM
NEW ENGLAND WET MIX
* SEE PLANTING PLAN

INFILTRATION BASIN DETAIL
NOT TO SCALE



EMERGENCY SPILLWAY SECTION
SCALE 1"=4'

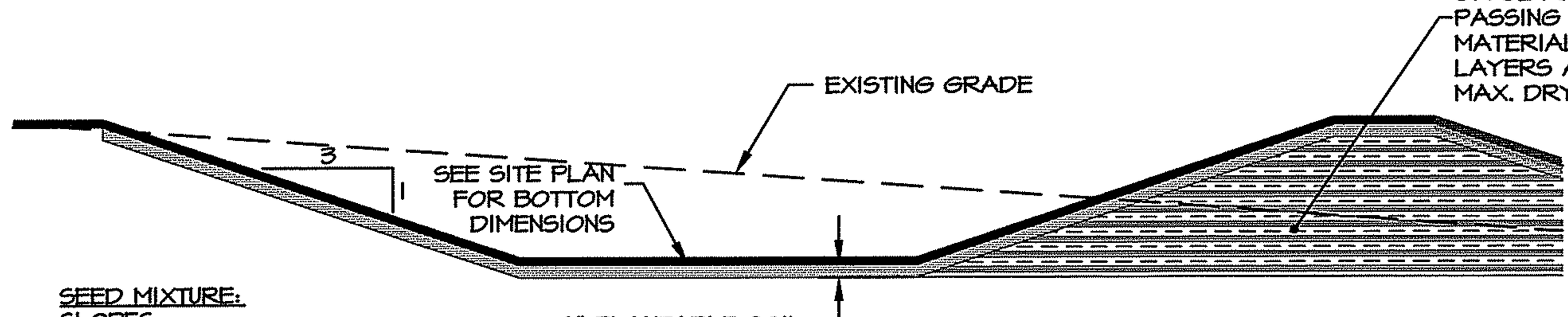


INFILTRATION BASIN SPILLWAY: 22'-0"
BIORETENTION BASIN SPILLWAY: 10'-0"
DETENTION BASIN SPILLWAY: 28'-0"

EMERGENCY SPILLWAY PROFILE
SCALE 1"=4'±

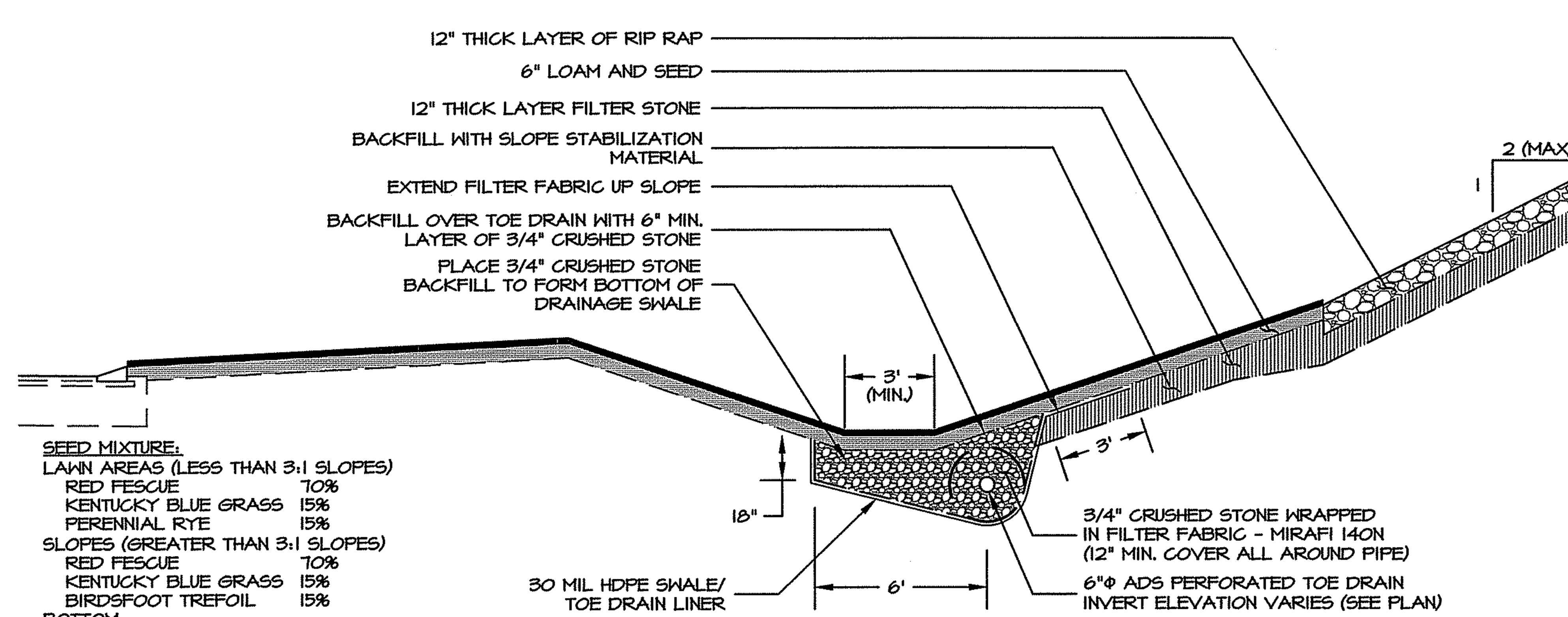
DETENTION BASIN ELEVATION								
HYDROCAD STRUCTURE	SUMP ELEVATION	BOTTOM ELEVATION	OUTLET INVERT	1-YEAR PEAK ELEV.	10-YEAR PEAK ELEV.	100-YEAR PEAK ELEV.	TOP OF BERM	EMERGENCY SPILLWAY
11P	703.00	704.00	704.00	705.44	707.21	708.92	710.15	709.00

FILL MATERIAL SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. FILL MATERIAL SHALL BE PLACED IN 8" LAYERS AND BE COMPACTED TO 98% MAX. DRY DENSITY. NO STONES > 4"



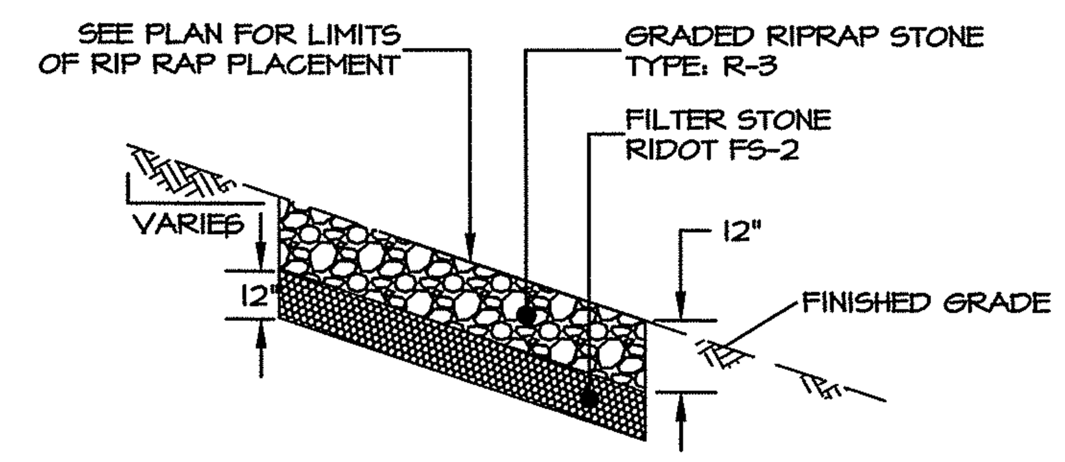
SEED MIXTURE:
SLOPES
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
BOTTOM
NEW ENGLAND WET MIX
* SEE PLANTING PLAN

DETENTION BASIN DETAIL
NOT TO SCALE



SEED MIXTURE:
LAWN AREAS (LESS THAN 3:1 SLOPES)
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
PERENNIAL RYE 15%
SLOPES (GREATER THAN 3:1 SLOPES)
RED FESCUE 70%
KENTUCKY BLUE GRASS 15%
BIRDSFOOT TREFOIL 15%
BOTTOM
USE SLOPE MIX
* SEE PLANTING PLAN

TYPICAL SLOPE PROTECTION FOR ALL FILL AND CUT SLOPES GREATER THAN 3' VERTICAL TO 1' HORIZONTAL
SCALE 1" = 4'



ALL RIP RAP AND FILTER STONE TO MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION

TYPICAL RIP RAP SLOPE SECTION
SCALE 1"=4'

RIDEM PERMIT SET

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West Glocester, RI 02814

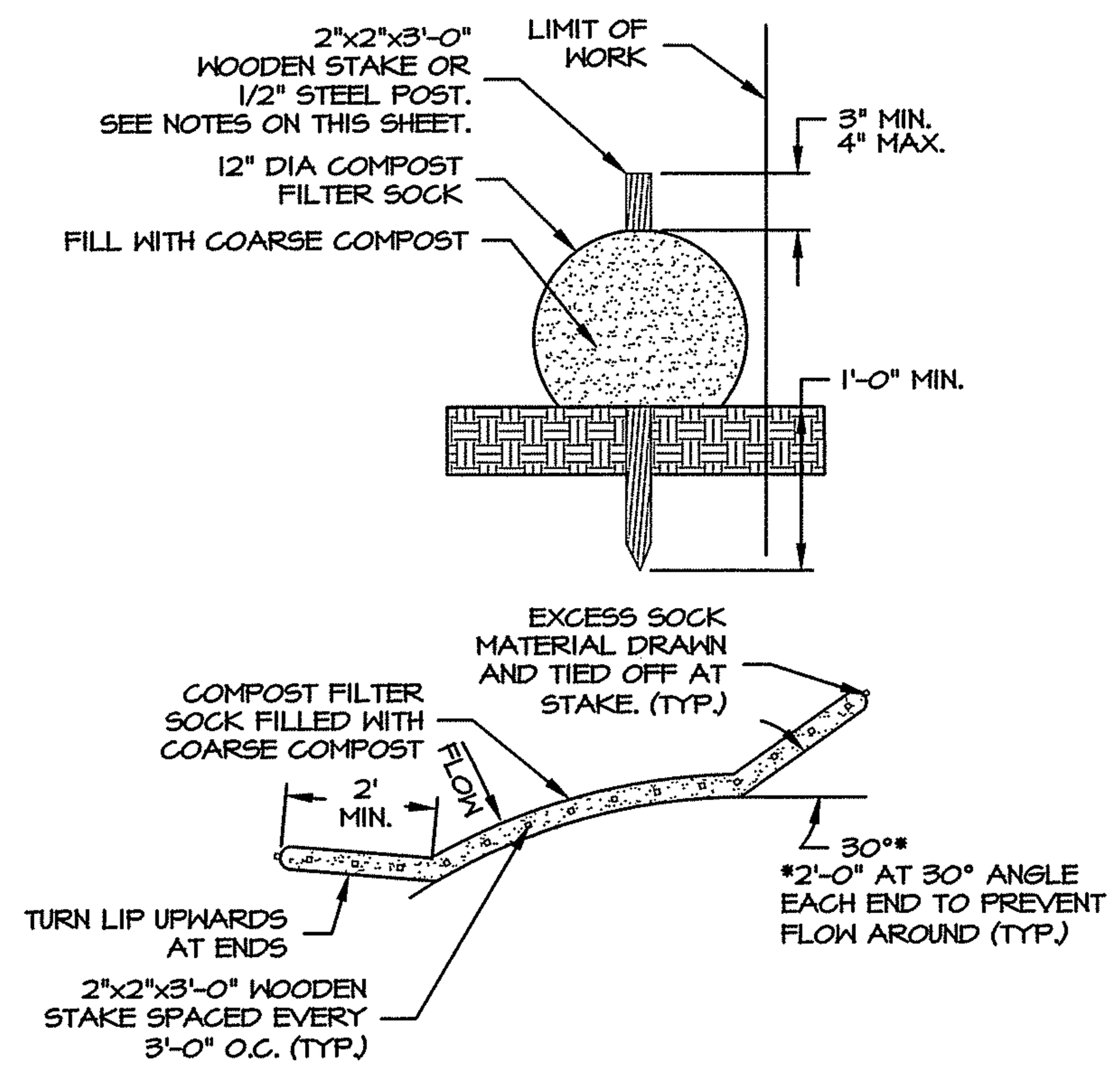
SHEET CONTENTS:

DETAILS

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-8.02

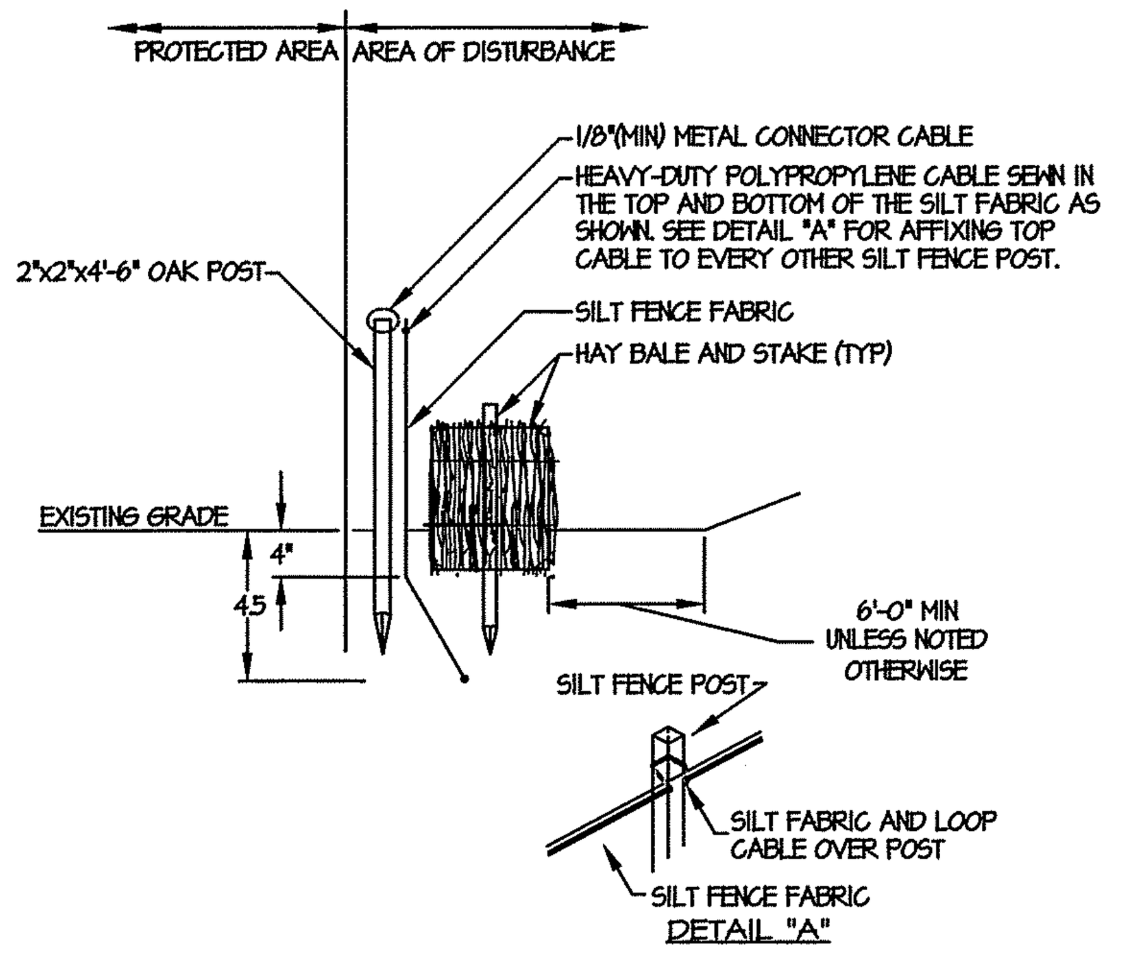


GENERAL NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF AND SEDIMENT PER THESE NOTES AND COMPOST FILTER SOCK DETAILS, PLANS, AND SWPPP.
2. FOR DITCH APPLICATIONS, MINIMUM INSTALLED HEIGHT OF SINGLE SOCK NOMINALLY. SOCKS ARE PLACED PERPENDICULAR TO FLOW OF WATER. FILTER SOCKS SHALL CONTINUE UP SIDE SLOPES TO TOP OF BANK OR MAXIMUM 3 FEET ABOVE INSTALLED HEIGHT. FILTER SOCKS SHALL REMAIN IN PLACE UNTIL ALL UPSTREAM AREAS ARE PERMANENTLY STABILIZED.
3. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.
4. REMOVAL SHALL BE ACCOMPLISHED BY CUTTING SOCK OPEN AND SPREADING THE FILL MATERIAL ON THE SITE. ALL NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED. FILTER SOCKS APPLIED IN DITCHES SHALL BE COMPLETELY REMOVED ONCE VEGETATION IS ESTABLISHED.

COMPOST FILTER SOCK

NOT TO SCALE

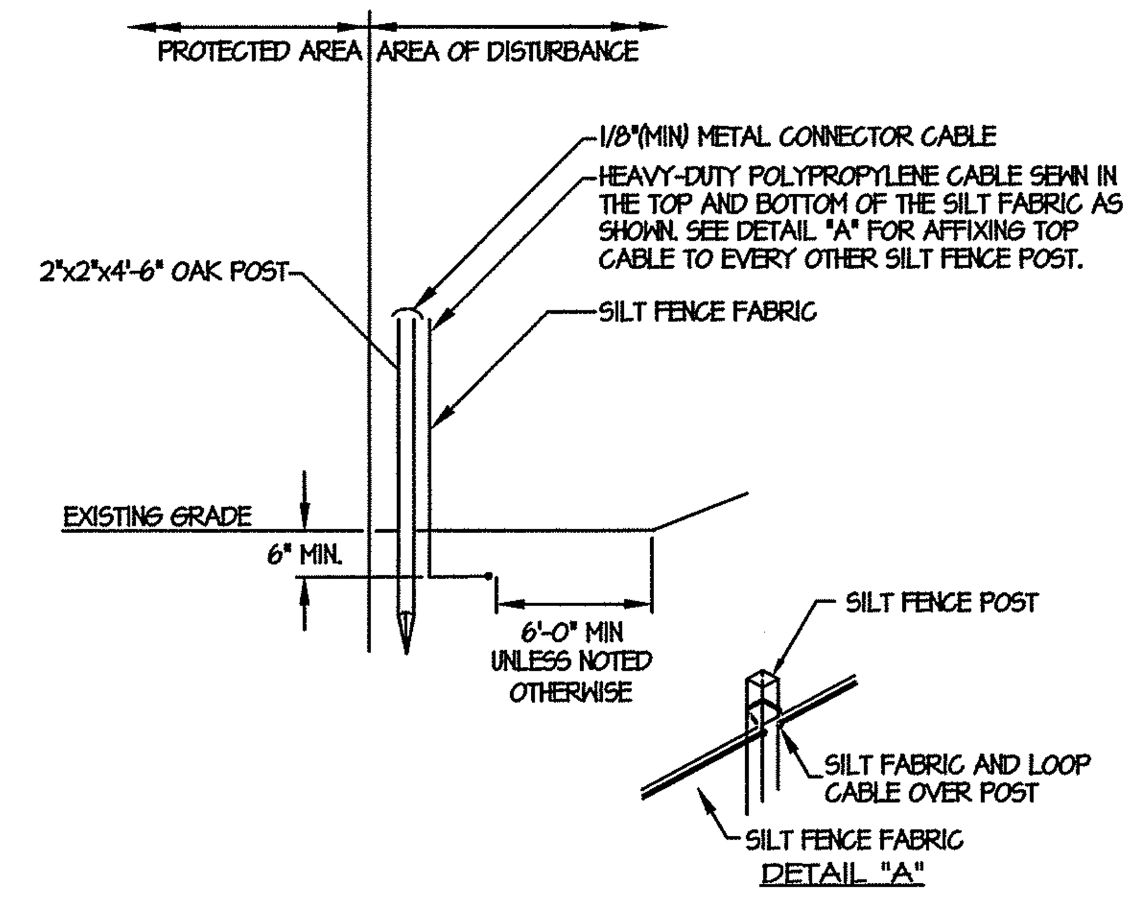


NOTES:

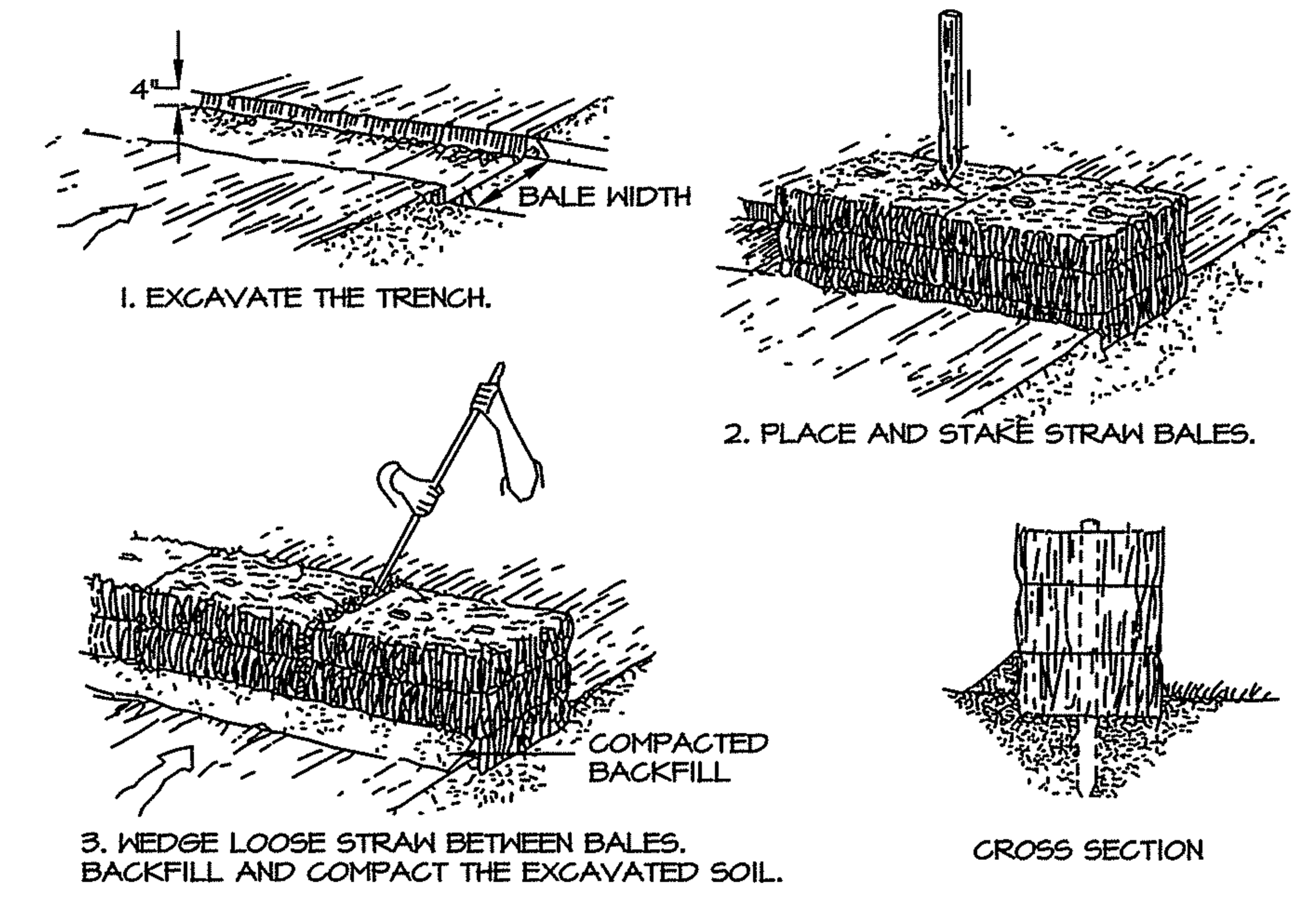
1. HAY BALES ARE TO BE PLACED WITHIN A 4" MIN. TRENCH AND INSTALLED "TIGHT" AGAINST THE SILT FENCE.
2. THROUGHLY COMPACT EXCAVATED SOILS BACK INTO THE TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICES.
3. SILT FENCE FABRIC SHALL NOT BE SLIT AND SHALL BE PLACED IN A 6" MIN. TRENCH
4. 2"x2"x4'-6" OAK STAKE FOR THE SILT FENCE SHALL BE LOCATED ON 8'-0"(MAX) CENTERS IN A WETLAND AREA AND 4'-0"(MAX) CENTERS IN A WETLAND RAVINE, GULLY AND/OR A DROPOFF AREA AS SHOWN ON THE PLANS.

SILT FENCE WITH HAY BALES

NOT TO SCALE



SILT FENCE



STRAW BALE DETAIL

NOTES:

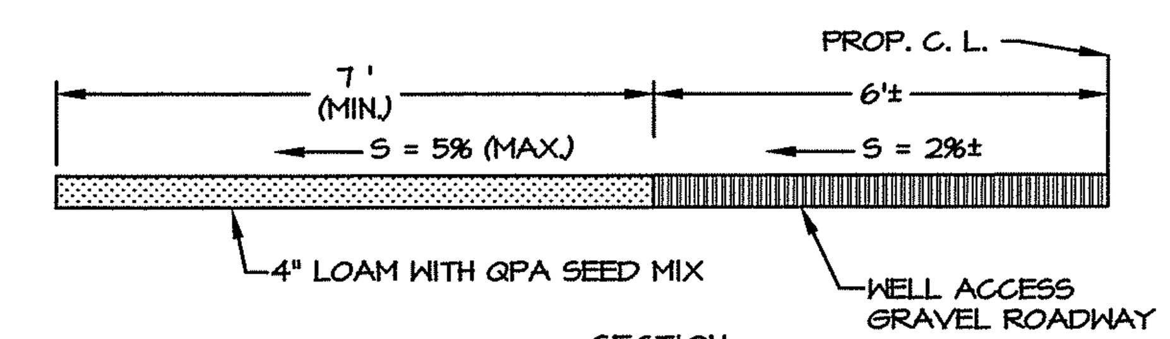
1. PREVENT VEHICLES FROM DRIVING ON THE "QUALIFYING PERVIOUS AREA". IF THE "QUALIFYING PERVIOUS AREA" BECOMES COMPACTED, THE SOIL MUST BE SUITABLY AMENDED, TILLED, AND RE-VEGETATED TO RESTORE INFILTRATION CAPACITY.
2. INSPECT THE "QUALIFYING PERVIOUS AREA" AT LEAST YEARLY TO REMOVE ANY DEPOSITED SEDIMENT (E.G. SAND FROM WINTER SANDING OPERATIONS), ADDRESS ANY PONDING, EROSION, AND REPLANT ANY VEGETATION THAT HAS DIED.

SEEDING REQUIREMENTS

MIXTURE	% BY WEIGHT:
RED FESCUE	30
KENTUCKY BLUEGRASS	10
PERENNIAL RYEGRASS	20
LITTLE BLUESTEM	20
TIMOTHY	20

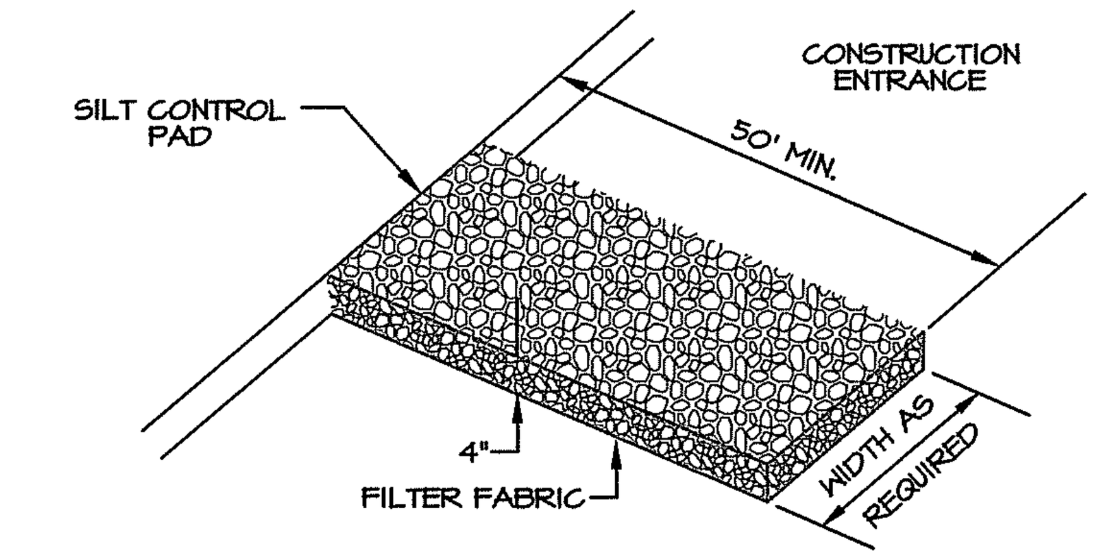
*SEE PLANTING PLAN

TOTAL: 200 LBS./ACRE
SEEDING DATES: APRIL 1 - JUNE 15; AUGUST 15 - OCTOBER 15



QUALIFYING PERVIOUS AREA

NOT TO SCALE



MATERIALS SIZE

SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO.2	ASTM C-33 NO.3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	0-5
3/8 INCH	-	-	-

NOTE:
SILT CONTROL PAD TO BE INSTALLED AND MAINTAINED IN CONFORMANCE WITH STANDARDS SET FORTH IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (1989 EDITION).

TEMPORARY SILT CONTROL PAD

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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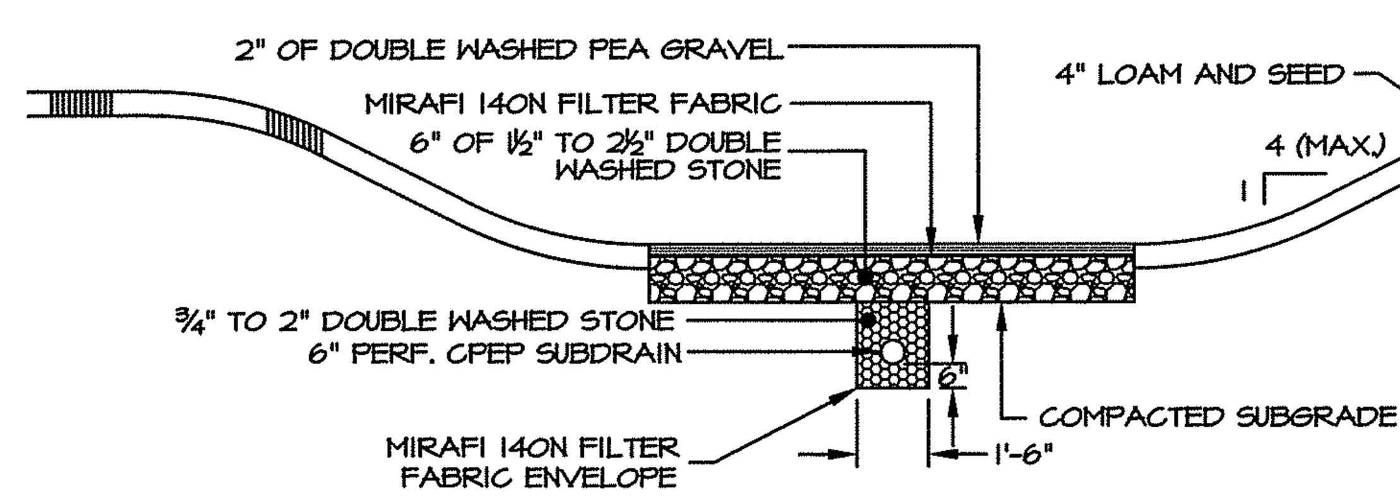
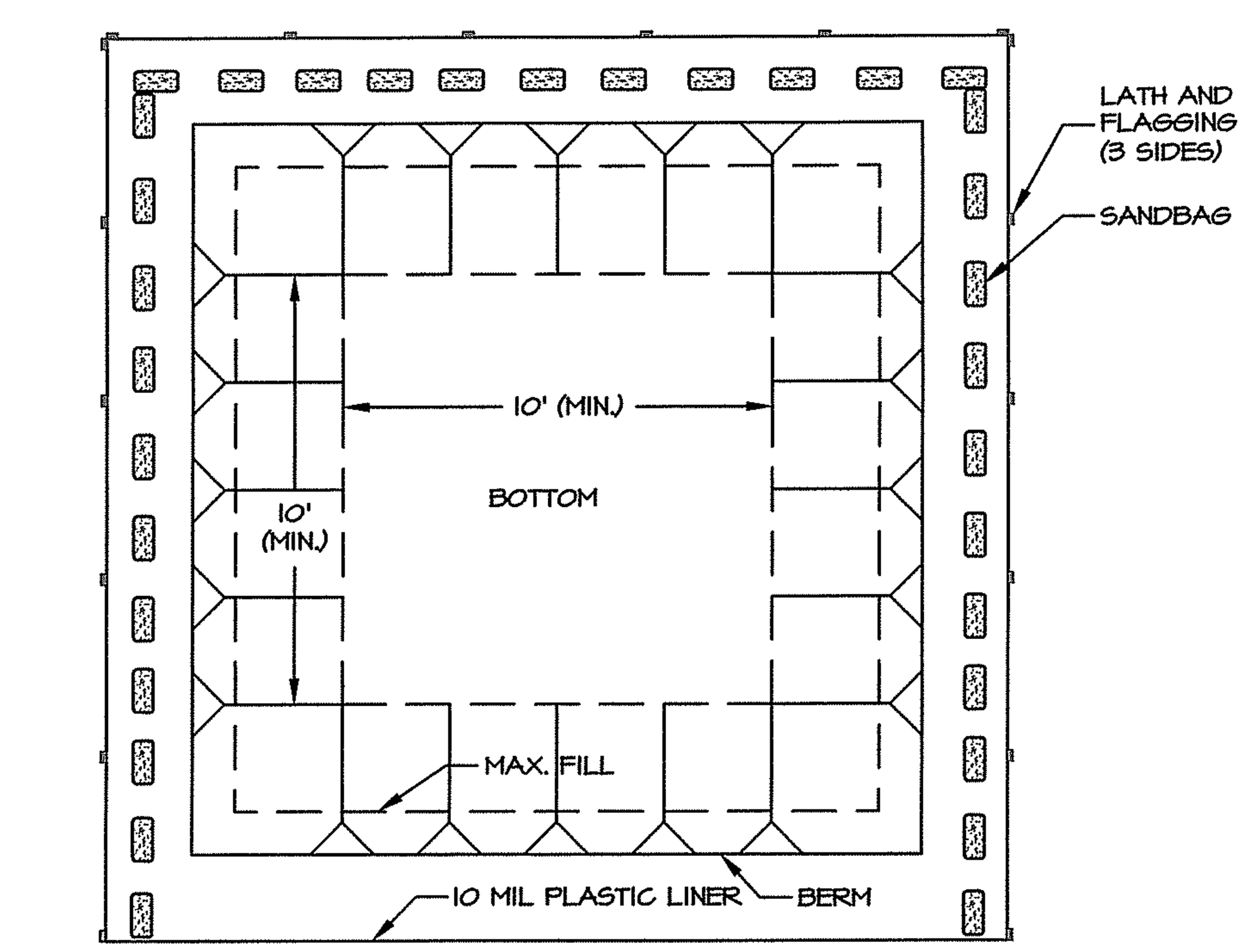
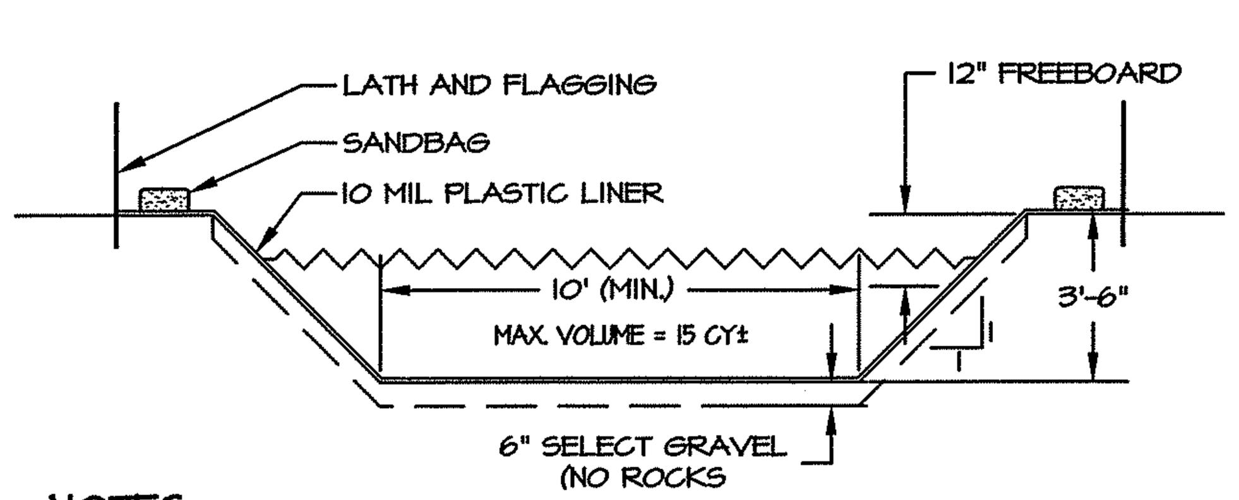


DEWATERING BASIN SECTION

NOT TO SCALE



PLAN



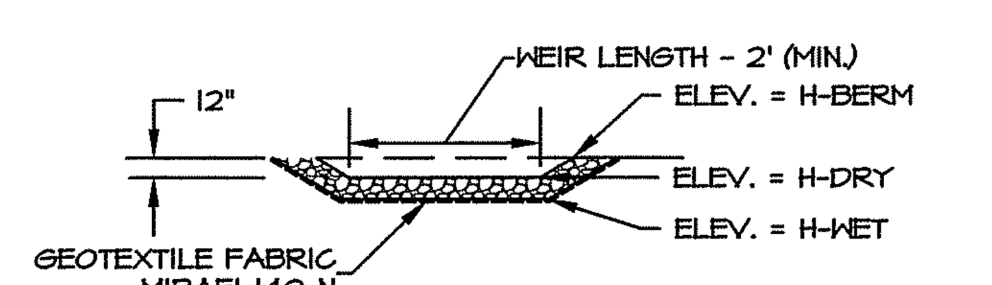
NOTES:

1. LINER SEEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. WASHOUT TO BE LOCATED AT LEAST 50' FROM WETLAND EDGE, OPEN DRAINAGE CHANNELS, DOWNSTREAM CATCH BASINS AND OTHER SENSITIVE AREAS.
3. SOIL BASE SHALL BE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE PLASTIC LINER.
4. PLASTIC LINER MATERIAL SHALL BE A MINIMUM 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE INPERMEABILTY OF THE MATERIAL.

CONCRETE WASHOUT DETAIL

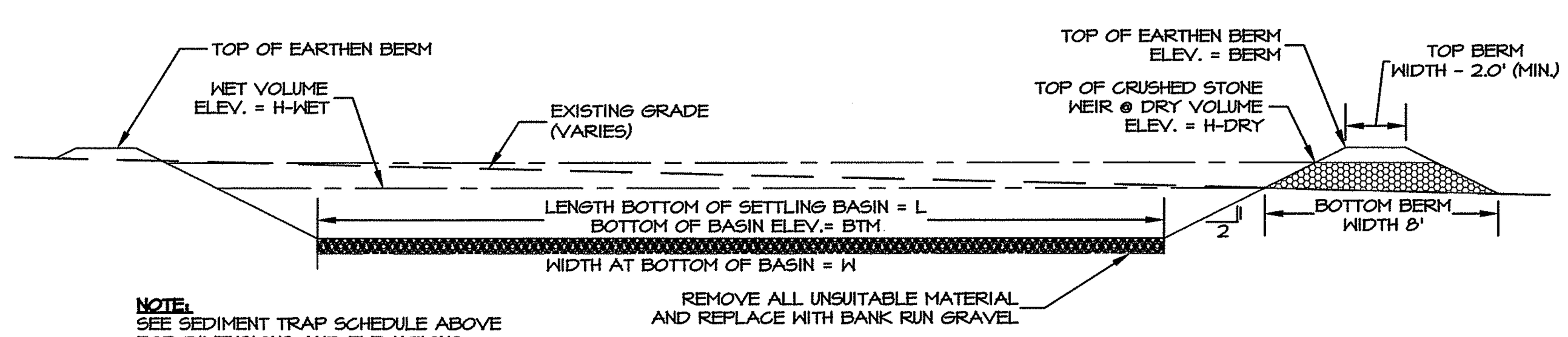
SCALE 1"=4'

SEDIMENT TRAP SCHEDULE			
DIM./ELEV./VOLUME	SEDIMENT TRAP NO. 1	SEDIMENT TRAP NO. 2	SEDIMENT TRAP NO. 3
L (LENGHT)	18'	12'	12'
W (WIDTH)	10'	8'	8'
BTM (BOTTOM ELEVATION)	710	697	685
H-WET (ELEVATION)	712	699	687
H-DRY (ELEVATION)	713	700	688
BERM (ELEVATION)	714	701	689
REQUIRED VOLUME	513 C.F.	378 C.F.	323 C.F.
WET VOLUME PROVIDED	627 C.F.	395 C.F.	395 C.F.
DRY VOLUME PROVIDED	561 C.F.	397 C.F.	397 C.F.



SEDIMENT TRAP SPILLWAY DETAIL

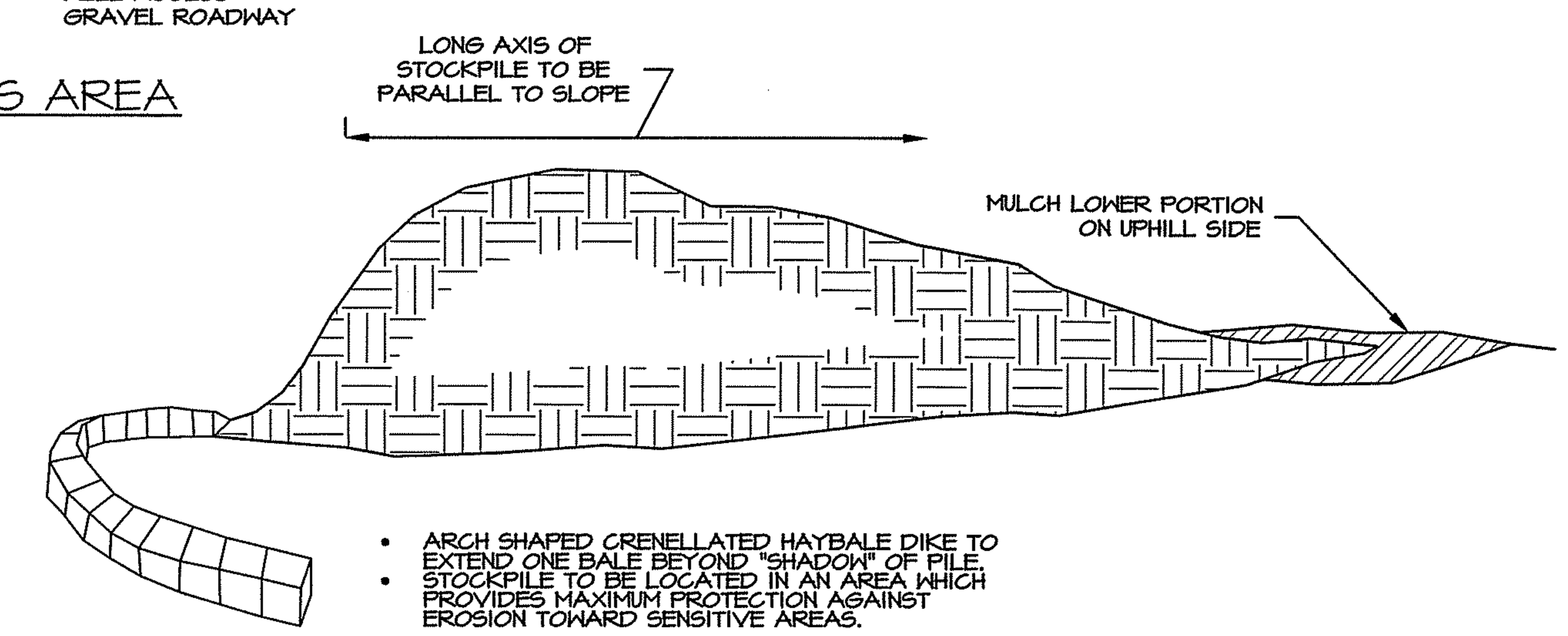
NOT TO SCALE



NOTE:
SEE SEDIMENT TRAP SCHEDULE ABOVE FOR DIMENSIONS AND ELEVATIONS.

TYPICAL SEDIMENT TRAP DETAILS

NOT TO SCALE

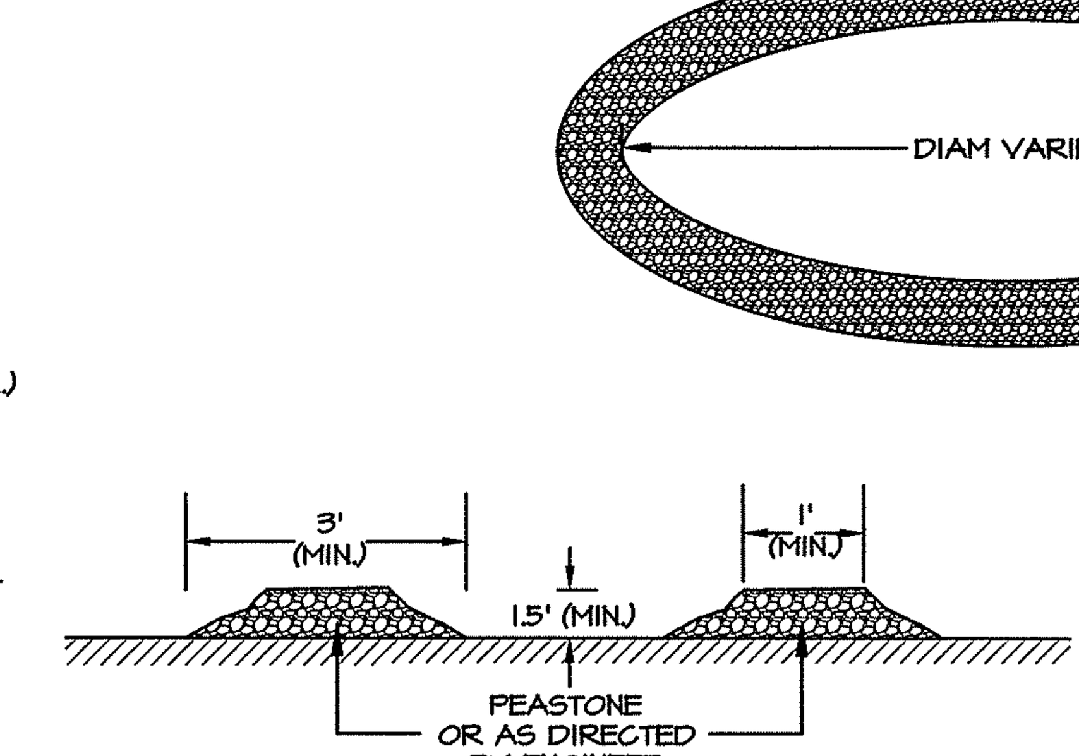


- ARCH SHAPED CRENELLATED HAYBALE DIKE TO EXTEND ONE BALE BEYOND "SHADOW" OF PILE.
- STOCKPILE TO BE LOCATED IN AN AREA WHICH PROVIDES MAXIMUM PROTECTION AGAINST EROSION TOWARD SENSITIVE AREAS.

TEMPORARY STOCKPILE

NOT TO SCALE

NOV 15 2017



NOTE:

1. THE STONE DEWATERING ENCLOSURE SHALL BE INSTALLED ON GRASS OR OTHER PERMEABLE SURFACE. IF IT MUST BE SITED ON PAVEMENT, THEN A FABRIC LINER SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.
2. PROVIDE APPROPRIATE ANCHORS TO ENSURE PUMP WATER DISCHARGE HOSE REMAINS WITHIN THE STONE ENCLOSURE.
3. ANY ACCUMULATED SEDIMENT MUST BE ALLOWED TO DEWATER FOR A MINIMUM 72-HOUR DRAIN TIME PRIOR TO OFF-SITE TRANSPORT.

DETAIL - TRENCH PUMPWATER DISCHARGE ENCLOSURE

NOT TO SCALE

RIDEM PERMIT SET

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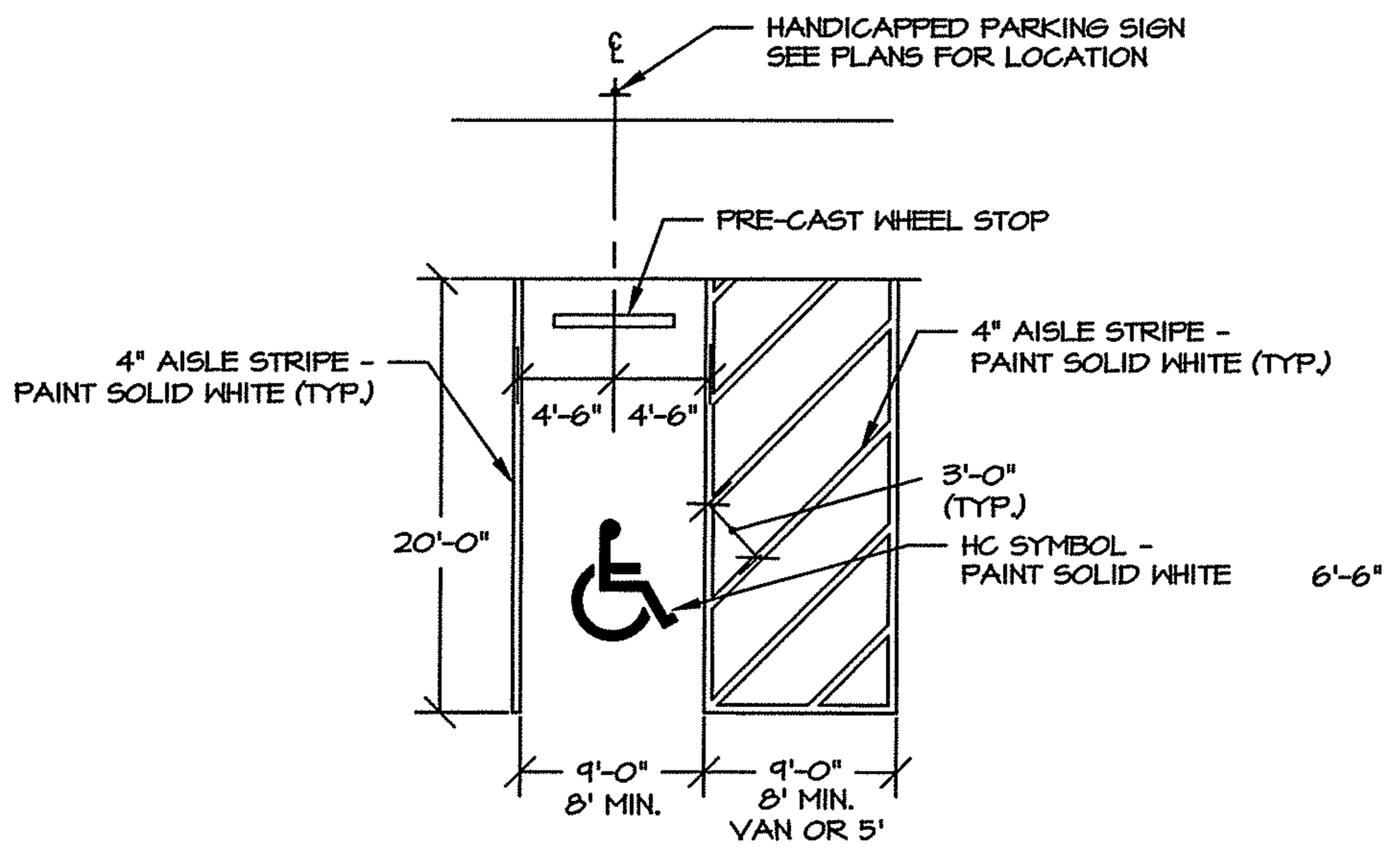
DETAILS

PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

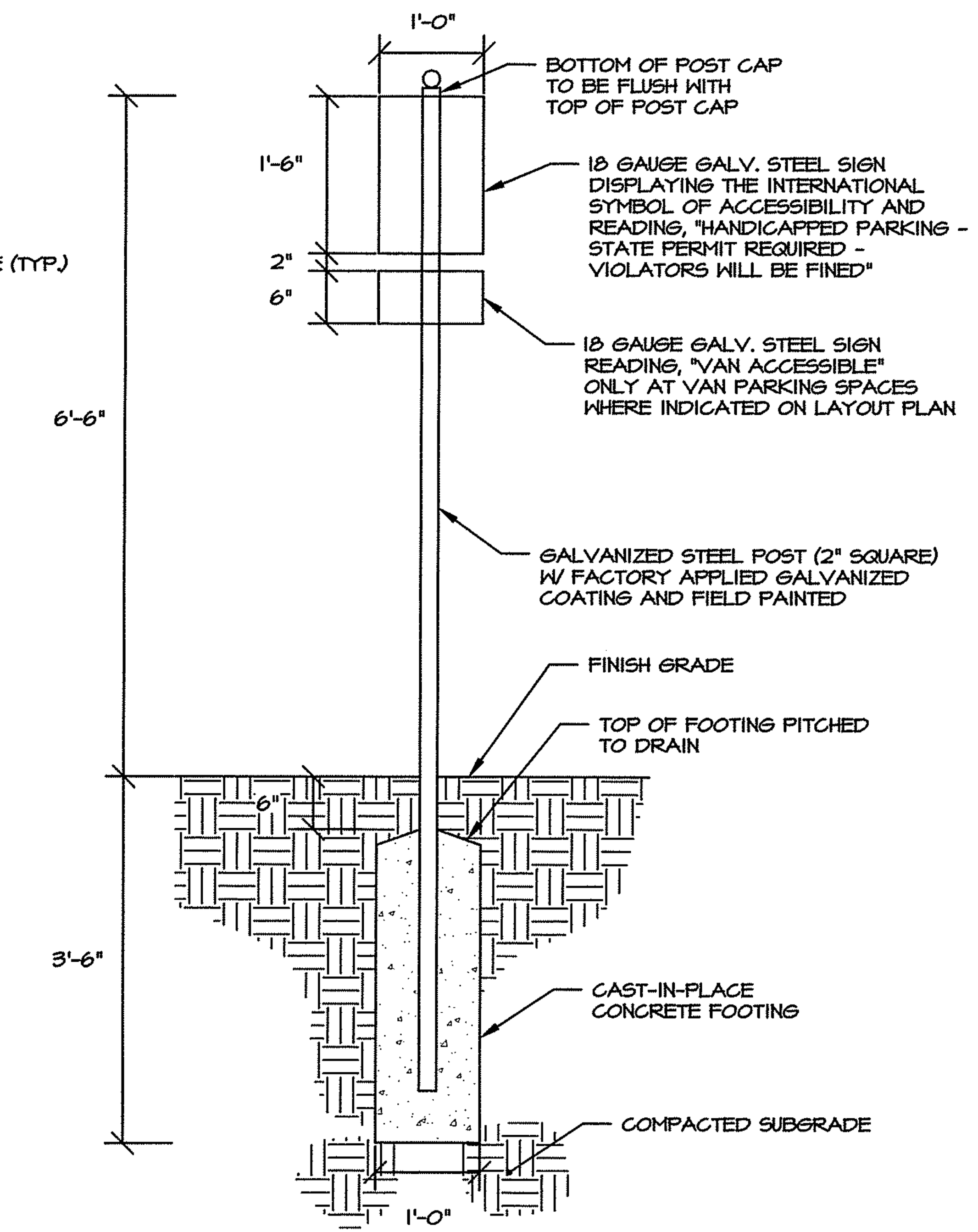
C-8.03



NOTE:
1. SLOPE OF PAVEMENT AT HANDICAP SPACES SHALL NOT EXCEED 2%
2. SEE SPECIFICATIONS FOR TYPICAL LINE PAINT FOR ALL PAVEMENT MARKINGS

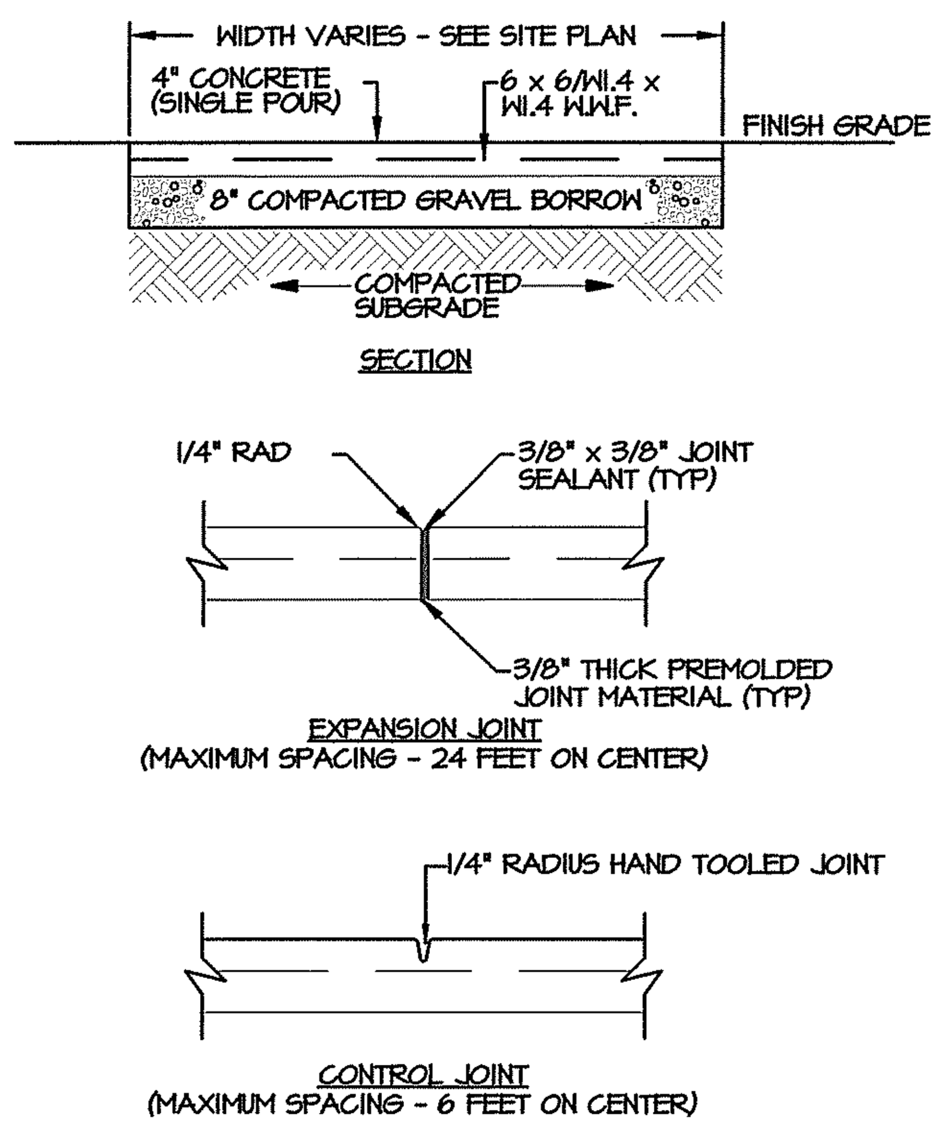
PARKING SPACE DETAIL

NOT TO SCALE



HANDICAPPED PARKING SIGN

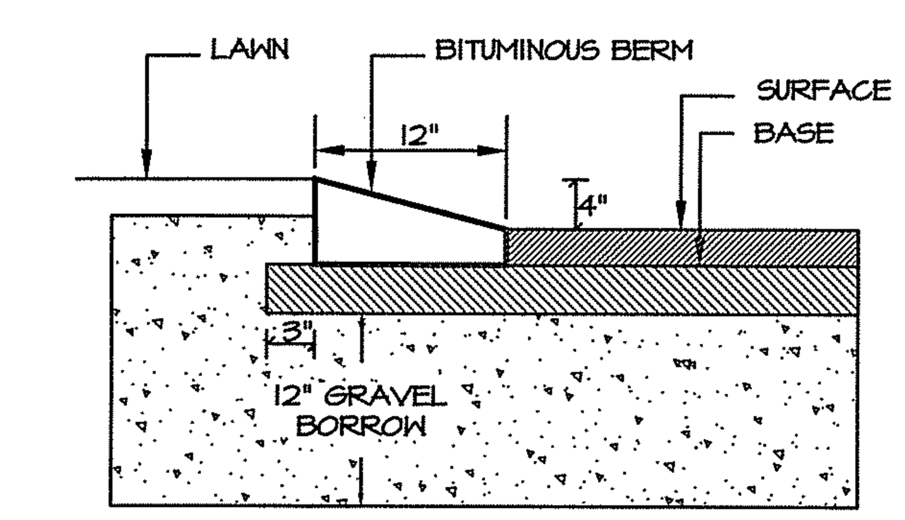
SCALE: 3/4" = 1'-0"



CONCRETE SIDEWALK DETAIL

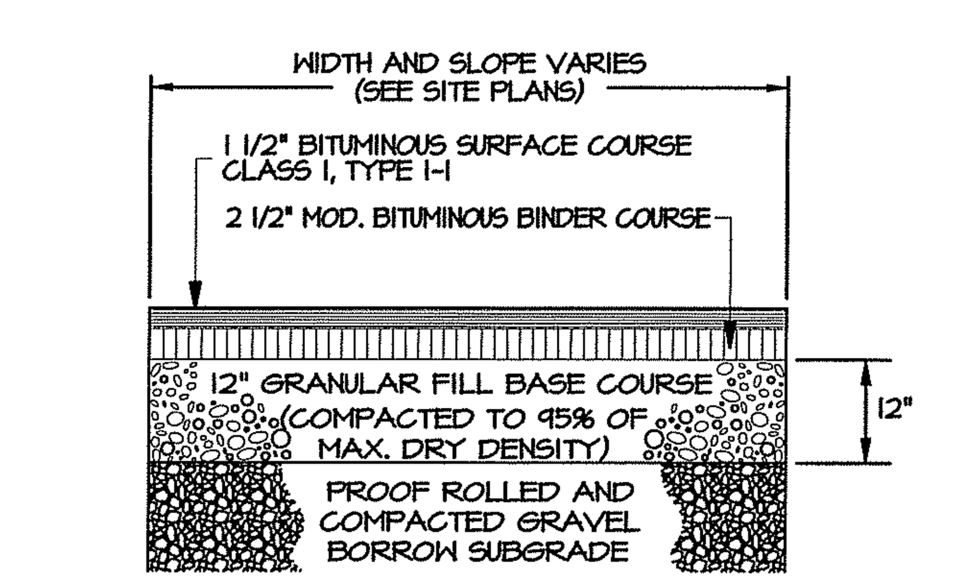
NOT TO SCALE

CONCRETE TO BE 4000 PSI. @ 28 DAYS



BITUMINOUS BERM DETAIL

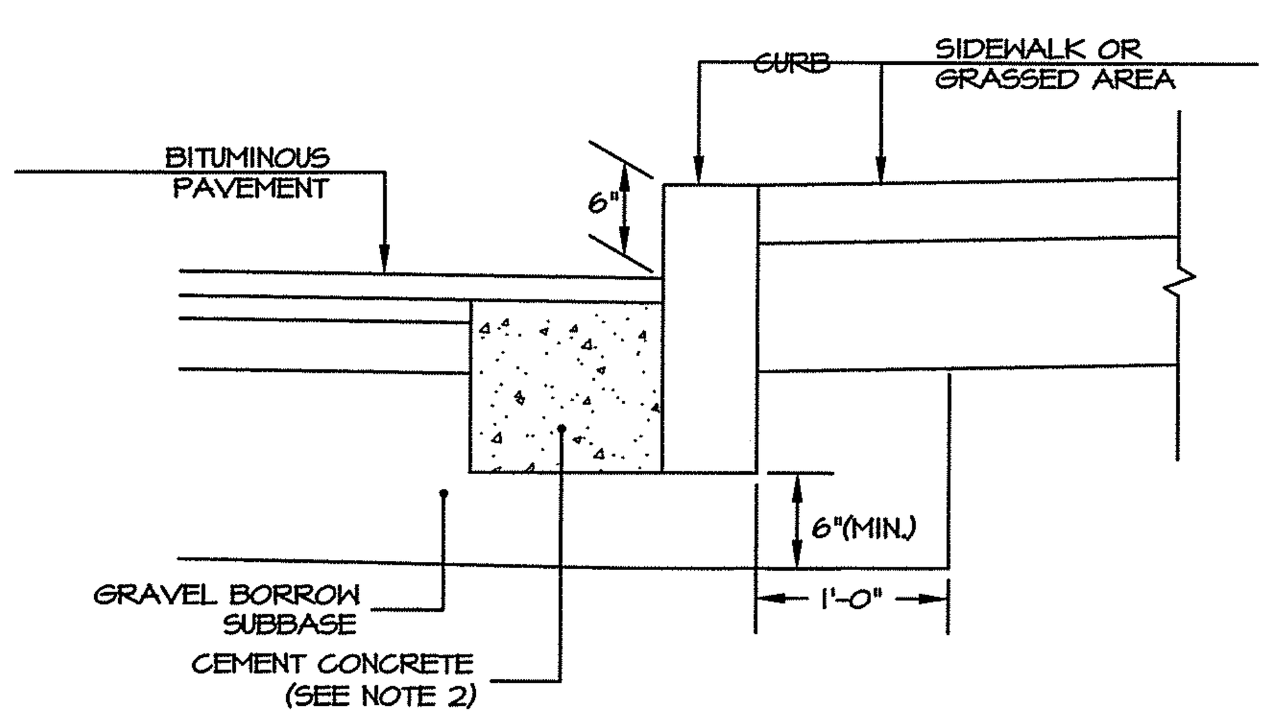
NOT TO SCALE



NOTES:
1. ALL PAVEMENT, GRAVEL AND GRANULAR FILL TO CONFORM WITH RIDOT STANDARDS AND INSTALLATION REQUIREMENTS.
2. ALL LOAM, TOPSOIL, SUBSOIL, ROOTS, ROCK OR ANY OTHER UNSUITABLE MATERIALS SHALL BE REMOVED FROM WITHIN OF LIMITS OF PAVEMENT. INSTALL CLEAN, GRANULAR FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
3. INCREASE GRAVEL BASE DEPTH TO 24" IN AREAS WHERE ROCK IS PRESENT.

BITUMINOUS CONCRETE PAVEMENT DETAIL

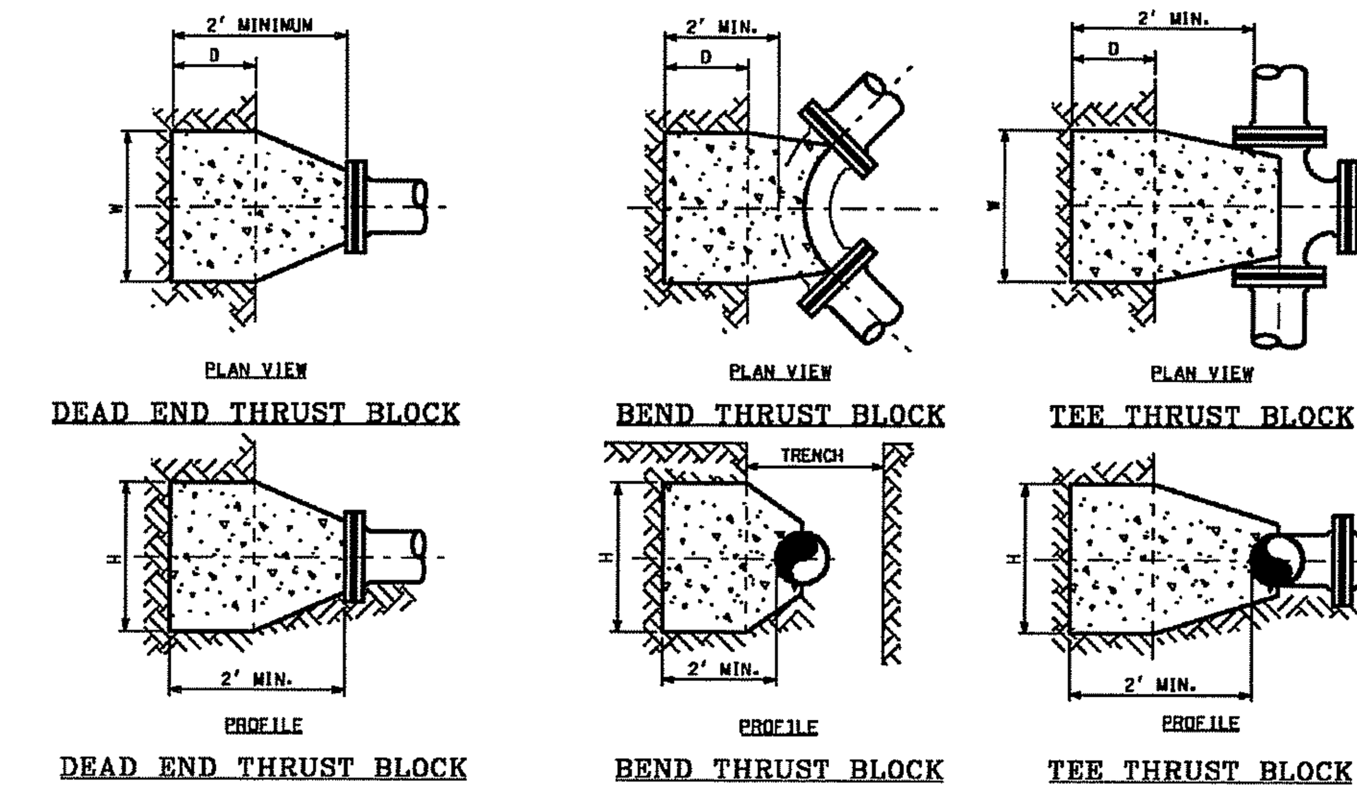
NOT TO SCALE



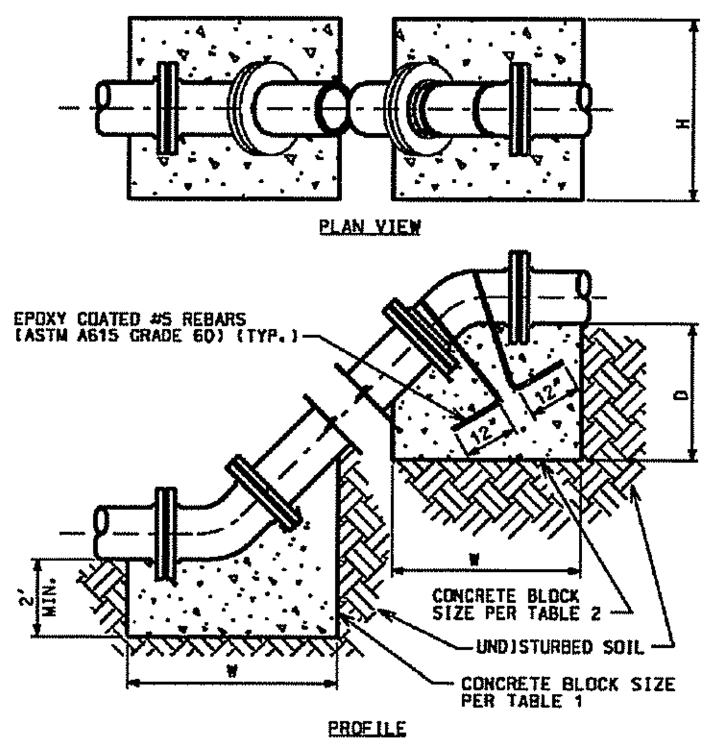
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATION.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

CURB SETTING DETAIL

NOT TO SCALE



HORIZONTAL THRUST BLOCK DETAILS



VERTICAL THRUST BLOCK DETAILS

TABLE 1

PIPE SIZE	DEAD END & TEE				HORIZONTAL 1/4 BEND				HORIZONTAL 1/8 BEND			
INCH DIA.	D	H	W	CY	D	H	W	CY	D	H	W	CY
16	1	5.5	4.5	2	1	6.5	5	2.5	1	4.5	4	1.5
12	1	3.5	3.5	1	1	4	4	1.5	1	3	3	.75
8	.5	2.5	2.5	.5	.5	3	3	.5	.5	2	2	.3

PIPE SIZE	HORIZONTAL 1/16 BEND				HORIZONTAL 1/32 BEND			
INCH DIA.	D	H	W	CY	D	H	W	CY
16	1	3.5	3.5	1	1	2.5	2.5	.6
12	1	2.5	2.5	.5	1	2	2	.4
8	.5	1.5	1.5	.25	.5	1.5	1.5	.25

TABLE 2

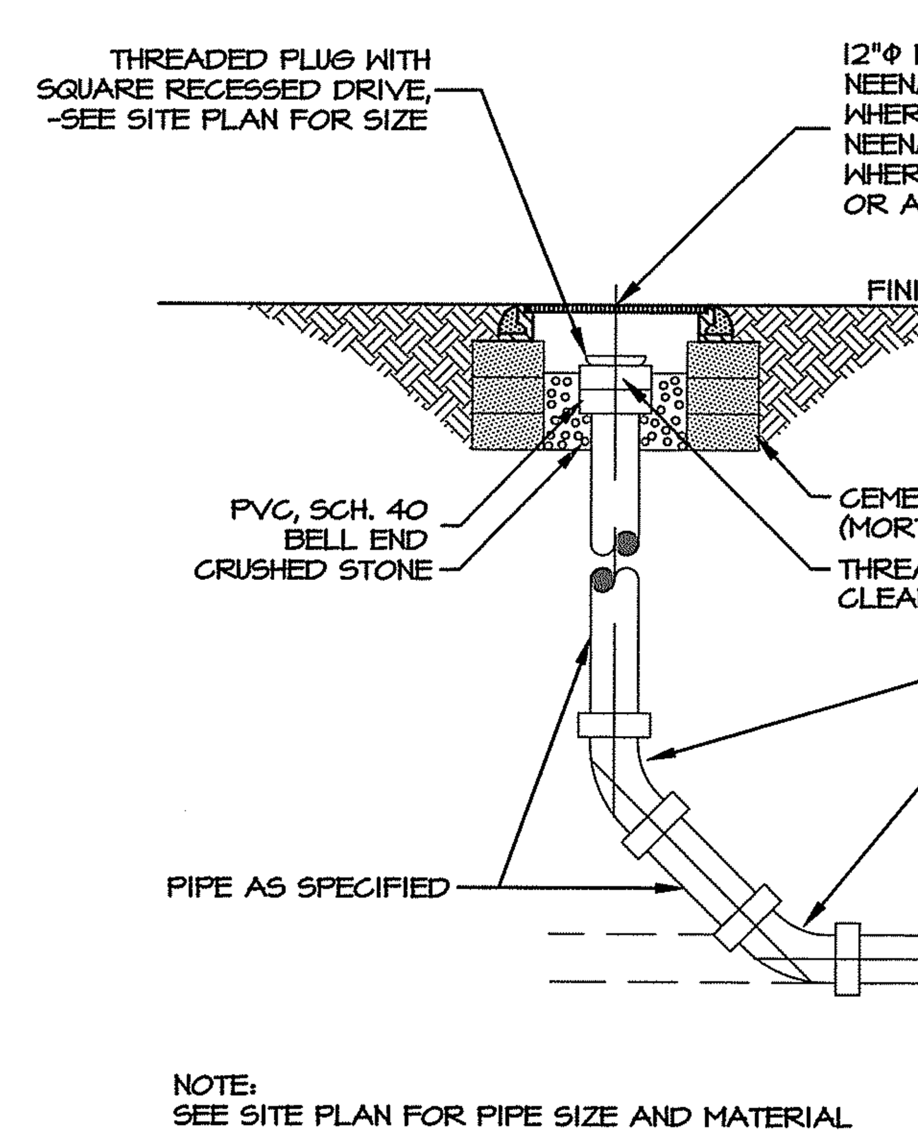
PIPE SIZE	VERTICAL 1/8 BEND				VERTICAL 1/8 BEND BOTTOM			
INCH DIA.	D	H	W	CY	D	H	W	CY
16	7	6	6	11	2	4.5	4	2.25
12	5	6	5	7	2	3	3	1
8	4.5	4	4	3.5	2	2	2	.5

D IS THE DIMENSION INTO UNDISTURBED GROUND IN FEET
H IS HEIGHT OF THRUST BLOCK IN FEET
W IS WIDTH OF THRUST BLOCK IN FEET
ALL DIMENSIONS ARE MINIMUM.
THRUST BLOCKS IN LOOSE FILL OR SAND AREAS ARE NOT INCLUDED IN THESE TABLES AND WILL REQUIRE ADDITIONAL ANALYSIS.

NOTES:
1. ALL CONCRETE TO BE 4000 P.S.I.
2. CONCRETE THRUST BLOCK SHALL BEAR AGAINST UNDISTURBED EARTH.
3. TO BE USED WHERE RESTRAINED PIPE IS NOT INSTALLED.
4. ALL DEAD END PIPE SHALL BE PROPERLY RESTRAINED WITH THRUST BLOCKS PRIOR TO TESTING.
5. ALL THRUST BLOCKS TO CONFORM WITH FMRC STANDARD 2-10.

THRUST BLOCK DETAILS

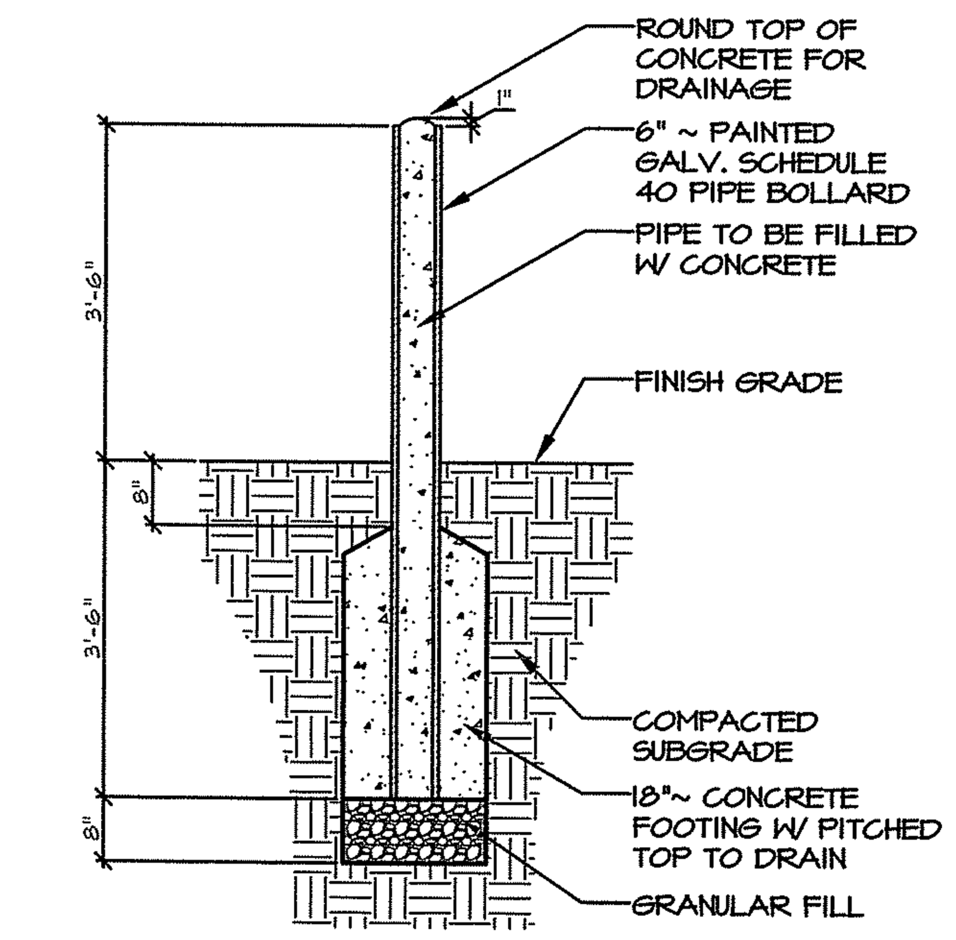
NOT TO SCALE



NOTE:
SEE SITE PLAN FOR PIPE SIZE AND MATERIAL

DETAIL - CLEANOUT

NOT TO SCALE



INSTALL BOLLARDS AT EACH SIDE OF OVERHEAD DOORS, BUILDING CORNERS THAT ARE EXPOSED TO TRUCK OR MATERIALS HANDLING TRAFFIC AND OTHER DESIGNATED AREAS.

CONC. FILLED BOLLARD

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

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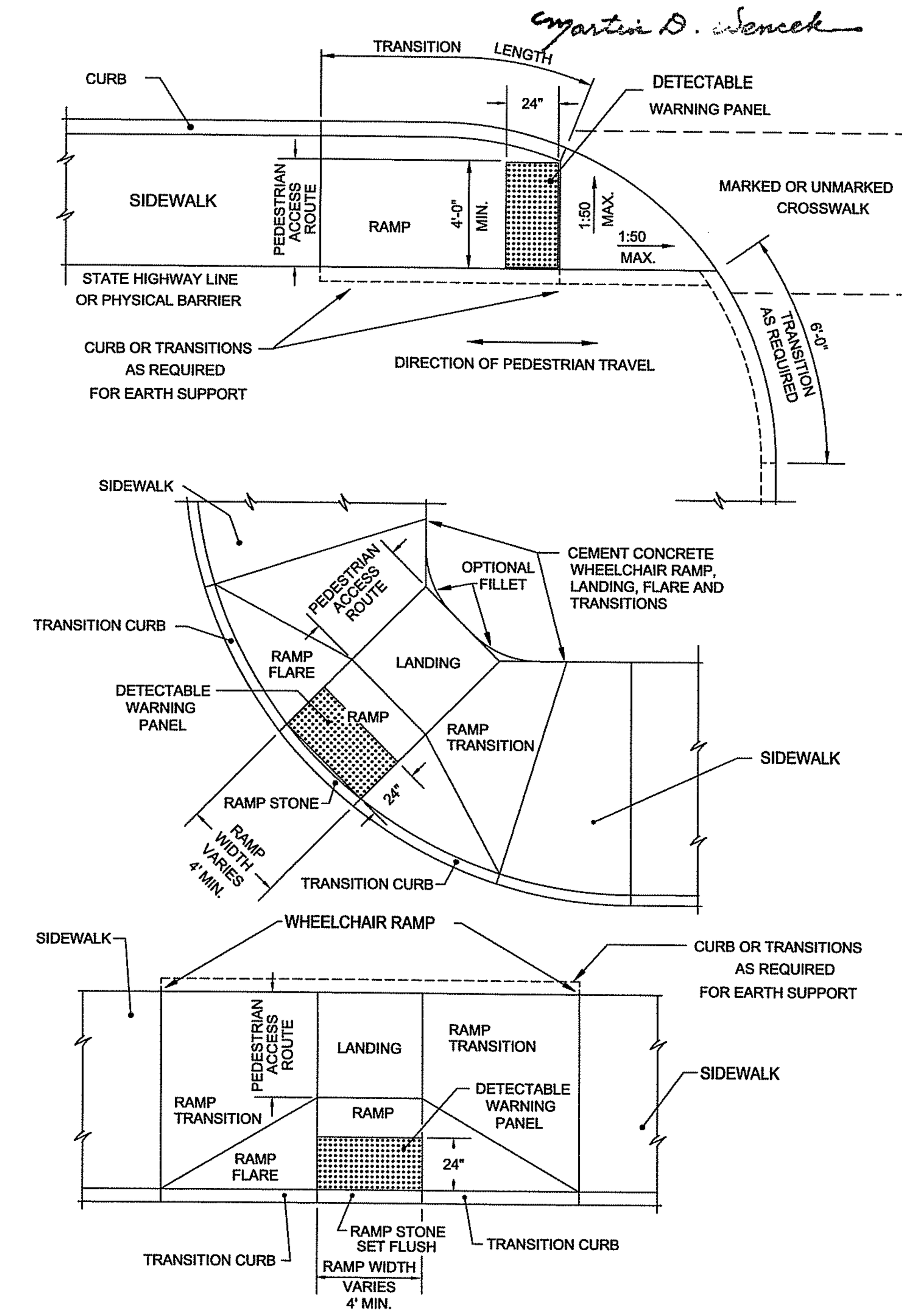
Martin D. Wencek



GENERAL NOTES:
1. DETECTABLE WARNING PANEL SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RHODE ISLAND STANDARD SPECIFICATIONS. PANEL TO MATCH RAMP WIDTH.
2. COORDINATE BRAND AND COLOR OF DETECTABLE WARNING PANEL WITH ARCHITECT.

DETECTABLE WARNING PANEL PLACEMENT

NOT TO SCALE

RIDEM PERMIT SET

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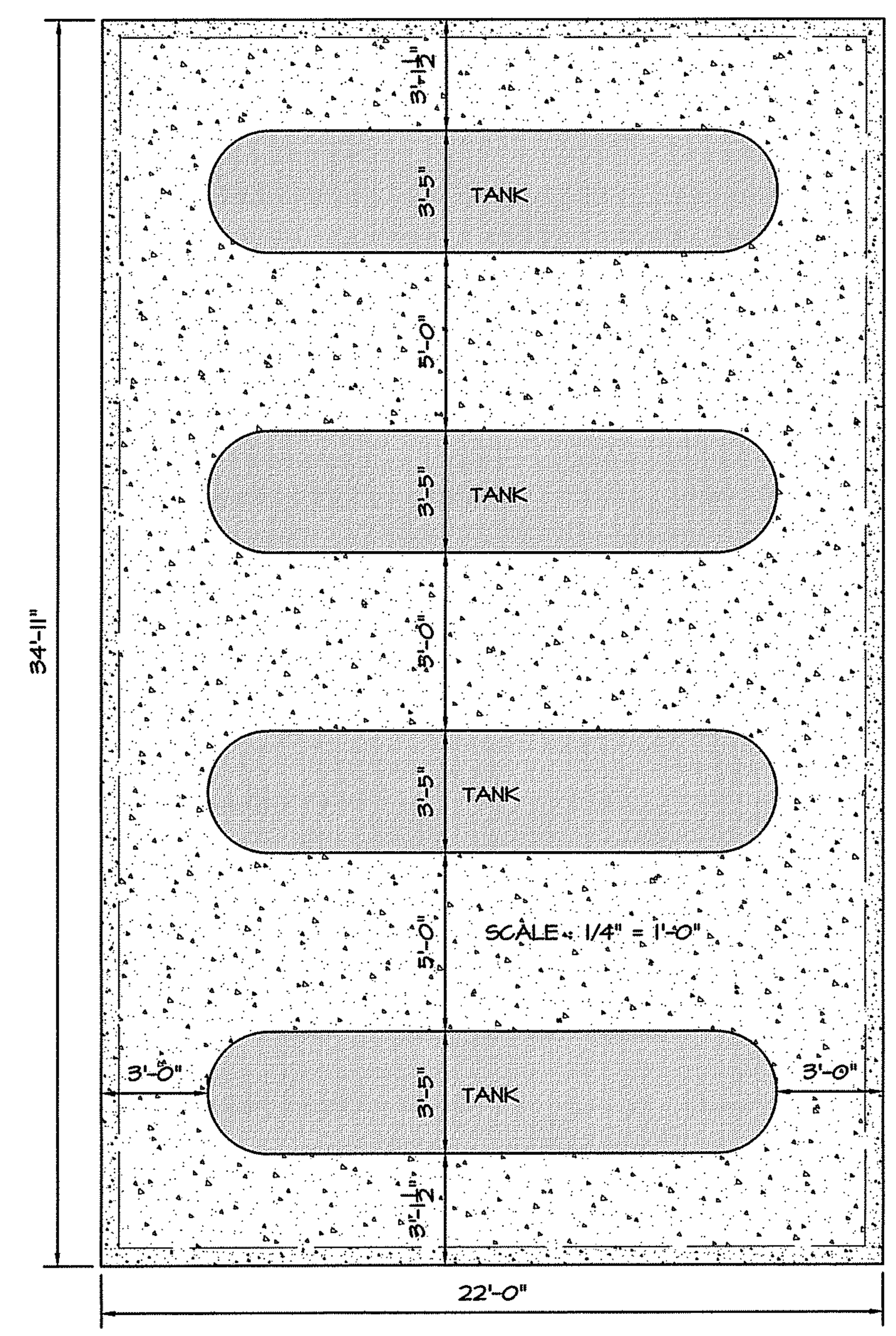
DETAILS

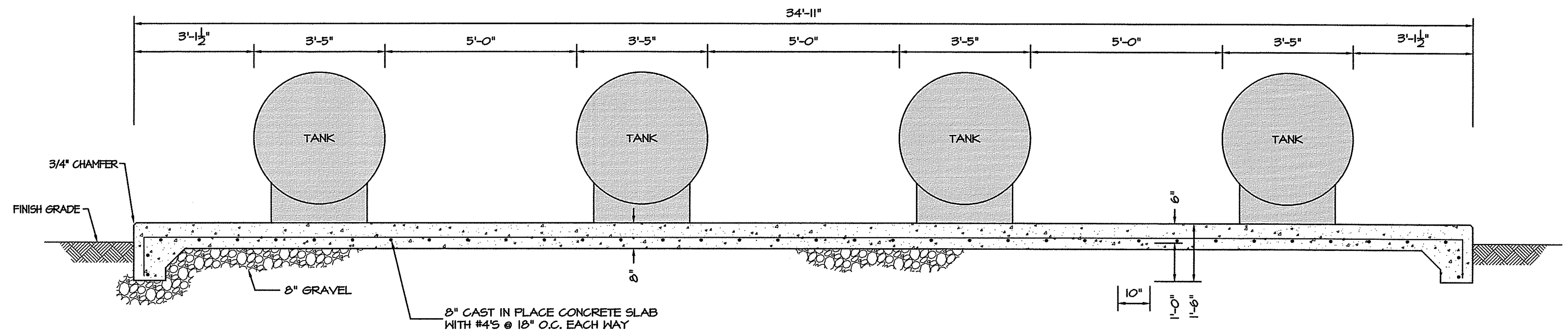
PROJECT # 3216

DATE: 08/30/2017
REVISED DATE: 11/13/2017

C-8.04



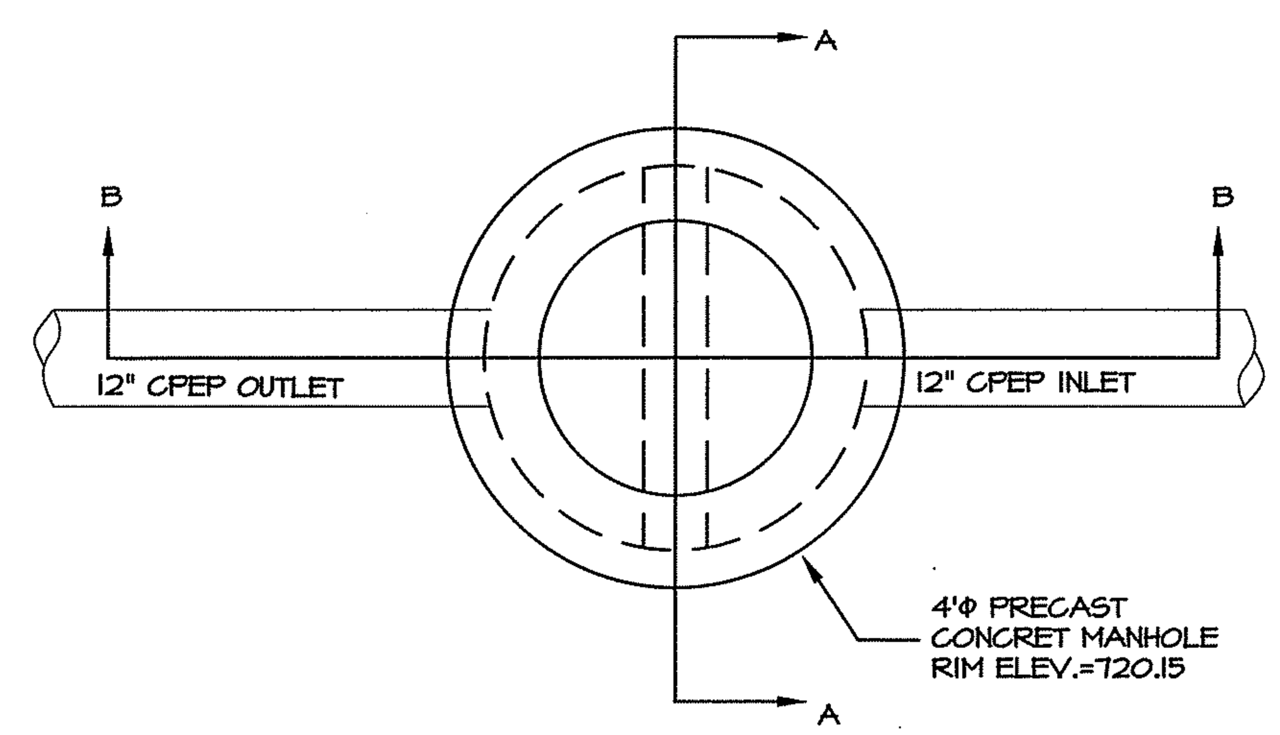
PLAN VIEW - PROPANE TANK SLAB



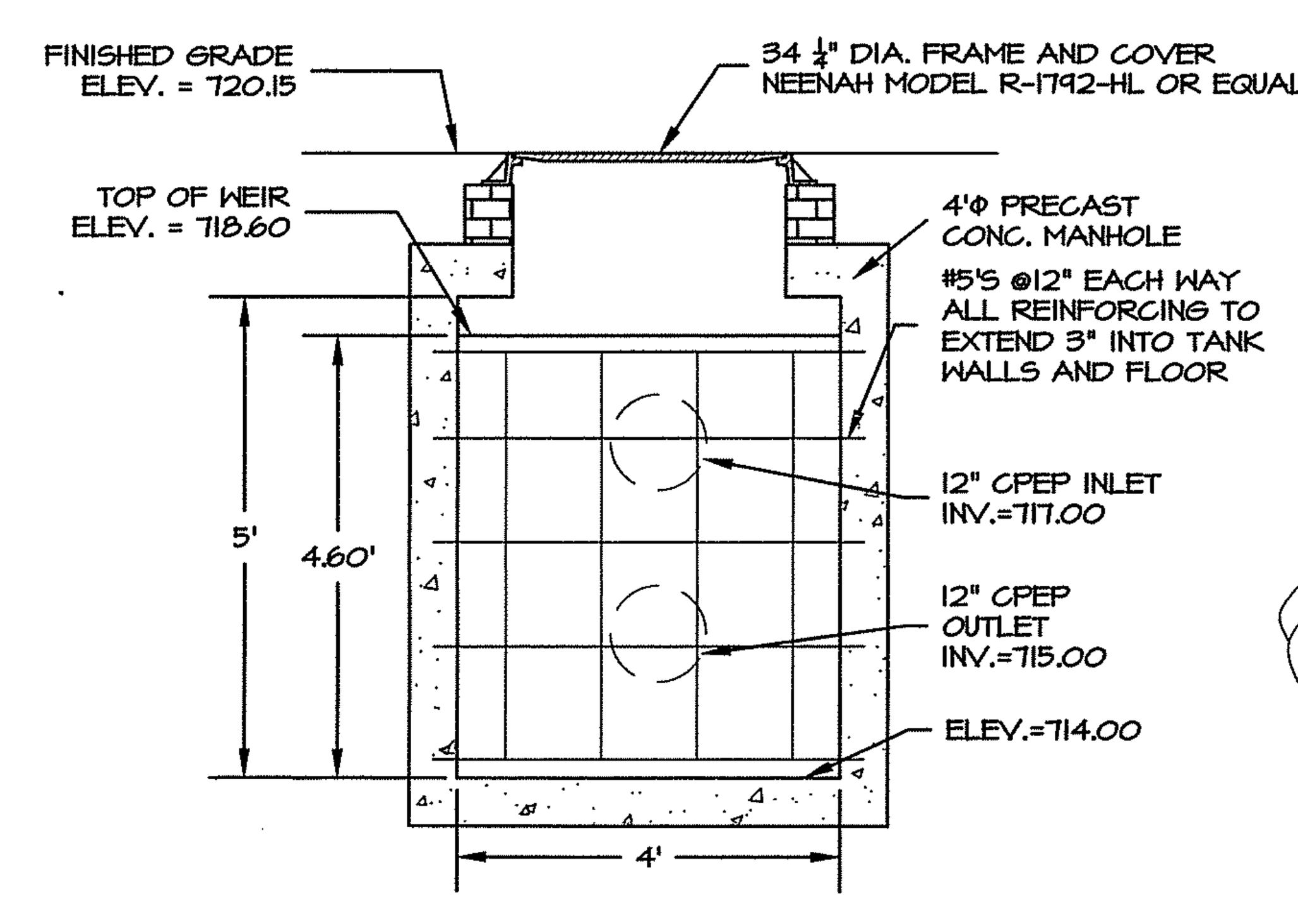
30" OF CRUSHED STONE BELOW SLAB.
SOIL CONDITIONS NEED TO BE VERIFIED.

TANK PAD SECTION

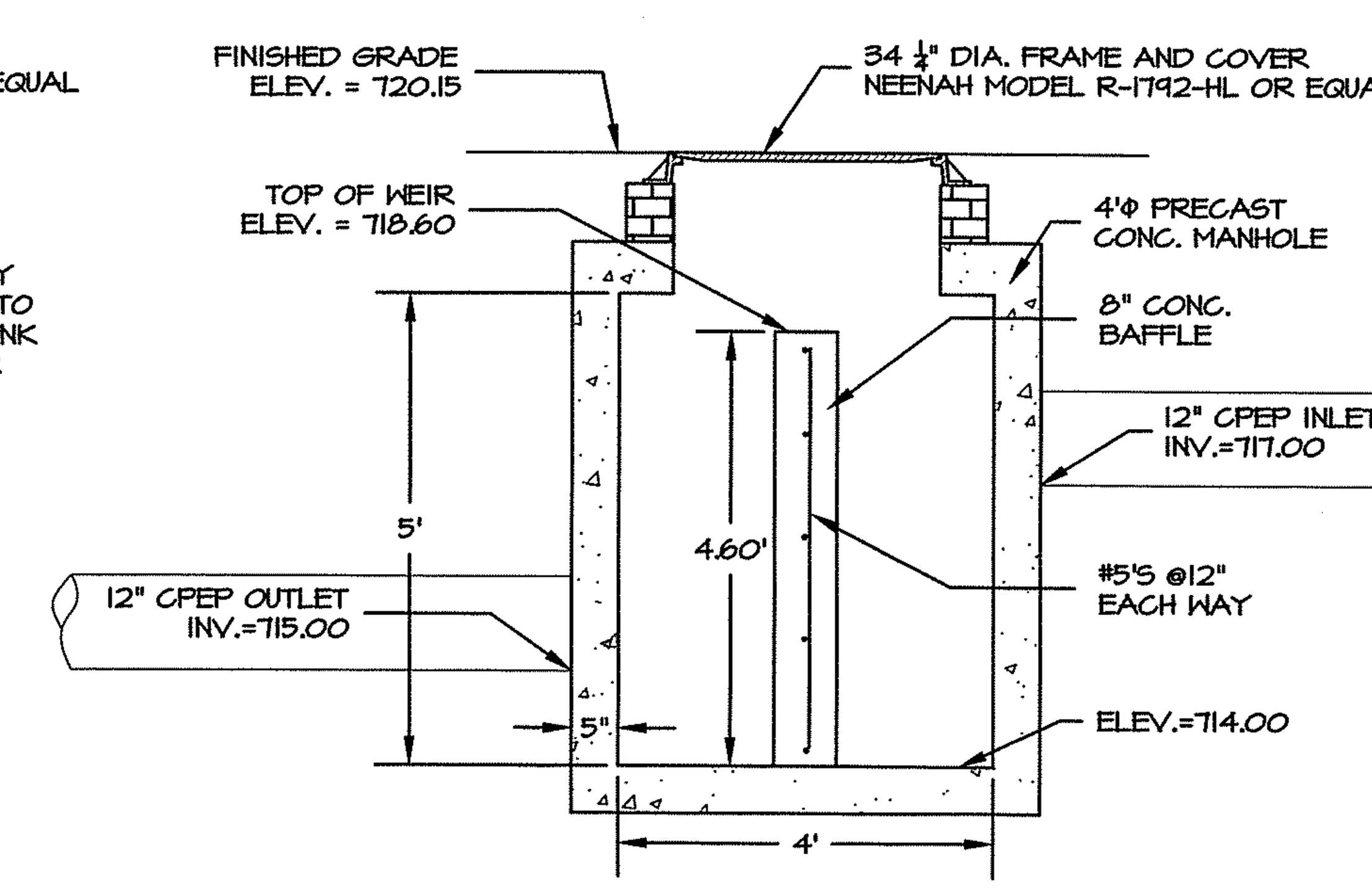
SCALE : 1/2" = 1'-0"



PLAN VIEW



SECTION A-A



SECTION B-B

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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Martin D. Wencek

INFILTRATION BASIN OUTLET CONTROL STRUCTURE DETAIL

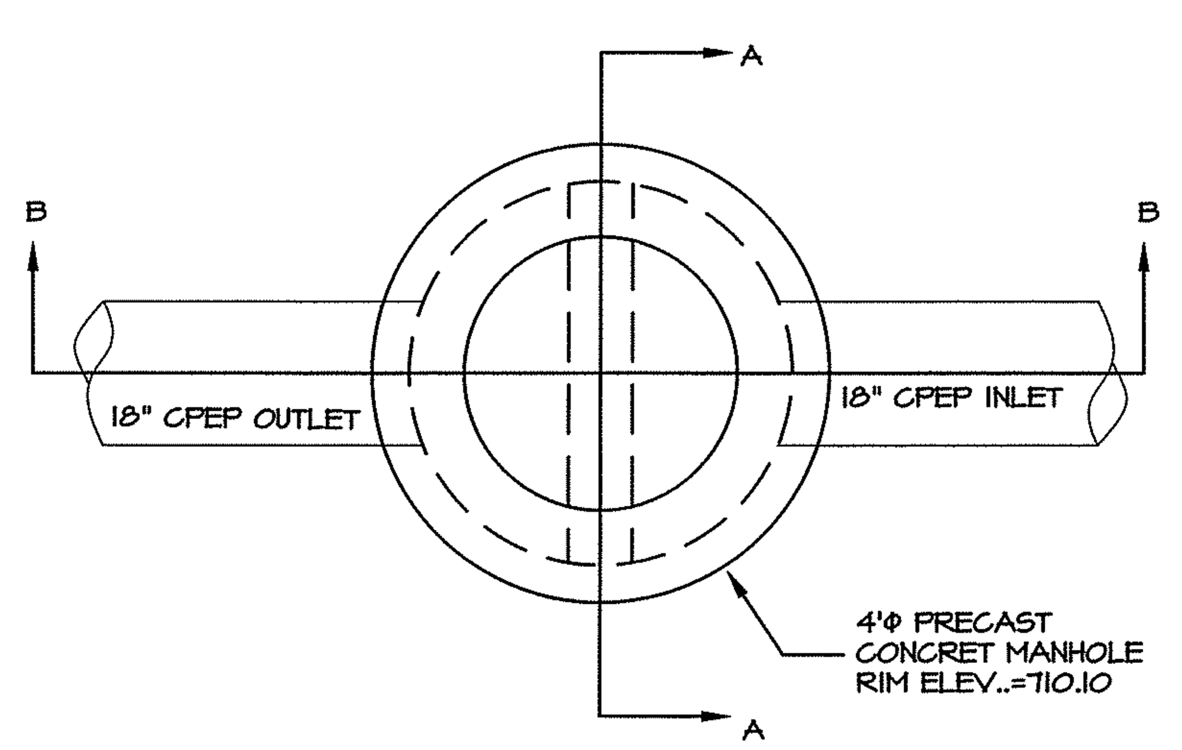
SCALE 1" = 2'

GENERAL

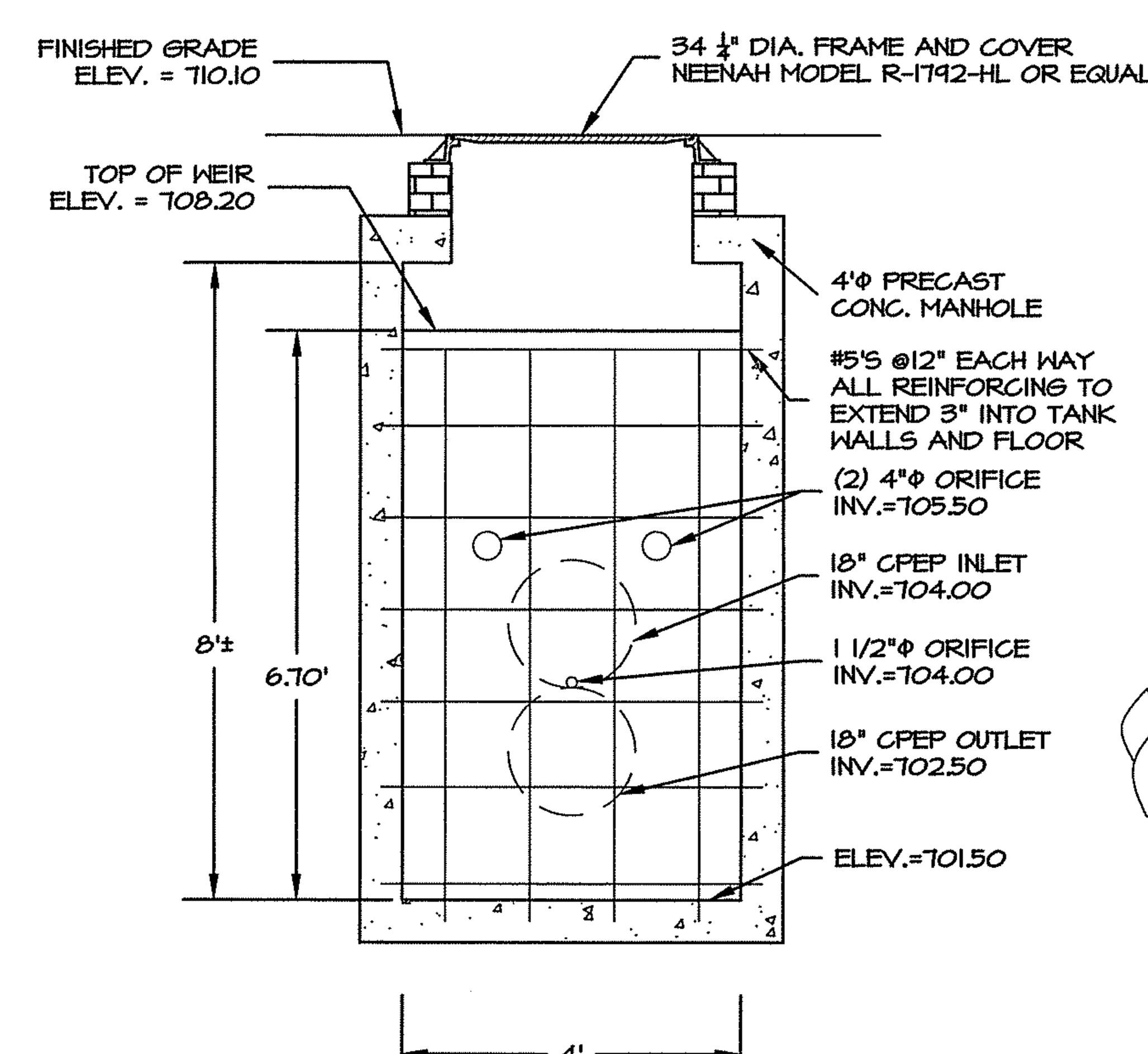
1. ALL WORK SHALL CONFORM TO THE RHODE ISLAND STATE BUILDING CODE, ITS APPLICABLE REFERENCED STANDARDS, AND LOCAL CODES.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO THE ARCHITECT/ENGINEER ALL OBSERVATIONS AND ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.

CONCRETE

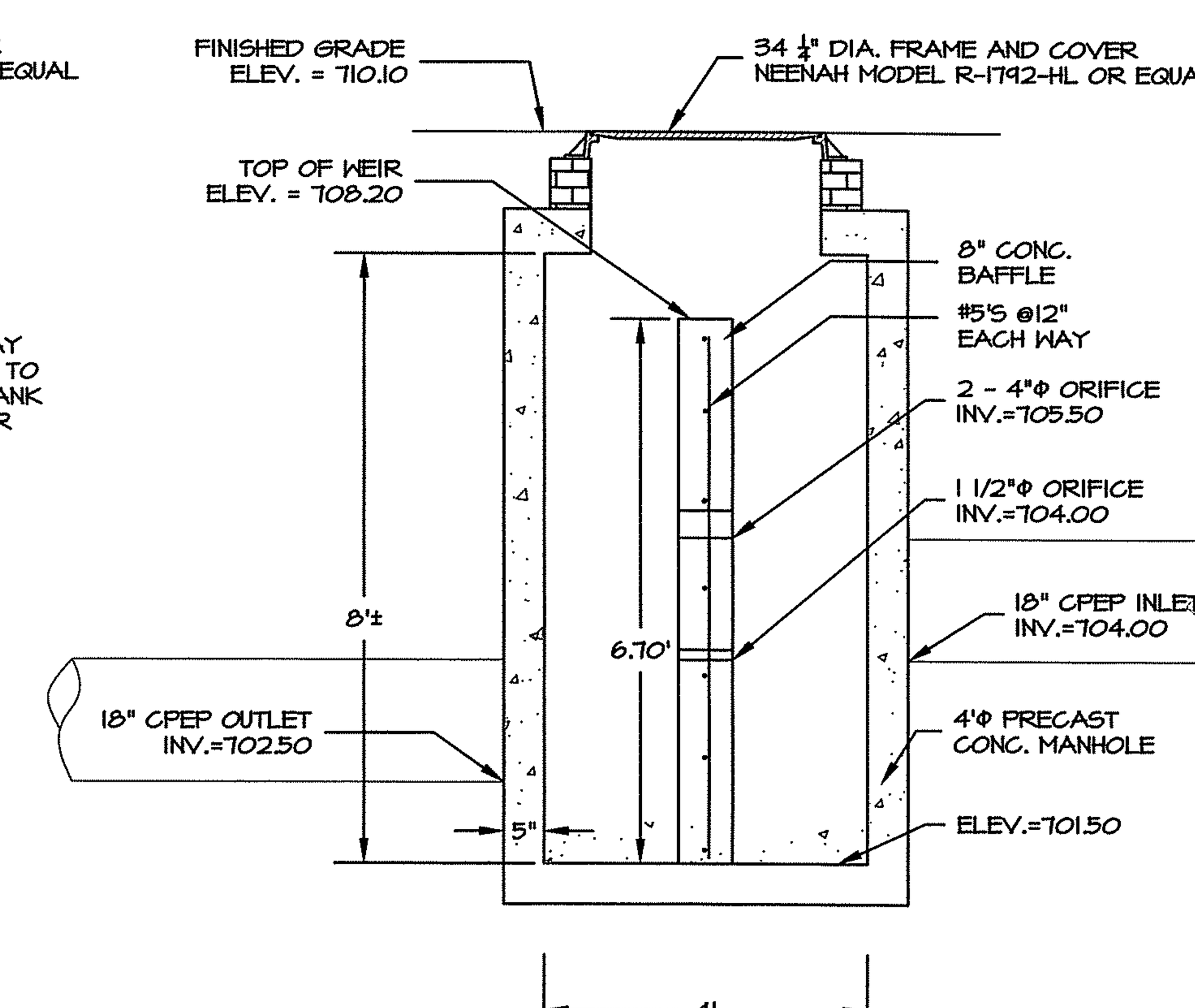
1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 & 301 REQUIREMENTS.
2. CONCRETE SHALL HAVE THE FOLOWING 28-DAY COMPRESSIVE STRENGTH: EXTERIOR SLABS ON GRADE - 4000 PSI
3. CONCRETE REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60. INSTALLATION SHALL BE IN ACCORDANCE WITH ACI 315 AND 318.
4. PROVIDE THE FOLLOWING MINIMUM REINFORCING COVER:
   A. FOOTINGS________________3 INCHES
   B. CONC. EXPOSED TO WEATHER OR EARTH________2 INCHES
   C. SLABS ON GRADE (STEEL BARS)________2 INCHES
5. ENGINEERED FILL UNDER PAD SHALL BE PLACED IN 8" LAYERS AND COMPACTED TO 95 % MAX. DRY DENSITY.
6. LAP ALL BARS 40 DIAMETERS MINIMUM.
7. COORDINATE LOCATION OF ALL OPENINGS, SLEEVES AND CONDUIT WITH OTHER TRADES.



PLAN VIEW



SECTION A-A



SECTION B-B

NOV 15 2017

DETENTION BASIN OUTLET CONTROL STRUCTURE DETAIL

SCALE 1" = 2'

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