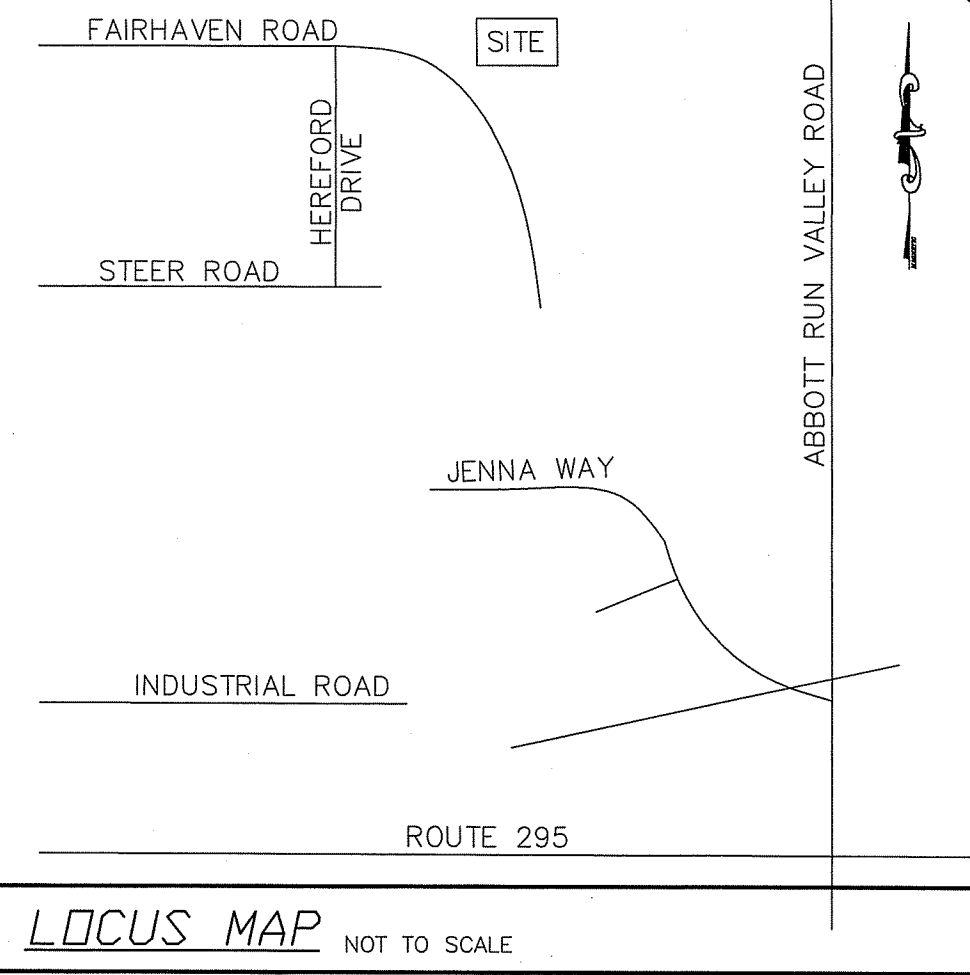
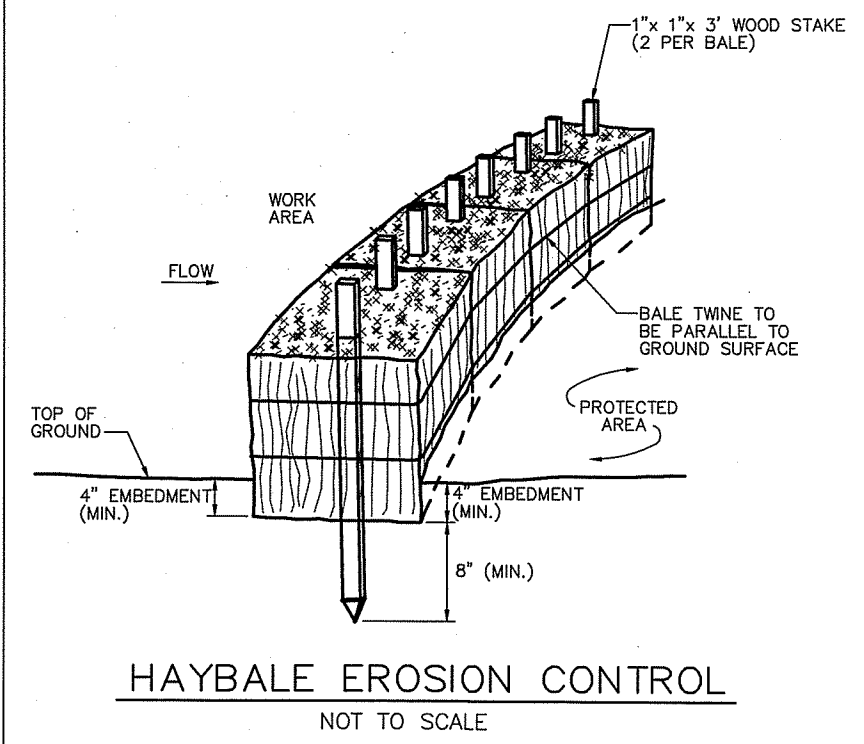


- NOTES:**
1. THE PARCEL IS PLAT 24, LOT 440.
 2. THE TOTAL PARCEL AREA IS 51,635 S.F. OR 1.1854 ACRES.
 3. THE OWNER AND APPLICANT OF THE PARCEL IS:
TERRAPIN DEVELOPMENT, LLC
8 DAVIS STREET
CUMBERLAND, RI 02864
 4. SEE DEED BOOK 1676 AT PAGE 647 FOR TITLE REFERENCE.

ZONING INFORMATION:
THE AREA IS ZONED: R-1 (AREAS WITH PUBLIC SEWER AND WATER)
MINIMUM LOT AREA = 25,000 S.F.
MINIMUM LOT FRONTAGE = 100 FEET
MINIMUM BUILDING SETBACKS:
FRONT YARD = 20 FEET
SIDE YARD = 10 FEET
REAR YARD = 25 FEET
MAXIMUM LOT COVERAGE = 20%
MAXIMUM BUILDING HEIGHT = 35 FEET



- GENERAL NOTES:**
1. THERE IS NO PROPOSED PHASING ON THIS PROJECT.
 2. THERE IS NO PROPOSED DEDICATION OF OPEN SPACE FOR THIS PROJECT.
 3. THERE ARE NO PROPOSED EASEMENTS, PLAT RESTRICTIONS AND/OR COVENANTS FOR THIS PROJECT.
 4. THERE ARE NO PRIVATE WELLS WITHIN 200- FEET OF THE PROJECT AND NO PUBLIC WELLS WITHIN 800- FEET OF THE PROJECT AT THE TIME OF SURVEY.
 5. THERE ARE NO EXISTING CESSPOOLS, SEPTIC SYSTEMS, SEEPAGE PITS OR OTHER SEWAGE DISPOSAL SYSTEMS WITHIN 200- FEET OF THE PROJECT AT THE TIME OF SURVEY.
 6. THE PROPERTY IS LOCATED WITHIN THE PAWTUCKET WATER SUPPLY BOARD PUBLIC DRINKING WATER SUPPLY WATERSHED.
 7. THERE ARE NO CEMETERIES ON THE SITE AT THE TIME OF SURVEY.
 8. THE PARCEL IS LOCATED WITHIN FLOOD ZONE X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON NATIONAL FLOOD INSURANCE RATE MAP 44007C0185G FOR THE TOWN OF CUMBERLAND, EFFECTIVE DATE OF MARCH 2, 2009.



- GENERAL CONTRACTOR'S NOTES:**
1. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE TAKEN FROM EXISTING FIELD LOCATION AND/OR EXISTING PLANS.
 2. NO EXCAVATION IS TO OCCUR UNTIL "DIG SAFE" AND ALL APPROPRIATE UTILITY COMPANIES HAVE BEEN NOTIFIED AND MARKED THE EXACT LOCATION ON THE GROUND.
 4. THE SEWER LATERAL, PUMP BASIN AND PRESSURE LINE NEEDS TO BE FLUSHED PRIOR TO TIE-IN.
- WATER NOTES:**
1. THE BEDDING FOR THE PROPOSED WATER SERVICE SHALL BE SAND, 8" AROUND THE SERVICE. IN AREAS OF LEDGE, THE SAND WILL BE 12" AROUND THE SERVICE.
 2. THE PROPOSED WATER SERVICE IS TO BE 1" TYPE K COPPER TUBING.

- SEWER NOTES:**
1. THE BEDDING FOR THE PROPOSED SEWER LATERAL SHALL BE CLEAN COARSE SAND, 8" AROUND THE SERVICE.
 2. THE PROPOSED SEWER LATERAL SHALL BE 2" SCHD40 PRESSURE RATED PVC PIPING WITH GLUED JOINTS.
 3. NO BENDS GREATER THAN 22 1/2" SHALL BE USED IN THE BUILDING SEWER FROM THE FOUNDATION TO THE PROPOSED ENVIRONMENTAL ONE PUMP BASIN. THE BENDS IN THE PROPOSED FORCE MAIN ARE TO MEET ENVIRONMENTAL ONE MANUFACTURER'S SPECIFICATIONS.
 4. THE PROPOSED ENVIRONMENTAL ONE PUMP BASIN IS TO BE DESIGNED BY MANUFACTURER TO MEET ALL TOWN OF CUMBERLAND REGULATIONS.
 5. AFTER THE ENVIRONMENTAL ONE PUMP IS CONNECTED, THE PUMP BASIN AND PIPING SHOULD BE FILLED, ENERGIZED AND INSPECTED FOR LEAKS BEFORE BACKFILLING THE PRESSURE LINES AND CONNECTIONS.

- SEDIMENTATION AND EROSION CONTROL:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION & EROSION CONTROL.
 2. EMBANKMENT SLOPES & ALL DISTURBED AREAS ARE TO RECEIVE A LAYER OF TOPSOIL (LOAM) AND SEED.
 3. IMMEDIATELY UPON COMPLETION OF THE CLEARING AND GRUBBING AND PRIOR TO ANY ROUGH GRADING, A TEMPORARY SILT FENCE SHALL BE PLACED AT THE LIMIT OF PERMANENT DISTURBANCE PER PLAN.
 4. ALL EROSION & SEDIMENTATION CONTROL SHALL BE CONTINUALLY MAINTAINED BY THE CONTRACTOR.

- EROSION & SOIL STABILIZATION PROGRAM:**
1. TEMPORARY TREATMENTS SHALL CONSIST OF A SILT FENCE, HAY BALES, WATTLES (MULCH TUBES), OR PROTECTIVE COVERS SUCH AS FABRIC MATS.
 2. ALL CONTROLS SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED COVER IS ESTABLISHED.
 3. NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1 - OCT. 15.
 4. ALL FILL, IF REQUIRED, SHALL BE CLEAN AND THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH RIDPW STANDARD SPECIFICATION SECTION 202.

- SEDIMENTATION CONTROL PROGRAM:**
1. A TEMPORARY SILT FENCE, HAY BALES, WATTLES, OR PROTECTIVE COVER SHALL BE INSTALLED PRIOR TO CONSTRUCTION & SHALL BE MAINTAINED CONTINUALLY. IN ADDITION TO THE LINE OF THE SILT FENCE AT THE LIMIT OF PERMANENT DISTURBANCE, TEMPORARY BARRIERS SHALL BE CONSTRUCTED AT THE TOE OF THE DISTURBED (CUT OR FILL) SLOPES UNTIL VEGETATIVE COVER HAS BEEN ESTABLISHED.
 2. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE FLOW DURING STORMS AND PERIODS OF RAINFALL.
 3. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.

- SLOPE STABILIZATION AND VEGETATION:**
1. ALL CONTROLS SHALL BE PLACED AT THE TOE OF ALL DISTURBED SLOPES. THIS SHALL BE MAINTAINED AS A SEDIMENT BARRIER UNTIL THE SLOPES ARE STABILIZED WITH GRASS OR APPROVED COVER AS SPECIFIED IN THE LETTER OF APPROVAL MEASURE.
 2. THE DISTURBED SLOPES (CUT OR FILL) SHALL BE IMMEDIATELY MULCHED AS AN EROSION PROTECTION MEASURE.
 3. MAINTAIN MULCH UNTIL THE SLOPES ARE STABILIZED WITH SATISFACTORY GROWTH OF GRASS.
 4. VEGETATION REMOVED MAY BE SHREDDED AND REUSED OR DISPOSED OF IN A MANNER APPROVED BY THE TOWN OF CUMBERLAND.
 5. THE RESEEDING OF THE DISTURBED SLOPES SHALL BE DONE USING A CONSERVATION GRASS SEED OR COMPARABLE. THE SEEDING SHALL BE IN ACCORDANCE WITH COMMON NURSERY PRACTICE IN THE RHODE ISLAND AREA.
 6. PROVIDED THAT THE PROVISIONS OF THIS SEDIMENTATION & EROSION CONTROL PLAN ARE IMPLEMENTED, THERE WILL BE NO ADVERSE ENVIRONMENTAL EFFECTS FROM THE PROPOSED CONSTRUCTION.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OF ALL DISTURBED SLOPES THIS SHALL BE MAINTAINED AS A SEDIMENT BARRIER UNTIL THE SLOPES ARE STABILIZED WITH GRASS OR APPROVED COVER AS SPECIFIED IN THE LETTER OF APPROVAL MEASURE.

NICHOLAS J. PIAMPIANO
No. 6512
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

DATE: OCTOBER 7, 2015
SCALE: AS NOTED
DESIGN/CHECK BY: B.C.S.R.
SHEET NO. 2 OF 2

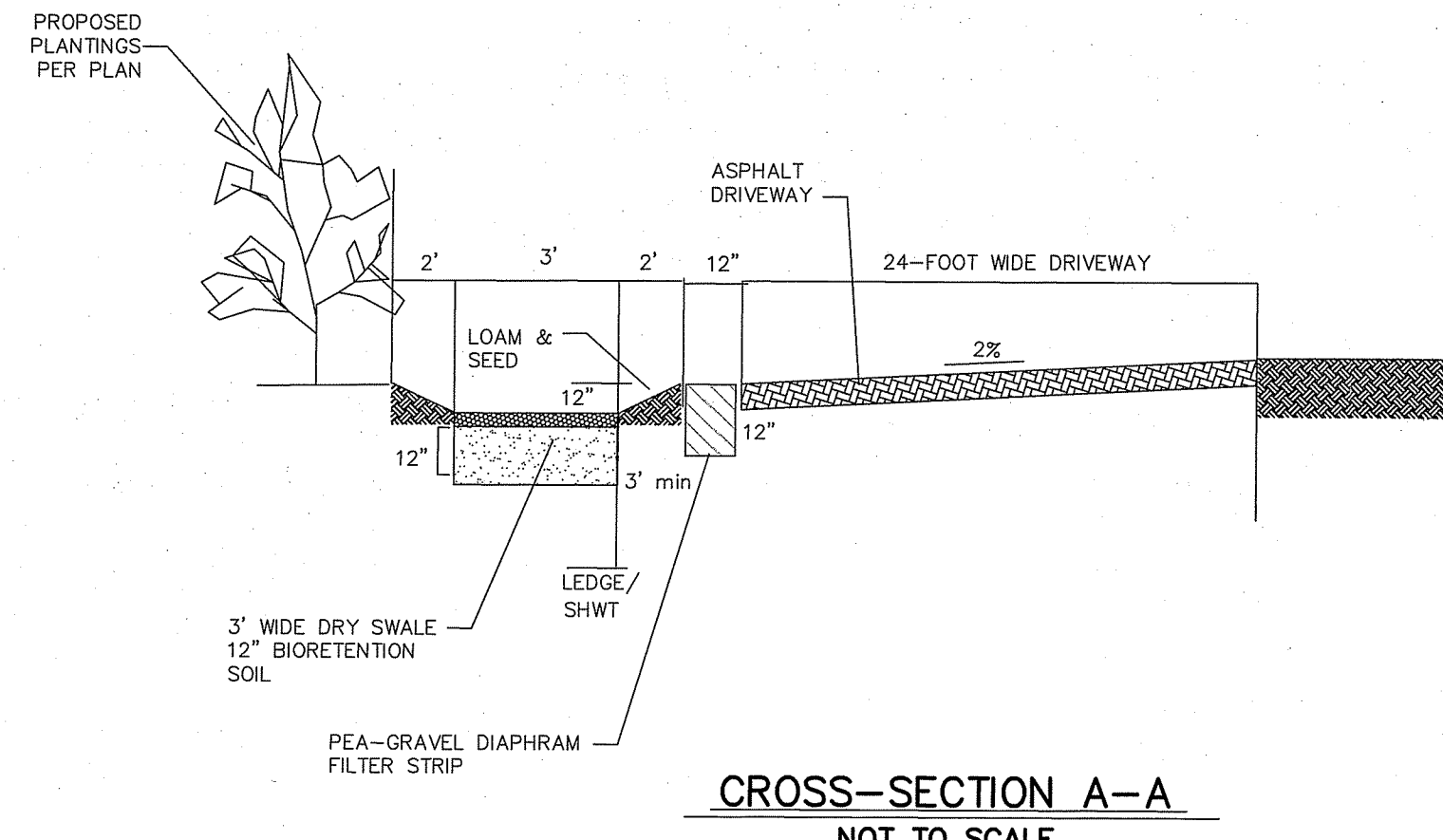
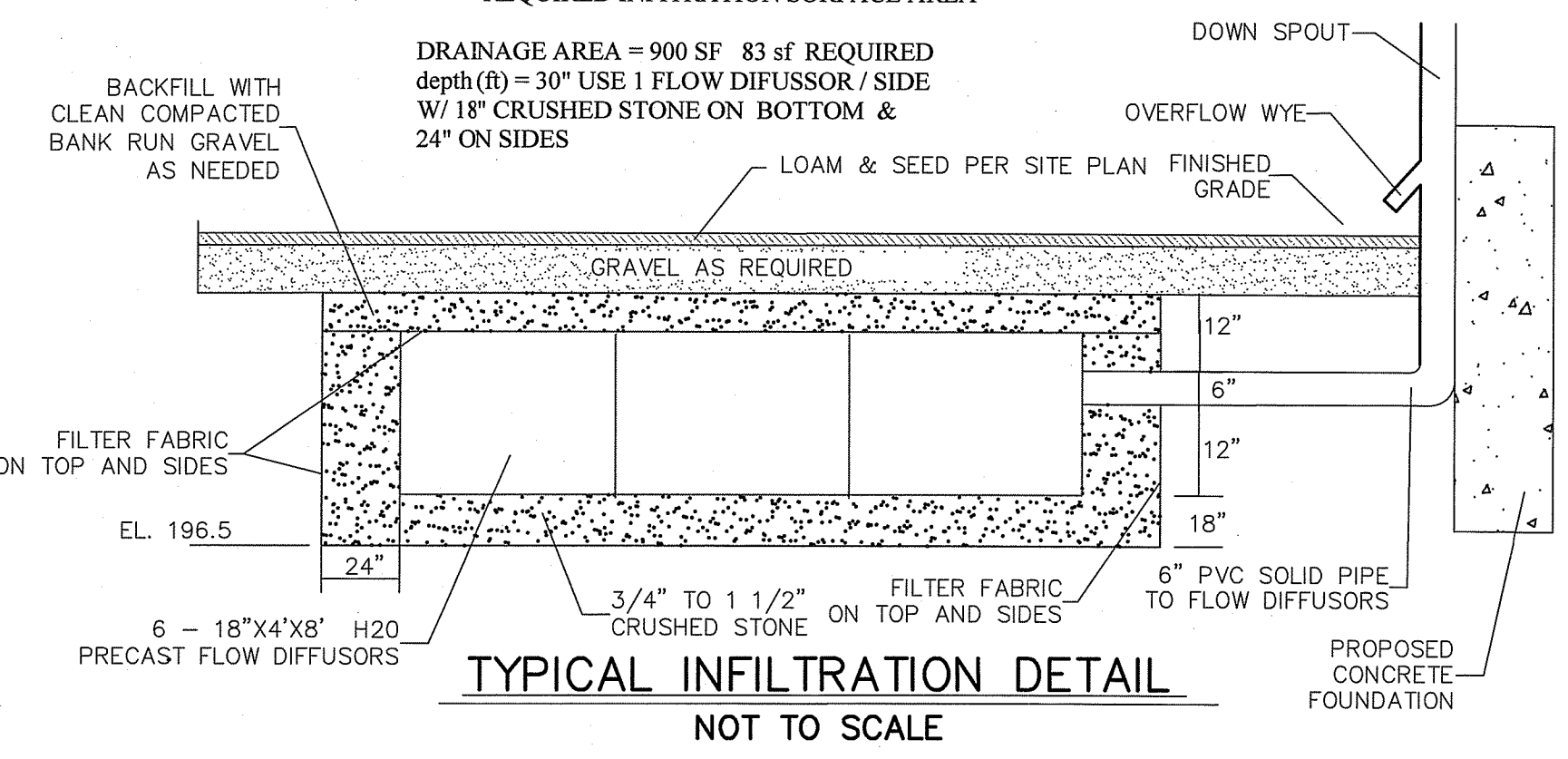
- MAINTENANCE PLAN FOR THE INFILTRATION TRENCH AND FLOW DIFFUSORS:**
1. THE OWNER IS RESPONSIBLE TO INSURE THAT THE STORMWATER MEASURES ON SITE ARE MAINTAINED PROPERLY AND FUNCTIONING AS DESIGNED.
 2. THE STORMWATER MEASURES ON-SITE ARE TO BE INSPECTED ON AN ANNUAL BASIS OR AFTER ALL LARGE STORM EVENTS AND REPAIRED AS NEEDED.
 3. THE INSPECTION OF THE STORMWATER MEASURES WILL INCLUDE:
 - * BUILDING GUTTERS AND DOWN SPOUTS
 - * THE IN-GROUND "FLOW DIFFUSOR" UNITS (THROUGH THE INSPECTION PORT) AND MEASUREMENT OF SILTATION AT THE BOTTOM OF THE UNITS.
 - * ANY OTHER ITEMS THAT DO NOT ALLOW THE STORMWATER SYSTEMS TO OPERATE PROPERLY.
 4. THE STORMWATER MEASURES ARE TO BE REPAIRED IF THE FOLLOWING IS ENCOUNTERED DURING THE INSPECTION PROCESS:
 - * CLOGGED GUTTERS AND/OR DOWN SPOUTS ARE TO BE CLEANED.
 - * A LAYER OF SEDIMENT GREATER THAN 3-INCHES THICK IS IN THE BOTTOM OF THE "FLOW DIFFUSOR" UNIT BOTTOM IS TO BE VACUUMED OUT AND/OR UNITS ARE TO BE DUG UP AND REPLACED.
 - * ALL OTHER ISSUES THAT WILL NOT ALLOW THE STORMWATER SYSTEMS TO OPERATE PROPERLY ARE TO BE REPAIRED AS NEEDED.

FLOW DIFFUSOR SIZING CALCULATIONS

- Impervious ROOF area = 1700 s.f. USE 900 SF PER SIDE
- Soil type: Loam

PER TABLE IN SINGLE FAMILY GUIDANCE DOCUMENT:
REQUIRED INFILTRATION SURFACE AREA =

DRAINAGE AREA = 900 SF 83 sf REQUIRED
depth (ft) = 30" USE 1 FLOW DIFFUSOR / SIDE
W/ 18" CRUSHED STONE ON BOTTOM & 24" ON SIDES



Maintenance Notes:

DRY SWALE

1. DRY SWALES SHALL BE INSPECTED ANNUALLY AND SHOULD BE INSPECTED AFTER LARGE STORM EVENTS.
2. ERODED SIDE SLOPES AND CHANNEL BOTTOMS SHALL BE STABILIZED AS NECESSARY.
3. IF THE SURFACE OF THE DRY SWALE BECOMES CLOGGED TO THE POINT THAT STANDING WATER IS OBSERVED ON THE SURFACE 48 HOURS AFTER PRECIPITATION EVENTS, THE BOTTOM SHALL BE ROTO-TILLED OR CULTIVATED TO BREAK UP ANY HARD-PACKED SEDIMENT, AND THEN RESEDED.
4. VEGETATION IN DRY SWALES SHALL BE MOWED AS REQUIRED TO MAINTAIN MINIMUM GRASS HEIGHTS IN THE 4-6 INCH RANGE.

DRY SWALE SIZING CALCULATIONS

- Impervious driveway area = 942 s.f.
- Soil type: Loam
- Design Infiltration Rate = 0.52 in./hr.
- Intensity = 1-inch
- Water Quality Volume Needed: 942 s.f. x 0.083 (1") = 78.2 c.f. Say 79 c.f.
- Proposed Dry Swale Depth = 12-inches or 1.0-feet

Surface Area at Bottom of the Trench:

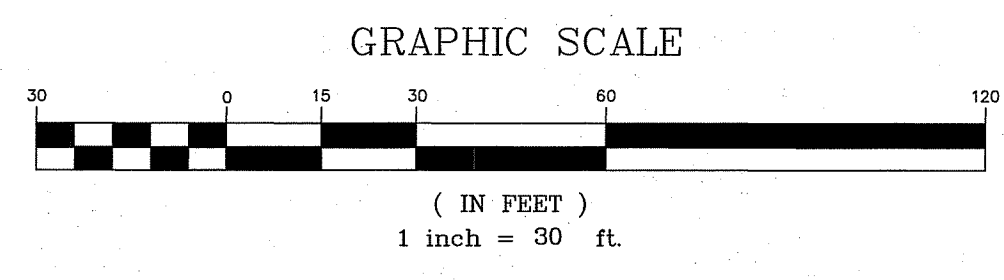
$$A(f) = (WQv)(dt) / [(k)(hf + d)(t)]$$

Where:

- A(f) = surface area of the filter bed (ft²)
- d = Filter bed depth (ft) = 1.0 ft
- k = coefficient of permeability of the filter media (use 0.52 ft/day)
- h(f) = Average height of water above the dry swale (ft) (use 0.5 ft)
- tf = design filter bed drain time (assume 1 day for design purposes)

$$A(p) = (79)(1.0) / [(0.52)(0.5 + 1.0)(1.0)]$$

$$A(f) = 101 s.f. use 120 s.f.$$



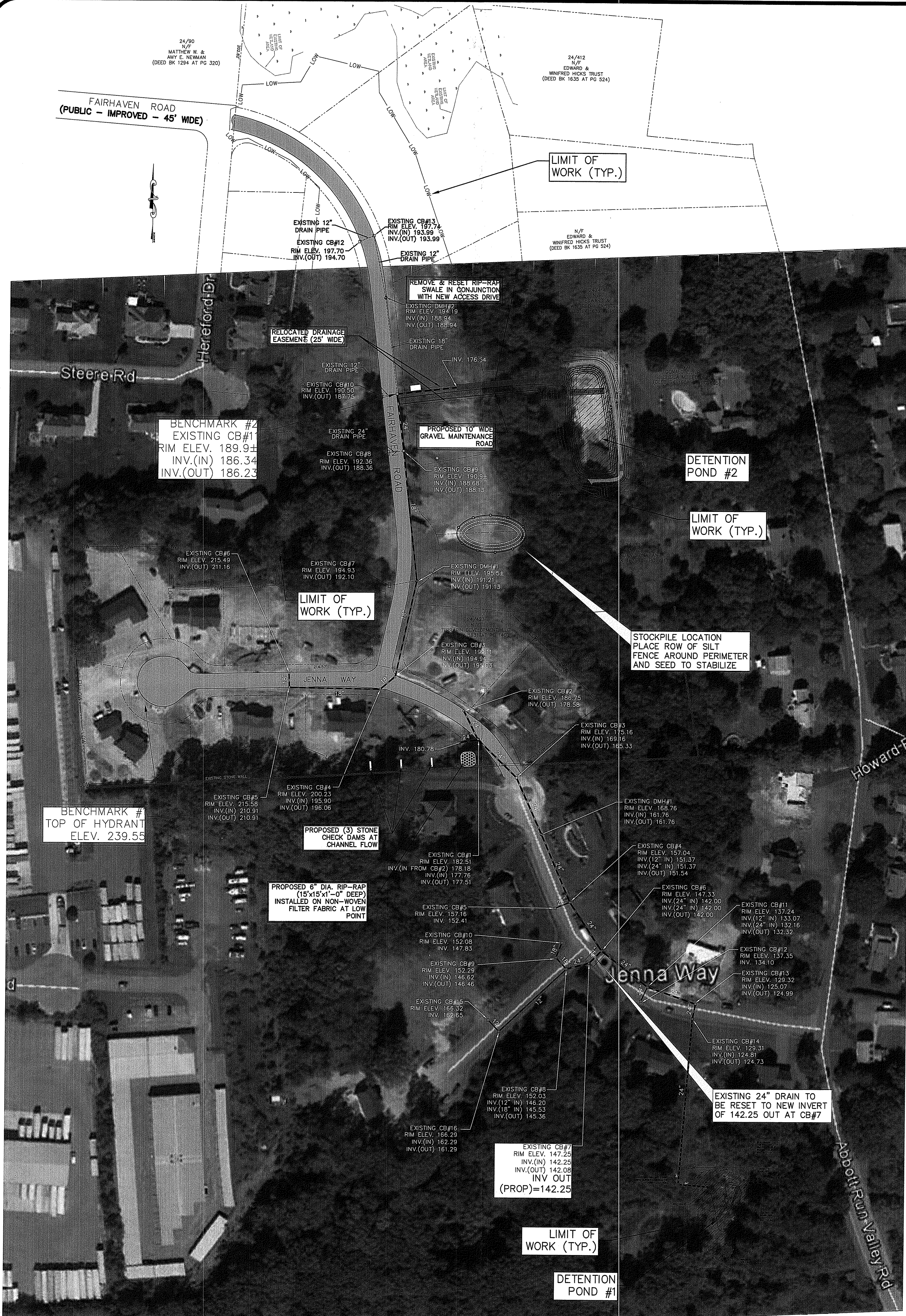
PERMIT MODIFICATION PLAN
MINOR SUBDIVISION
A.P. 24 LOT 440
FAIRHAVEN ROAD CUMBERLAND, RI

PREPARED FOR:
TERRAPIN DEVELOPMENT, LLC

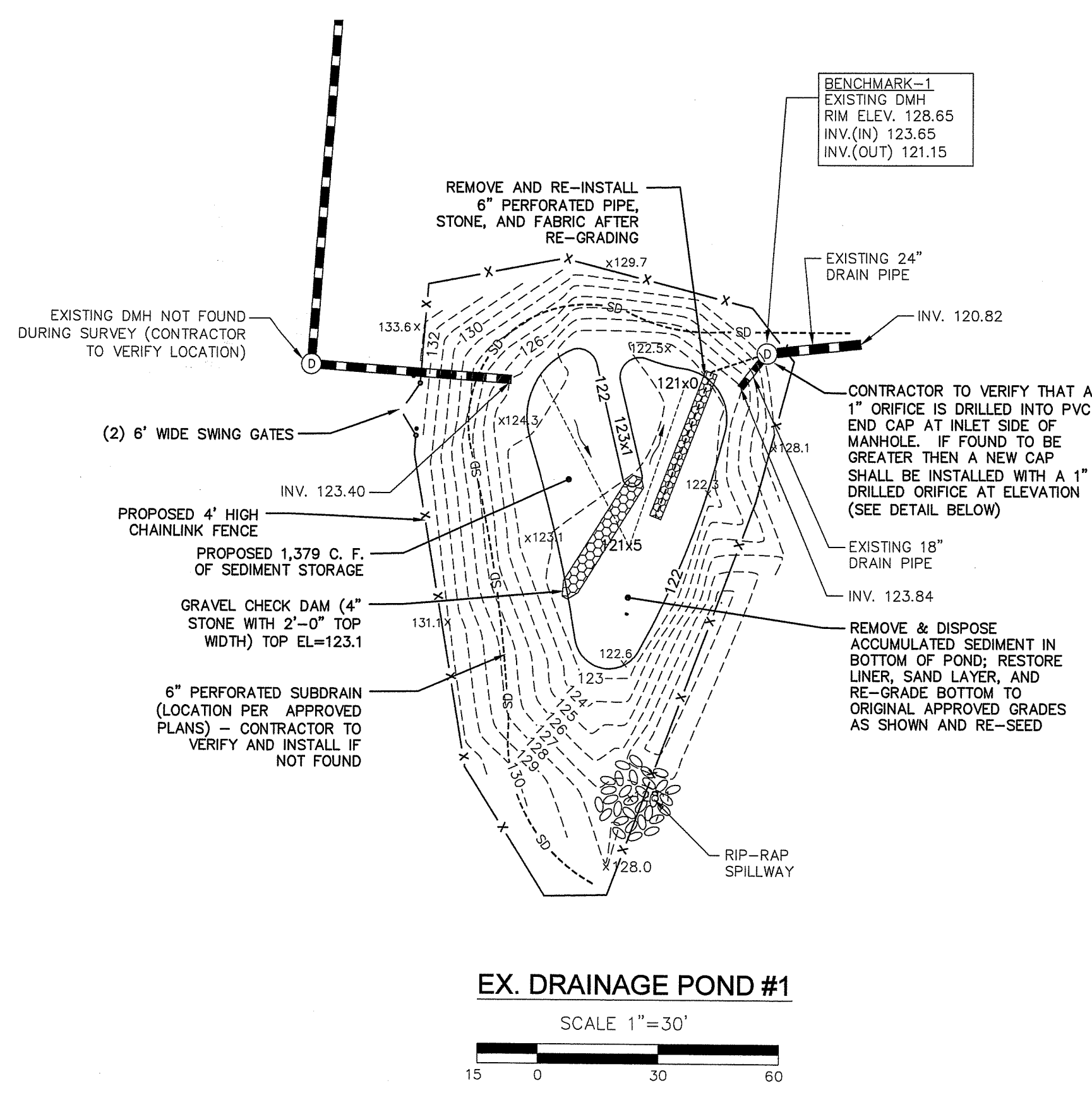
ADVANCED CIVIL DESIGN, INC.
CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857

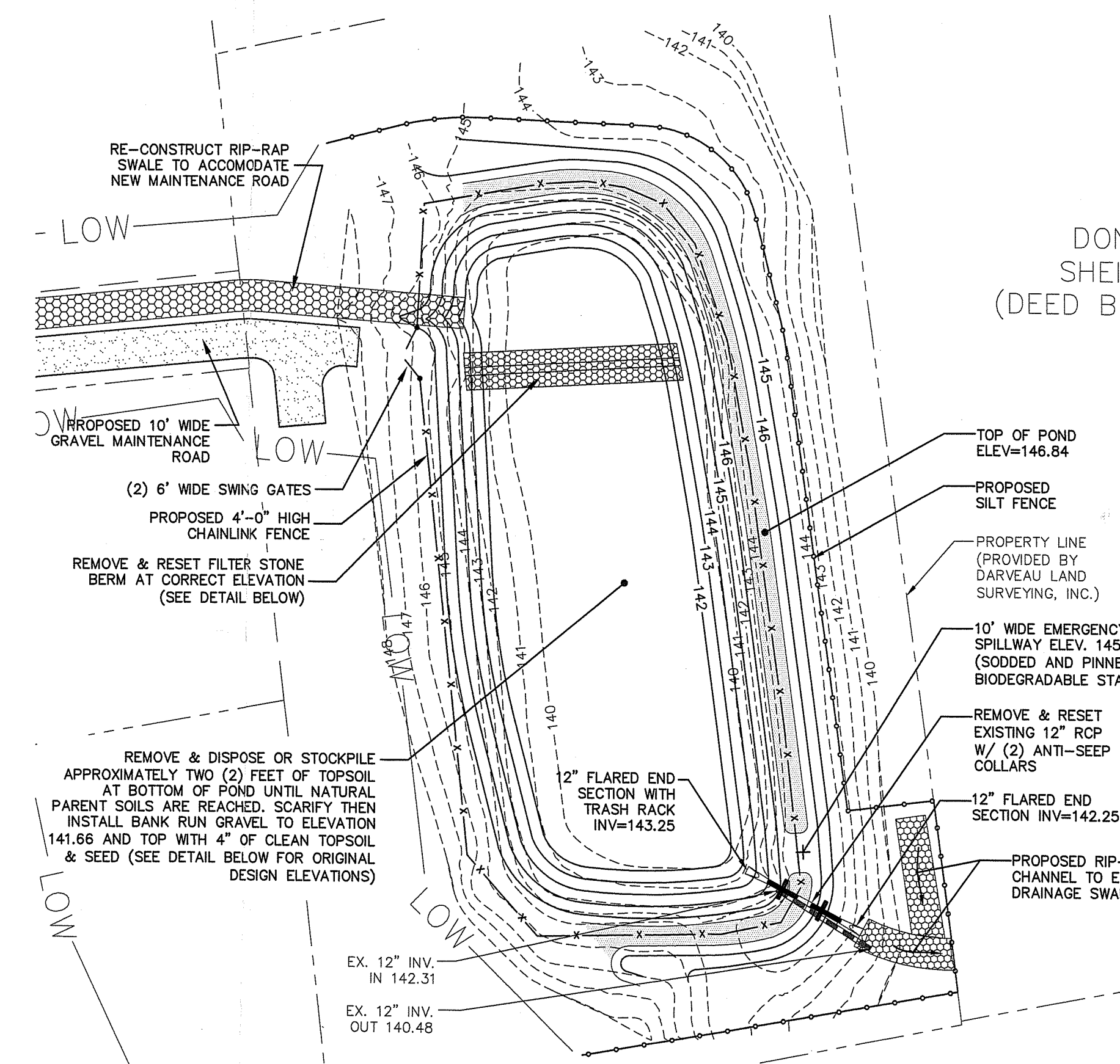
P1: (401) 644-8656
P2: (401) 473-4404



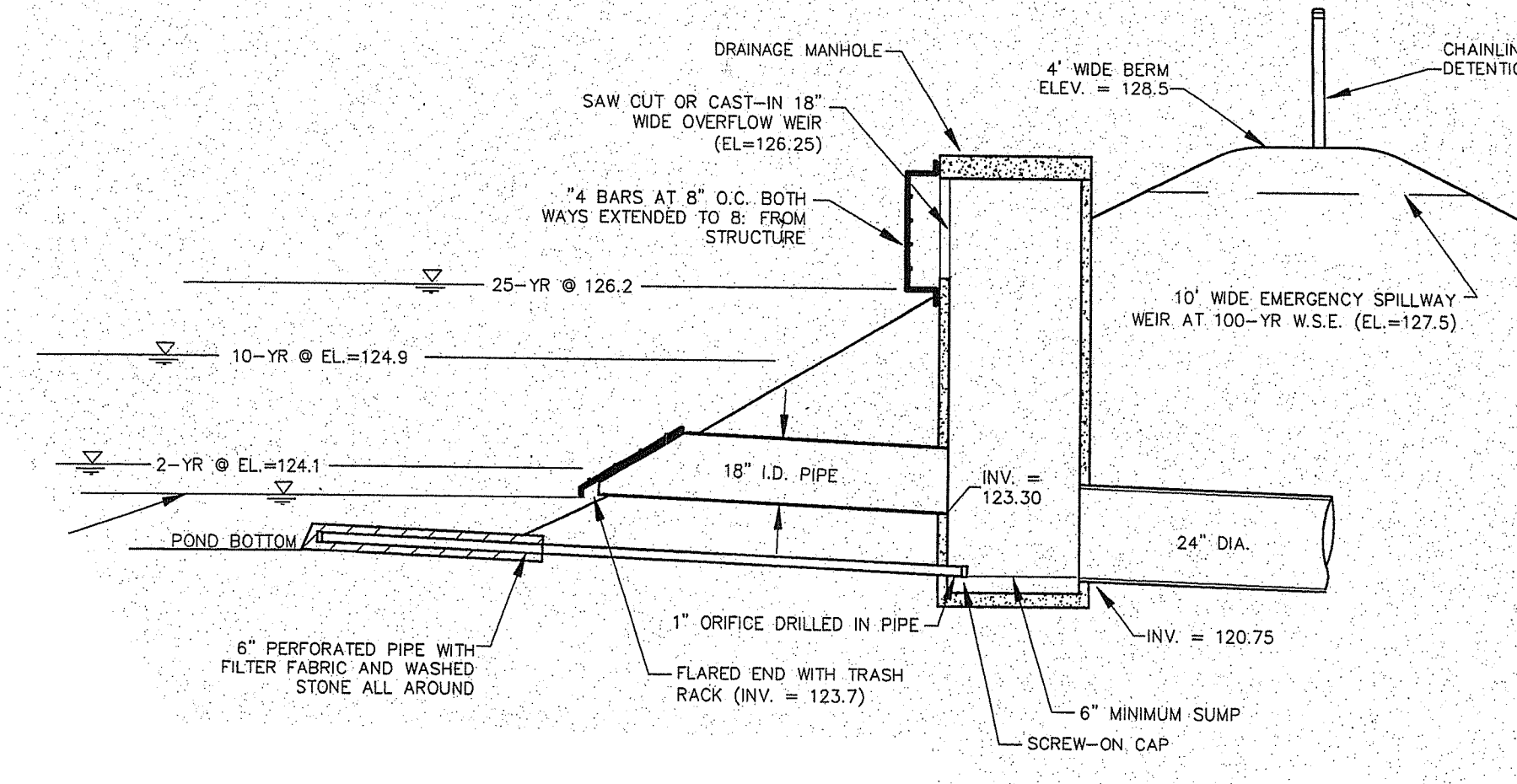
OVERALL SITE PLAN
SCALE 1"=100'



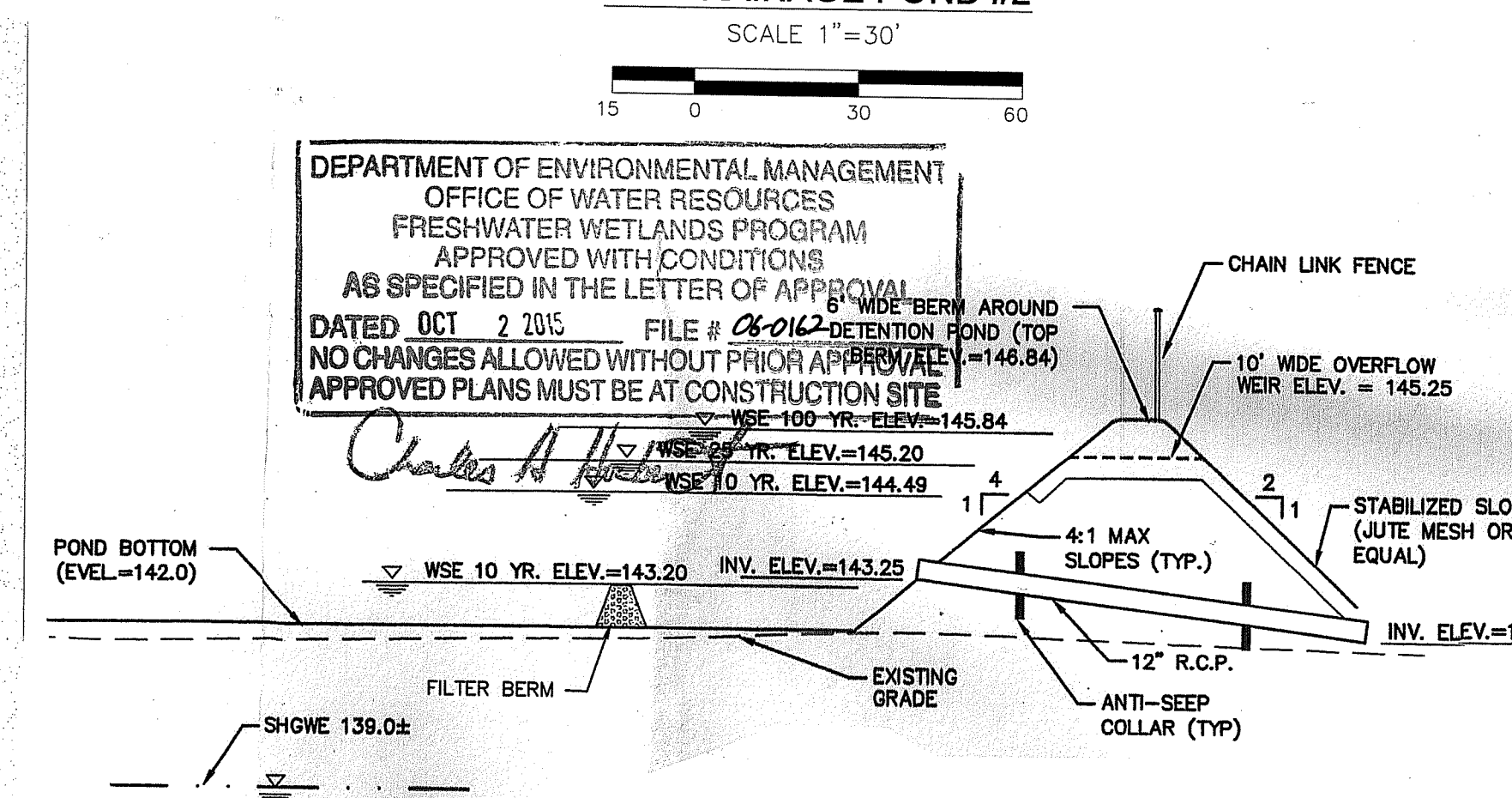
EX. DRAINAGE POND #1
SCALE 1"=30'



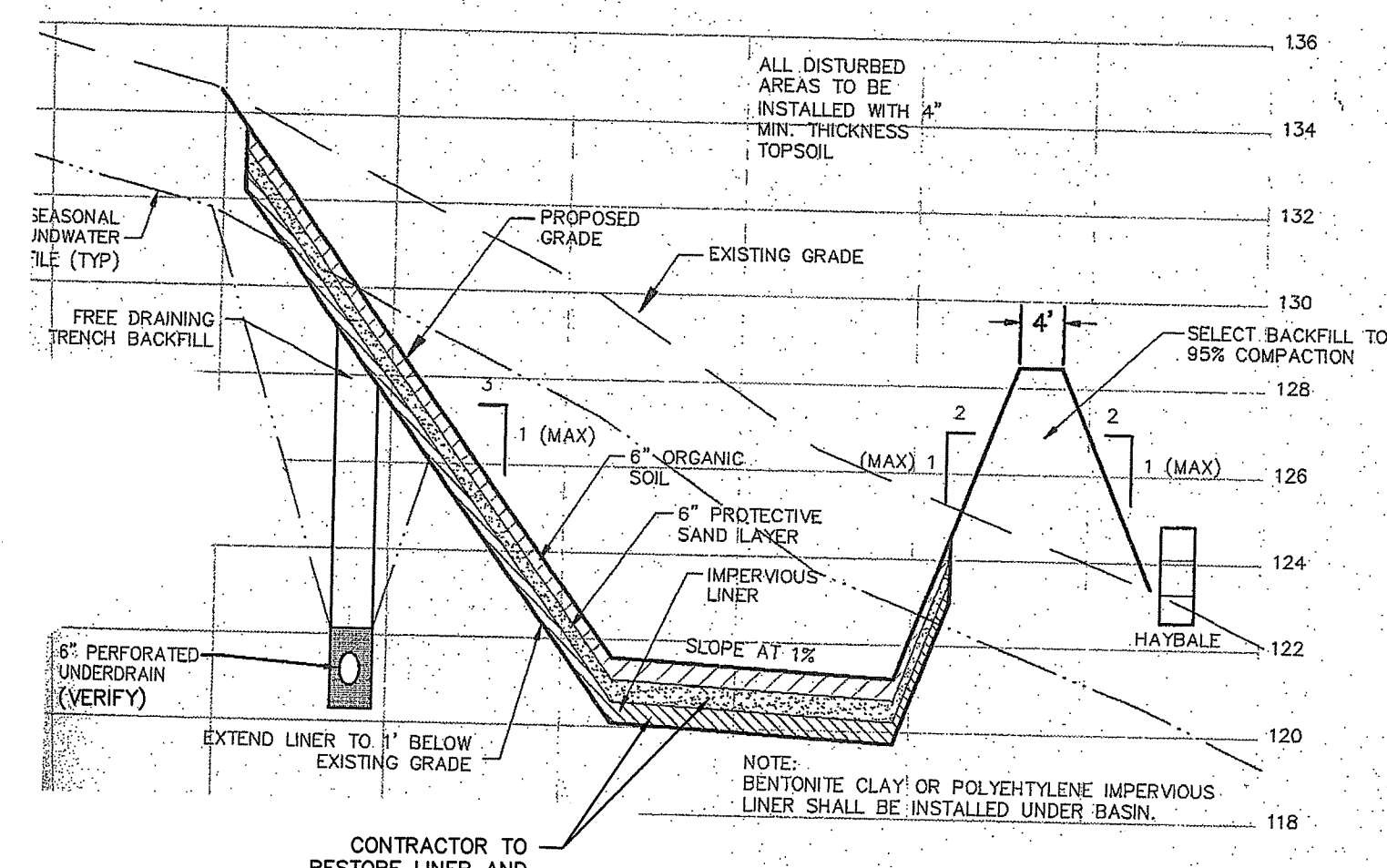
EX. DRAINAGE POND #2
SCALE 1"=30'



ORIGINAL DRAINAGE POND OUTLET CONTROL
NOT TO SCALE



ORIGINAL DRAINAGE POND #2 SECTION
NOT TO SCALE



ORIGINAL DRAINAGE POND #1 SECTION W/ LINER
NOT TO SCALE

DRAINAGE & SOIL EROSION CONTROL PLAN
Corrective Actions for Existing Drainage Ponds
JENNA WAY CUMBERLAND, RI

ADVANCED CIVIL DESIGN, INC.
CIVIL ENGINEERS
7 COUNTRYSIDE LANE
SCITUATE, RI 02857
PH: (401) 644-8656

NICHOLAS J. PIAMPIANO
No. 6512
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

NO.	DATE	DESCRIPTION
1	3-4-15	ADDRESS DEM COMMENTS
2	9-4-15	ADDRESS DEM COMMENTS

DATE: JANUARY 20, 2015
SCALE: AS NOTED
DESIGN/CHECK BY: N.J.P.
SHEET NO. **1** OF 2

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 2015 FILE # **06-012** DETENTION POND (TOP
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL -146.84)
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
WSE 10-YR. ELEV.=143.20 INV. ELEV.=143.25
WSE 100-YR. ELEV.=144.49 INV. ELEV.=144.49

Charles A. Piampiano
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

MAINTENANCE PROGRAM

SHORT TERM:

- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED, AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK REGULARLY ALL SEEDED AREAS TO SEE THAT A GOOD STAND IS MAINTAINED.
- THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN A PERIOD OF THREE (3) MONTHS AND SHALL DO SO AT THE CONTRACTOR'S EXPENSE.
- ALL HAY BALES, TEMPORARY TREATMENTS (HAY, STRAW, ETC.) AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- THE CONTRACTOR SHALL MAINTAIN ALL TOP SOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER.
- HAY BALES OR SILT FENCE EROSION BARRIER SHALL BE MONITORED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. CONTRACTOR SHALL REPAIR OR REPLACE AS NECESSARY.
- CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED IN WITH SEDIMENTS.
- ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- PRIOR TO SITE CONTRACTOR DEMOBILIZING FROM SITE, FLUSH DRAIN PIPES AND REMOVE SEDIMENT FROM AND PONDS.
- CONTRACTOR SHALL LEAVE THE PONDS WITH A HEALTHY STAND OF GRASS WITHIN AND AROUND THE POND.

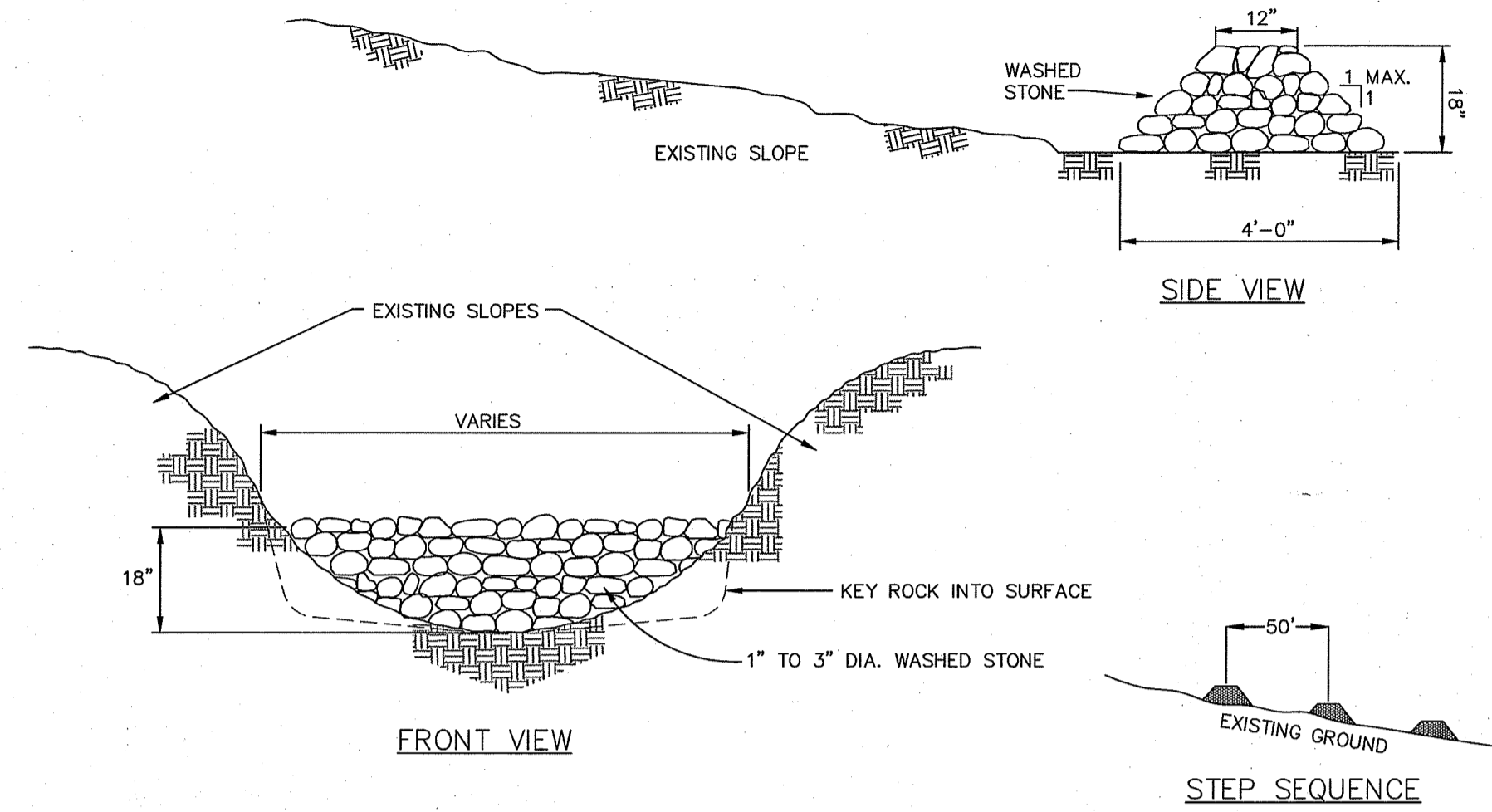
LONG-TERM:

- THE LONG-TERM MAINTENANCE IS THE RESPONSIBILITY OF THE TOWN OF CUMBERLAND.
- THE DETENTION PONDS WILL BE MAINTAINED ON A BI-ANNUAL BASIS, WHICH INCLUDES MOWING, REMOVING ANY DEBRIS OR TRASH, AND RE-SEEDING ANY ERODED AREAS.
- CATCH BASINS, MANHOLES, AND PIPES WILL BE FLUSHED AND CLEANED ON A YEARLY BASIS. SEDIMENT AND OIL REMOVED FROM THE CATCH BASIN IS TO BE DISPOSED OF IN ACCORDANCE WITH STATE REGULATIONS.
- SWEEPING THE ROADWAY AFTER WINTER SHALL BE PERFORMED ANNUALLY.
- REMOVE SEDIMENT BUILD-UP AT THE OUTFALL OF FLARED END SECTIONS.
- DURING INSPECTION, CHECK THE STRUCTURAL INTEGRITY OF THE STRUCTURES AND ANY SETTLEMENTS AROUND THE RIM OF THE CATCH BASIN. FIX AS REQUIRED.

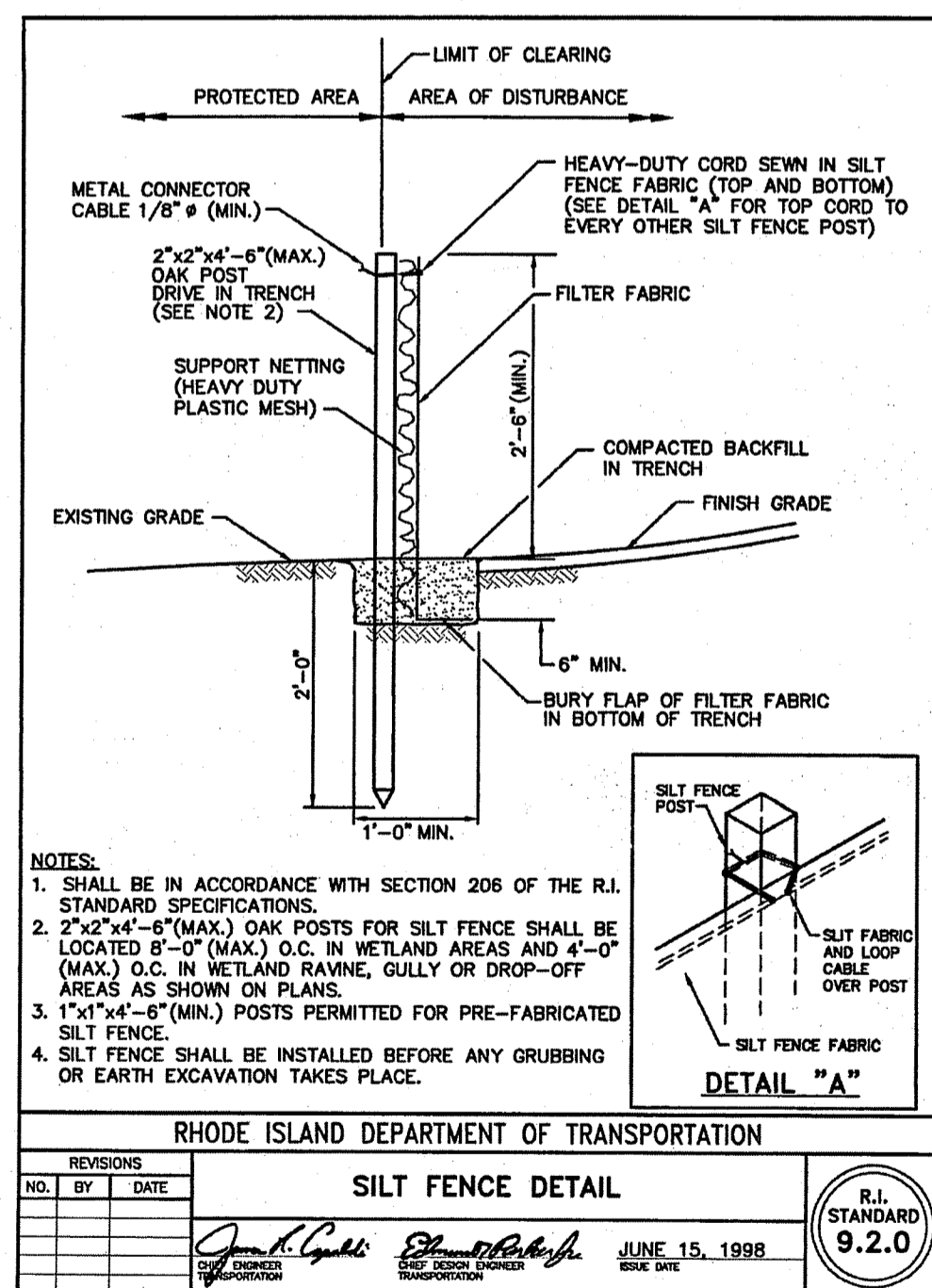
ESTABLISHMENT OF VEGETATIVE COVER

- SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED. PLANTABLE SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND'S STANDARD SPECIFICATIONS, AS AMENDED.
- THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	LBS./ACRE
CREeping RED FESCUE	75
KENTUCKY BLUE GRASS	15
COLONIAL BENT GRASS	5
PERENNIAL RUE GRASS	5
- EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. ADD LIME, FERTILIZER, OR COMPOST TO STRIPPED AND SCREENED TOPSOIL AS REQUIRED FROM TESTING.
- THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
- THE RECOMMENDED SEEDING DATES ARE APRIL 1ST THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPTEMBER 30. TEMPORARY TREATMENTS SHALL CONSIST OF NORTH AMERICAN GREEN SISOBON OR APPROVED EQUAL. THEY SHALL BE INCORPORATED INTO THE WORK AS SHOWN ON THE PLANS.
- HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE. ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 202.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAY. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEDED AS NECESSARY.
- REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE AS A GUIDE. TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING. MAXIMUM GRADED SLOPE WITHIN THE SITE TO BE 3:1, UNLESS SPECIFIED OTHERWISE.



STONE CHECK DAM
NOT TO SCALE



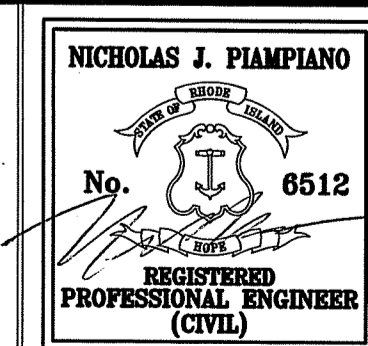
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 2015 FILE # 06-0162
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Herbert

SEP - 8 2015
CUMBERLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

NOTES & DETAILS
Corrective Actions for Existing Drainage Ponds

JENNA WAY CUMBERLAND, RI



ADVANCED CIVIL DESIGN, INC.
CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SITUATE, RI 02857



PH: (401) 644-8656

NO.	DATE	DESCRIPTION
1	3-4-15	ADDRESS DEM COMMENTS
DATE: JANUARY 20, 2015		
SCALE: AS NOTED		
DESIGN/CHECK BY: N.J.P.		

SHEET NO.

2

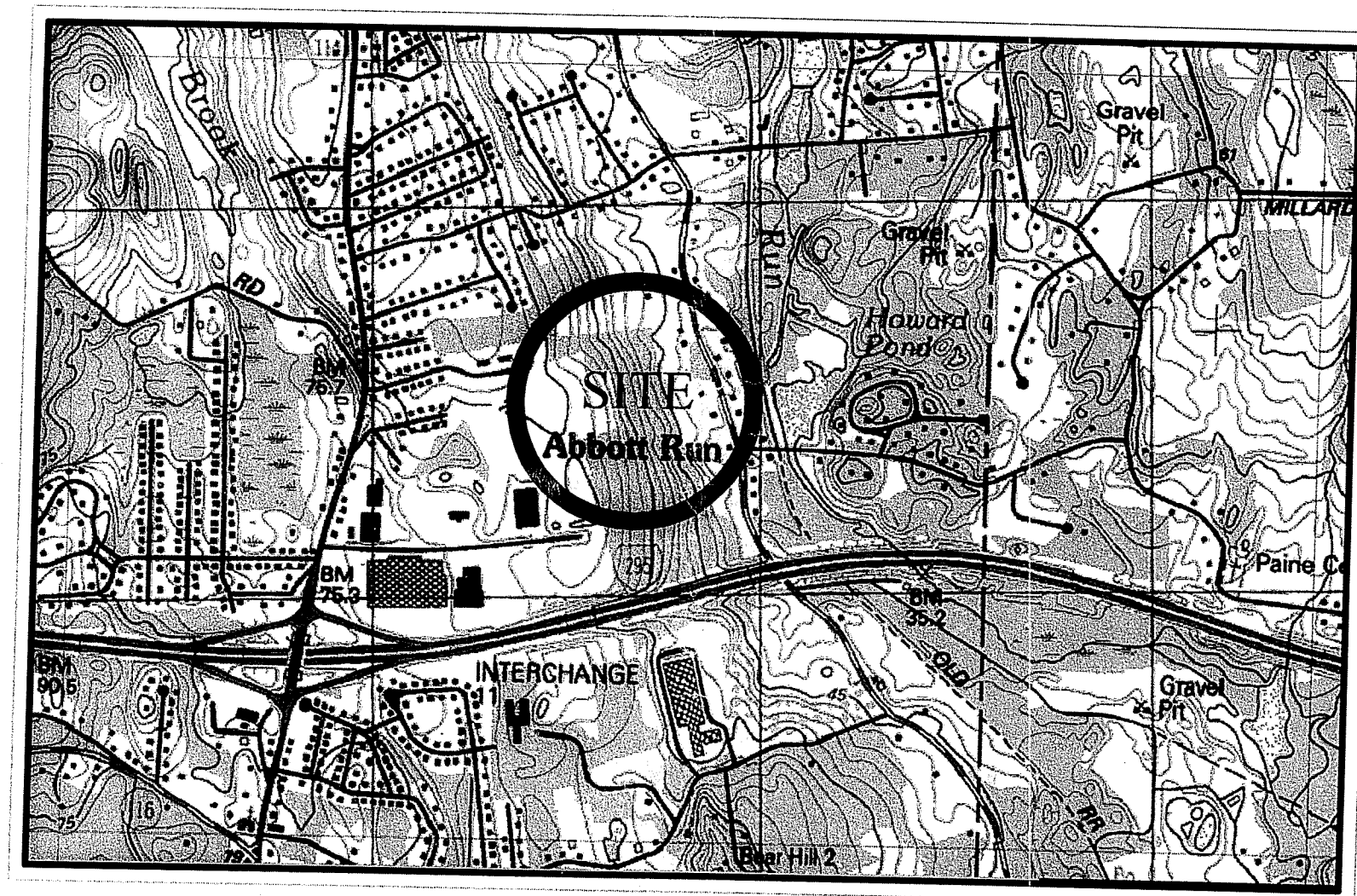
2 OF 2

MAJOR SUBDIVISION
PRELIMINARY STAGE SUBMISSION PLANS

FOR

LANESVILLE COMMONS
PHASE II & III

SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
A.P. 24, LOT 84



LOCUS MAP
NOT TO SCALE

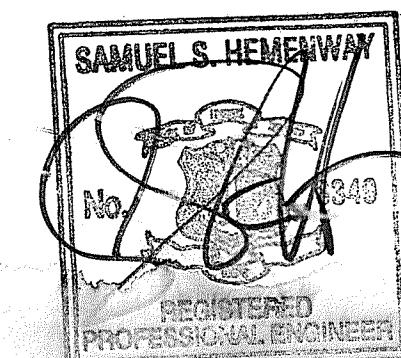
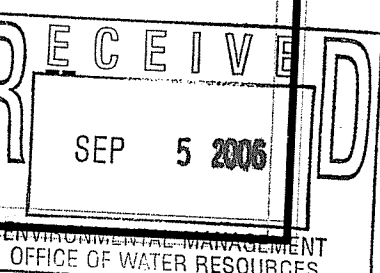
PREPARED FOR:
EDWARD & WINIFRED HICKS
84 ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND

PREPARED BY:
GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS
P.O. BOX 6145
85 CORLISS STREET
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

PROJECT MANAGER:
SAMUEL S. HEMENWAY, PE (#6349)

JANUARY 20, 2006

SHEET INDEX:		DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES	
		APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED NOV 27 2006 FILE # 06-0162	
		NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE	
SHEET		Charles A. Hemenway	LAST REVISED
C1	COVER SHEET		06/09/06
C2	GENERAL NOTES, LEGEND, & OVERALL PLAN		--
C3	EXISTING CONDITIONS PLAN		--
C4	MASS GRADING & EROSION CONTROL PLAN		06/09/06
C5	JENNA WAY PLAN AND PROFILE		--
C6	FAIRHAVEN ROAD PLAN AND PROFILE		06/09/06
C7	INFILTRATION/DETENTION BASIN DETAILS		06/09/06
C8	CONSTRUCTION DETAILS 1		--
C9	CONSTRUCTION DETAILS 2		--
C10	CONSTRUCTION DETAILS 3		--
REFERENCE PLAN:			
S1	PHASE II AND PHASE III FINAL SUBDIVISION PLAT		



OWNERS
EDWARD G. HICKS AND
WINIFRED J. HICKS
and
NORTH BRANCH, LLC

UTILITY NOTES

- THE CONTRACTOR SHALL NOTIFY THE CUMBERLAND DEPARTMENT OF PUBLIC WORKS 48 HOURS BEFORE THE BEGINNING OF EACH PHASE OF CONSTRUCTION.
- COMPACTION OF THE BACKFILL OF ALL TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN COMPACTED FILL THICKNESS. CORRECTION OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.
- THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE PLANS.
- THE CONTRACTOR SHALL BE REQUIRED TO USE THE "DIG-SAFE" NUMBER [1-888-344-7233] FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL COORDINATE LOCATION AND INSTALLATION OF ALL UNDERGROUND UTILITIES AND APPURTENANCES TO MINIMIZE DISTURBANCE TO CURBING, PAVING, AND COMPACTED SUBGRADE.
- ALL PIPE LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE.
- ALL PIPING LAYOUT INDICATED ON THESE PLANS IS DIAGRAMMATIC ONLY AND DOES NOT SHOW ALL THE REQUIRED FITTINGS FOR PROPER ALIGNMENT. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS TO OBTAIN PROPER ALIGNMENT AND FOR EXISTING UTILITY CONNECTIONS BASED UPON FIELD CONDITIONS.
- BEDDING REQUIREMENTS SPECIFIED HEREIN ARE TO BE CONSIDERED AS MINIMUMS FOR RELATIVELY DRY, STABLE EARTH CONDITIONS. ADDITIONAL BEDDING SHALL BE REQUIRED FOR ROCK TRENCHES AND WET AREAS. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO PROVIDE SUCH ADDITIONAL BEDDING AS MAY BE REQUIRED TO PROPERLY CONSTRUCT THE WORK.
- SANITARY SEWERS SHALL BE SDR21 PVC PIPE. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARDS OF THE TOWN OF CUMBERLAND PUBLIC WORKS REGULATIONS, STANDARDS AND SPECIFICATIONS.
- CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT OF SANITARY SEWER FOR CONNECTION TO EXISTING OR PROPOSED SEWER SYSTEM.
- WHERE WATERLINES CROSS SEWER SERVICE LINES, WATERLINES SHALL BE CONSTRUCTED OVER SEWER WITH 18" MIN. SEPARATION, OR SEWER MAIN SHALL BE ENCASED FOR A DISTANCE OF 10' IN EACH DIRECTION.
- PROPOSED WATERLINES SHALL BE CLASS 52 DIP OR CLASS 150 PVC. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE CUMBERLAND PUBLIC WORKS, WATER DIVISION GENERAL CONDITIONS FOR EXTENSION OF WATERMAINS AND ALL OTHER APPLICABLE STANDARDS. THE CONTRACTOR SHALL CONTACT THE DPW TO OBTAIN A COMPLETE OUTLINE OF INSTALLATION REQUIREMENTS.
- FIRE HYDRANT AND WATER MAINS TO BE INSTALLED AND UNDER PRESSURE BEFORE ANY COMBUSTIBLE CONSTRUCTION IS STARTED.
- ALL FIRE AND PLUMBING FIXTURES MUST CONFORM TO CUMBERLAND WATER COMPANY SPECIFICATIONS AND AS STIPULATED BY THE FIRE MARSHALL AND/OR THE BUILDING OFFICIAL.
- STORM DRAINS SPECIFIED SHALL BE CORRUGATED PLASTIC PIPE (CPP), OR EQUAL, OR CLASS III R.C.P. UNLESS OTHERWISE SPECIFIED. ROOF DRAINS SHALL BE SDR35 PVC PIPE WITH GASKETED FITTINGS.
- ALL STORM DRAINAGE PIPE SHALL BE LAID ON SMOOTH CONTINUOUS GRADES WITH NO VISIBLE BENDS AT JOINTS.
- AT A MINIMUM, THE LENGTH OF RIP RAP AREA SHALL BE SIX TIMES THE DIAMETER OF THE STORM DRAIN PIPE. WIDTH OF THE RIP RAP AREA SHALL BE 3 TIMES THE DIAMETER AT THE OUTLET OF THE PIPE AND TWO TIMES THE DIAMETER AT INLET END.
- GAS SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE UTILITY INSTALLATIONS AS REQUIRED TO ENSURE ADEQUATE GAS SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE GAS COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION.
- ELECTRIC SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. ELECTRIC SERVICE AND TRANSFORMER PAD SHALL CONFORM TO THE REQUIREMENTS OF THE ELECTRIC COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE ELECTRIC SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE ELECTRIC COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION.
- TEL/CABLE SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE UTILITY SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE UTILITY CO. FOR COMPLETE AND IN PLACE CONSTRUCTION.

CONSTRUCTION SEQUENCE:

- INSTALL CONSTRUCTION FENCING/TREE PROTECTION AS SPECIFIED.
- INSTALL PERIMETER EROSION CONTROL MEASURES, CONSTRUCTION EXIT, AND INLET PROTECTION ON ADJACENT DRAINAGE STRUCTURES.
- CLEAR AND GRUB PROPERTY, INSTALL DETENTION BASIN AND OUTFALL FOR COLLECTION OF SEDIMENTS.
- ROUGH GRADE SITE.
- INSTALL UTILITIES AND SITE IMPROVEMENTS. FINISH GRADE AND INSTALL LANDSCAPE MATERIAL AS SPECIFIED.
- REMOVE SEDIMENTATION CONTROLS ONLY WHEN SITE IS COMPLETELY STABILIZED, AND AT THE DIRECTION OF THE OWNER/ENGINEER.

GRADING & DRAINAGE NOTES

- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES AROUND THE WORK AND SHALL PROVIDE PROTECTION AGAINST WATER DAMAGE AND SOIL EROSION.
- MAXIMUM SLOPE OF EMBANKMENT SHALL BE 2.0 FEET HORIZONTAL TO 1.0 FOOT VERTICAL, OR PER APPLICABLE JURISDICTIONAL REGULATIONS.
- PROPOSED CONTOURS ARE TO FINISHED GRADE.
- THE CONTRACTOR WILL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR REGRADING AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
- THE CONTRACTOR SHALL PROVIDE ANY AND ALL EXCAVATION AND MATERIAL SAMPLES NECESSARY TO CONDUCT REQUIRED SOIL TESTS. ALL ARRANGEMENTS AND SCHEDULING FOR THE TESTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

SITE NOTES

- ALL CONCRETE SHALL BE CLASS A, 3,000 PSI AT 28 DAYS COMPRESSIVE STRENGTH WITH A MAXIMUM SLUMP OF 4" UNLESS NOTED OTHERWISE. ALL EXPOSED CONCRETE TO HAVE A FINE BROOM FINISH.
- ALL MATERIALS SHALL BE NEW UNLESS USED OR SALVAGED MATERIALS ARE AUTHORIZED BY THE OWNER AND ACCEPTED BY PROPER AUTHORITIES.
- ALL DIMENSIONS ARE TO FACE OF CURB OR AS NOTED.
- NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC, SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE CONSTRUCTION.

DEMOLITION AND CLEARING NOTES:

- THE LIMIT OF WORK LINE FOR THE AREA TO BE CLEARED AND GRUBBED SHALL BE THE SAME AS THE LIMIT OF WORK LINE NECESSARY FOR GRADING PURPOSES (I.E. THE GRADING LIMITS AROUND THE PERIMETER OF THE PROJECT AREA). ALL AREAS SHALL BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AS DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
- DISPOSAL OF DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
- OFF-SITE DISPOSAL OF UNSUITABLE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL MUNICIPAL REQUIREMENTS.

DRAINAGE MAINTENANCE SCHEDULE:

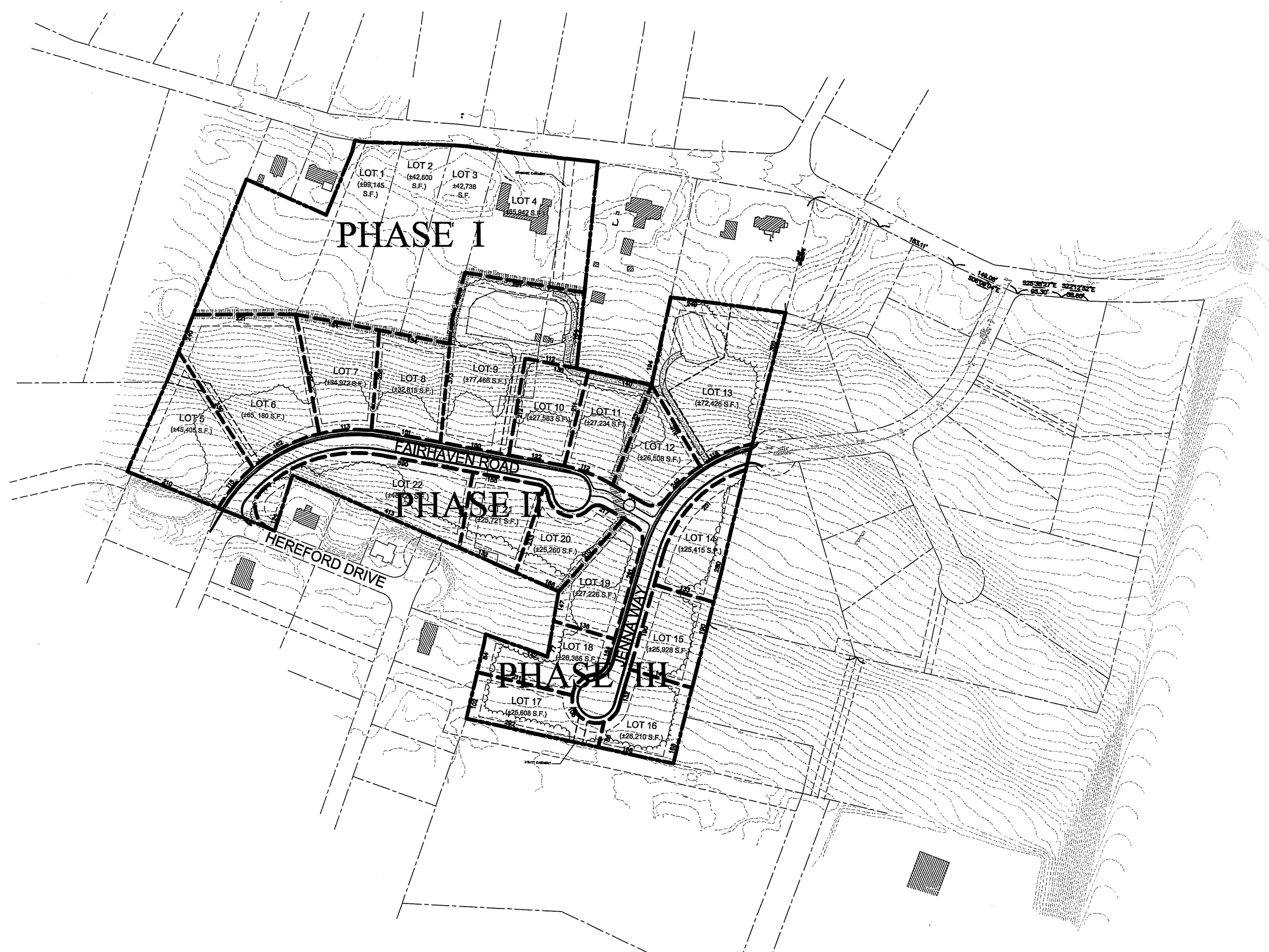
- UPON COMPLETION AND FINAL ACCEPTANCE, MAINTENANCE OF ALL ON-SITE FACILITIES SHALL BE PERFORMED BY THE OWNER, AND SHALL WITHOUT THE USE OF HEAVY MACHINERY WITHIN THE BASIN.
- DRAINAGE PIPES, MANHOLES, AND OUTLETS SHALL BE INSPECTED AND CLEARED OF ANY BLOCKAGES ON AT LEAST A QUARTERLY BASIS.
- CATCH BASIN SUMPS SHALL BE INSPECTED BY MAINTENANCE PERSONNEL ON AT LEAST AN ANNUAL BASIS. ANY SEDIMENT OR DEBRIS FOUND SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- DETENTION BASIN SHALL BE INSPECTED AND MAINTAINED ON AT LEAST A BI-ANNUAL BASIS (BUT INCREASED TO QUARTERLY DURING ROADWAY AND LOT CONSTRUCTION OPERATIONS). THE BASIN SHALL BE MOWED AT LEAST ONCE PER GROWING SEASON AND ALL TRASH AND DEBRIS SHALL BE REMOVED FROM THE FACILITY DURING MOWING. AFTER CONSTRUCTION, SEDIMENTS SHALL BE REMOVED FROM THE BASIN WITHOUT THE USE OF HEAVY EQUIPMENT ON AT LEAST A 5-YEAR CYCLE, BUT PRIOR TO REACHING A DEPTH OF 6" BELOW THE TOP OF THE SEDIMENT FOREBAY CHECK DAM. THE OUTLET CONTROL STRUCTURE SHALL BE INSPECTED AT EACH VISIT AND MAINTAINED SUCH THAT IT REMAINS CLEAR OF DEBRIS AND FLOWS FREELY.

R.I.D.E.M. NOTES:

- ALL EXCESS SOIL, STUMPS, TREES, ROCKS, BOULDERS, AND OTHER REFUSE SHALL BE DISCARDED OFFSITE, OUTSIDE OF ALL WETLANDS AND WETLAND SETBACK AREAS, UNLESS OTHERWISE SPECIFIED.
- THE HAYBALE LINE ILLUSTRATED ON THIS PLAN SHALL BE INSTALLED IN THE FIELD PRIOR TO CONSTRUCTION, AND SHALL SERVE AS THE LIMIT OF CLEARING & SURFACE DISTURBANCE ON THE SUBJECT PROPERTY (PROPERLY SECURED SILT FENCE MAY BE SUBSTITUTED FOR HAYBALES WITH ENGINEERS APPROVAL). NO ALTERATIONS (INCLUDING VEGETATIVE CLEARING, RESTORATION PLANTINGS, SEEDING, OR SURFACE DISTURBANCE) SHALL OCCUR BEYOND THE SILT FENCE/DISTURBANCE LINE. UPON THE COMPLETION OF CONSTRUCTION, AND AN ADEQUATE STABILIZATION OF THE SITE, ALL SILT FENCE SHALL BE REMOVED ALONG WITH ANY ACCUMULATED SANDS/SEDIMENTS.
- UPON THE COMPLETION OF THE NECESSARY GRADING ON THE SUBJECT LOT, ALL DISTURBED SURFACES WITHIN OR ADJACENT TO WETLAND AREAS SHALL BE COVERED WITH PLANTABLE SOIL (4" MINIMUM), SEEDED WITH A CONSERVATION SEED MIX (OR LIKE), STABILIZED WITH A SPREAD HAY MULCH OR SIMILAR EROSION CONTROL AGENT AND, WHERE APPLICABLE, PLANTED WITH EVERGREEN WOODY SHRUB AND SAPLING SPECIES. THESE AREAS SHALL REMAIN ENTIRELY UNDISTURBED FOLLOWING PROJECT COMPLETION AND WILL BE ALLOWED TO REVEGETATE TO A NATURAL CONDITION.

CONSERVATION SEED MIX: (% BY WEIGHT)
 70% RED FESCUE
 10% PERENNIAL RYE GRASS
 5% COLONIAL BENT GRASS
 15% BIRDSFOOT TREFLOIL
 SEEDING RATE: 100 LBS/ACRE

- THE WETLAND LIMITS INDICATED ON THESE PLANS WERE DELINEATED BY A QUALIFIED WETLANDS SPECIALIST, AND HAS BEEN PROFESSIONALLY SURVEYED AND LOCATED BY ACCURATE SURVEY METHODS. THE WETLANDS HAVE BEEN VERIFIED BY THE RIDEM (#00-0316; VERIFIED OCTOBER 30, 2000)



OVERALL PLAN
SCALE: 1" = 200'

GENERAL CONSTRUCTION NOTES:

- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE 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 OR PROCEEDING WITH WORK.
- METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE TOWN OF CUMBERLAND AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
- CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, DRIVEWAYS, WALKS, WALLS, CURBS, ETC., THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR.

PROJECT SUMMARY:

THIS PLAN OF DEVELOPMENT CONSISTS OF THE CONSTRUCTION OF A 18 LOT SUBDIVISION WITH ASSOCIATED GRADING, AND RELATED SITE IMPROVEMENTS. CONSTRUCTION SHALL TAKE PLACE IN TWO STAGES. STAGE I SHALL INCLUDE CONSTRUCTION OF THE ROADWAYS, GRADING, DRAINAGE/DETENTION POND, AND INFRASTRUCTURE EROSION CONTROLS. STAGE II SHALL INCLUDE CONSTRUCTION AND GRADING ON INDIVIDUAL LOTS.

LEGEND (not to scale)

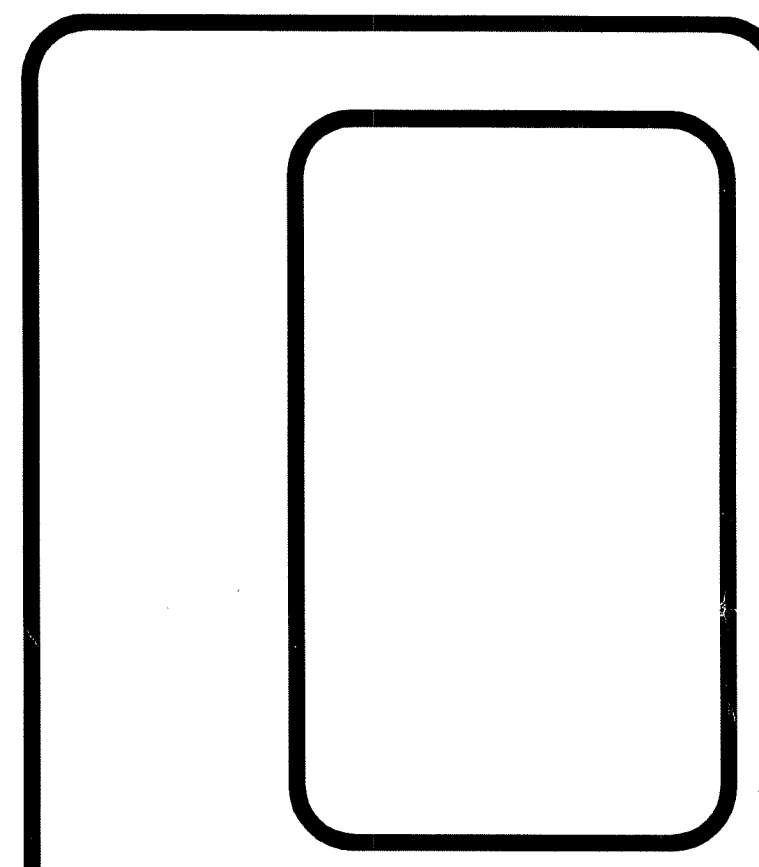
EXISTING	DESCRIPTION	PROPOSED
---	LOCUS PROPERTY LINE	---
-x-	CHAIN LINK FENCE	-x-
-o-	STOCKADE FENCE	-o-
-G-	CONTOUR LINE	-G-
-w-	WATER MAINS	-w-
-S-	SEWER	-S-
-E/T/C-	ELECTRIC/TELEPHONE/CABLE	-E/T/C-
-G-	GAS MAIN	-G-
-OHW-	OVERHEAD WIRE	-OHW-
⊙	SEWER/RAIN MANHOLE	⊙
⊕	ELECTRIC MANHOLE	⊕
⊕	ELECTRIC HANDHOLE	⊕
⊕	LIGHT POLE	⊕
⊕	WATER GATE	⊕
⊕	GAS GATE	⊕
⊕	FIRE HYDRANT	⊕
⊕	UTILITY POLE	⊕
⊕	SPOT GRADE	X 65.6
⊕	TOP OF CURB	TC=64.5
⊕	BOTTOM OF CURB	BC=62.7
⊕	TOP OF WALL	TW=58.8
⊕	BOTTOM OF WALL	BW=52.4
⊕	GRANITE CURB	GC
⊕	BIT. CONCRETE CURB	CC
⊕	DRILL HOLE	⊕
⊕	NAIL	⊕
⊕	GRANITE BOUND	⊕
⊕	FOUND	⊕

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 27 2006 FILE # 0162
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Herbert

GENERAL NOTES, LEGEND, & OVERALL PLAN
LANESVILLE COMMONS PHASE II & III
 MAJOR SUBDIVISION
 A.P. 24 LOTS 84 & 96
 SITUATED ON
 ABBOTT RUN VALLEY ROAD
 CUMBERLAND, RHODE ISLAND
 PREPARED FOR:
 MR. EDWARD & WINIFRED HICKS

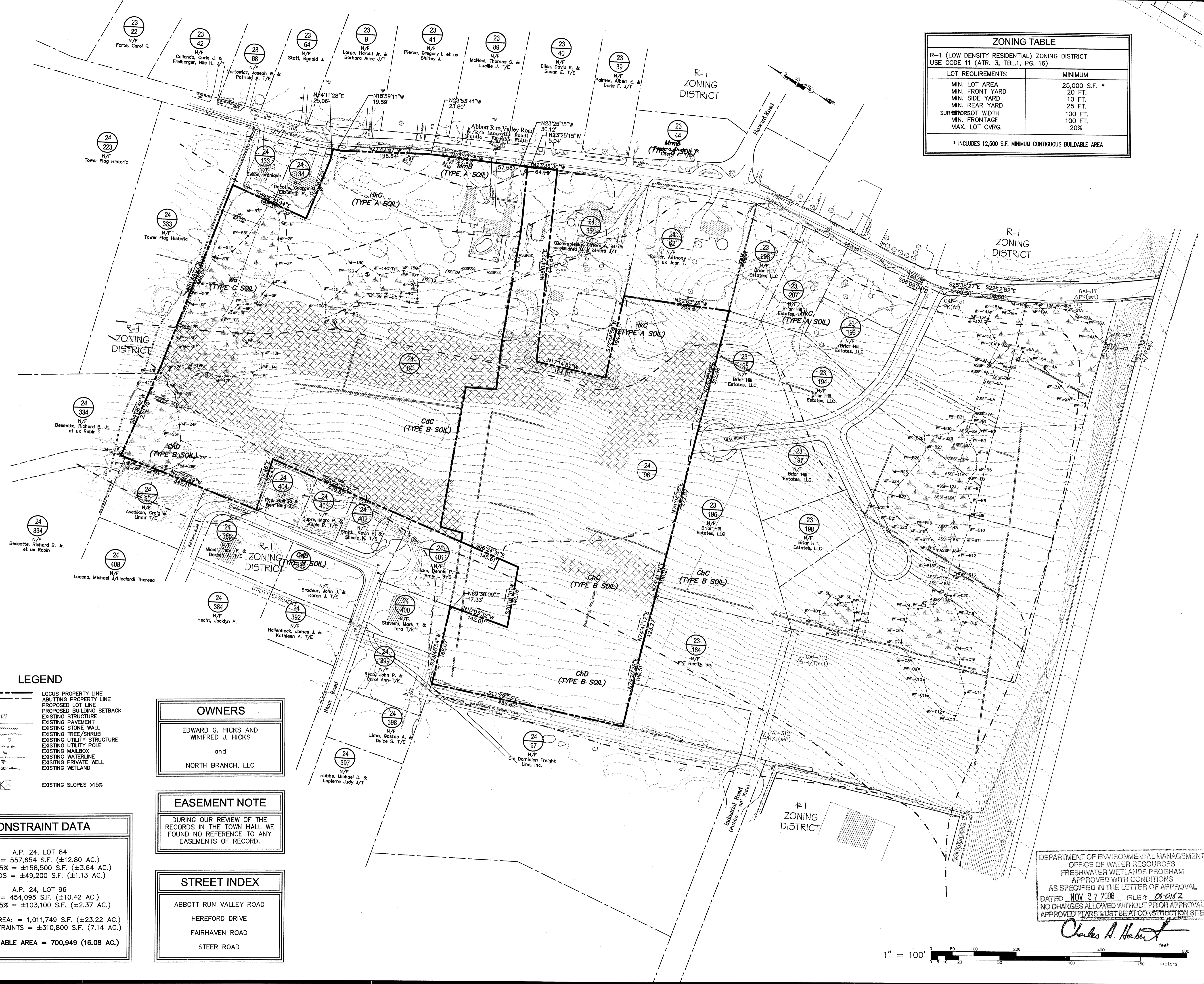
NO.	REVISION	BY	DATE



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 LAND PLANNERS/ENVIRONMENTAL SCIENTISTS
 P.O. BOX 6145
 85 CORLISS STREET
 PROVIDENCE, R.I. 02940
 TEL. 401-273-6000

JOB NO. 5985-01 DRAWN BY R.J.B.
 DWG. NO. 5985-01-MP CHECKED SSH
 SCALE: AS SHOWN APPROVED
 DATE: JANUARY 26, 2006
 SHEET **C2**
 OF 10 SHEETS

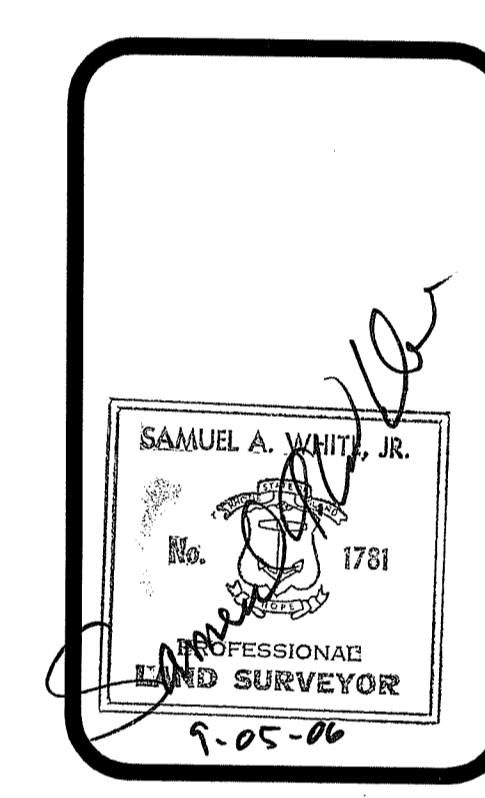
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ZONING TABLE	
R-1 (LOW DENSITY RESIDENTIAL) ZONING DISTRICT USE CODE 11 (ATR. 3, TBL.1, PG. 16)	
LOT REQUIREMENTS	MINIMUM
MIN. LOT AREA	25,000 S.F. *
MIN. FRONT YARD	20 FT.
MIN. SIDE YARD	10 FT.
MIN. REAR YARD	25 FT.
SURVEYED LOT WIDTH	100 FT.
MIN. FRONTAGE	100 FT.
MAX. LOT CVRG.	20%
* INCLUDES 12,500 S.F. MINIMUM CONTIGUOUS BUILDABLE AREA	

EXISTING CONDITIONS AND
LAND CONSTRAINTS MAP
LANESVILLE COMMONS PHASE II & III
MAJOR SUBDIVISION
SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
PREPARED FOR:
MR. EDWARD & WINIFRED HICKS

NO.	REVISION	BY	DATE



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- LEGEND**
- LOCUS PROPERTY LINE
 - - - ABUTTING PROPERTY LINE
 - - - PROPOSED LOT LINE
 - - - PROPOSED BUILDING SETBACK
 - ▭ EXISTING STRUCTURE
 - ▭ EXISTING PAVEMENT
 - ▭ EXISTING STONE WALL
 - ▭ EXISTING TREE/SHRUB
 - ▭ EXISTING UTILITY STRUCTURE
 - ▭ EXISTING UTILITY POLE
 - ▭ EXISTING MAILBOX
 - ▭ EXISTING WATERLINE
 - ▭ EXISTING PRIVATE WELL
 - ▭ EXISTING WETLAND
 - ▭ EXISTING SLOPES >15%

OWNERS
EDWARD G. HICKS AND
WINIFRED J. HICKS
and
NORTH BRANCH, LLC

EASEMENT NOTE
DURING OUR REVIEW OF THE
RECORDS IN THE TOWN HALL WE
FOUND NO REFERENCE TO ANY
EASEMENTS OF RECORD.

STREET INDEX
ABBOTT RUN VALLEY ROAD
HEREFORD DRIVE
FAIRHAVEN ROAD
STEER ROAD

CONSTRAINT DATA

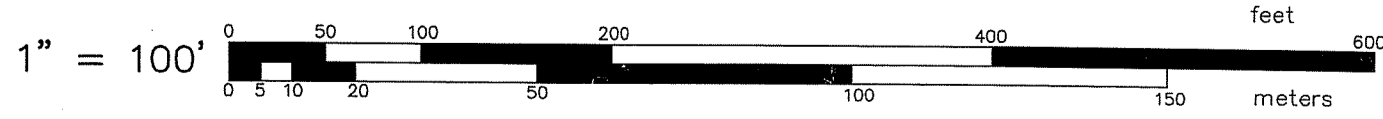
A.P. 24, LOT 84
AREA = 557,654 S.F. (±12.80 AC.)
SLOPE >15% = ±158,500 S.F. (±3.64 AC.)
WETLANDS = ±49,200 S.F. (±1.13 AC.)

A.P. 24, LOT 96
AREA = 454,095 S.F. (±10.42 AC.)
SLOPE >15% = ±103,100 S.F. (±2.37 AC.)

COMBINED AREA = 1,011,749 S.F. (±23.22 AC.)
TOTAL CONSTRAINTS = ±310,800 S.F. (7.14 AC.)
TOTAL BUILDABLE AREA = 700,949 (16.08 AC.)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 27 2006 FILE # 06-0182
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

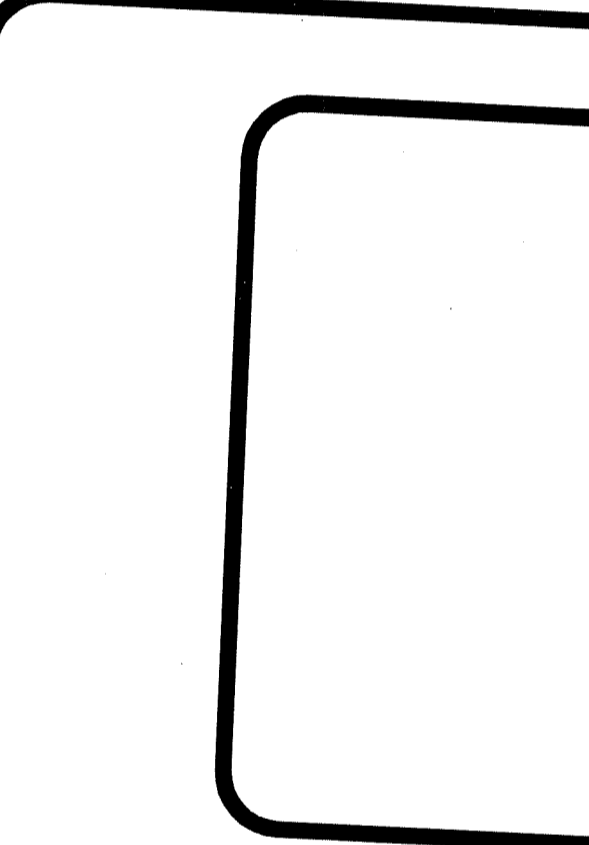


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DWG. NO. 5985-01-MP CHECKED SSH
SCALE: 1"=100' APPROVED
DATE: JANUARY 20, 2006
SHEET C3 SEP 5 2006
OF 10 SHEETS

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MASS GRADING & EROSION CONTROL PLAN
LANESVILLE COMMONS PHASE II & III
 MAJOR SUBDIVISION
 A.P. 24 LOTS 84 & 96
 SITUATED ON
 ABBOTT RUN VALLEY ROAD
 CUMBERT AND BOND

NO.	REVISION	BY
1	ADDED SWALES & DWELLINGS PER ROOM ADDED 'STREAMCUTO' WIDE & RIVERBANK	SSH

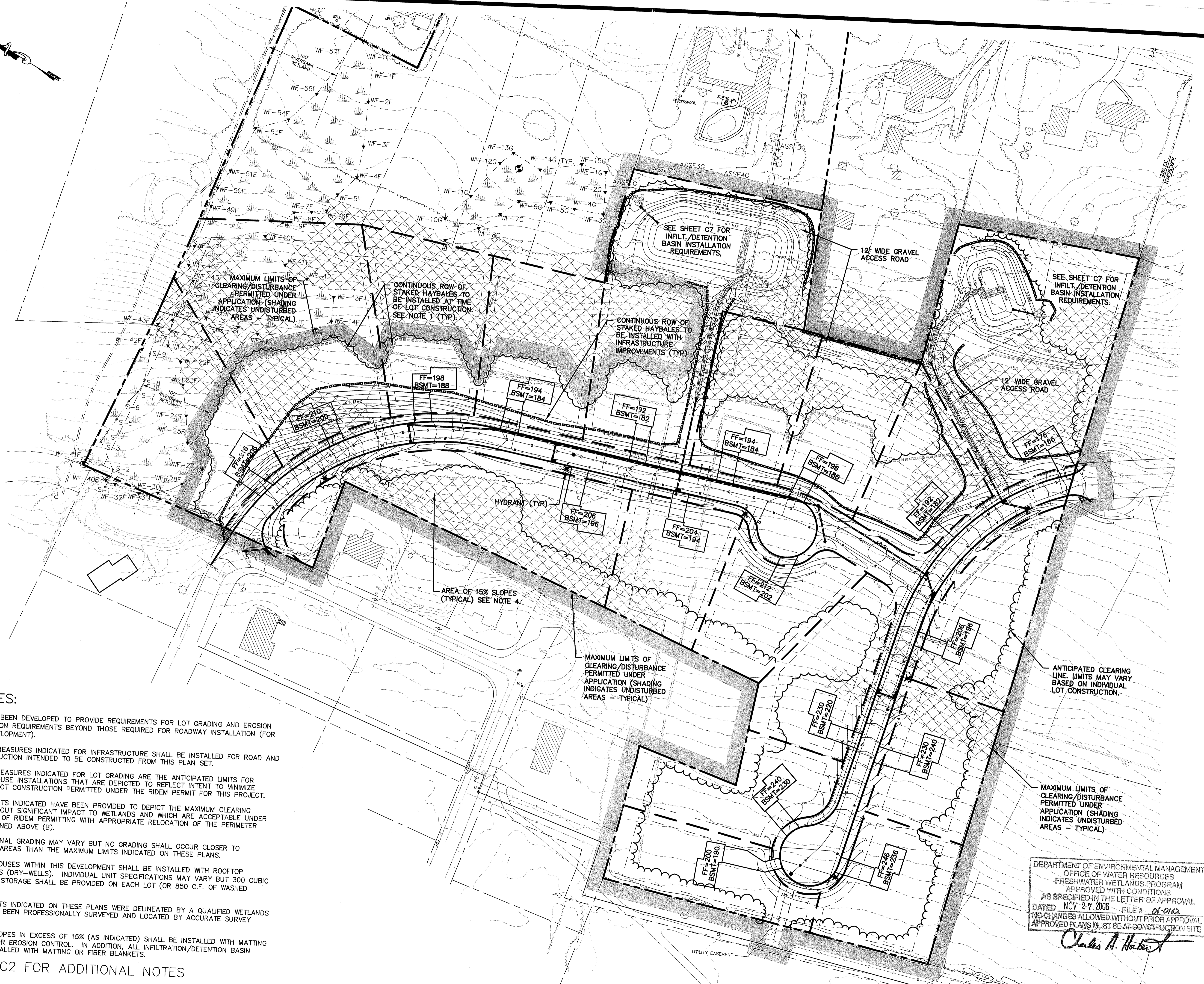


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JOB NO. 5985-01	DRAWN BY R.J.B.
DWG. NO. 5985-01-MP	CHECKED SSH
SCALE: 1"=60'	APPROVED
SHEET	DATE: JANUARY 20, 2006

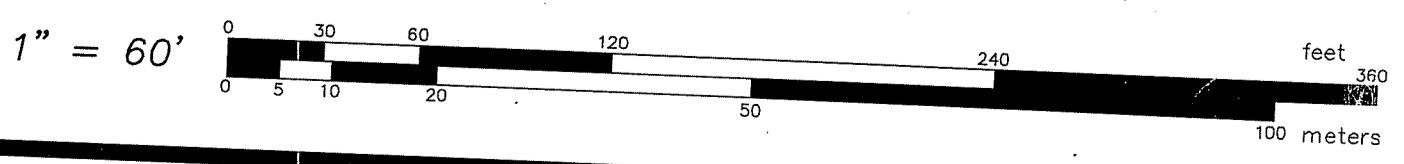
C4
 ENVIRONMENTAL MANAGEMENT
 & RESOURCES



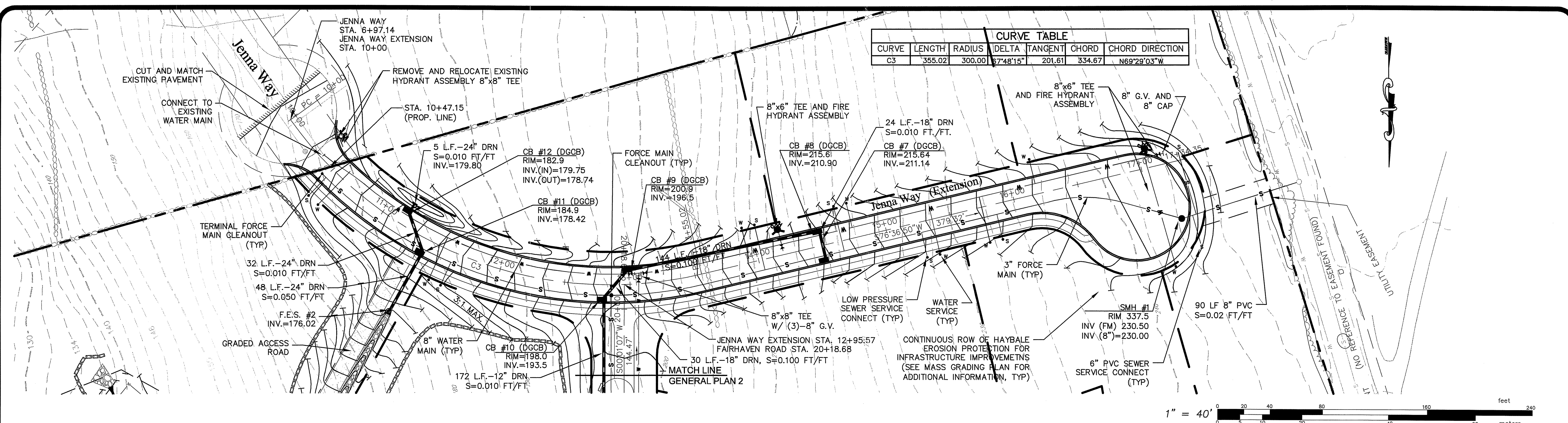
- PLAN NOTES:**
- 1) THIS PLAN HAS BEEN DEVELOPED TO PROVIDE REQUIREMENTS FOR LOT GRADING AND EROSION CONTROL INSTALLATION REQUIREMENTS BEYOND THOSE REQUIRED FOR ROADWAY INSTALLATION (FOR INDIVIDUAL LOT DEVELOPMENT).
 - A) PERIMETER MEASURES INDICATED FOR INFRASTRUCTURE SHALL BE INSTALLED FOR ROAD AND UTILITY CONSTRUCTION INTENDED TO BE CONSTRUCTED FROM THIS PLAN SET.
 - B) PERIMETER MEASURES INDICATED FOR LOT GRADING ARE THE ANTICIPATED LIMITS FOR REASONABLE HOUSE INSTALLATIONS THAT ARE DEPICTED TO REFLECT INTENT TO MINIMIZE CLEARING FOR LOT CONSTRUCTION PERMITTED UNDER THE RIDEM PERMIT FOR THIS PROJECT.
 - C) MAXIMUM LIMITS INDICATED HAVE BEEN PROVIDED TO DEPICT THE MAXIMUM CLEARING ALLOWABLE WITHOUT SIGNIFICANT IMPACT TO WETLANDS AND WHICH ARE ACCEPTABLE UNDER THE CONDITIONS OF RIDEM PERMITTING WITH APPROPRIATE RELOCATION OF THE PERIMETER MEASURES OUTLINED ABOVE (B).
 - 2) THE PROPOSED HOUSES WITHIN THIS DEVELOPMENT SHALL BE INSTALLED WITH ROOFTOP INFILTRATION FACILITIES (DRY-WELLS). INDIVIDUAL UNIT SPECIFICATIONS MAY VARY BUT 300 CUBIC FEET (C.F.) OF TOTAL STORAGE SHALL BE PROVIDED ON EACH LOT (OR 850 C.F. OF WASHED STONE).
 - 3) THE WETLAND LIMITS INDICATED ON THESE PLANS WERE DELINEATED BY A QUALIFIED WETLANDS SPECIALIST, AND HAVE BEEN PROFESSIONALLY SURVEYED AND LOCATED BY ACCURATE SURVEY METHODS.
 - 4) ALL DISTURBED SLOPES IN EXCESS OF 15% (AS INDICATED) SHALL BE INSTALLED WITH MATTING OR FIBER BLANKETS FOR EROSION CONTROL. IN ADDITION, ALL INFILTRATION/DETENTION BASIN SLOPES SHALL BE INSTALLED WITH MATTING OR FIBER BLANKETS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 27 2006 - FILE # 06-0182
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Haber

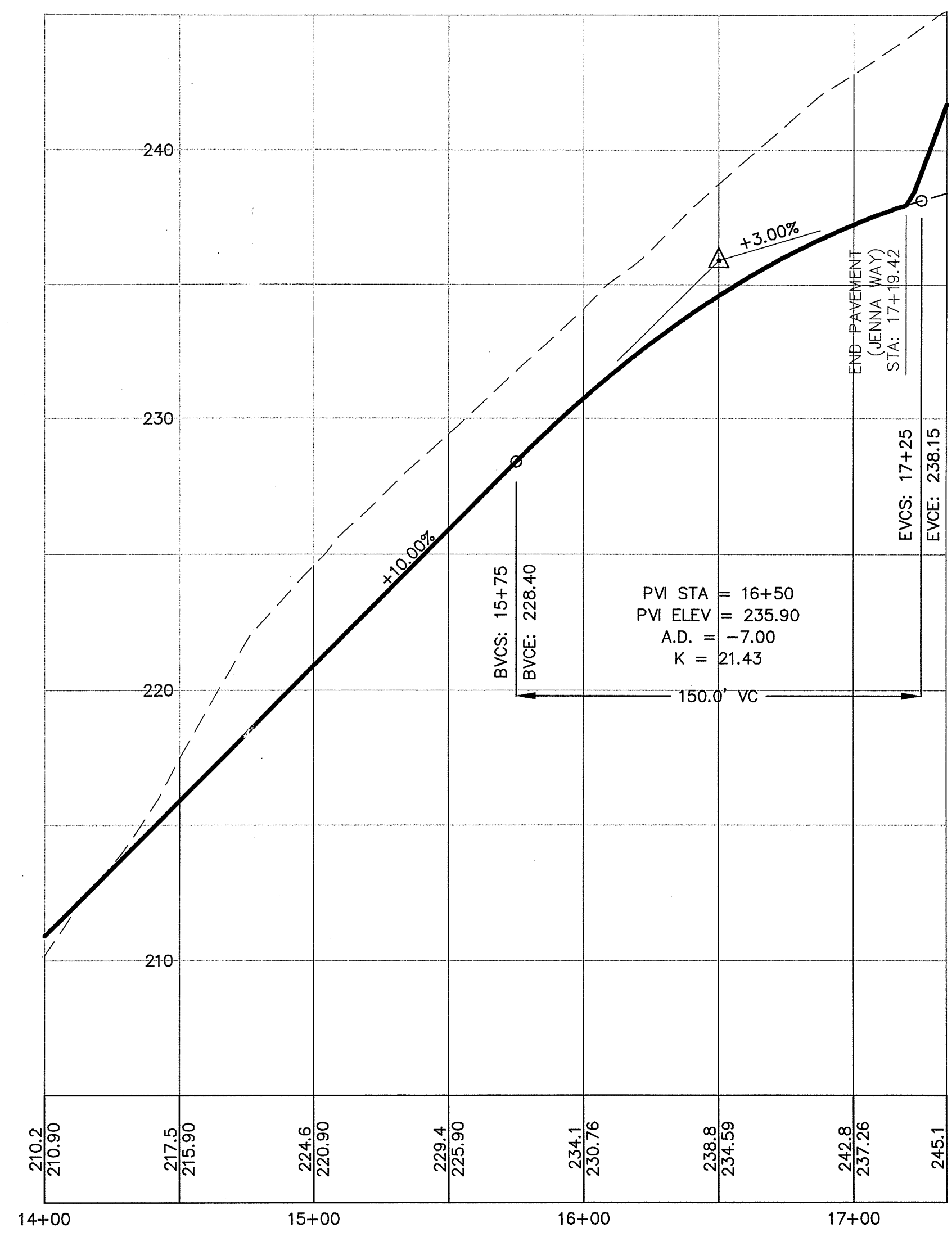
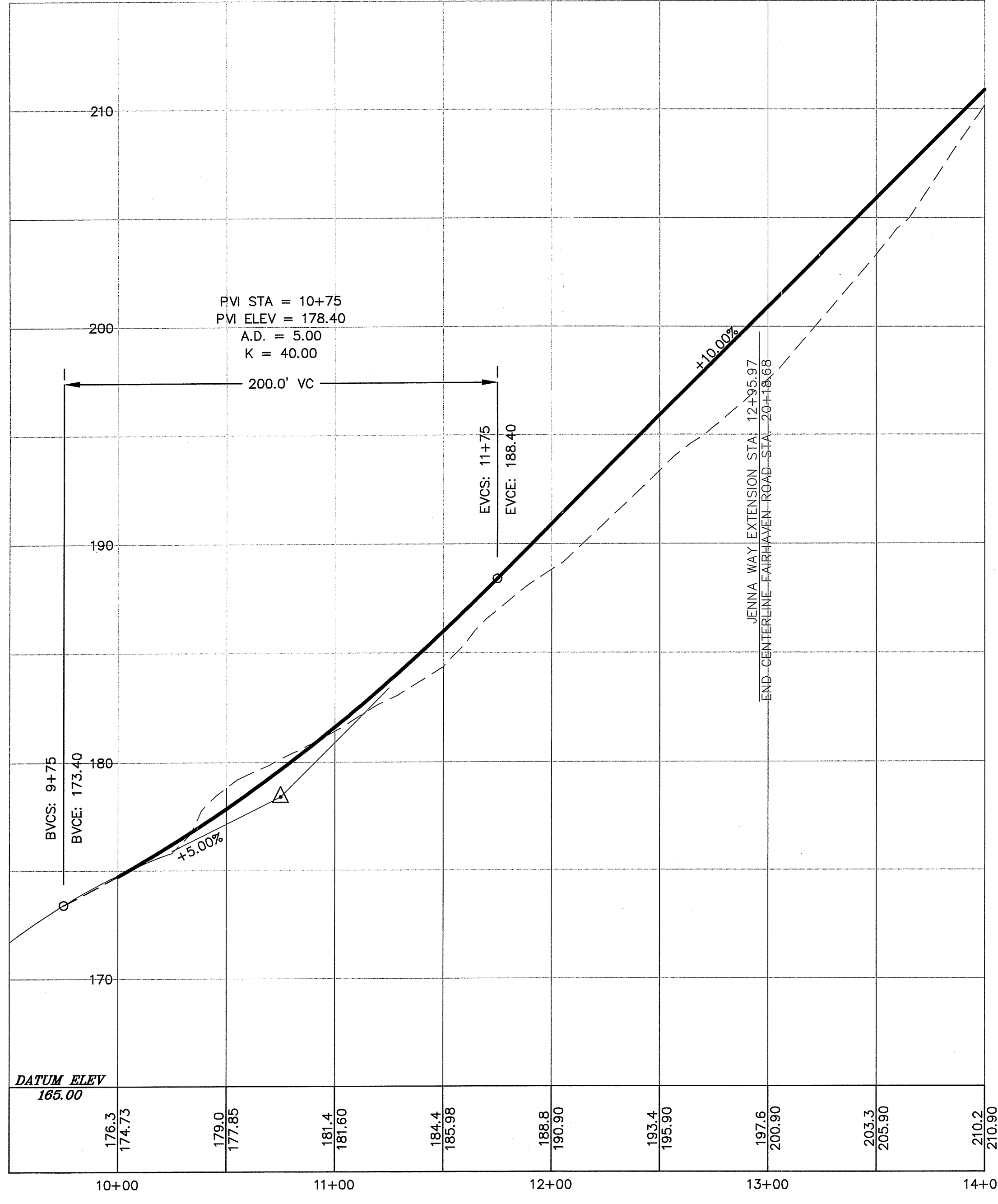


SEE SHEET C2 FOR ADDITIONAL NOTES



JENNA WAY
 PLAN AND PROFILE
 LANESVILLE COMMONS PHASE II & III
 MAJOR SUBDIVISION
 A.P. 24 LOTS 84 & 96
 SITUATED ON
 ABBOTT RUN VALLEY ROAD
 CUMBERLAND, RHODE ISLAND
 PREPARED FOR:
 MR. EDWARD & WINIFRED HICKS

NO.	REVISION	BY	DATE



PLAN NOTES:

- 1) ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE CURRENT TOWN OF CUMBERLAND STANDARDS AND SPECIFICATIONS. WHERE THESE STANDARDS DO NOT ADDRESS CERTAIN ITEMS, CONTRACTOR SHALL REFER TO THE RHODE ISLAND HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS, LATEST EDITION, AND TO STATE BUILDING CODES.
- 2) ALL DRAINAGE STRUCTURES SHALL BE PROVIDED WITH 8" KNOCKOUTS TOWARD LOTS TO ACCOMMODATE POSSIBLE SUBDRAINS AND/OR FOOTING DRAINS DURING LOT CONSTRUCTION.
- 3) ELECTRIC (INCLUDING STREET LIGHTING), TELEPHONE, AND GAS SERVICES SHALL BE DESIGNED BY THE RESPECTIVE UTILITY COMPANIES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE FOR UTILITY MAIN AND SERVICE INSTALLATIONS AND SHALL PERFORM ALL TRENCHING AND BACKFILL REQUIRED FOR IN-PLACE CONSTRUCTION IN ACCORDANCE WITH UTILITY COMPANY STANDARDS.

SEE SHEET C2 FOR ADDITIONAL NOTES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 27 2006 FILE # 06-062
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harbin

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P.O. BOX 6145
 85 CORLISS STREET
 PROVIDENCE, R.I. 02940
 TEL. 401-273-6000

JOB NO. 5985-01	DRAWN BY R.J.B.
DWG. NO. 5985-01-MP	CHECKED SSH
SCALE:	APPROVED
HOR. 1"=40'	DATE JANUARY 20, 2006
VERT. 1"=4'	

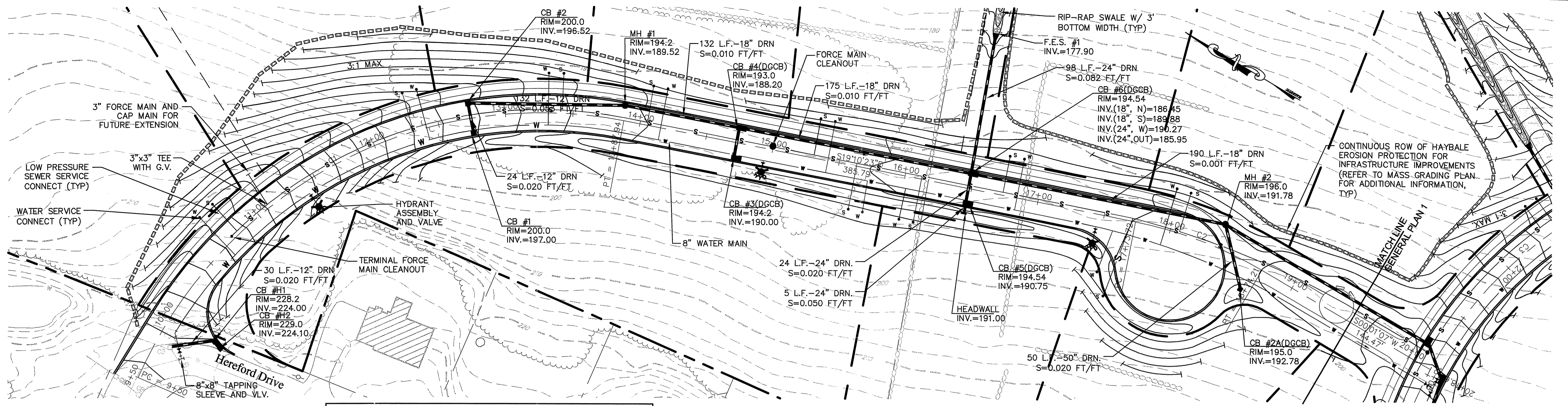
SHEET

SEP 5 2006

C5

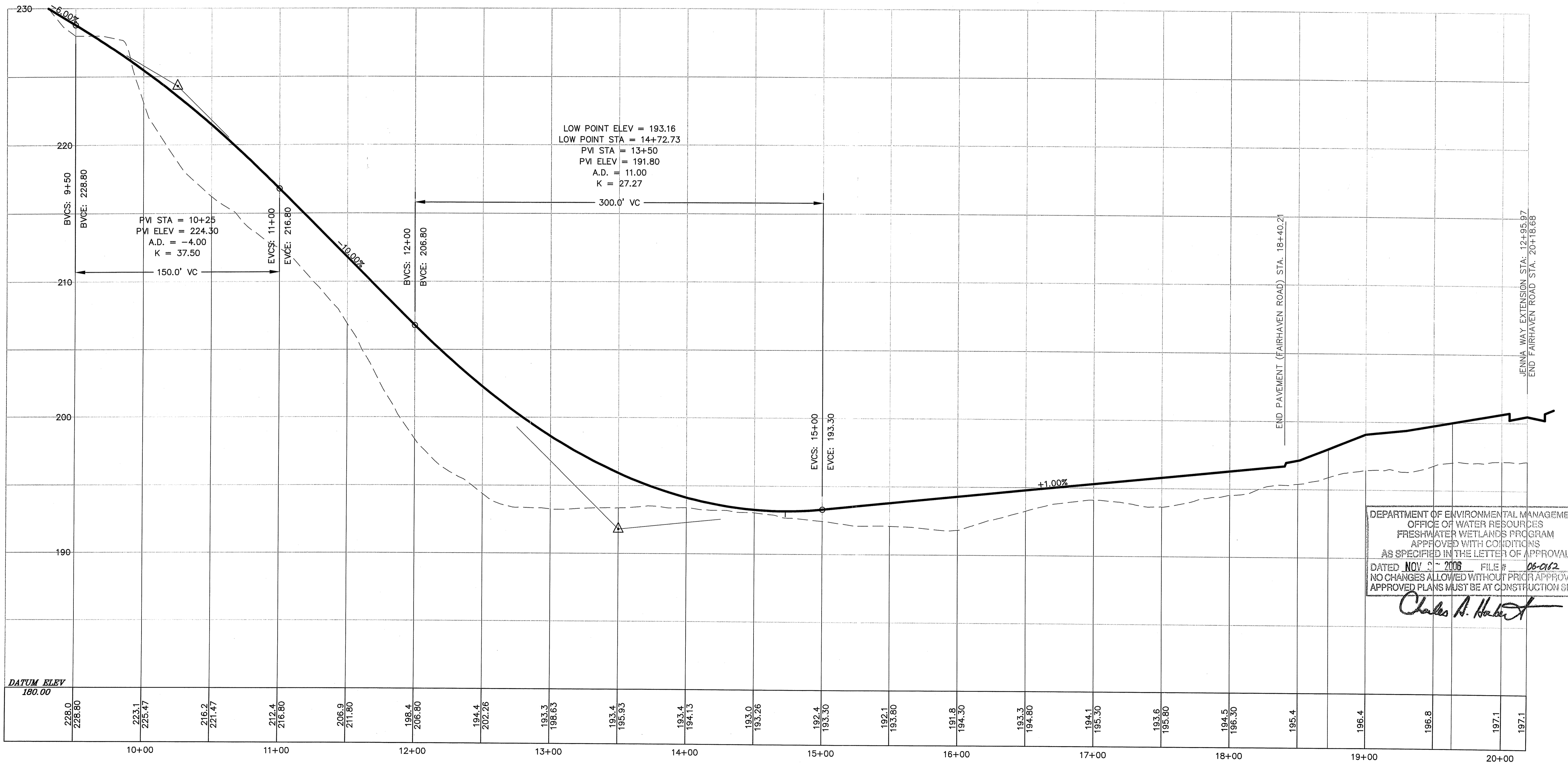
OF 10 SHEETS

L:\5985-01_Hicks Expansion - Cumberland, RI.dwg(01-Current\5985-01-base.dwg, 05-GEN-1, 3/23/2006 10:41:41 AM, CALSTANDARD.pc3)



CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIRECTION
C1	437.94	325.00	77°12'20"	259.47	405.55	N57°46'34"W
C2	100.49	300.00	19°11'30"	50.72	100.02	N09°34'38"W



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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 DATED NOV 3 - 2006 FILE # 05-012
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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Charles A. Harbert

**FAIRHAVEN ROAD
 PLAN AND PROFILE**

**LANESVILLE COMMONS PHASE II & III
 MAJOR SUBDIVISION**

A.P. 24 LOTS 84 & 96
 SITUATED ON
 ABBOTT RUN VALLEY ROAD
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
 MR. EDWARD & WINIFRED HICKS

NO.	REVISION	BY	DATE
1	ADDED CB2A & GRADING	SSH	06/09/06

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JOB NO. 5985-01 DRAWN BY R.J.B.
 DWG. NO. 5985-01-MP CHECKED SSH
 SCALE: APPROVED
 HOR. 1"=40' DATE
 VERT. 1"=4' JANUARY 20, 2006

SHEET 5 OF 10
 SEP 5 2006

C6

OF 10 SHEETS

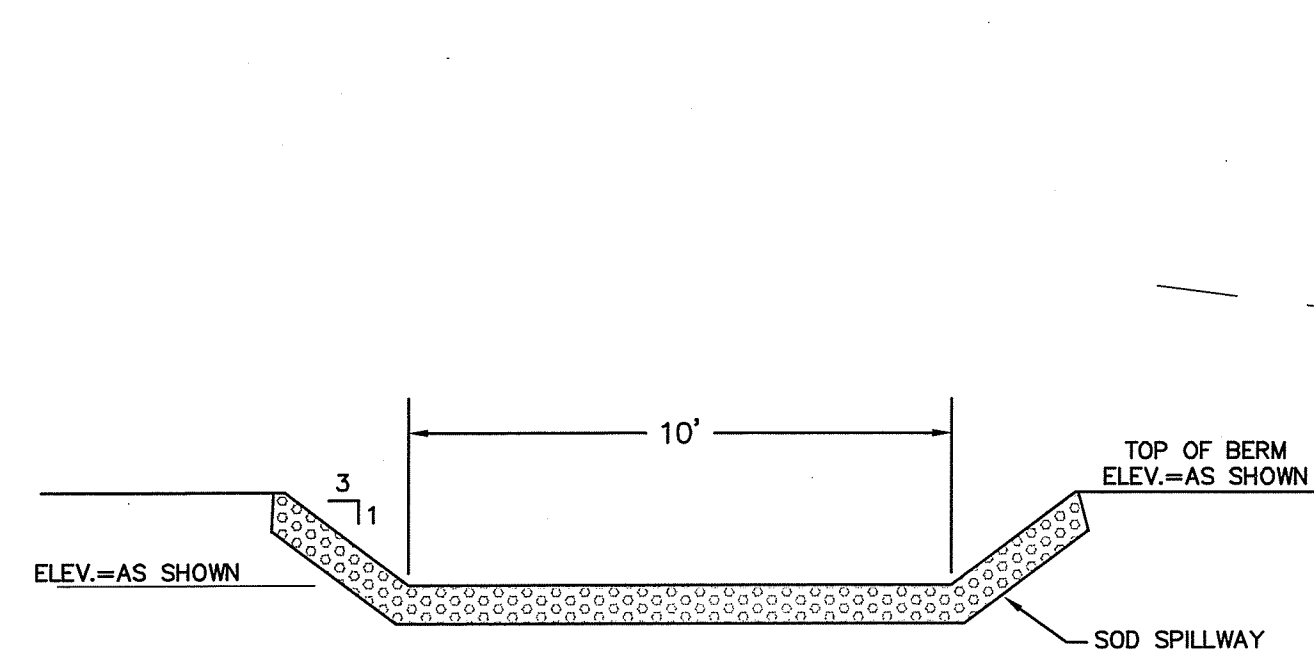
STORMWATER MANAGEMENT FACILITY NOTES

CONSTRUCTION:

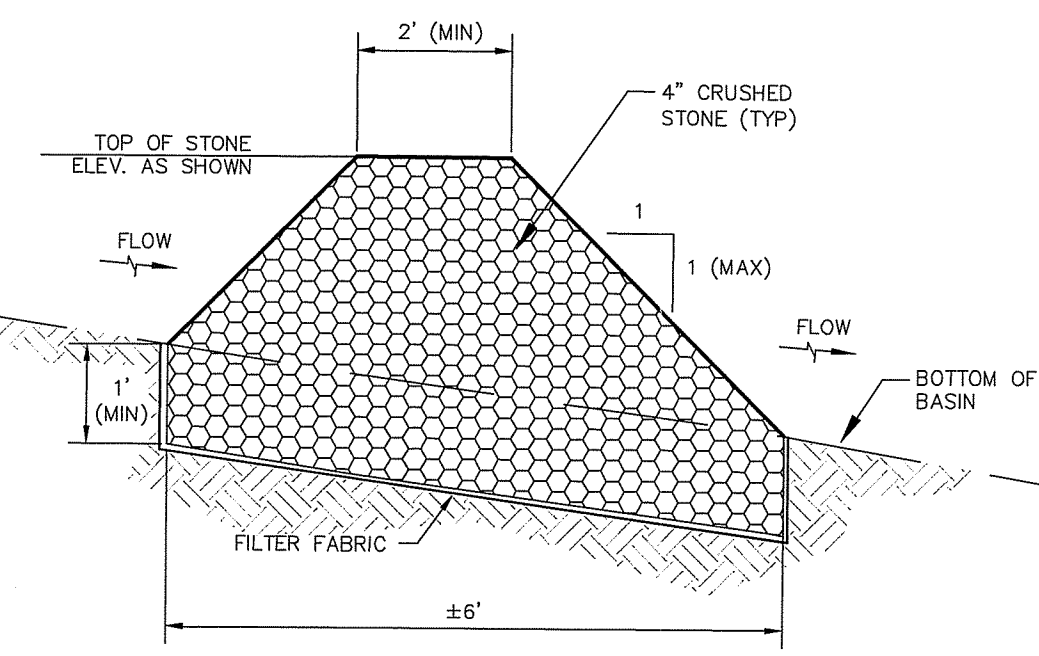
- CARE SHOULD BE TAKEN DURING CONSTRUCTION TO MINIMIZE THE RISK OF PREMATURE FAILURE OF THE INFILTRATION TRENCH.
- FIRST, HEAVY EQUIPMENT SHOULD NOT OPERATE ON THE SURFACE LOCATION WHERE THE INFILTRATION SYSTEM ARE PLANNED. SOIL COMPACTION WILL ADVERSELY EFFECT THE PERFORMANCE OF THE SYSTEM AND INFILTRATION BASIN SITES SHOULD BE ROPED OFF AND FLAGGED.
- THE FINAL 12" OF BASIN EXCAVATION SHOULD NOT BE CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN STABILIZED. FINAL GRADED BASIN SHOULD NEVER BE USED AS TEMPORARY SEDIMENT TRAP FOR CONSTRUCTION ACTIVITIES.
- DIVERSION BERMS OR STAKED AND LINED HAYBALES SHOULD BE UTILIZED AROUND THE PERIMETER OF THE INFILTRATION SYSTEM DURING ITS CONSTRUCTION. FOR THE EXCAVATION AND CONSTRUCTION OF THE FINAL LIFT, MANUAL REMOVAL OR LIGHT EARTH - MOVING EQUIPMENT IS RECOMMENDED. ALL EXCAVATED MATERIAL FROM THE BASIN SITE SHOULD BE LOCATED DOWN GRADIENT TO PREVENT REDEPOSITION OF THIS MATERIAL IN THE BASIN DURING RUNOFF EVENTS.
- IF THE CONTRACTOR ENCOUNTERS THAT THE SEASONAL HIGH GROUND WATER TO BE CLOSER THAN 3' SEPARATION TO THE BOTTOM OF THE SYSTEM THEN WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER NOTIFIED.
- BASIN BERMS SHALL BE CONSTRUCTED OF (NATIVE) SANDY LOAM BACKFILL COMPACTED TO 95% DENSITY. CONTRACTOR SHALL STRIP ALL ORGANIC MATERIALS UNDER BERM AND SURFACE COMPACT PRIOR TO PLACING BERM FILL.

MAINTENANCE:

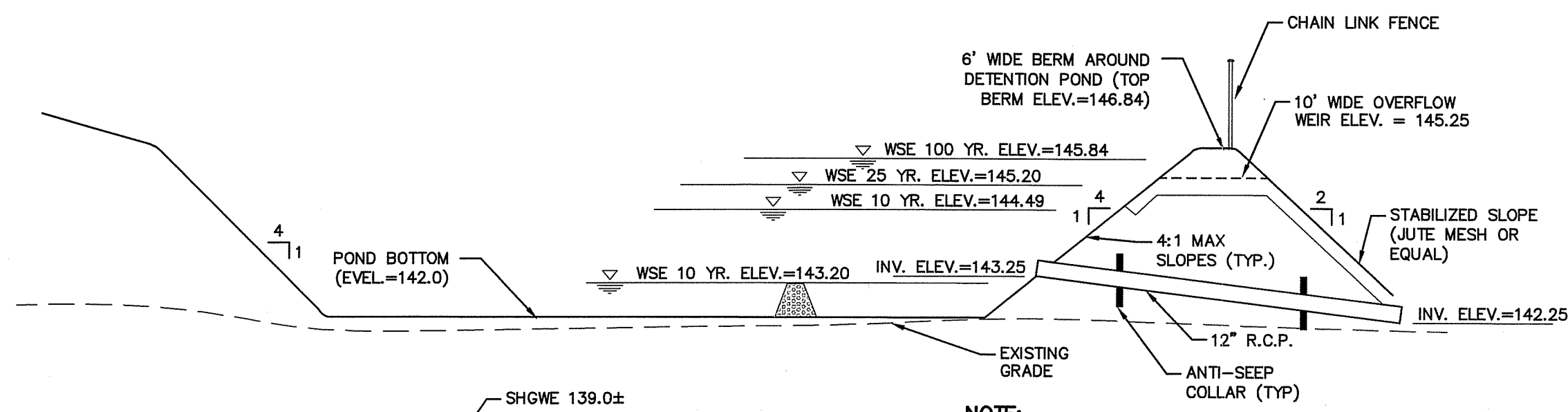
- THE MAINTENANCE OF THE SYSTEM WOULD BE REQUIRED OF THE PRELIMINARY COLLECTION SYSTEMS PRIOR TO FEEDING THE BED. YOU MUST STABILIZE THE SITE AND MAKE SURE SILT TRAPS, SEDIMENTATION CHAMBERS AND CATCH BASINS WITH DIVERSION TEES ARE IN PLACE PRIOR TO FEEDING THE INFILTRATION SYSTEM.
- THE INFILTRATION SYSTEM BASINS SHALL BE INSPECTED FOR PROPER FUNCTIONING OFTEN DURING THE FIRST 6 MONTHS AND ANNUALLY THEREAFTER. DRAINAGE WITHIN THE SYSTEMS CAN BE EXAMINED BY OBSERVING WATER LEVELS IN THE OBSERVATION WELL AND CALCULATING DRAINAGE RATES.
- PONDED WATER INSIDE THE SYSTEM (AS VISIBLE FROM THE BASIN PERIMETER) AFTER 24 HOURS OR SEVERAL DAYS OFTEN INDICATES THAT THE BOTTOM OF THE SYSTEM IS CLOGGED. WATER PONDED AT THE SURFACE OF THE SYSTEM MAY INDICATE ONLY SURFACE CLOGGING.
- CLOGGING IN THE SYSTEM OCCURS MOST FREQUENTLY ON THE SURFACE. GRASS CLIPPINGS, LEAVES, AND ACCUMULATED SEDIMENT SHOULD BE REMOVED ROUTINELY FROM THE SURFACE OF THE SYSTEM.
- SEDIMENT FOREBAY SHOULD BE INSPECTED AND CLEANED DURING THE REGULAR BI - ANNUAL INSPECTIONS. RIP RAP SWALES SHOULD BE CLEARED OF ACCUMULATED SEDIMENT, THEN GRASS CLIPPINGS, LEAVES, AND TRASH SHOULD BE REMOVED. TREE SEEDLINGS SHOULD BE REMOVED BEFORE BECOMING ESTABLISHED FIRMLY.
- LONG-TERM MAINTENANCE OF THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE LOT ON WHICH THE BASIN IS LOCATED.
- BASIN FLOOR SHALL BE DEEP-TILLED AND RE-VEGETATED EVERY 5-YEARS.



TYPICAL SPILLWAY ELEVATION
NOT TO SCALE



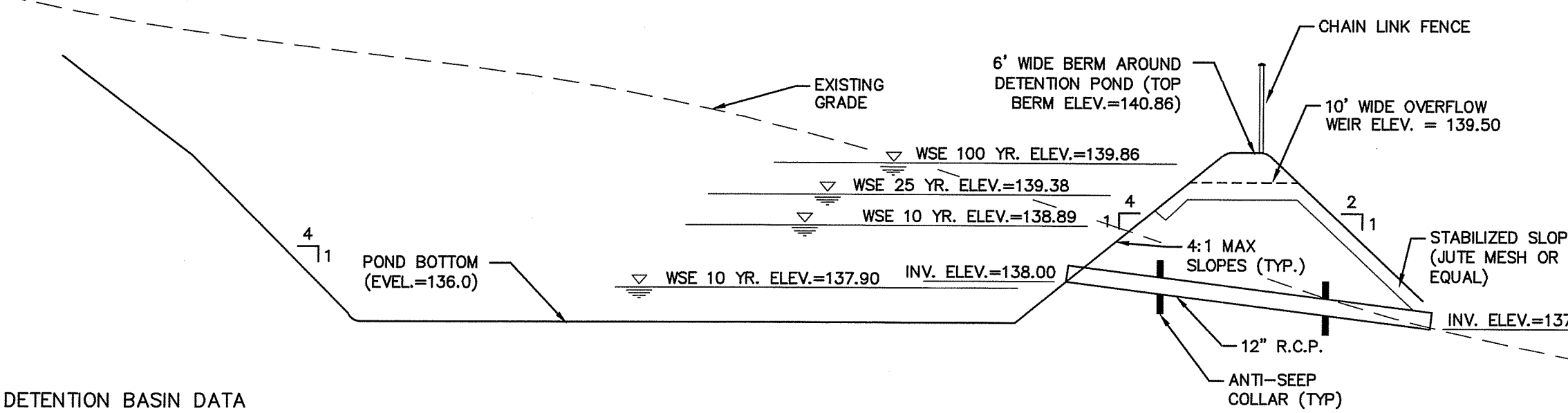
FILTER STONE BERM
NOT TO SCALE



DETENTION BASIN DATA

2 YEAR STORM ELEVATION = 143.20
10 YEAR STORM ELEVATION = 144.49
25 YEAR STORM ELEVATION = 145.20
100 YEAR STORM ELEVATION = 145.84

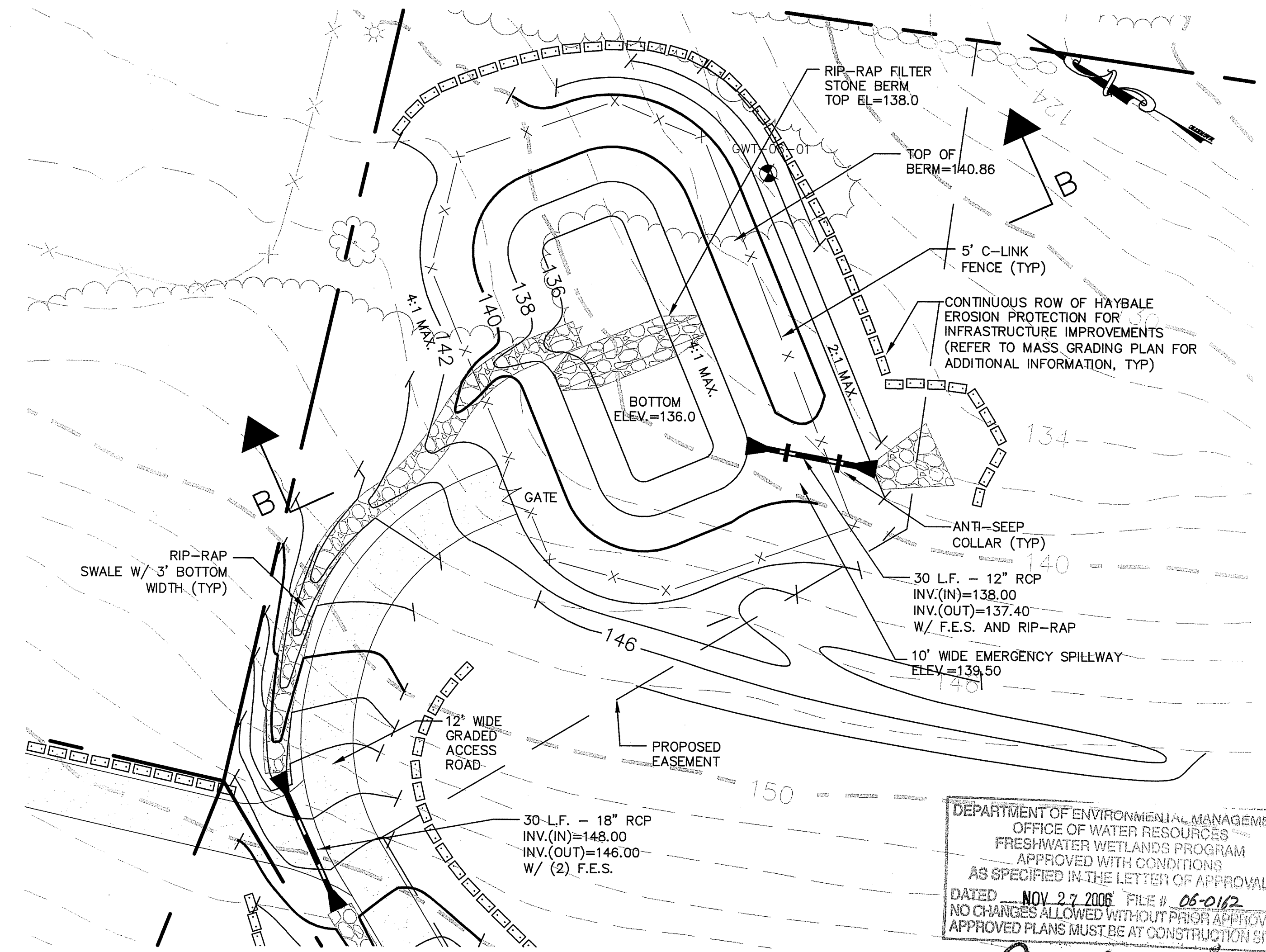
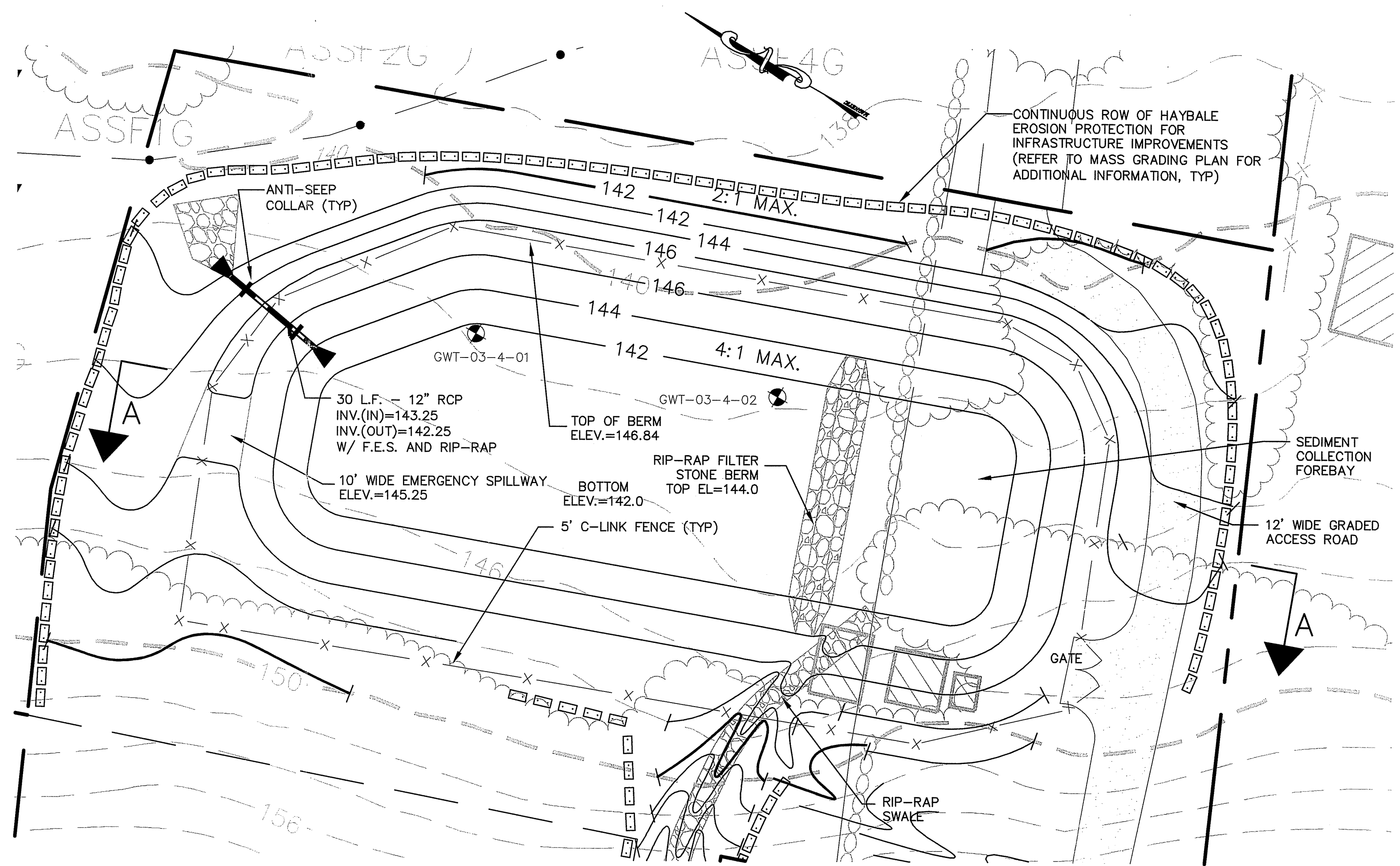
POND SECTION A-A
NOT TO SCALE



DETENTION BASIN DATA

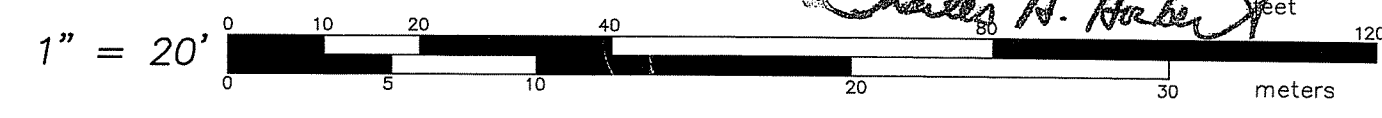
2 YEAR STORM ELEVATION = 137.90
10 YEAR STORM ELEVATION = 138.89
25 YEAR STORM ELEVATION = 139.38
100 YEAR STORM ELEVATION = 139.86

POND SECTION B-B
NOT TO SCALE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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DATED NOV 27 2008 FILE # 05-0112
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hester

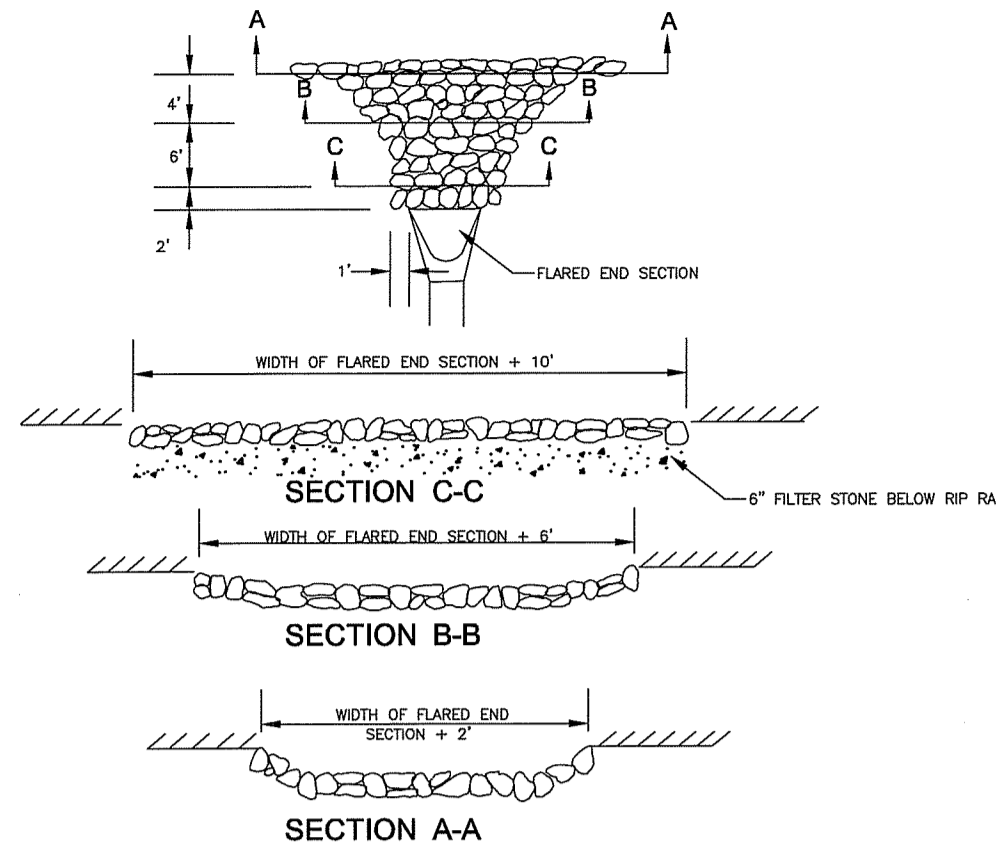


**INFILTRATION/DETENTION
BASIN DETAILS**
LANESVILLE COMMONS PHASE II & III
MAJOR SUBDIVISION
A.P. 24 LOTS 84 & 96
SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
PREPARED FOR:
MR. EDWARD & WINIFRED HICKS

NO.	REVISION	BY	DATE
1	ADDED SWALES & DWELLINGS PER RIDEM	SSH	06/08/06

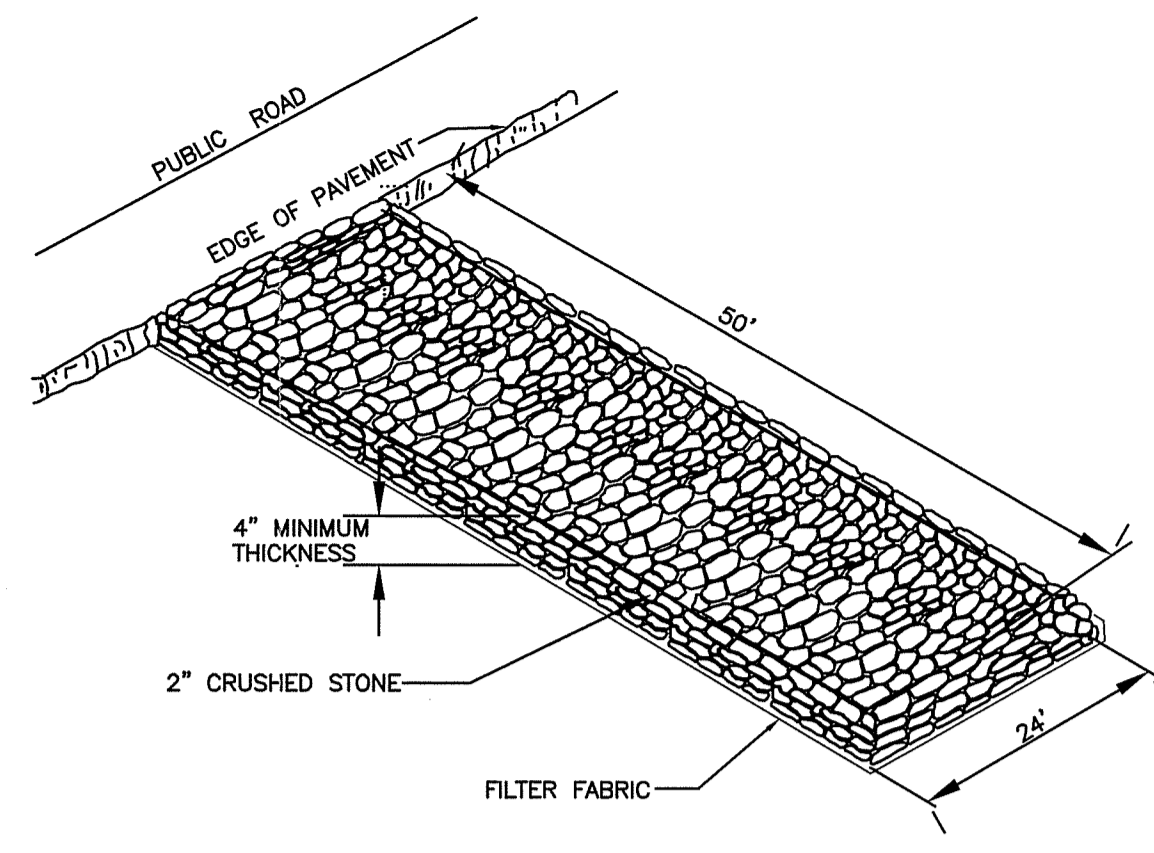
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P.O. BOX 6145
85 CORLISS STREET
PROVIDENCE, R.I. 02940
TEL. 401-273-8000

JOB NO. 5985-01 DRAWN BY R.J.B.
DWG. NO. 5985-01-MP CHECKED SSH
SCALE: 1"=20' APPROVED
DATE: JANUARY 20, 2006
RECEIVED
SEP 5 2006
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
C7
OF 10 SHEETS

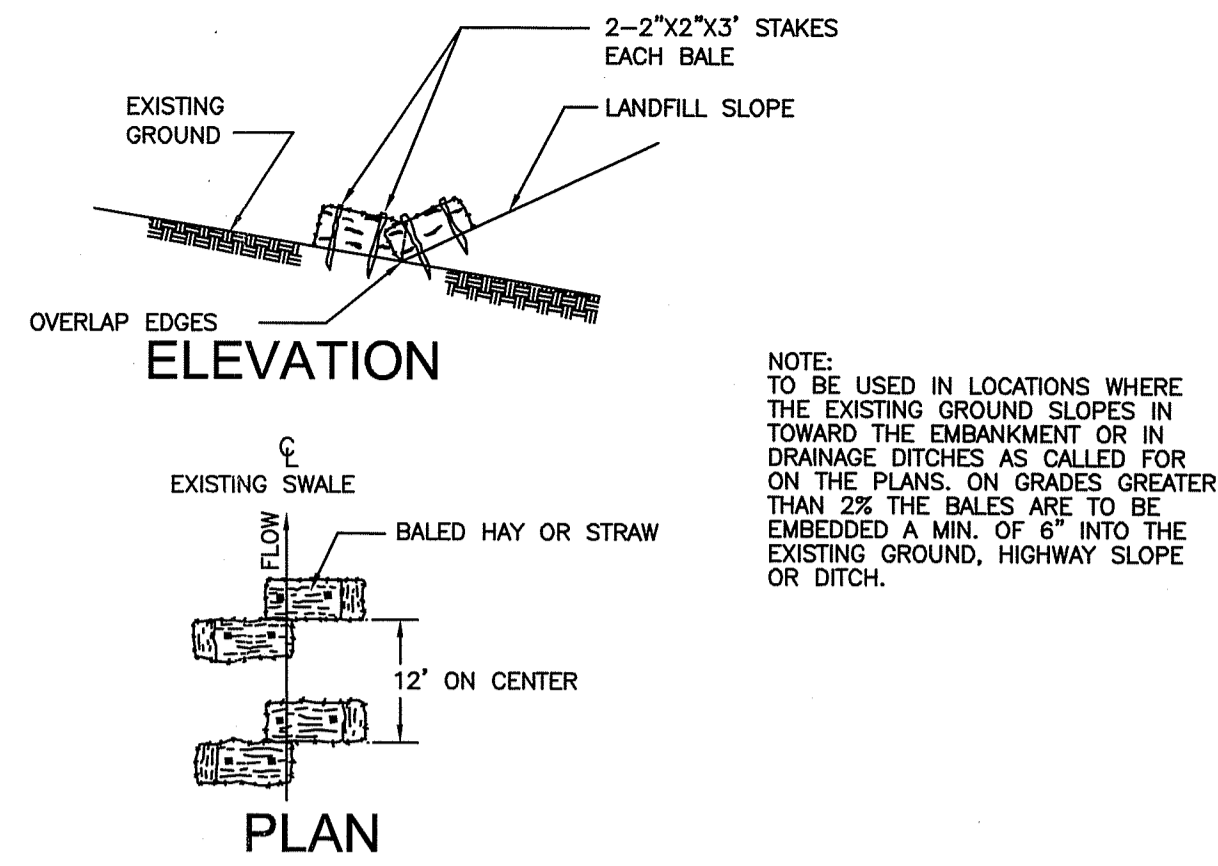


- NOTES:**
1. STONE SIZE TO BE NSA #R-4.
 2. FILTER STONE TO BE NSA #FS-2.
 3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.

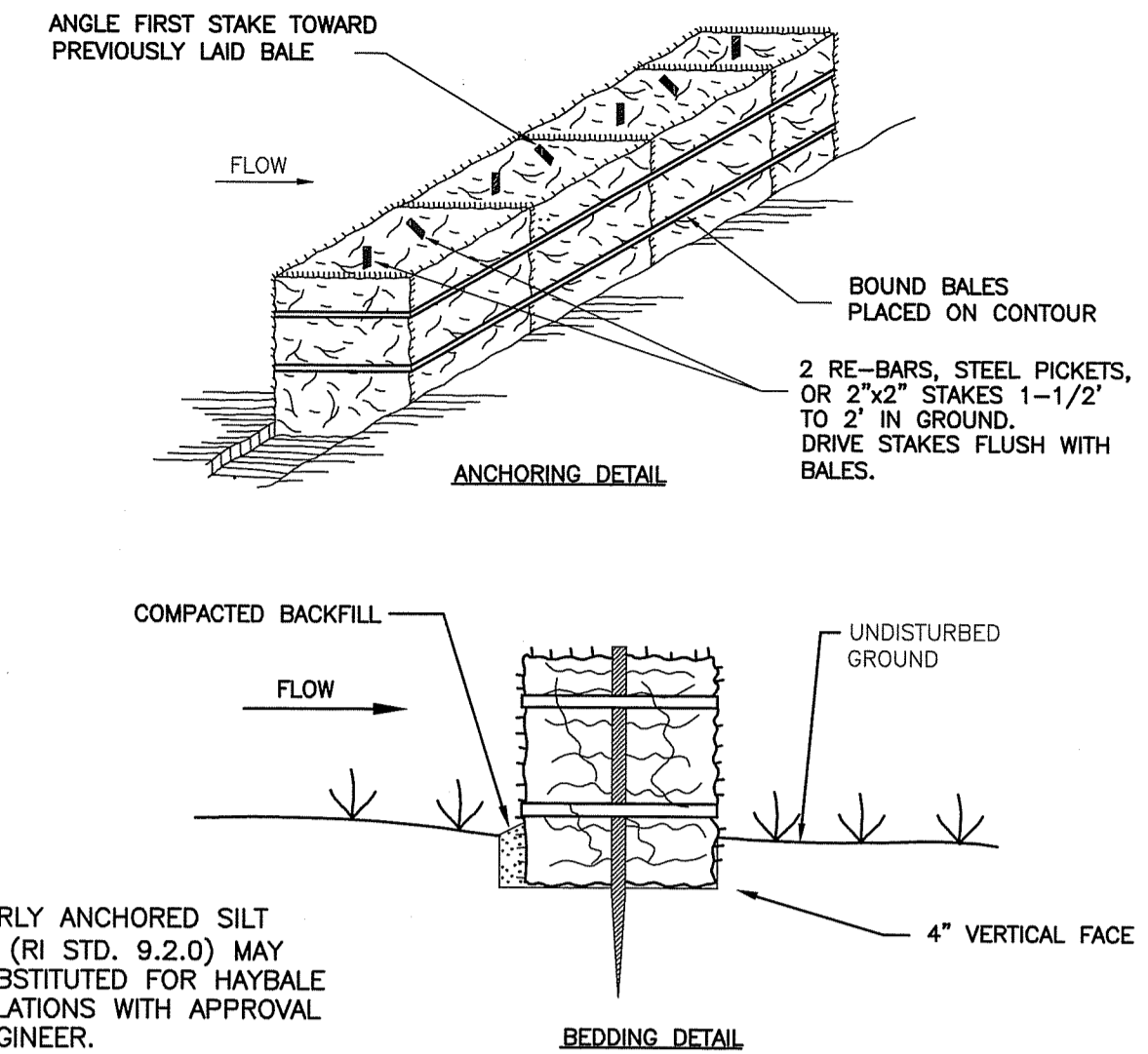
ROCK FILL RIP-RAP AT FLARED END SECTIONS/ENERGY DISSIPATERS
R.I. STD. 2.12



CONSTRUCTION EXIT DETAIL
NOT TO SCALE



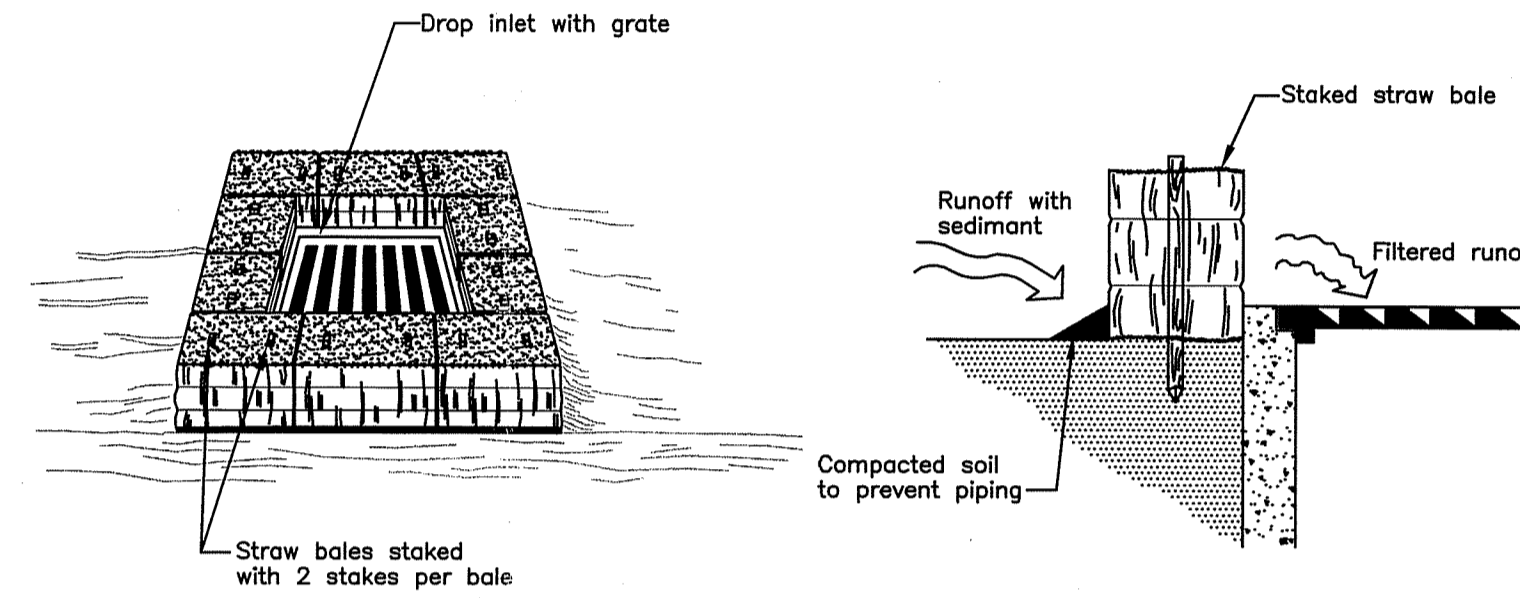
EXISTING DRAINAGE SWALE BALED HAY DITCH EROSION CHECK
NOT TO SCALE



NOTE: PROPERLY ANCHORED SILT FENCE (R.I. STD. 9.2.0) MAY BE SUBSTITUTED FOR HAYBALE INSTALLATIONS WITH APPROVAL OF ENGINEER.

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR, AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL, A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE, THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE, AT AN ANGLE, TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. REMOVE ACCUMULATED SEDIMENT PROMPTLY.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

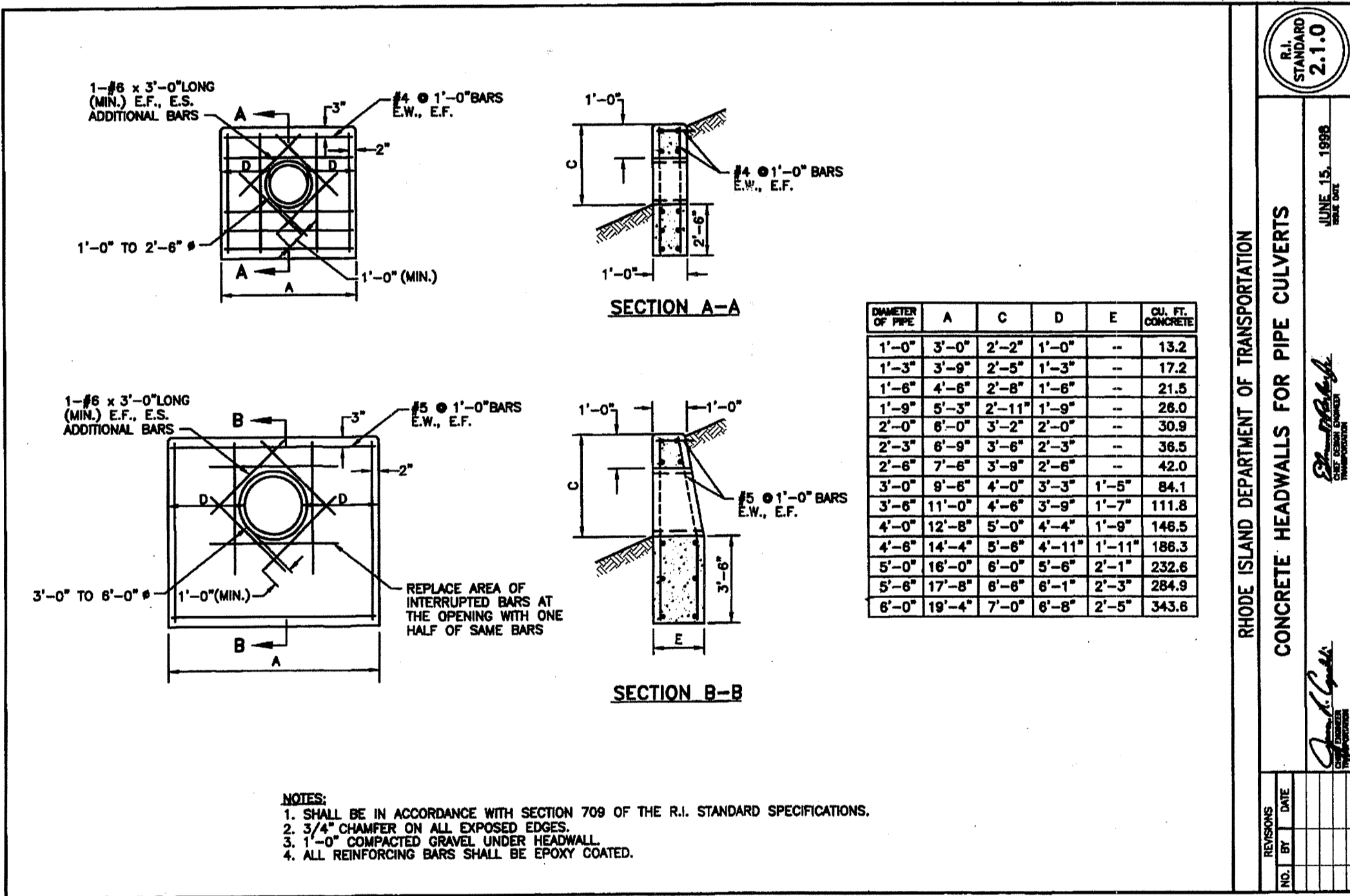


STRAW BALE DROP INLET PROTECTION
NOT TO SCALE

STRAW BALE BARRIER DETAIL
NOT TO SCALE

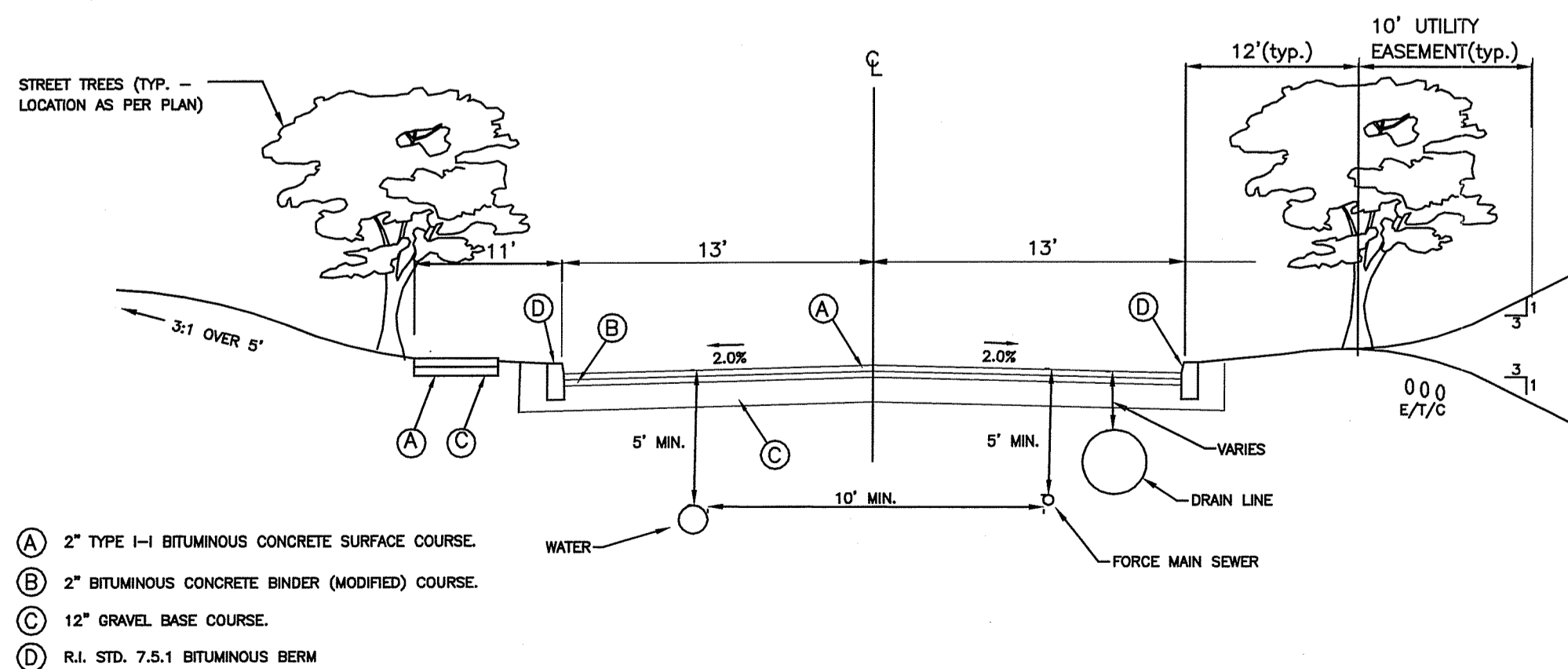
EROSION AND SEDIMENTATION CONTROL PROGRAM

1. ALL CONTROLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK", BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, USDA SOIL CONSERVATION SERVICE, RHODE ISLAND STATE CONSERVATION COMMITTEE, LATEST REVISION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION AND SEDIMENTATION CONTROLS.
3. SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED AND MUST BE INSPECTED BY THE D.E.M. WETLAND SECTION STAFF PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. SEDIMENTATION DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
5. HAYBALES - R.I. STANDARD 9.1 ARE TO BE INSTALLED DOWNSTREAM, OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION. ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATION. SHALL BE MAINTAINED ON A REGULAR BASIS. SHALL CONFORM TO THE STANDARDS AS SET FORTH BY THE DEPT. OF ENVIRONMENTAL MANAGEMENT FOR THE DESIGN AND CONSTRUCTION OF HAY EROSION CHECKS.
6. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT, OR AS DIRECTED BY THE TOWN OF CUMBERLAND, THE ENGINEER, OR D.E.M. STAFF.
7. THE CONTRACTOR SHALL REMOVE ALL SEDIMENTS FROM THE DRAINAGE AND DETENTION FACILITIES AS DIRECTED BY THE ENGINEER AND D.E.M. STAFF.
8. FLARED END SECTIONS AND RIP RAP SPLASH PADS SHALL BE INSTALLED AT THE INLETS AND OUTLETS OF ALL CULVERTS.
9. EXTREME CARE SHALL BE EXERCISED, SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE WETLANDS.
10. MAXIMUM SLOPE FOR ANY CUT OR FILL WILL BE 2:1.
11. SEDIMENTATION TRAPS SHALL BE INSTALLED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
12. CARE SHALL BE TAKEN SO AS NOT TO PLACE REMOVED SEDIMENTS WITHIN THE PATH OF EXISTING, NEWLY CREATED, (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM FLOWAGE.
13. DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
14. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER, SHALL BE SEEDED OR PROTECTED BY THAT DATE, FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION YEAR.
15. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS DIRECTED BY THE ENGINEER.
16. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3000 TO 4000 LBS. PER ACRE.
17. ALL CONTROLS WILL STAY IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
18. THE TOPSOIL SHALL CONFORM WITH R.I. STD. SPECIFICATION 2.0.10 WITH CONDITIONS CORRECT TYPE AND AMOUNT OF INOCULANT.
19. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE IMPLANTING AND PLANTING WITH CORRECT TYPE AND AMOUNT OF INOCULANT.
20. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING ALLOWED WITHOUT PRIOR APPROVAL, APPROVED PLANS MUST BE AT CONSTRUCTION SITE:
RED FESCUE (75 LBS./ACRE)
COLONIAL BENTGRASS, EXETER (5 LBS./ACRE)
PERENNIAL RYEGRASS (5 LBS./ACRE)
BIRDSFOOT TREFOL, "EMPIRE" (15 LBS./ACRE)
21. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR, AND HE SHALL DO SO AT NOT ADDITIONAL EXPENSE.
22. NORMAL ACCEPTABLE SEEDING DATES ARE APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPT. 30.
23. STABILIZATION AS DESCRIBED SHALL TAKE PLACE WITHIN 15 DAYS OF FINAL GRADING.
24. STOCKPILES OF SOIL SHALL BE KEPT AWAY FROM WETLANDS AND WATERWAYS AND SHALL BE STABILIZED AS NOTED ABOVE AND PROTECTED WITH HAYBALE SILT BARRIERS AS DIRECTED BY THE ENGINEER.
25. ON STEEP OR LONG SLOPES, MULCH APPLICATIONS SHALL BE TACKED DOWN BY CRIMPING OR TRACKING.
26. THE DETENTION BASINS AND THE DRAINAGE SYSTEM SHALL RECEIVE ONE FINAL CLEANING OF SEDIMENTS PRIOR TO ACCEPTANCE OF THE OVERALL PROJECT BY THE OWNER. SEDIMENTS SHALL BE DISPOSED OF IN A PROPER MANNER.

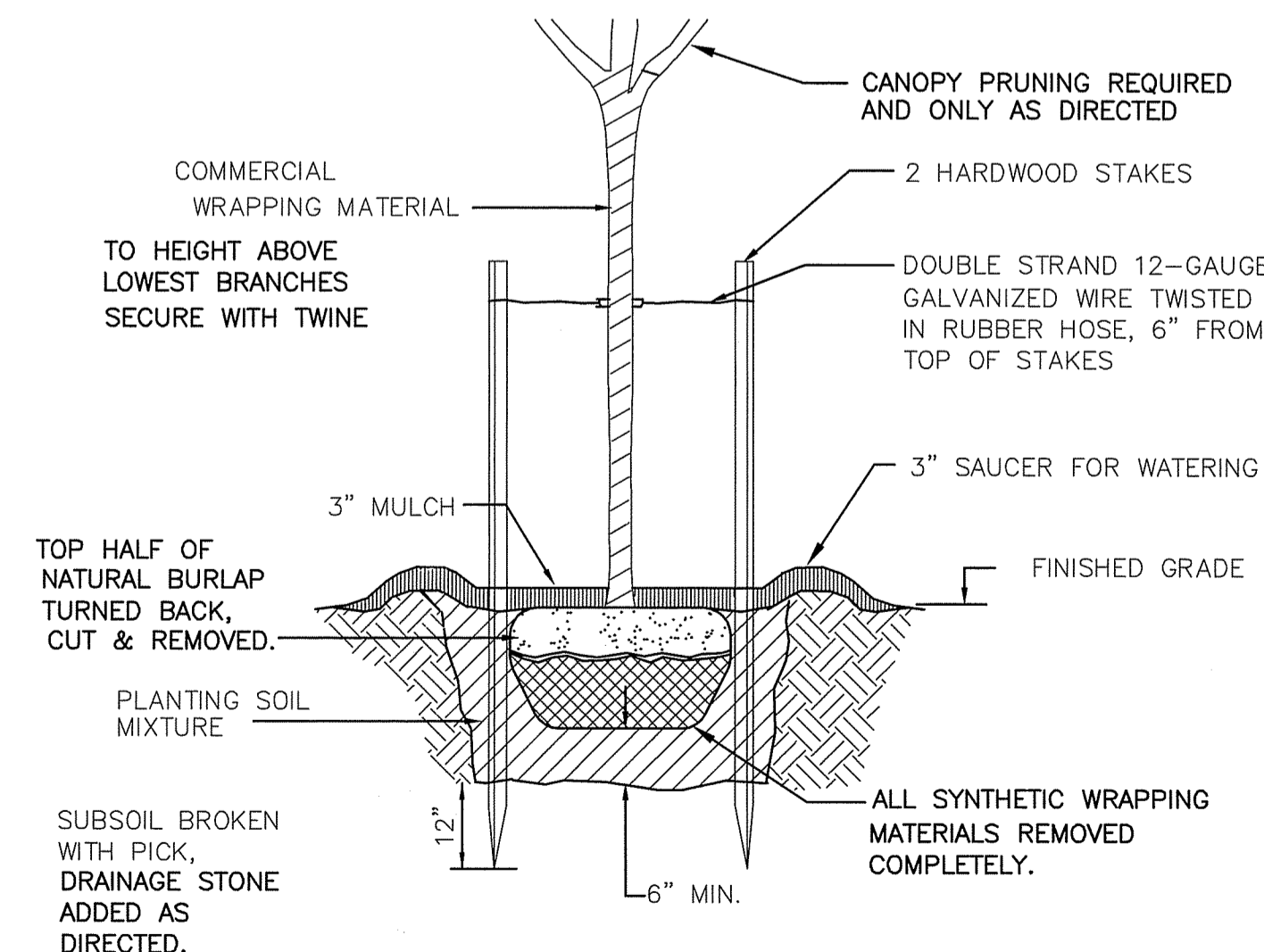


- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
 2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
 3. 1" COMPACTED GRAVEL UNDER HEADWALL.
 4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
CONCRETE HEADWALLS FOR PIPE CULVERTS
JUNE 15, 1998
R.I. STANDARD 2.10



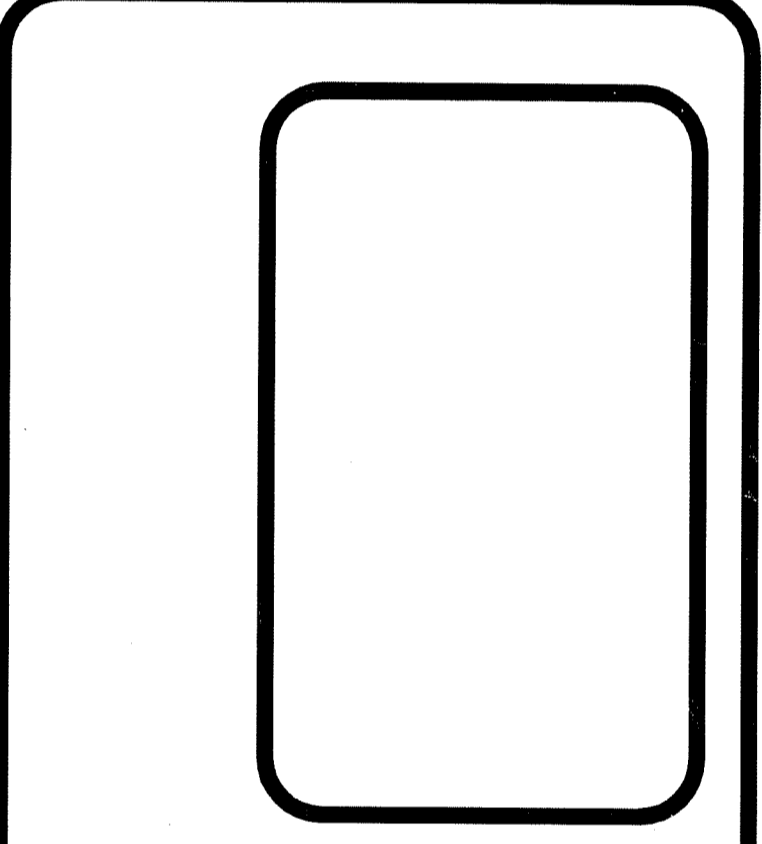
TYPICAL ROADWAY SECTION
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

CONSTRUCTION DETAILS I
LANESVILLE COMMONS PHASE II & III
MAJOR SUBDIVISION
A.P. 24 LOTS 84 & 96
SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
PREPARED FOR:
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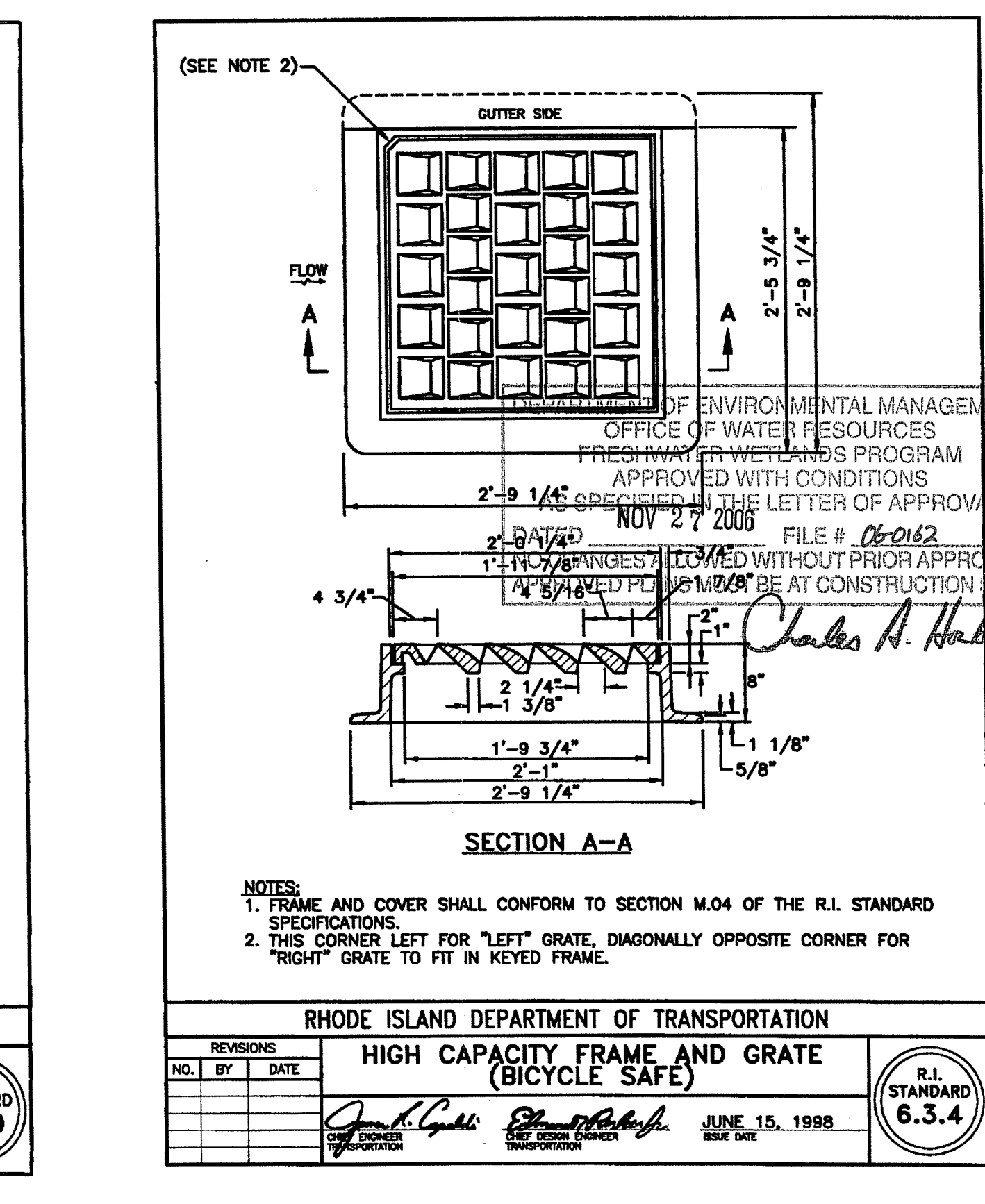
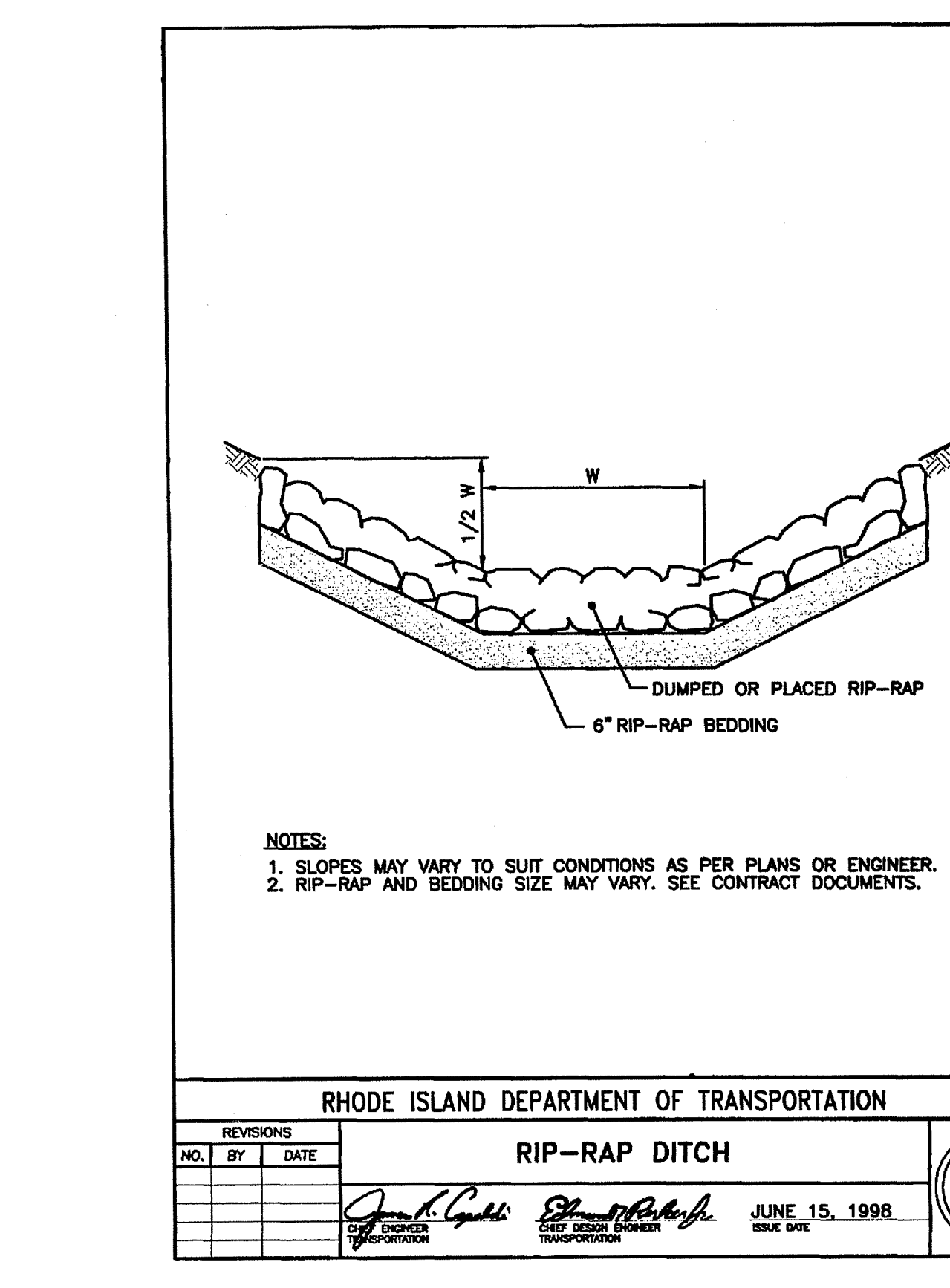
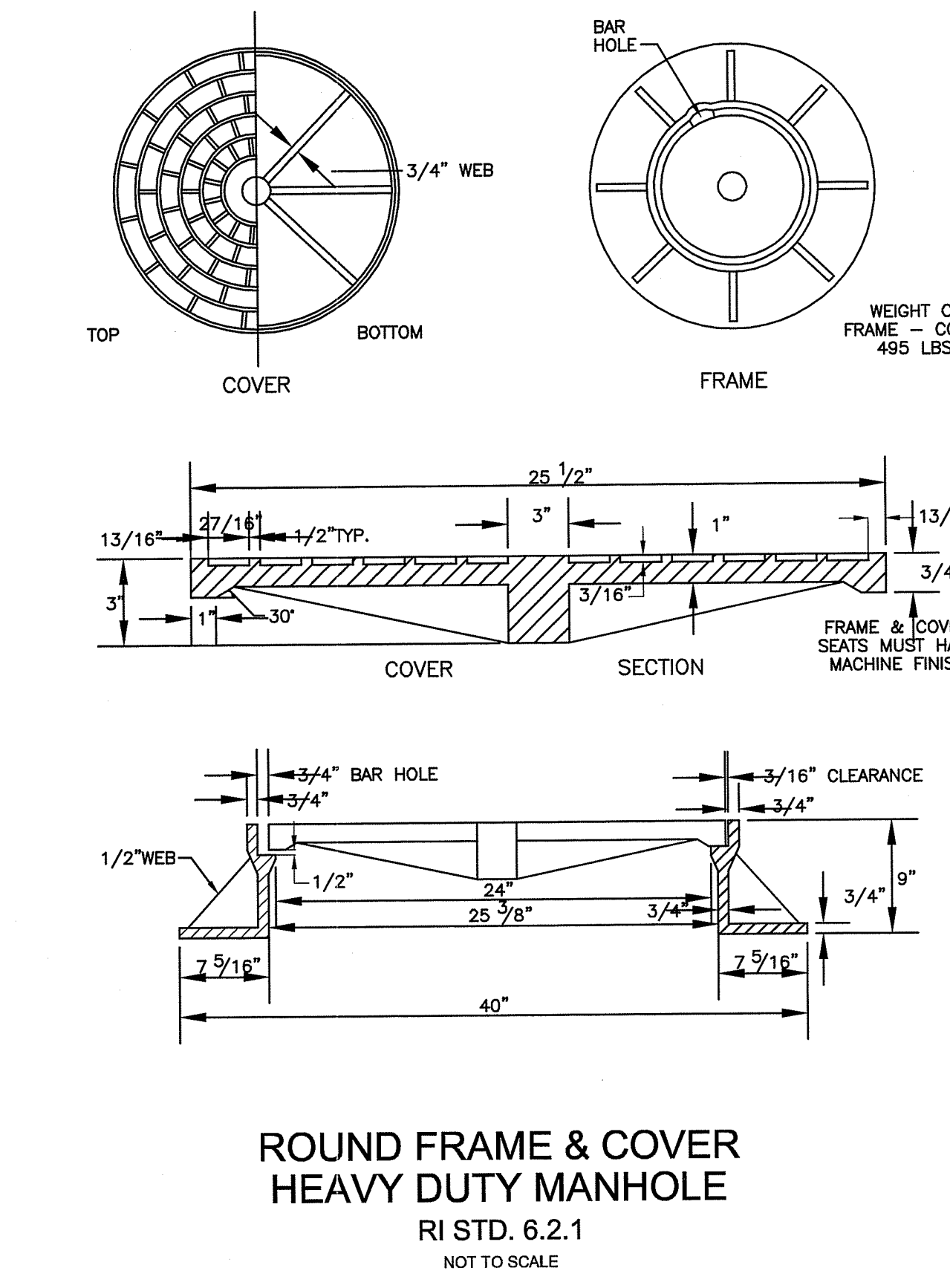
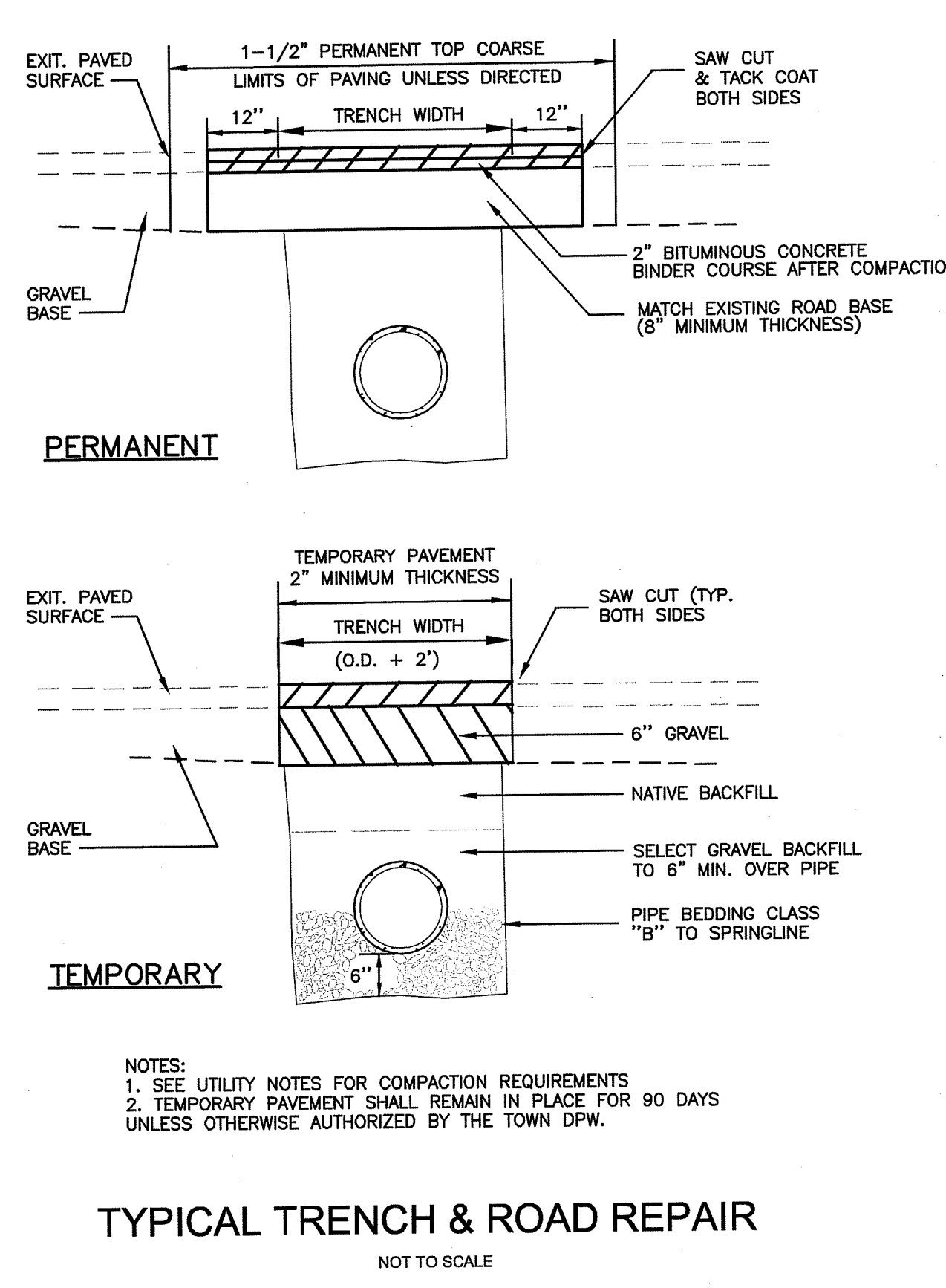
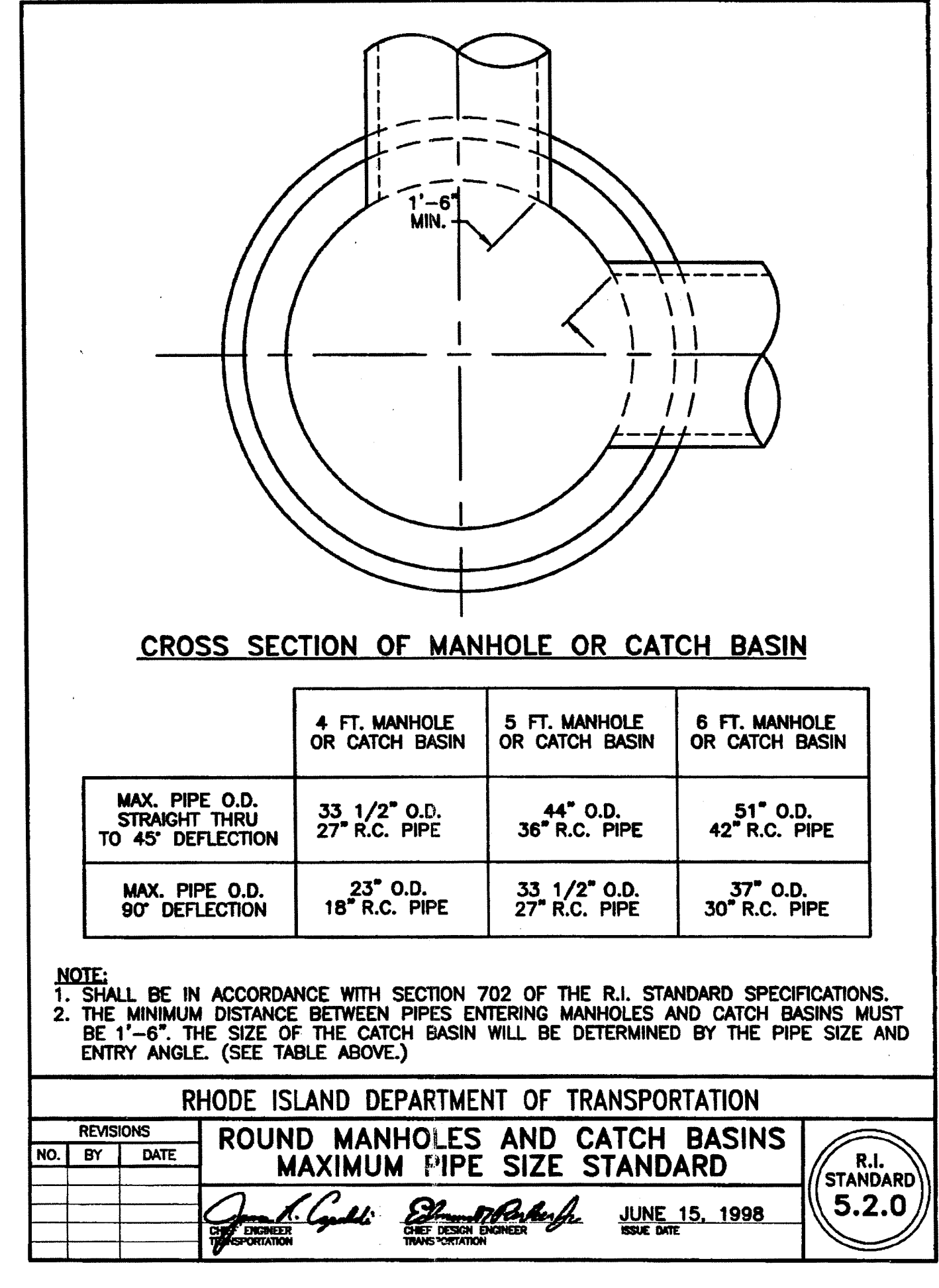
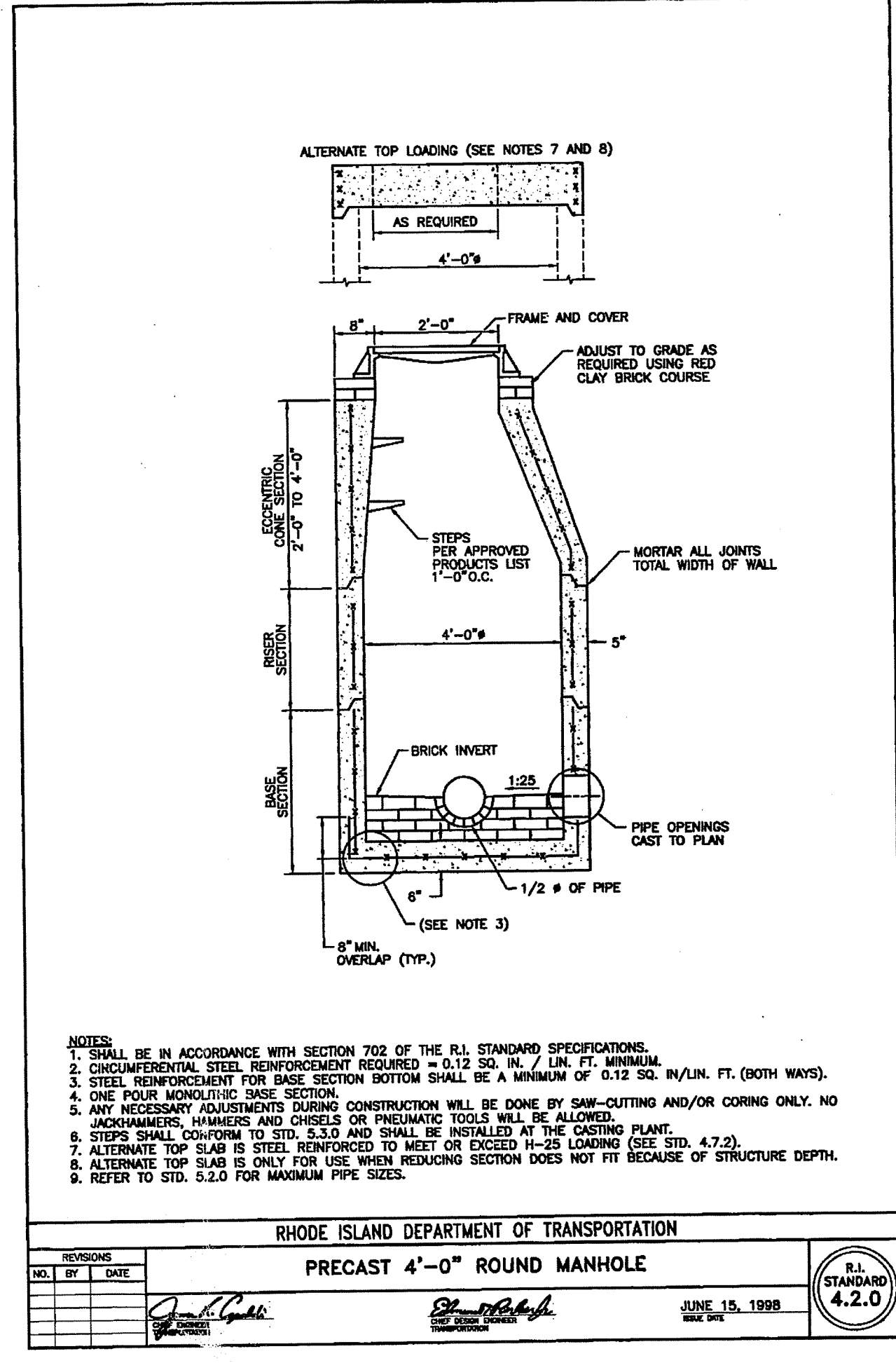
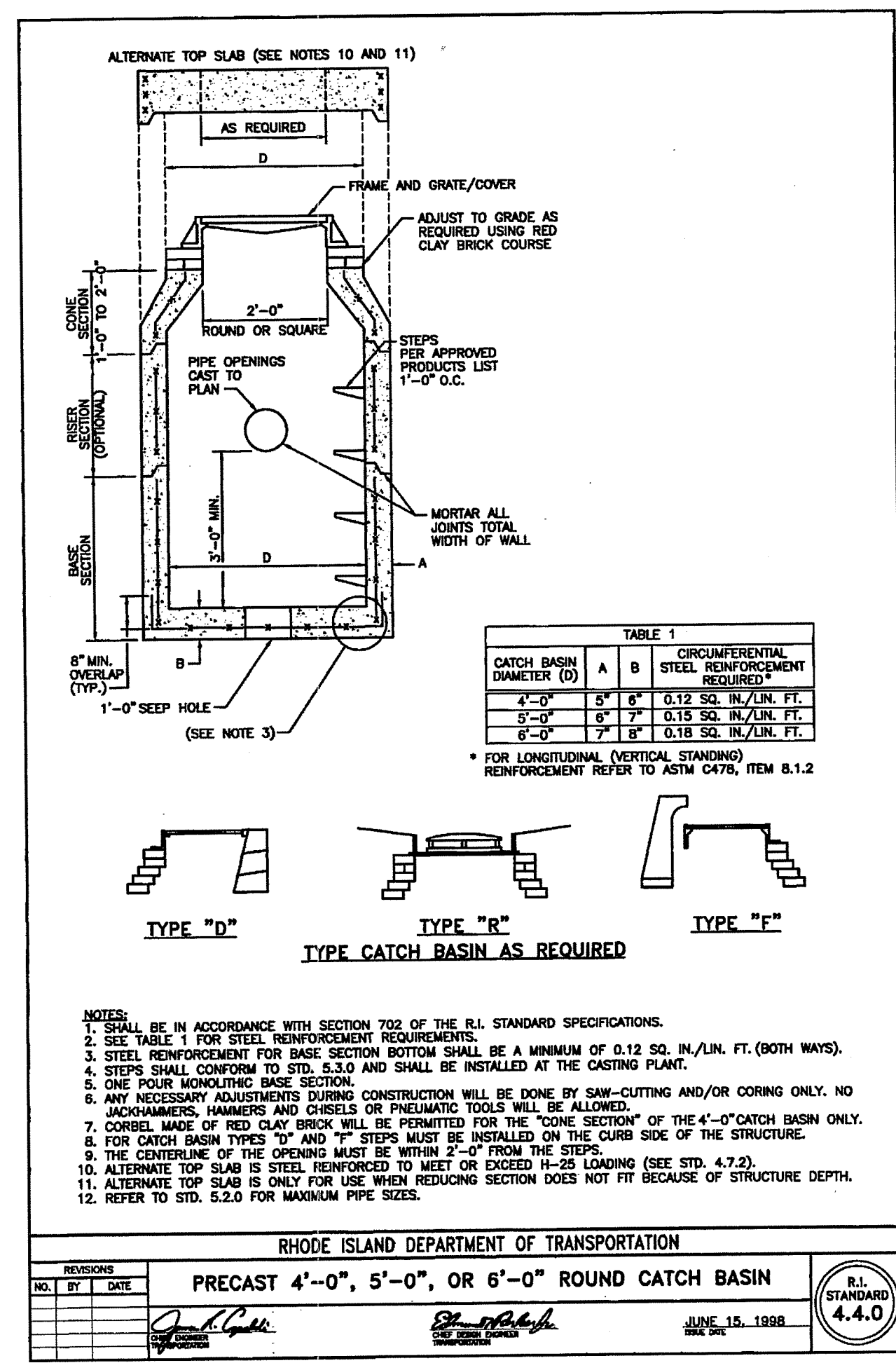
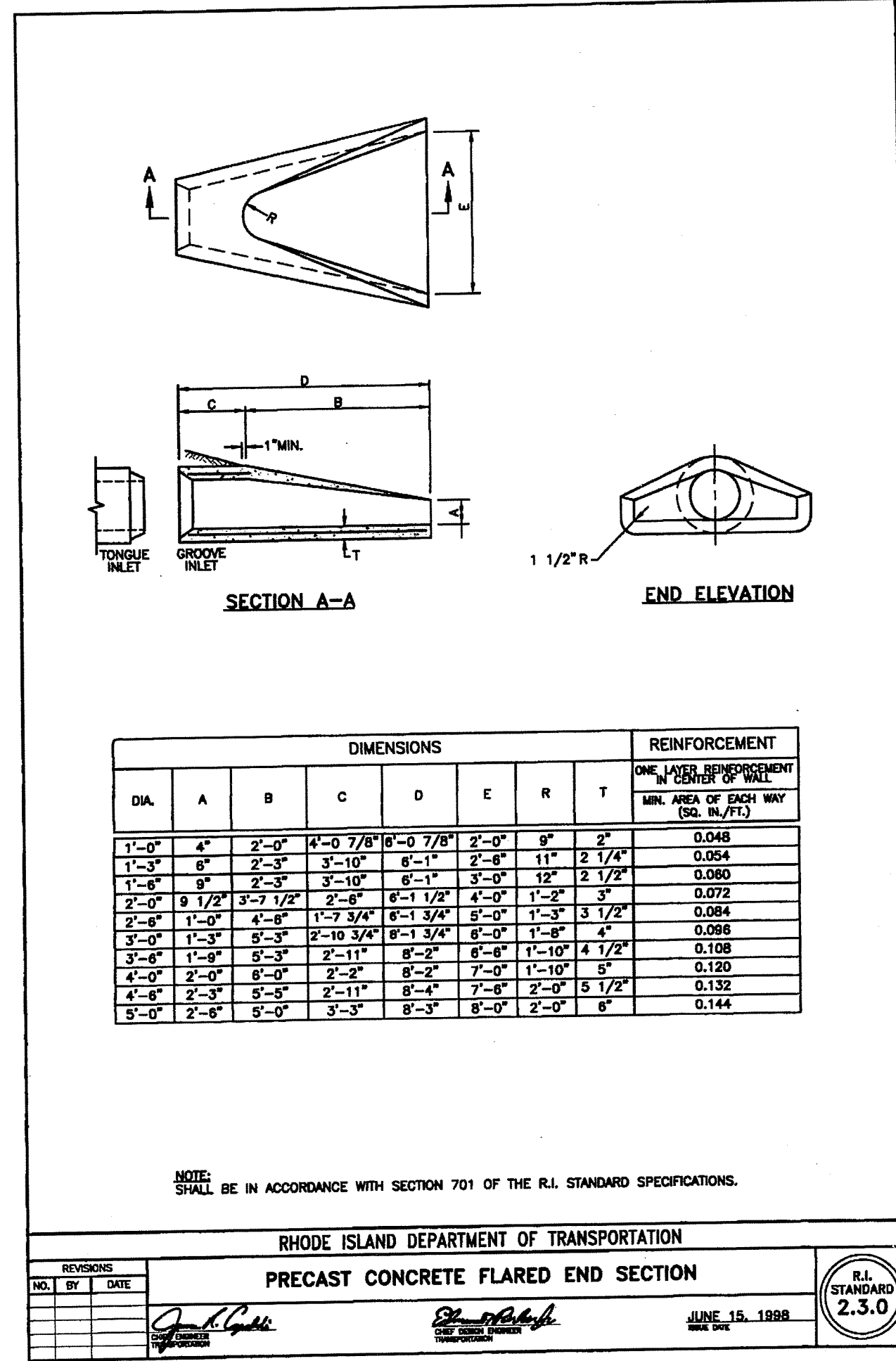
NO.	REVISION	BY	DATE



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PROVIDENCE, R.I. 02940
TEL. 401-273-6000

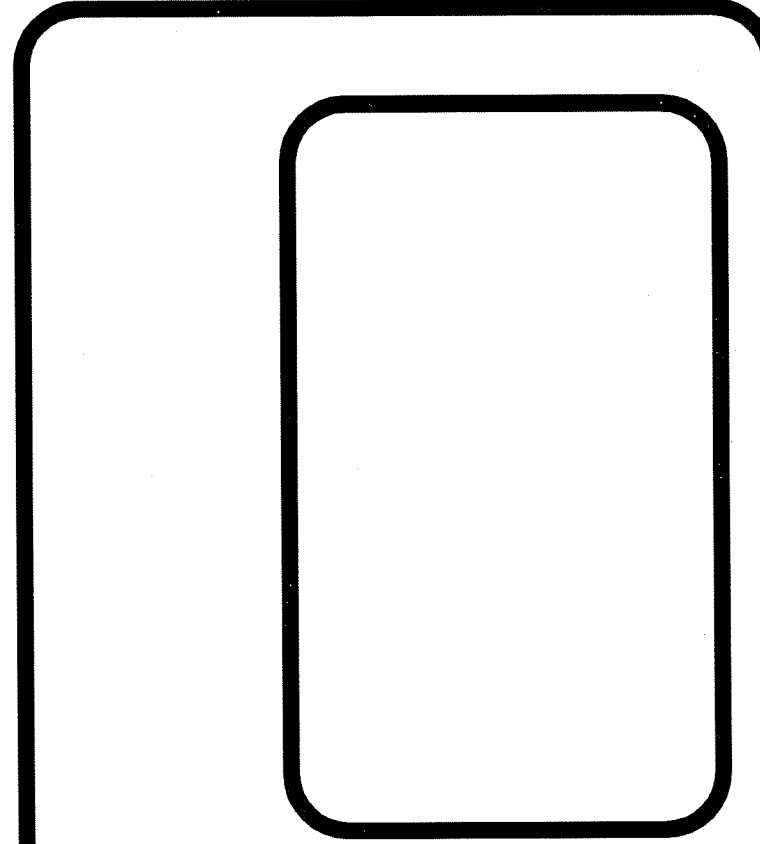
JOB NO. 5985-01
DWG. NO. 5985-01-MP
SCALE: AS SHOWN
DRAWN BY R.J.B.
CHECKED SSH
APPROVED
DATE: JANUARY 20, 2006
SEP 5 2006
C8
OF 10 SHEETS

L:\5985-01_Hicks Expansion - Cumberland, RI\dwg\01-Current\5985-01-base.dwg, 08-DETAIL-1, 3/22/2006 3:23:34 PM, GAL-STANDARD.pc3



CONSTRUCTION DETAILS 2
LANESVILLE COMMONS PHASE II & III
MAJOR SUBDIVISION
A.P. 24 LOTS 84 & 96
SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
PREPARED FOR:
MR. EDWARD & WINIFRED HICKS

NO.	REVISION	BY	DATE



TYPICAL TRENCH & ROAD REPAIR
NOT TO SCALE

ROUND FRAME & COVER
HEAVY DUTY MANHOLE
RI STD. 6.2.1
NOT TO SCALE

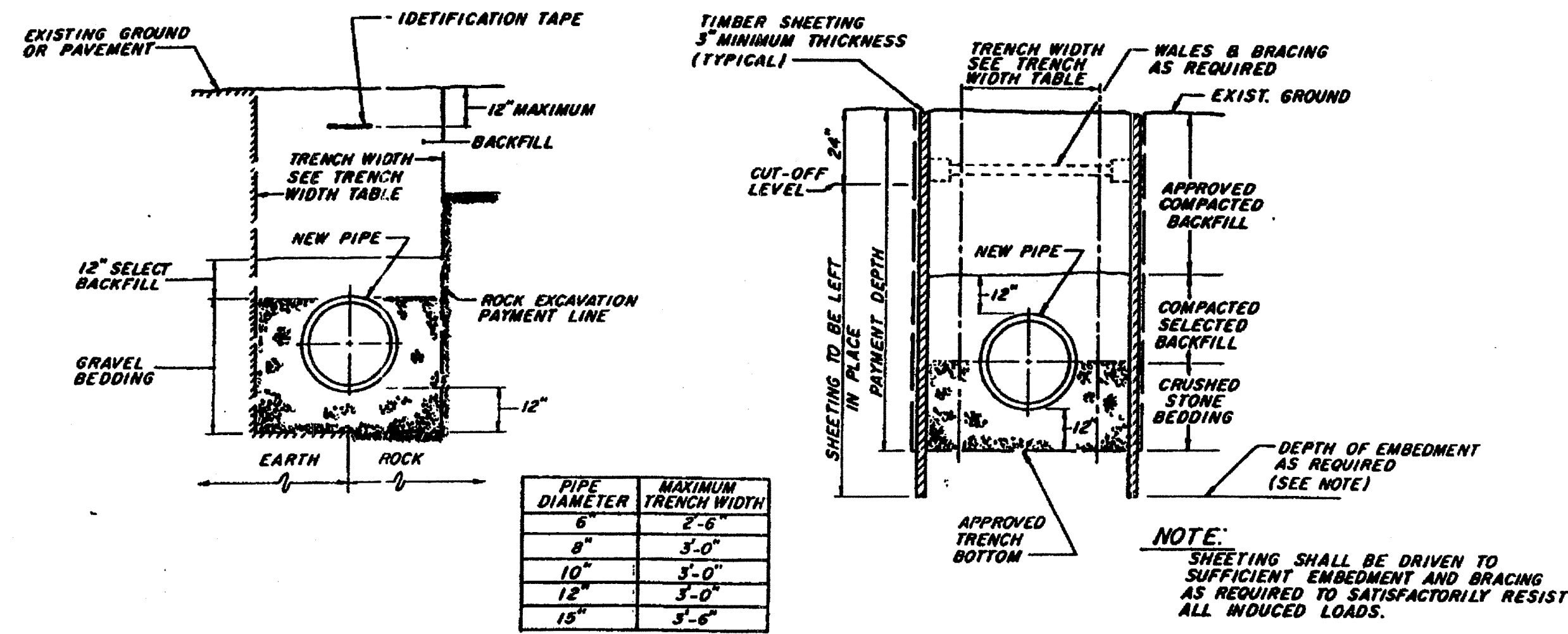
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
PRECAST 4'-0" ROUND MANHOLE
R.I. STANDARD 4.2.0
JUNE 15, 1998

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
ROUND MANHOLES AND CATCH BASINS
MAXIMUM PIPE SIZE STANDARD
R.I. STANDARD 5.2.0
JUNE 15, 1998

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS
P.O. BOX 6146
85 CORLISS STREET
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 5985-01 DRAWN BY R.J.B.
DWG. NO. 5985-01-MP CHECKED SSH
SCALE: APPROVED
DATE: JANUARY 20, 2006
AS SHOWN RECEIVE
SHEET 5 OF 5
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
C9
OF 10 SHEETS

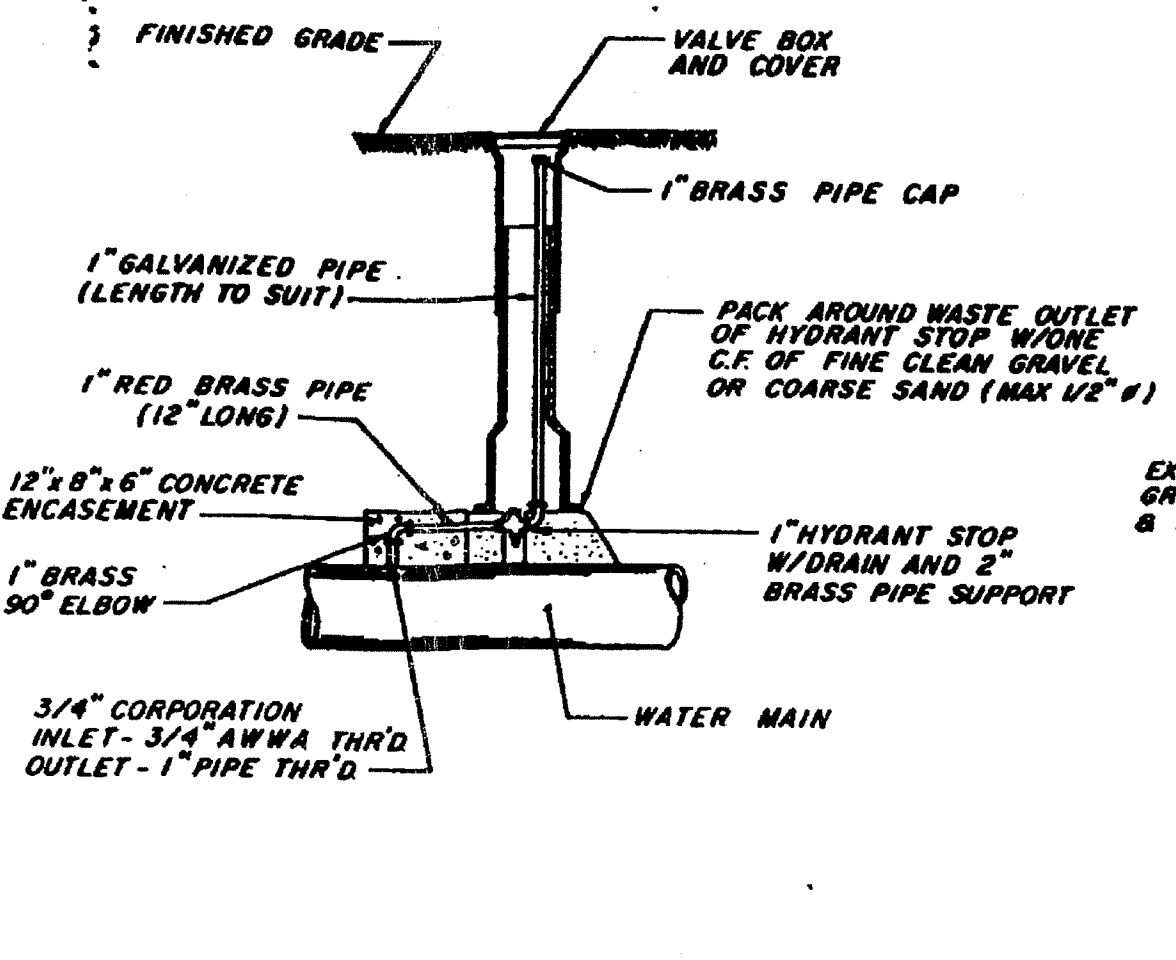
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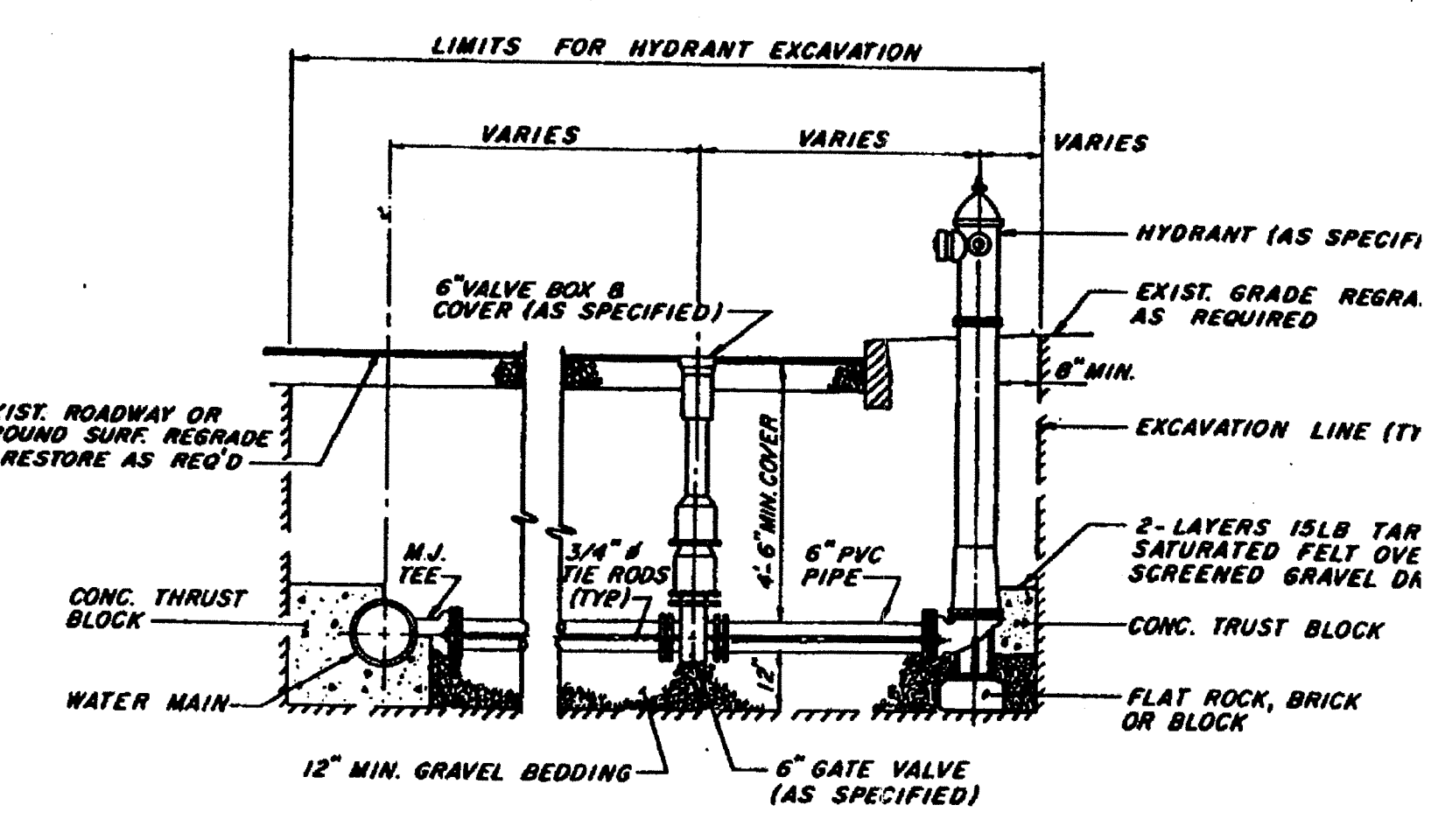
TYPICAL TRENCH DETAIL
NOT TO SCALE

TRENCH WIDTH TABLE

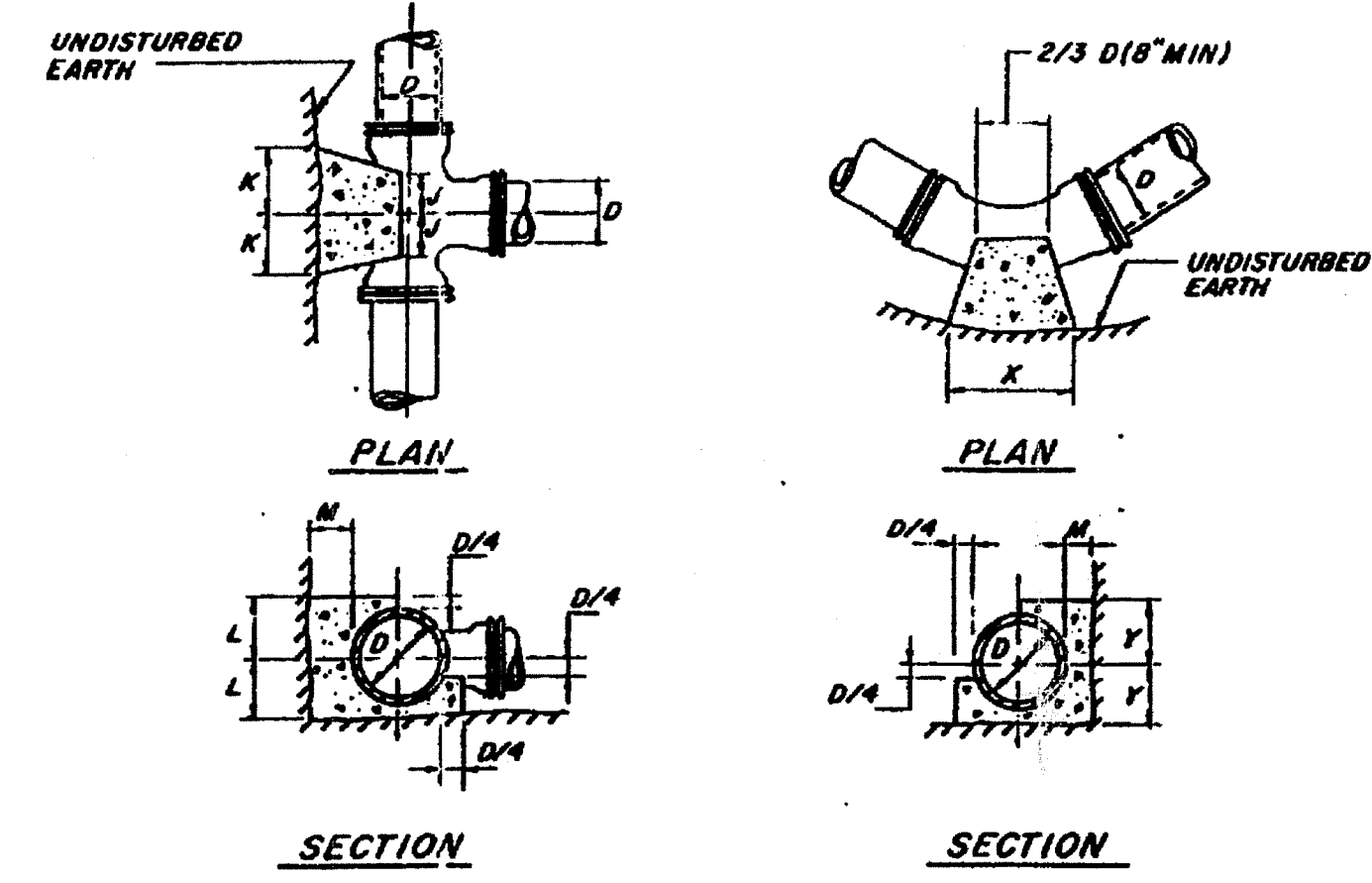
(WHEN REQUIRED)
TIMBER SHEETING
NOT TO SCALE



AIR RELEASE ASSEMBLY DETAIL
NOT TO SCALE



TYPICAL HYDRANT DETAIL
NOT TO SCALE

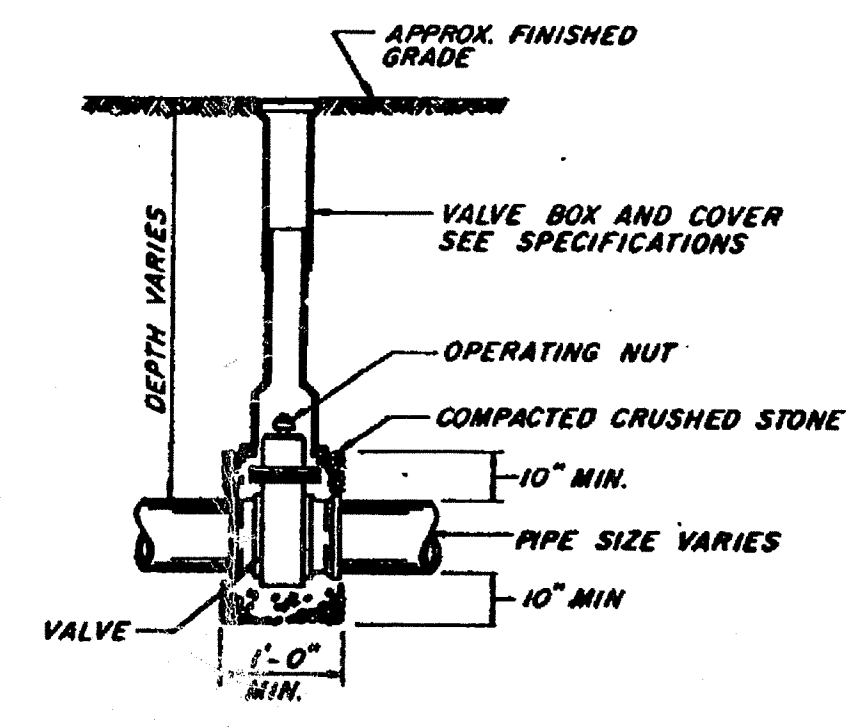


THRUST BLOCK DETAILS
NOT TO SCALE

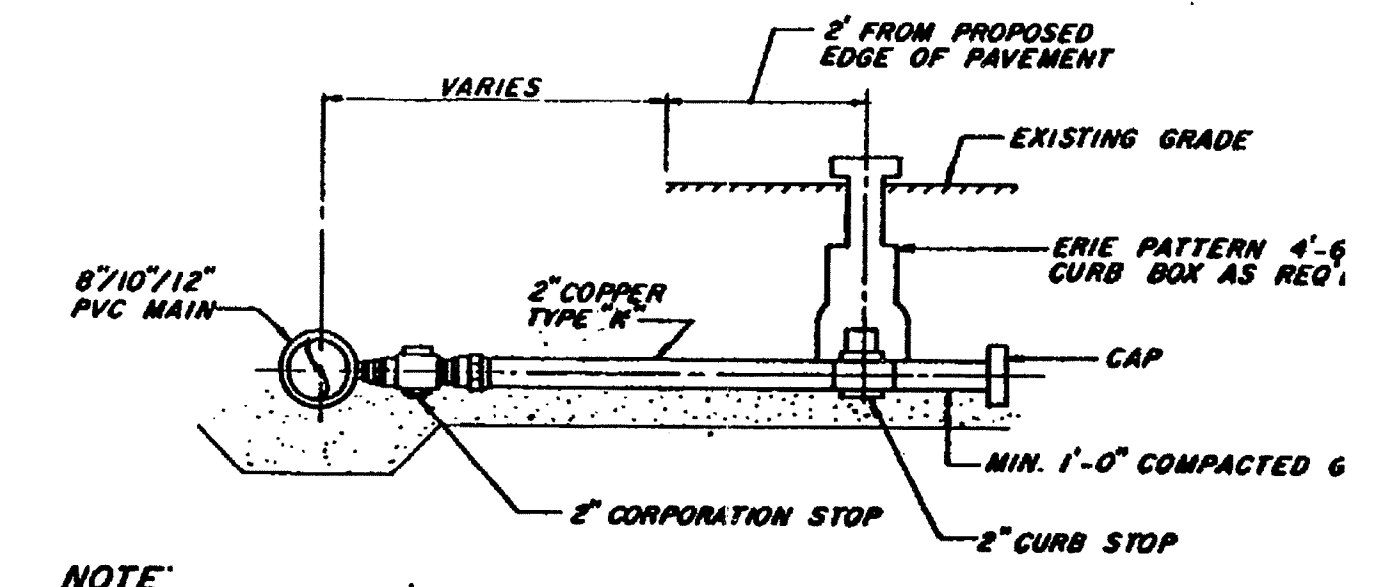
THRUST BLOCK DIMENSIONS - TEES				
SIZE	J	K	L	M
1 1/2"	6"	6"	8"	6"
2"	6"	6"	8"	6"
4"	8"	8"	10"	8"
6"	8"	8"	10"	8"
8"	10"	10"	12"	10"
10"	12"	12"	14"	12"
12"	14"	14"	16"	14"

THRUST BLOCK DIMENSIONS - BENDS				
TYPE	1/4 BEND	1/2 BEND	3/4 BEND	1 BEND
1 1/2"	8"	8"	8"	8"
2"	10"	10"	10"	10"
4"	12"	12"	12"	12"
6"	14"	14"	14"	14"
8"	16"	16"	16"	16"
10"	18"	18"	18"	18"
12"	20"	20"	20"	20"

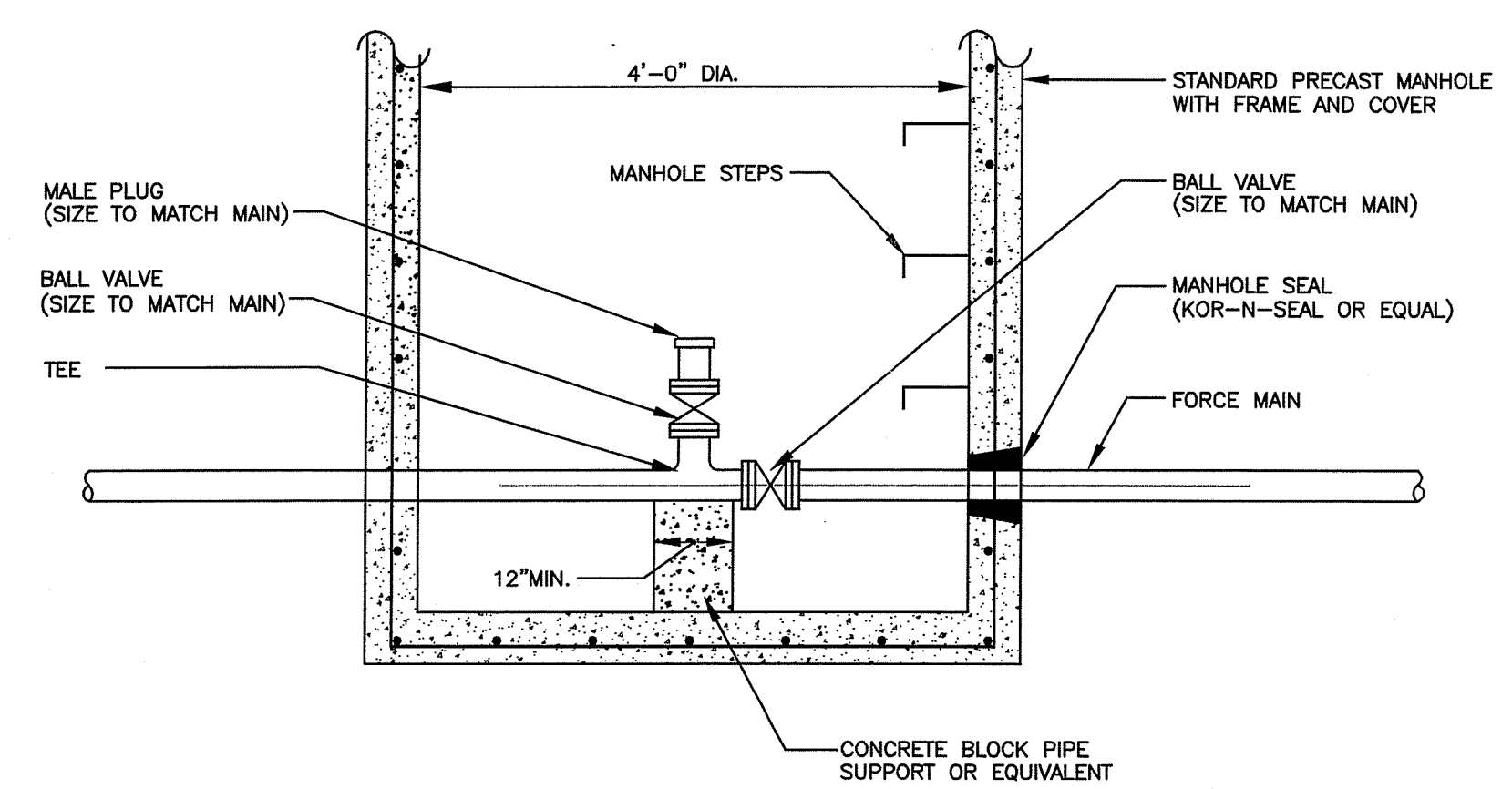
NOTES:
1. ALL CONCRETE SHALL BE 3,000 PSI AT 28 DAYS.
2. DIMENSIONS SHOWN ARE MINIMUM AND ARE BASED UPON SOIL PRESSURE OF 3,000 PSF AND STATIC WATER PRESS 100 PSI.
3. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.



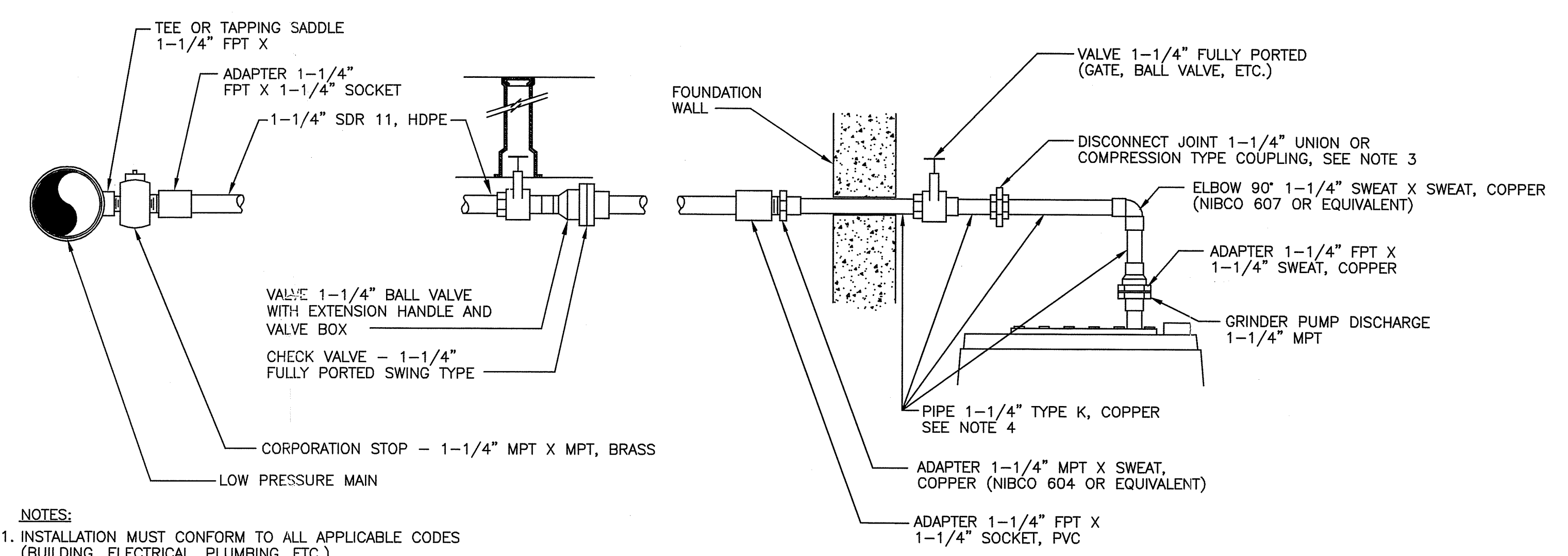
VALVE BOX DETAIL
NOT TO SCALE



TYPICAL SERVICE CONNECTION
NOT TO SCALE



LOW PRESSURE FORCE MAIN CLEANOUT MANHOLE
NOT TO SCALE



NOTES:
1. INSTALLATION MUST CONFORM TO ALL APPLICABLE CODES (BUILDING, ELECTRICAL, PLUMBING, ETC.)
2. DISCHARGE LINE TO BE BELOW FROST LINE OR PROTECTED FROM FREEZING WITH INSULATION.
3. DISCONNECT JOINT MUST BE BEYOND THE OUTSIDE OF THE GRINDER PUMP CORE AND A MINIMUM OF 3' HEAD ROOM OVER THE TANK TO ALLOW REMOVAL OF PUMP.
4. PLASTIC PIPE MAY BE USED IF PERMITTED BY LOCAL CODES.

LOW PRESSURE SEWER SERVICE CONNECTION
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 27 2006 FILE # 06-012
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

CONSTRUCTION DETAILS 3
LANESVILLE COMMONS PHASE II & III
MAJOR SUBDIVISION
A.P. 24 LOTS 84 & 96
SITUATED ON
ABBOTT RUN VALLEY ROAD
CUMBERLAND, RHODE ISLAND
PREPARED FOR:
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JOB NO. 5985-01 DRAWN BY R.J.B.
DWG. NO. 5985-01-MP CHECKED SSH
SCALE: APPROVED
AS SHOWN DATE: JANUARY 20, 2006
SHEET 5 OF 5
SEP 5 2006

ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
C10
OF 10 SHEETS

L:\1985-01 Hicks Expansion - Cumberland, RI\Wg\01-Current\5985-01-base.dwg, 10-DETAIL-3, 3/22/2006 3:25:29 PM, GAI-STANDARD.p3