

GENERAL NOTES:

- ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE TOWN ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE TOWN ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWINGS AND THE TOWN SPECIFICATIONS.
- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-800-225-4977) A MINIMUM OF 48 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND, FEDERAL GOVERNMENT, NARRAGANSETT BAY COMMISSION, AND THE TOWN OF CUMBERLAND PRIOR TO COMMENCING ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
- THE INSTALLATION OF THE SANITARY SEWER SHALL CONFORM TO THE CONSTRUCTION DETAILS AND REQUIREMENTS OF THE TOWN OF CUMBERLAND, AND THE NARRAGANSETT BAY COMMISSION. (SEE SANITARY SEWER NOTES)
- THE INSTALLATION OF THE WATER UTILITY IMPROVEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE CUMBERLAND WATER DEPARTMENT AND THE AMERICAN WATER WORKS STANDARDS.
- THE ENTIRE PROPERTY IS LOCATED WITHIN "ZONE X", AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN AS IDENTIFIED ON THE FOLLOWING MAP:
"NATIONAL FLOOD INSURANCE PROGRAM; FIRM, FLOOD INSURANCE RATE MAP; TOWN OF CUMBERLAND, RHODE ISLAND, PROVIDENCE COUNTY; PANEL 0191G; COMMUNITY PANEL NUMBER 440016-0191-G; MAP REVISED MARCH 2, 2009; FEDERAL EMERGENCY MANAGEMENT AGENCY".
- ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
- SANITARY SEWER P.V.C. PIPE FITTINGS SHALL MEET ASTM SPECIFICATION D-3034-SDR-35.
- VERTICAL DATUM: MEAN SEA LEVEL (NGVD 29).
- THE LIMITS OF JURISTRICTONAL WETLANDS HAVE BEEN VERIFIED BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT UNDER FILE NUMBER 98-0018.
- FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).

EROSION CONTROL AND SOIL STABILIZATION PROGRAM:

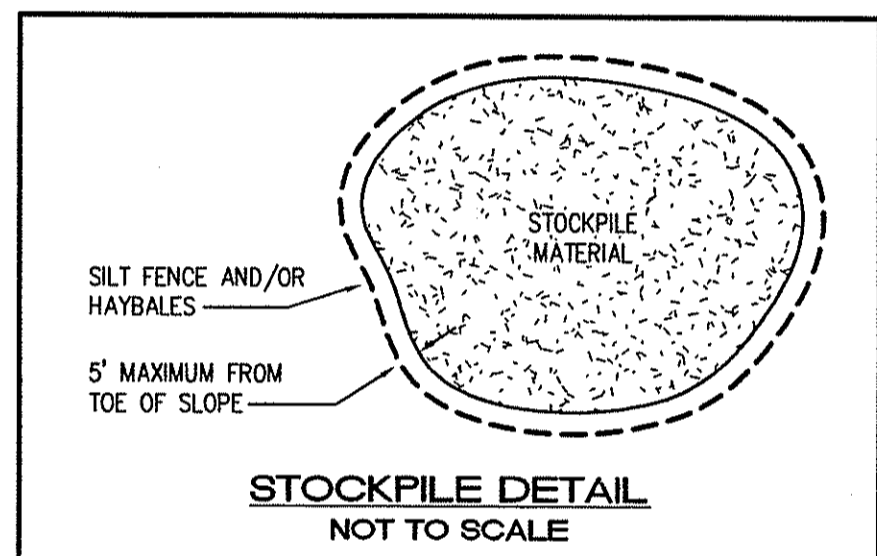
- DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS THE INACTIVE WINTER SEASONS.
- TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCLUSOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
- HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
- ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN-PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND STANDARD SPECIFICATION M.20.01.
- THE SEED MIX SHALL BE INOCULATED WITHIN 24-HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
- THE DESIGN MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDFOOT TREEFOIL	15
PERENNIAL RYEGRASS	10
APPLICATION RATE (LBS/ACRE)	100

- LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.
- THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
 - THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
 - STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
 - STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%), SHALL ALSO BE SEEDED AND/OR STABILIZED AND SHALL BE COMPLETELY ENCLOSED WITH STAKED HAY BALES AND/OR SILT FENCE (SEE DETAIL).
 - "CRIMPING" OR "TRACKING" SHALL BE USED ON BOTH STEEP AND LONG SLOPES TO TACK DOWN MULCH APPLICATIONS.
 - TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT.
 - ALL PROPOSED PLANTINGS MUST BE ACCOMPLISHED AS EARLY AS POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION, AND AT LEAST PRIOR TO ANY ON-SITE OCCUPANCY.
 - ALL PROPOSED PLANTINGS MUST BE MAINTAINED BY THE PROPERTY OWNER TO ENSURE SURVIVAL.
 - SHOULD ANY OR ALL OF THE PROPOSED PLANTS FAIL TO SURVIVE AT LEAST ONE (1) FULL GROWING SEASON FROM THE TIME THEY HAVE BEEN PLANTED, THE OWNER SHALL BE FULLY RESPONSIBLE FOR REPLACING AND MAINTAINING THE SAME PLANT SPECIES FOR ONE (1) ADDITIONAL GROWING SEASON.
 - ALL DISTURBED AREAS MUST BE SEEDED OR PLANTED WITHIN THE CONSTRUCTION SEASON.
 - TEMPORARY SEEDING MUST BE DONE WITHIN ONE (1) MONTH AFTER DISTURBANCE.
 - ALL DISTURBED AREAS MUST BE PERMANENTLY SEEDED OR PLANTED BEFORE OCTOBER 1ST, IF NOT THEY MUST BE TEMPORARILY SEEDED.

SEDIMENTATION CONTROL PROGRAM:

- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
- DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUN-OFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
- SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
- 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 STORMWATER FLOWAGE.
- ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- SEDIMENTATION TRAPS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
- EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THE SITE PRIOR TO THE START OF CONSTRUCTION AND BE PROPERLY MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED INCLUDING:
 - THE INSTALLATION OF A CONTINUOUS LINE OF STAKED HAYBALES IN ALL LOCATIONS SHOWN ON THE APPROVED SITE PLANS AND WHERE OTHERWISE NECESSARY TO PREVENT SEDIMENTS FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
 - ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER PRIOR TO THE COMPLETION OF THE PROJECT. AREAS EXPOSED FOR EXTENDED PERIODS ARE TO BE COMPLETELY COVERED WITH SPREAD HAY MULCH.
 - CATCH BASINS SHALL BE PROTECTED WITH HAYBALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. SUMPS ARE TO BE CLEANED IMMEDIATELY FOLLOWING INSTALLATION OF PERMANENT PAVEMENT.
 - OUTFALLS SHALL BE PROTECTED BY HAYBALE FILTERS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER.
 - ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
- THE LIMITS OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REMAIN TOTALLY UNDISTURBED.



SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE. THE DISTANCE SHALL BE MEASURED EDGE-TO-EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10 FOOT HORIZONTAL SEPARATION IS MAINTAINED. STRUCTURES, OTHER THAN PIPELINES OR CONDUITS, THROUGH WHICH SANITARY WASTEWATER FLOWS SUCH AS, BUT NOT LIMITED TO, MANHOLES, VALVE VAULTS, METER PITS AND PUMP STATION WET WELLS SHALL ALSO BE CONSTRUCTED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE, MEASURED EDGE-TO-EDGE.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE OWR MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER PIPELINES AND/OR STRUCTURES CLOSER TO A WATER LINE, PROVIDED THAT:

- The sewer pipeline and/or structures and water line are laid in separate trenches, or
- The sewer pipeline and/or structures and water line may be installed in the same trench with the water line placed on a bench of undisturbed earth, and
- In either case, the crown of the sewer pipeline shall be at least 18 inches below the invert of the water line.

IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:

- Encasement of the sewer pipeline in concrete (min. 6 inch thickness) or a carrier pipe for at least 10 feet either side of the area not complying with the minimum horizontal and vertical separation, or
- The design and construction of the sewer pipeline must meet the requirements applicable to water lines (any AWWA-approved material for potable water conveyance), and pressure tested in accordance with AWWA specifications, or
- In instances of conflict with sanitary wastewater structures mentioned above, relocate the water line to achieve either a 10 foot horizontal or 18 inch vertical separation.

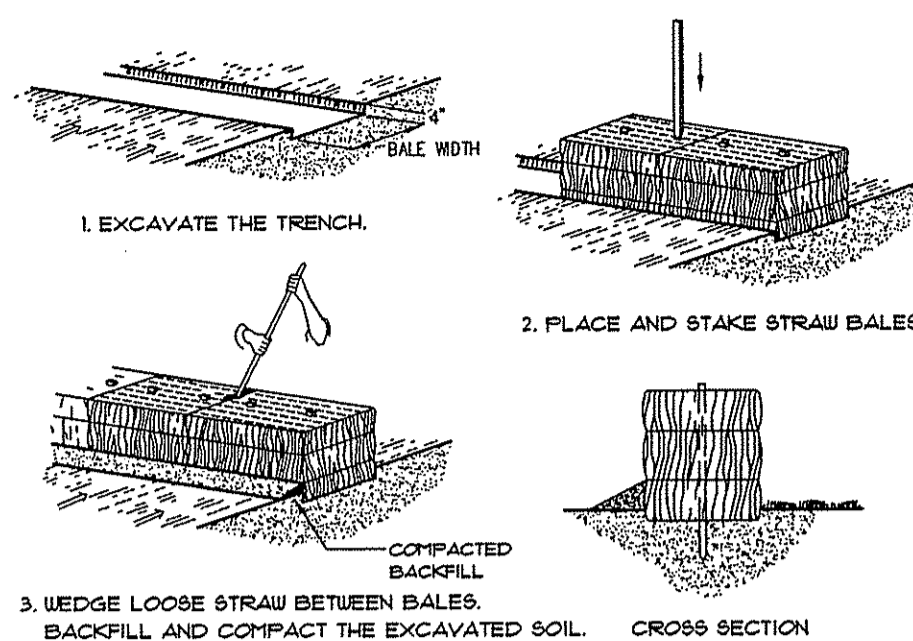
SEWERS CROSSING OVER WATER LINES SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATER LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE WATER LINE AND THE CROWN OF THE SEWER. RELOCATION OF AN EXISTING WATER LINE MAY BE NECESSARY TO ACHIEVE THIS VERTICAL SEPARATION. RELOCATED WATER LINES SHALL BE CONSTRUCTED OF AN AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE AND DESIGNED FOR THE REQUIRED WATER SERVICE PRESSURE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE SEWER. THE CROSSING SHALL BE ORANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER LINE JOINTS.

WHERE CONDITIONS PREVENT AN 18 INCH VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:

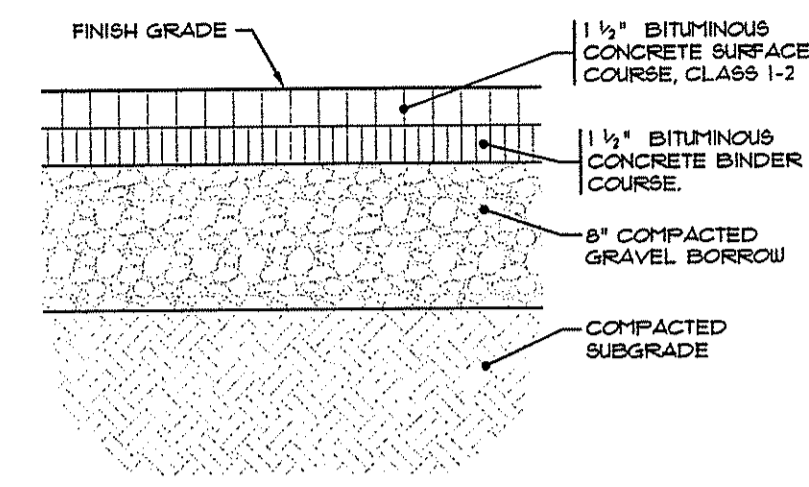
- The design and construction of the sewer must meet the requirements applicable to water lines (any AWWA-approved material for potable water conveyance) for a distance of 10 feet on each side of the crossing, measured perpendicular to the water line and pressure tested in accordance with AWWA specifications, or
- Either the water line or the sewer may be encased in concrete (min. 6 inch thickness) or a carrier pipe for a distance of 10 feet on each side of the crossing, measured perpendicular to the water line. The carrier pipe shall be designed and constructed of materials which are satisfactory to the OWR, or
- Any other methods, if supported by data from the design engineer, which ensure adequate watertightness and are satisfactory to the OWR.

Water lines shall be defined as any conduits or pipelines that convey potable water.

10/96 (rev. 5/01)

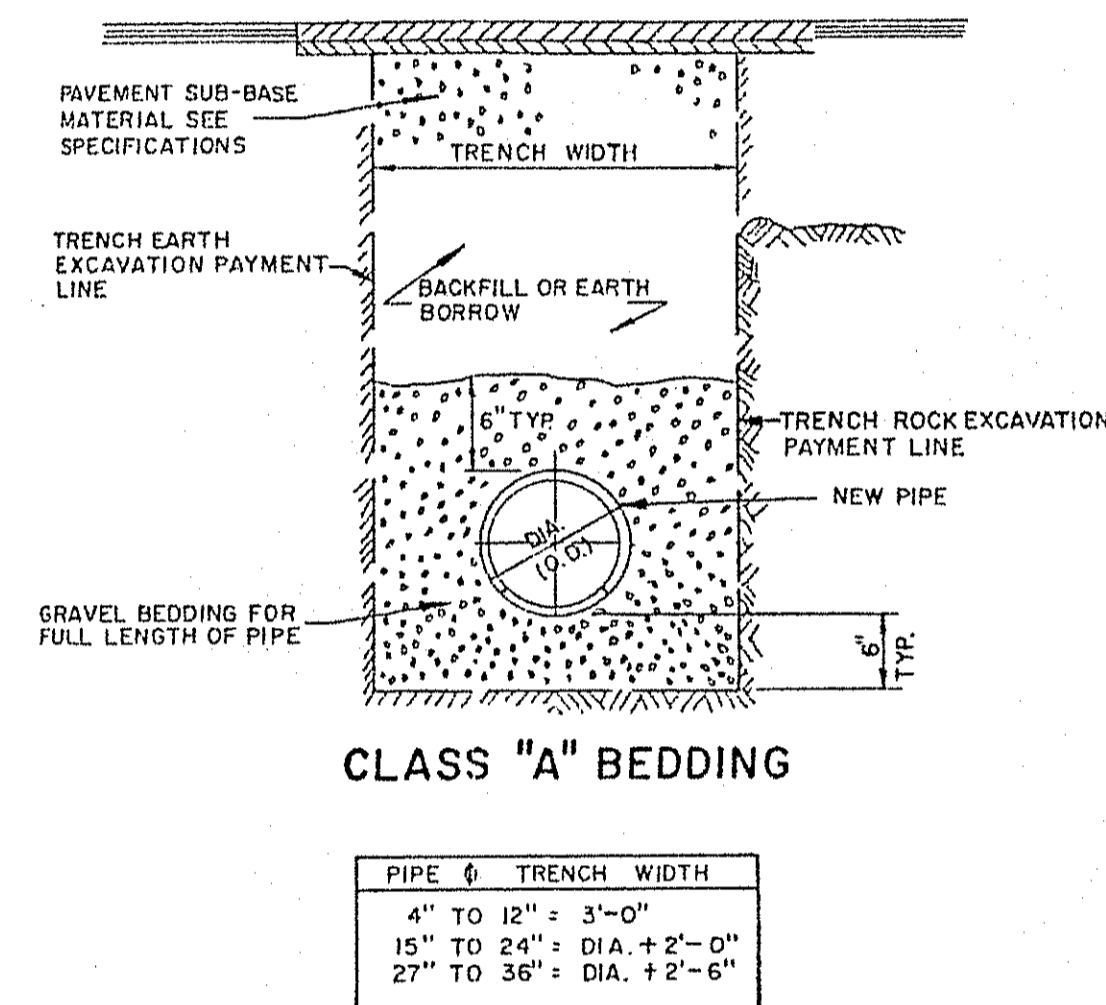


1 PLACEMENT AND CONSTRUCTION OF HAYBALE CHECK NOT TO SCALE

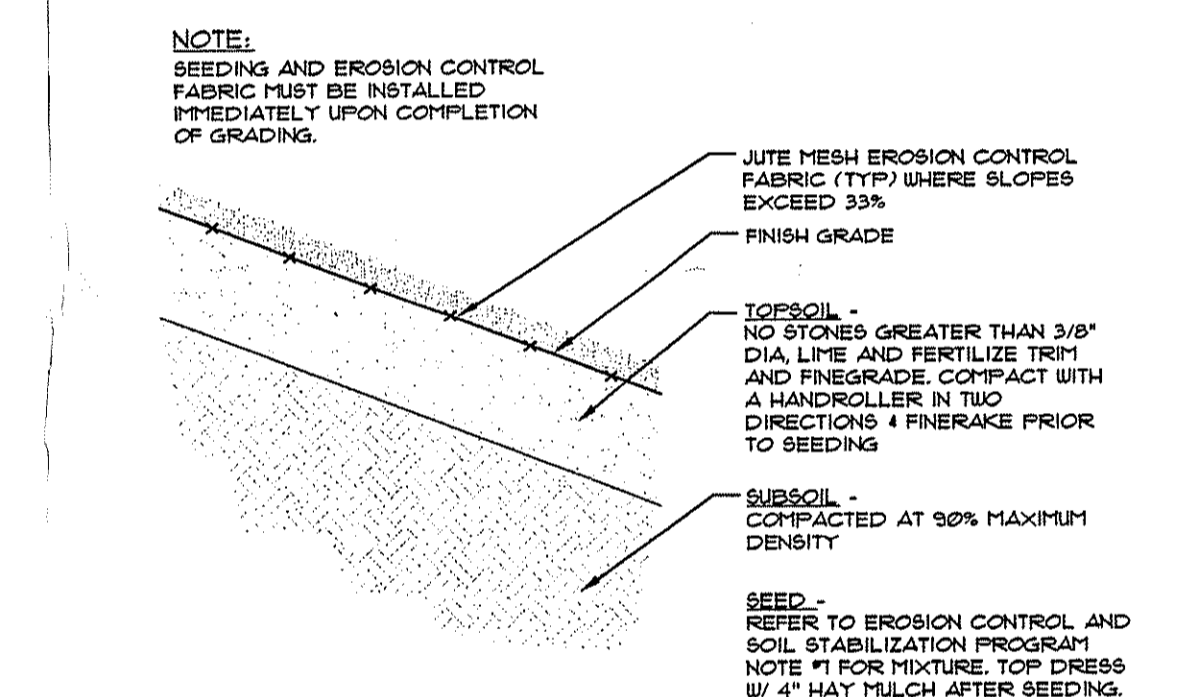


2 BITUMINOUS CONCRETE DRIVEWAY PAVEMENT NOT TO SCALE

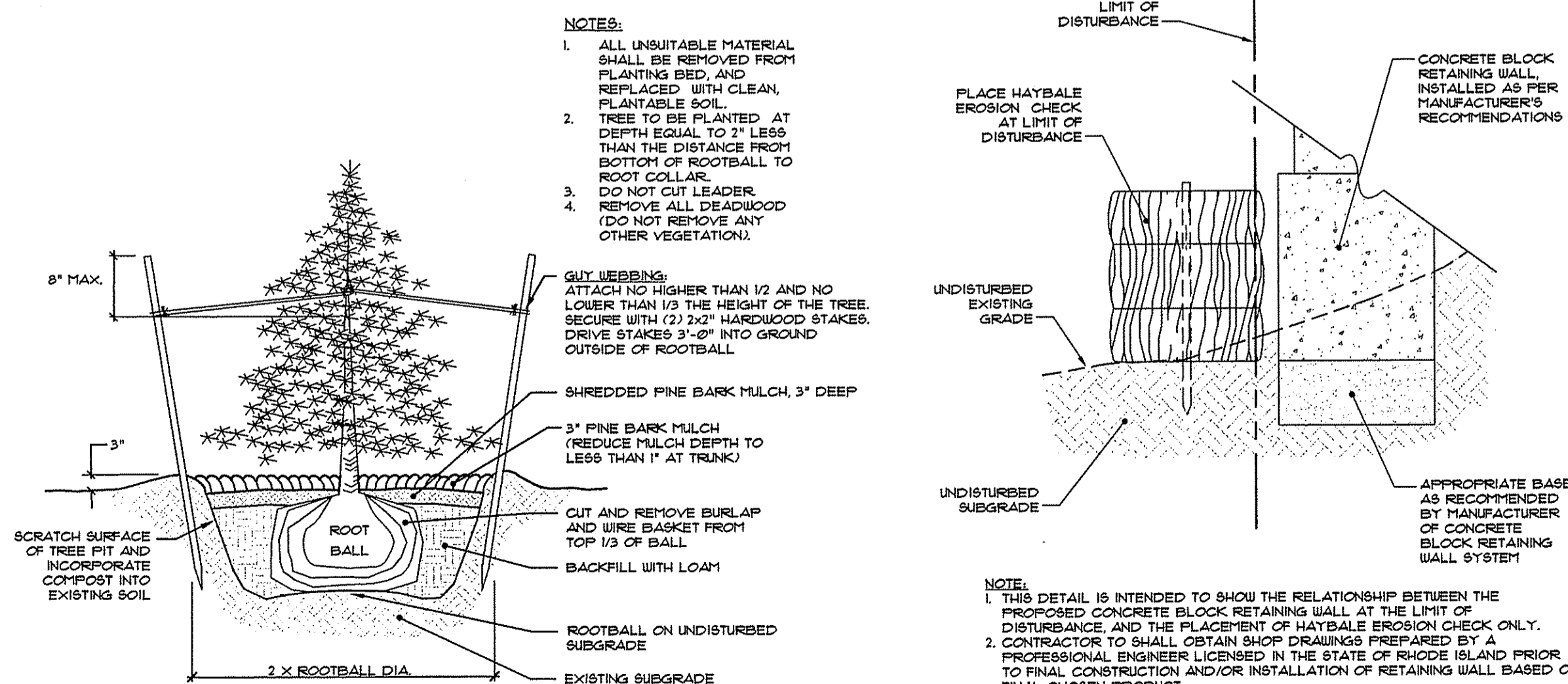
APPENDIX B
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED Jan. 5, 2010 FILE # 07-0049
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



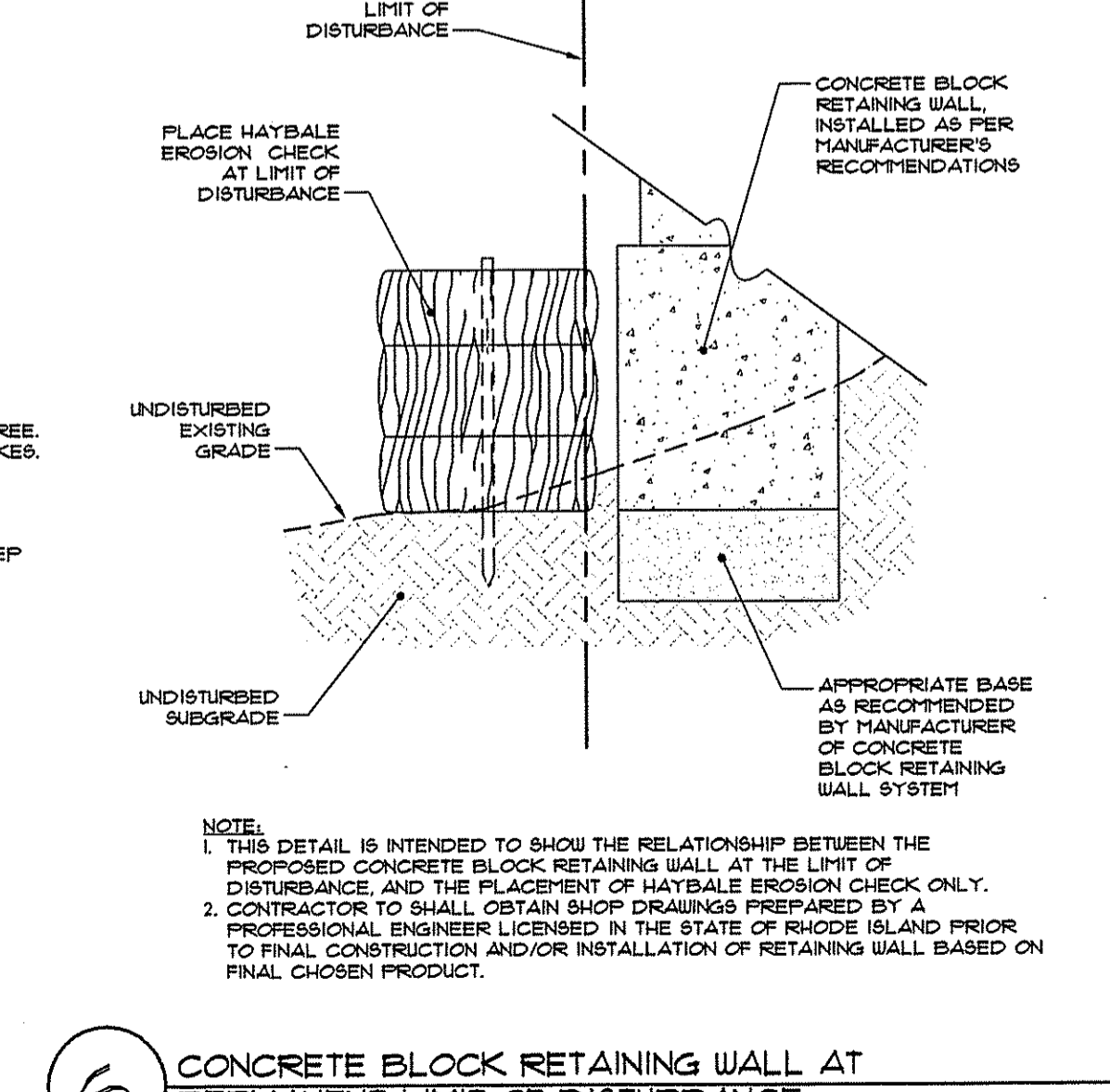
4 TYPICAL UTILITY TRENCH SECTION NOT TO SCALE



3 LOAM AND SEED (WITH JUTE MESH FABRIC AS NECESSARY) NOT TO SCALE



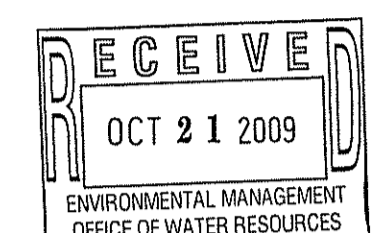
5 EVERGREEN PLANTING AND STAKING DETAIL NOT TO SCALE



6 CONCRETE BLOCK RETAINING WALL AT PERMANENT LIMIT OF DISTURBANCE NOT TO SCALE

No.	Revision	Date

REFERENCES:
"SITE PLAN", RESIDENTIAL HOUSE, ASSESSOR'S PLAT 15, LOTS 7 & 8, SUNSET AVENUE, CUMBERLAND, RHODE ISLAND, PREPARED BY: BERKELEY REALTY COMPANY, PREPARED BY: JOHN P. CATO CORPORATION, SHEETS 1 AND 2 OF 2, DATED: JANUARY, 2007 W/ REVISION THROUGH 11-9-07, SCALE: 1" = 10'.



SUNSET AVENUE RIDEM SUBMISSION

A.P. 15, LOTS 7 AND 8
SUNSET AVENUE
CUMBERLAND, RI

CIVIL ENGINEERS
JOHN P. CATO CORPORATION LAND PLANNERS
141 JAMES P. MURPHY HIGHWAY
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REGISTERED PROFESSIONAL ENGINEER
REGISTERED LANDSCAPE ARCHITECT

SITE DETAILS

PROJECT NO. 49.556	DRAWING 2 OF 2
DATE: OCTOBER 2009	DRAWING NO: 2
SCALE: AS SHOWN	CHECKED BY: GHG