

RESIDENTIAL DEVELOPMENT

81 RIVER STREET

ACTON, MA

SITE DATA

LOT AREA: 2.9± AC. (126,149± SF)
 WATER SUPPLY: MUNICIPAL
 APPROXIMATE WATER USE: 3520 GPD (28 BEDROOMS)
 SEWAGE DISPOSAL: MUNICIPAL
 APPROXIMATE SEWAGE FLOW: 3520 GPD (28 BEDROOMS)
 ZONING DISTRICT: SOUTH ACTON VILLAGE (SAV)
 OVERLAY DISTRICT: FLOODPLAIN

PARKING COMPUTATIONS

USE	FORMULA	VARIABLE	REQUIRED SPACES	PROPOSED SPACES
Residential	2 spaces per dwelling unit	9 dwellings	18	20+

NOTES:

1. See Zoning Bylaw section 6.3.1.

GENERAL NOTES

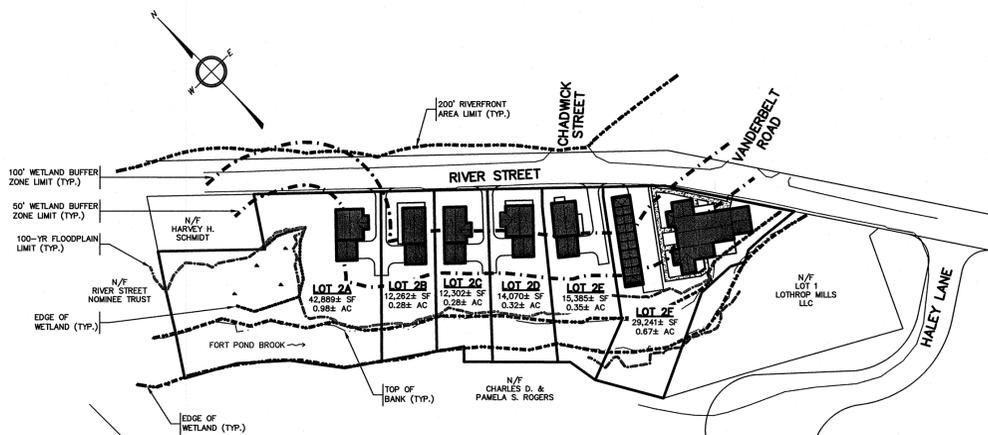
- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- BURIED UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE COMPANY SPECIFICATIONS.
- CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND SURVEYOR. LOCATIONS OF EXISTING FEATURES OR PROPOSED IMPROVEMENTS DERIVED BY SCALING DRAWINGS MAY NOT BE ACCURATE. PROPERTY LINES SHOWN HEREON ARE APPROXIMATE. SEE PLAN REFERENCE HEREON.
- SAFETY MEASURES, CONSTRUCTION METHODS, AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING UTILITY OR STRUCTURE DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON. DAMAGED UTILITY OR STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
- CONTRACTOR SHALL NOTIFY ENGINEER UPON COMMENCEMENT OF CONSTRUCTION IN ORDER TO ENSURE THAT REQUIRED INSPECTIONS ARE PERFORMED IN A TIMELY AND EFFICIENT MANNER.
- CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER UPON DISCOVERY OF ANY UNFORESEEN SURFACE OR SUBSURFACE CONDITIONS THAT MAY IMPACT SITE CONSTRUCTION.
- WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
- EROSION CONTROL MEASURES, SUCH AS SILT FENCE OR HAY BALES AS MAY BE SHOWN HEREON, SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS WITHIN BUFFER ZONE, AND SHALL SERVE AS THE LIMIT OF WORK.
- WHERE THE WORD "INSTALL" IS USED HEREIN, IT IS INTENDED TO DIRECT CONTRACTOR TO "FURNISH, INSTALL, AND PLACE IN OPERATION" THE COMPONENT REFERRED TO.
- LIMITS OF WORK SHALL BE STAKED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL STORM DRAIN PIPE TO BE SMOOTH INTERIOR HDPE PIPE, UNLESS OTHERWISE NOTED.
- WHERE SHOWN, CONSTRUCTION NOTES ARE INTENDED TO SUMMARIZE AND CLARIFY MAJOR ITEMS OF WORK. THESE NOTES SHOULD NOT BE CONSTRUED AS AN EXHAUSTIVE LISTING OF ALL WORK REQUIRED. CONTRACTOR SHOULD CONTACT ENGINEER WHEN FURTHER CLARIFICATION OF DEPICTED WORK IS DESIRED.
- CONSTRUCTION OF FIRE AND DOMESTIC WATER SUPPLY IMPROVEMENTS SHALL CONFORM TO TOWN OF ACTON REQUIREMENTS.
- WHERE DIMENSIONS INVOLVE CURB, DIMENSIONS ARE TO FACE OF CURB. WHERE SLOPED GRANITE CURB OR CAPE COD BERM SPECIFIED, FACE OF CURB IS EDGE OF FINISH PAVEMENT AT TOE OF CURB.
- NO DEBRIS, JUNK, RUBBISH OR OTHER NON-BIOGRADABLE MATERIALS, FILL CONTAINING HAZARDOUS MATERIALS OR WASTES, OR STUMPS SHALL BE BURIED ON ANY LAND ON THIS SITE, OR LEFT ON ANY LOT OR ON THE STREET RIGHT OF WAY.
- EXISTING CONDITION INFORMATION BASED ON AN ON-THE-GROUND TOPOGRAPHIC AND BOUNDARY SURVEY PERFORMED BY GOLDSMITH, PREST & RINGWALL, INC. DURING APRIL AND MAY, 2007.
- ALL CATCH BASIN SUMPS AND BIOTENTION AREAS TO BE MAINTAINED IN ACCORDANCE WITH THE STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN.
- HAULING OF EARTH TO AND FROM THE SITE SHALL BE PERFORMED ONLY BETWEEN THE HOURS OF 9AM AND 4PM ON WEEKDAYS.

REGULATORY NOTES

- CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 888.344.7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL GIVE TWENTY-FOUR (24)-HOUR NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE COMMENCING ANY WORK IN THE FIELD.
- CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- CONTRACTOR SHALL BE AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK.
- ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATION SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.



VICINITY MAP
SCALE: 1" = 1200'



PLOT PLAN
SCALE: 1" = 100'

ZONING

Parameter	Section [1]	Requirement	Remarks
Zoning District	SAV	Zoning & Village Plan	South Acton Village
Overlay District		Floodplain District [See Note 2]	Portion of Site with Zone AE with Base Elevation See GPR plan
Proposed Use	3.1	Single Family Res - Allowed Multifamily Res. - Allowed	Limit 4 Units or SP from B.O. Selectmen
Lot Area	Section 5	None	
Frontage		None	
Lot Width		None	
Yard	Section 5		
Front		10 FT	Maximum Setback 20 FT
Side		10 FT	
Rear		10 FT	
Building Height	Section 5	36 FT	20 FT Min.
Building Volume		None	
Building Coverage		None	
Floor Area Ratio		20% Max	May Be Increased to 40%
Open Space		None	
Parking	Section 6	2 per Dwelling	
Driveways and Entrances	Section 6	See Bylaw	
Wetlands Setback	Local Bylaw	Within 200 Feet of Riverbank	Wetlands on Site
MDEP Riverfront Area			On-Site
FEMA Floodplain		Within Mapped Zone AE	
ACEC			
Zone 1 Protective Radius	N/A		None on Site
Mapped Zone 2	N/A		None on Site
IWPA	N/A		None on Site

NOTES:

[1] Reference to section of Zoning Bylaw, where applicable.
 [2] From maps entitled "Flood Insurance Rate Maps."

ABBREVIATIONS:

SF=Square feet; CF=Cubic feet; FT=feet; GFA=gross floor area; AC=acres; IWPA=interim wellhead protection area; ACEC=Area of Critical Environmental Concern; FIRM=Flood Insurance Rate Map; MDEP=Massachusetts Dept of Environmental Protection

WAIVERS

SECTION	REQUIREMENT	REQUESTED	SUPPORT
Acton Wetland Protection Bylaw Rules and Regulations:			
Section 3.2(2)	50-Foot Setback of Undisturbed Natural Vegetation	No Setback of Natural Vegetation at Portions of the Site	All activity other than bioretention outfalls is within previously degraded areas.
Section 3.2(3)	75-Foot No Build Setback to the Edge of Driveways, Roadways, and Structures	No Setback from Structure to Edge of Resource Area	The existing structure to be renovated is located at the bank of the river and extends to a pier within the river's limits. Proposed structures including buildings and driveways will remain 40± feet from the river and 35± feet from the wetland.
Acton Bylaw Chapter F - Environmental Protection:			
Section F8.3(2)	50-Foot Setback of Undisturbed Natural Vegetation	No Setback of Natural Vegetation at Portions of the Site	All activity other than bioretention outfalls is within previously degraded areas.
Section F8.3(3)	75-Foot No Build Setback to the Edge of Driveways, Roadways, and Structures	No Setback from Structure to Edge of Resource Area	The existing structure to be renovated is located at the bank of the river and extends to a pier within the river's limits. Proposed structures including buildings and driveways will remain 40± feet from the river and 35± feet from the wetland.
Town of Acton Zoning Bylaw:			
Section 10.4.3.4	Sidewalks Required Along Entire Frontage of Lot 2F	Sidewalk Along Front and Side of Multi-Family Dwelling on Lot 2F	Sidewalk does not extend along entire frontage due to building and river location.
Rules and Regulations for Site Plan Special Permits:			
Section 3.9.10	Separate Landscaping Plan	No Separate Landscaping Plan in Plan Set	Existing and proposed features shown on sheets 2.1, 3.1 and 4.1. Planting details and specifications shown on sheets 6.1 and 6.2. Minimal landscaping proposed on-site.

COVERAGE COMPUTATIONS

	Lot 2A	Lot 2B	Lot 2C	Lot 2D	Lot 2E	Lot 2F	Total
Proposed Lot Area	42,889 SF	12,262 SF	12,302 SF	14,070 SF	15,385 SF	29,241 SF	126,149 SF
Impervious Area							
Existing Buildings							12,000 SF
Proposed Buildings	1,824 SF	2,112 SF	1,764 SF	2,016 SF	1,912 SF	7,643 SF	17,271 SF
Existing Other Impervious [1]							56,000 SF
Proposed Other Impervious [1]	1,136 SF	1,132 SF	1,132 SF	1,136 SF	1,828 SF	6,416 SF	12,580 SF
Net Impervious Reduction							38,149 SF
Developable Lot Area	20,824 SF	9,851 SF	9,900 SF	11,506 SF	13,041 SF	23,425 SF	88,547 SF
Net Floor Area	3,500± SF [2]	7,520± SF	25,020± SF				
Floor Area Ratio	0.17±	0.36±	0.35±	0.30±	0.27±	0.32±	0.28±

Notes:

[1] Existing and proposed other impervious areas include all impervious areas on-site other than buildings.
 [2] Architectural layout and interior floor plans for single family dwellings to be determined.

SHEET INDEX

- C1.1 TITLE SHEET
- C2.1 EXISTING CONDITIONS & DEMOLITION PLAN
- C3.1 SITE LAYOUT & UTILITIES PLAN
- C4.1 GRADING, DRAINAGE & PAVING PLAN
- C5.1 EROSION & SEDIMENT CONTROL PLAN
- C6.1 CONSTRUCTION DETAILS
- C6.2 CONSTRUCTION DETAILS

PLAN REFERENCES

1. "PLAN OF LAND IN ACTON, MASS AT 81 RIVER STREET" FOR LOTHROP MILL, LLC BY GOLDSMITH, PREST & RINGWALL, INC. DATED NOVEMBER 21, 2007.

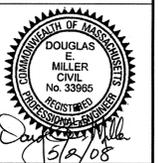
ASSESSORS REFERENCE

ASSESSORS MAP H-3, PARCEL 138, LOT 2, 2.9± ACRES

OWNER PER ASSESSOR RECORD:
 LOTHROP MILL, LLC
 544 MASSACHUSETTS AVENUE
 ACTON, MA 01720

DRAWING ISSUED FOR:

- CONCEPT CONSTRUCTION
 PERMIT CONSTRUCTION RECORD



THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

GPR Engineering Solutions
for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
 39 MAIN STREET, SUITE 301, AYER, MA 01432
 CIVIL & STRUCTURAL ENGINEERING • LAND SURVEYING & LAND PLANNING
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RESIDENTIAL DEVELOPMENT

TITLE SHEET

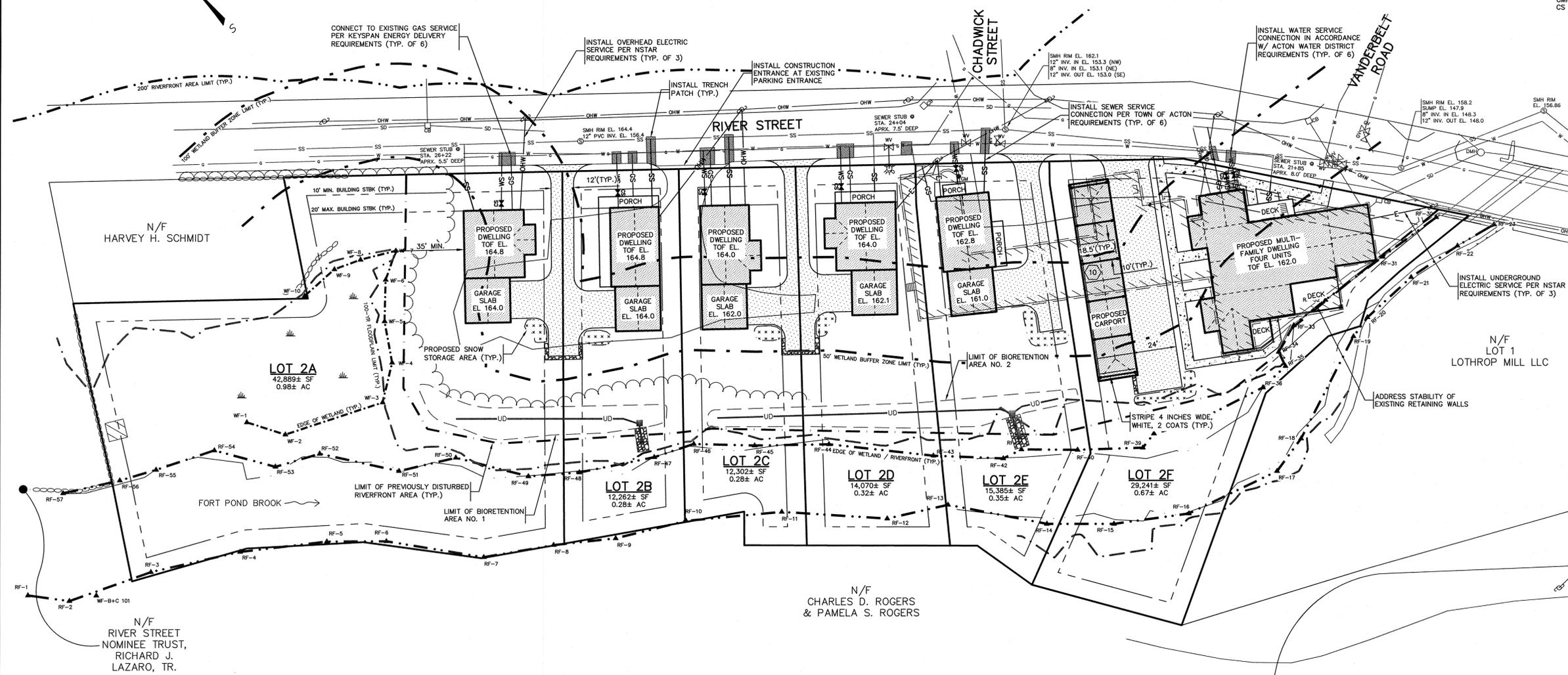
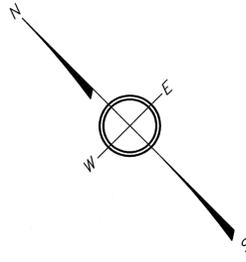
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DES. BY: MKB DATE: MAY 2008 JOB 071033A C1.1
 CHK. BY: MES

EXISTING		PROPOSED	
100.0	ELEVATION CONTOUR	100.0	SPOT GRADE
---	PROPERTY LINE	---	BUILDING ENVELOPE
---	10-YR FLOODPLAIN LIMIT	---	100-YR FLOODPLAIN LIMIT
---	WETLAND/RIVERFRONT EDGE	---	25' NO-DISTURBANCE ZONE LIMIT
---	100' WETLAND BUFFER ZONE LIMIT	---	SHORELINE
---	INTERMITTENT STREAM/DITCH	---	200' RIVERFRONT ZONE LIMIT
---	EDGE OF PAVEMENT	---	GRAVEL/DIRT ROAD
---	FENCE	---	STONE WALL
---	WATER MAIN	---	WATER SERVICE
---	FIRE SERVICE	---	GRAVITY SEWER LINE
---	GAS LINE	---	BURIED POWER LINE
---	UNDERDRAIN	---	STORM DRAIN
---	CATCH BASIN	---	DRAIN MANHOLE
---	HAYBALE BARRIER	---	SILT FENCE BARRIER
---	RETAINING WALL	---	DEEP SOIL OBSERVATION HOLE
---	PERCOLATION TEST	---	SOIL BORING
---	GROUNDWATER MONITORING WELL	---	WELL
---	ELEVATION BENCHMARK	---	SURFACE RUNOFF DIRECTION
---	TRAFFIC FLOW DIRECTION	---	WATER SHUT-OFF VALVE

ABBREVIATIONS			
EOP	EDGE OF PAVEMENT	CC	CONCRETE CURB
TW	TOP OF WALL	STCK	STOCKADE FENCE
FG	FINISH GRADE	RF	RIVERFRONT FLAG
CB	CATCH BASIN	WF	WETLAND FLAG
SMH	SEWER MANHOLE	STBK	SETBACK
DMH	DRAIN MANHOLE	TOF	TOP OF FOUNDATION
CLF	CHAINLINK FENCE	N/F	NOW OR FORMERLY
INV	INVERT	PVC	POLYVINYL CHLORIDE
EL	ELEVATION	DH	DRILL HOLE
CMP	CORRUGATED METAL PIPE	IP	IRON PIPE
CS	CURB STOP	FIV	POST INDICATOR VALVE



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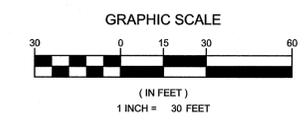
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SITE LAYOUT & UTILITIES PLAN

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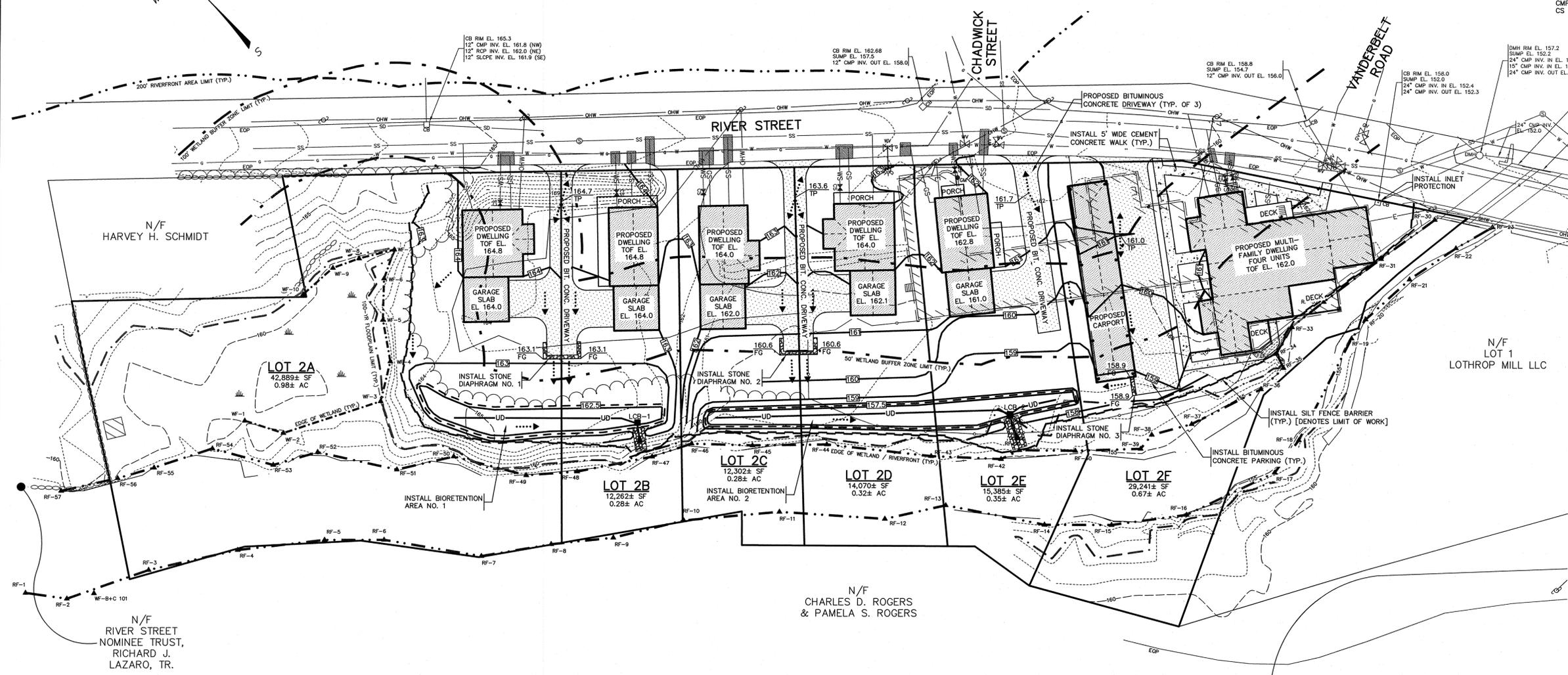
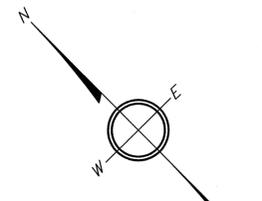


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EXISTING		PROPOSED	
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---	SILT FENCE BARRIER	---	SILT FENCE BARRIER
---	RETAINING WALL	---	RETAINING WALL
---	199-1	---	199-1
---	199-A	---	199-A
---	SBT	---	SBT
---	GM1	---	GM1
---	WELL	---	WELL
---	ELEVATION BENCHMARK	---	ELEVATION BENCHMARK
---	SURFACE RUNOFF DIRECTION	---	SURFACE RUNOFF DIRECTION
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EL	ELEVATION	DH	DRILL HOLE
CMP	CORRUGATED METAL PIPE	IP	IRON PIPE
CS	CURB STOP	PIV	POST INDICATOR VALVE



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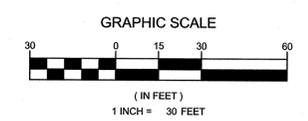
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CHK. BY: MES			

EROSION AND SEDIMENT CONTROL REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, HAY BALE AND SILT FENCE BARRIERS, RIPRAP, DIVERSION CHANNELS AND BERMS, CHECK DAMS, STRATEGICALLY LOCATED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF EROSION PRODUCTS (E.G. SOIL, MULCH, SOD) OFF SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, OR INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.
- 1. REFER TO DRAWINGS FOR LOCATION AND DETAILS OF CONTROL MEASURES REQUIRED TO COMMENCE WORK. THESE CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
- 2. DEVISE AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
- 3. DEVISE AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST EFFECTIVE MANNER.
- 4. DEVISE, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.
- 5. ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.

1.02 SUBMITTALS

- A. SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS AS INDICATED ON THE DRAWINGS.

1.03 QUALITY ASSURANCE

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, BOARD OF SELECTMEN, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY. WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. HAY BALES: DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE, APPROXIMATE SIZE EACH BALE 42" X 16" X 16".
- B. SILT FENCE: NON-WOVEN, UV-RESISTANT, POLYPROPYLENE FABRIC, FLOW RATED AT 10 GPM/SF MINIMUM, GRAB TENSILE RATED AT 124 POUNDS MINIMUM, WITH INTEGRAL STAKE LOOPS, AND HARDWOOD STAKES: USE NO. 2130 BY AMOCO FABRICS & FIBERS, OR APPROVED EQUAL.
- C. MULCH: ORGANICS INCLUDING HAY, PROCESSED PINE // HEMLOCK TWIGS AND NEEDLES.
- D. SEED MIXES: PERENNIAL RYEGRASS, KENTUCKY BLUEGRASS, AND / OR FINE FESCUE, DISEASE RESISTANT. NON-MAINTAINED AREA OPTION - ANNUAL RYEGRASS COMBINED WITH MEDIUM RED CLOVER.
- E. BIORETENTION AREA SEED MIX: NATIVE NEW ENGLAND MEADOW MIX AND SUPPLEMENTAL NATIVE PLANTINGS PER OXBOW ASSOCIATES.
- F. ROCK RIPRAP: SOUND, ANGULAR, 6-INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TAILINGS.
- G. CRUSHED STONE: SOUND, ANGULAR, 2-INCH MINUS PROCESSED CRUSHED STONE

PART 3 - EXECUTION

3.01 THROUGHOUT CONSTRUCTION

- A. DEVISE WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVISE, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.
- B. MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.
- C. MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.
- D. INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT, BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.
- E. LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24-HOUR PERIOD.
- F. INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE-DISTURBANCE.
- G. WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVISE, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.
- H. WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.
- I. PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF SITE.
- J. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS.

3.02 SITE PREPARATION AND ACCESS

- A. WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.
- B. INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.
- C. LIMIT VEHICULAR TRAFFIC TO AND FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENT.

3.03 CLEARING, GRUBBING, AND STRIPPING

- A. SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE, DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.
- B. MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE.
- C. LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.
- D. PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.
- E. PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES. PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

3.04 EXCAVATION FOR BUILDING FOUNDATIONS AND UTILITIES

- A. DEVISE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.
- B. ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.
- C. IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVISE AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.
- D. STOCKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED RUNOFF.
- E. BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

3.05 SITE GRADING

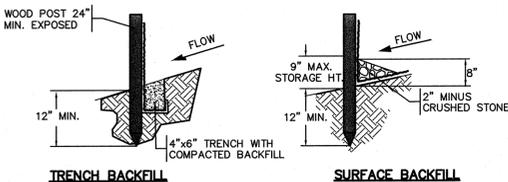
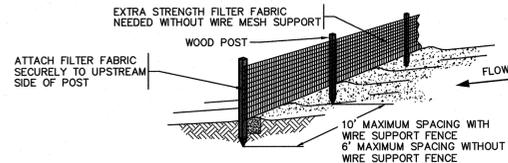
- A. WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE EROSION.
- B. MONITOR SEDIMENT VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS. IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY, REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENT BEFORE BRINGING SITE TO FINAL SUBGRADE.

3.06 STORMWATER MANAGEMENT SYSTEM

- A. THE STORMWATER MANAGEMENT SYSTEM INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, ALL PERMANENT DETENTION / RETENTION BASINS, BIORETENTION AREAS, VEGETATED FILTER STRIPS, STONE DIAPHRAGMS, GRASSED DRAINAGE CHANNELS, DISCHARGE STRUCTURES / WEIRS, CULVERTS, OPEN CHANNELS, CURBS, CUTTERS, CATCH BASINS, DRAIN MANHOLES, DRAINAGE PIPES, ROOF DRAIN MANFOLDS, WATER QUALITY SWALES, AND SIMILAR STORMWATER RUNOFF CONVEYANCE, TREATMENT, AND STORAGE FACILITIES.
- B. INSTALL STORMWATER MANAGEMENT SYSTEM COMPONENTS STARTING AT THE DOWNSTREAM END AND PROCEED UPSTREAM, WHERE POSSIBLE, COMPLETE INSTALLATION OF PERMANENT DETENTION / RETENTION BASINS (BIORETENTION AREAS) PRIOR TO BEGINNING WORK ON UPSTREAM SYSTEM COMPONENTS.
- C. INSTALL CONTROL MEASURES AT FINISHED UPSTREAM AND DOWNSTREAM PIPE ENDS AS SOON AS POSSIBLE AFTER COMPLETION OF PIPE RUN, SUCH MEASURES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, RIPRAP, CHECK DAMS, HAY BALE / SILT FENCE BARRIERS, AND VELOCITY DISSIPATORS.
- D. AT THE END OF EACH DAY OR WHEN RAINFALL IS EXPECTED, PLUG UPSTREAM END OF PIPES / DAM OPEN CHANNELS OR OTHERWISE REDIRECT POTENTIAL RUNOFF AND PREVENT FLOW FROM ENTERING PARTIALLY COMPLETED SYSTEM / SYSTEM COMPONENTS.
- E. WHERE PORTIONS OF A NEW SYSTEM ARE TO BE ACTIVATED PRIOR TO COMPLETION OF THE ENTIRE SYSTEM, EMPLOY CONTROL MEASURES TO PREVENT SILT AND DEBRIS FROM ENTERING THE SYSTEM. EMPLOY SILT SACKS OR FABRIC ON CATCH BASIN INLETS, AND PIPE AND CULVERT OPENINGS. EMPLOY CHECK DAMS AND TEMPORARY SEDIMENT BASINS UPSTREAM OF AND ALONG OPEN CHANNELS, SWALES, AND DITCHES TO TRAP SEDIMENT UPGRADIENT OF ENVIRONMENTALLY SENSITIVE AREAS.
- F. REMOVE TRAPPED SEDIMENT AND DEBRIS FROM ALL SYSTEM COMPONENTS AFTER COMPLETION OF INSTALLATION, AND AGAIN AFTER THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA. REMOVE TRAPPED SEDIMENT AND DEBRIS FROM DETENTION / RETENTION BASIN BOTTOMS SO THAT FINISH BOTTOM MATERIALS / INFILTRATION FUNCTION CONFORM TO DESIGN.

3.07 LANDSCAPING

- A. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.
- B. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.



TRENCH BACKFILL

SURFACE BACKFILL

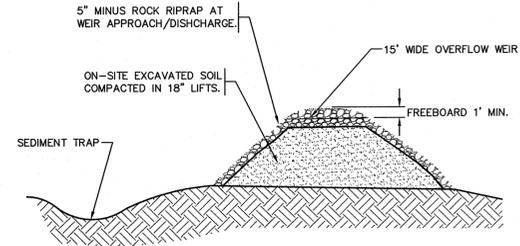
NOTES:

- [1] SILT FENCE SHALL BE PLACED ALONG CONTOUR TO MAXIMIZE PONDING EFFICIENCY.
- [2] INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- [3] REMOVED SEDIMENT SHALL BE DEPOSITED TO A NON-SENSITIVE UPLAND AREA.



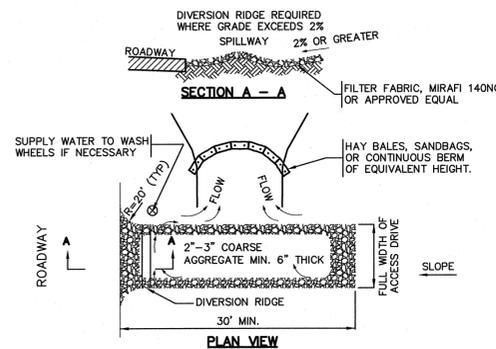
SILT FENCE BARRIER

TYPICAL CROSS SECTION NOT TO SCALE



TEMPORARY SEDIMENT BASIN

TYPICAL CROSS SECTION NOT TO SCALE

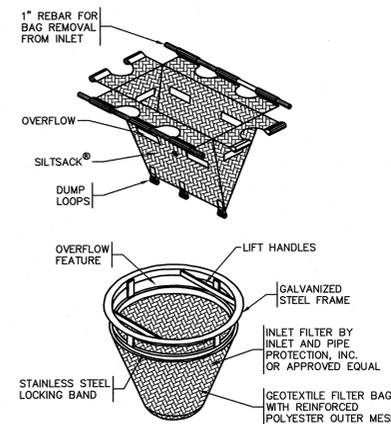


NOTES:

- [1] THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- [2] WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- [3] WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- [4] USE SANDBAGS, HAY BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.
- [5] CONSTRUCTION ENTRANCE MAY BE RELOCATED AS NECESSARY OF LOCATION CONFLICTS WITH CONSTRUCTION ACTIVITY.

CONSTRUCTION ENTRANCE

NOT TO SCALE

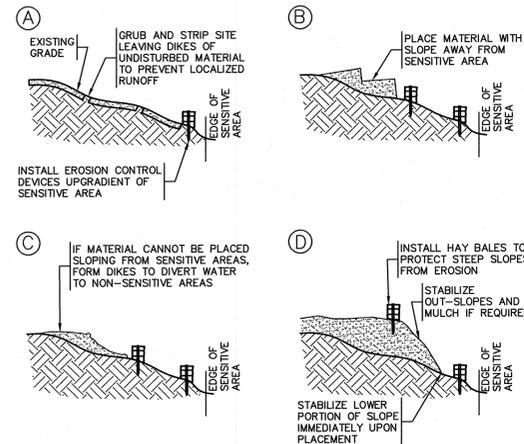


NOTES:

- [1] CLEAN INLET PROTECTION WHEN 30% FULL
- [2] BURLAP IS NOT AN ACCEPTABLE GEOTEXTILE

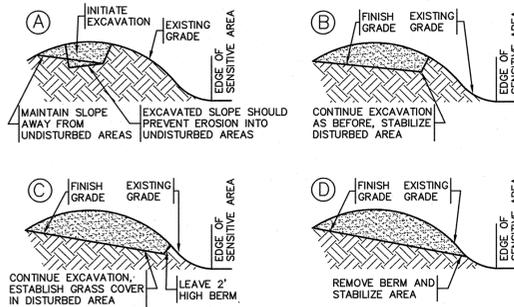
INLET PROTECTION

TYPICAL CROSS SECTION NOT TO SCALE



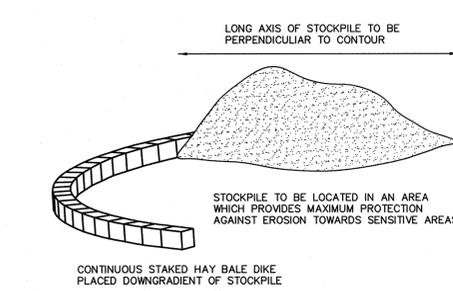
FILL PROCEDURE

SLOPE PROFILES NOT TO SCALE



EXCAVATION PROCEDURE

TYPICAL CROSS SECTION NOT TO SCALE



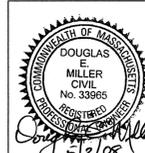
TEMPORARY STOCKPILE

ISOMETRIC VIEW NOT TO SCALE

DRAWING ISSUED FOR:

- CONCEPT
- CONSTRUCTION
- PERMIT
- CONSTRUCTION RECORD

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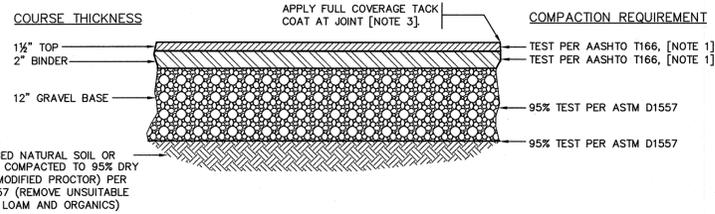
RESIDENTIAL DEVELOPMENT

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

81 RIVER STREET
 ACTON, MA 01720

OWNER/APPLICANT:
 LOTHROP MILL, LLC
 544 MASSACHUSETTS AVENUE
 ACTON, MA 01720

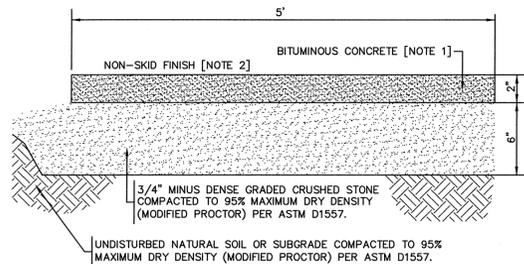
DES. BY: MKB	DATE: MAY 2008	JOB 071033A	C5.1
CHK. BY: MES			



COURSE	MATERIAL	SPECIFICATION PER MASS HIGHWAY DEPARTMENT (MHD)	MAX AGG. SIZE (INCH)
TOP	BITUMINOUS CONCRETE	M3.11.03 CLASS I, TYPE I-1	1/2
BINDER	BITUMINOUS CONCRETE	M3.11.03 CLASS I, TYPE I-1	3/4
BASE	GRAVEL BORROW [2]	M1.03.0 TYPE B	3
UNSUITABLE SUBGRADE	ORDINARY BORROW	ON-SITE EXCAVATED MATERIAL	12

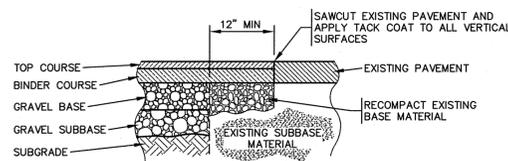
- NOTES:**
 [1] COMPACT TO TEST AVERAGE OF 95% NO TEST LOWER THAN 93%.
 [2] ACCEPTABLE SUBSTITUTE MATERIAL: 3/4" MINUS DENSE GRADED CRUSHED STONE.
 [3] EXISTING PAVEMENT SHALL BE SAW CUT VERTICALLY AT FINAL JOINT LOCATIONS.

BITUMINOUS CONCRETE PARKING
 TYPICAL CROSS SECTION
 NOT TO SCALE



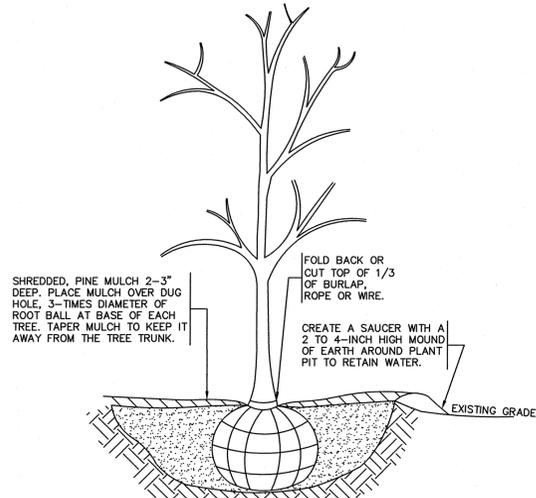
- NOTES:**
 [1] MHD M3.11.03 CLASS I, TYPE I-1 BITUMINOUS CONCRETE. 1/2" MAXIMUM AGGREGATE OR PARTICLE SIZE. COMPACT TO TEST AVERAGE OF 95% NO TEST LOWER THAN 93%.
 [2] SLOPE 5% MAXIMUM.

BITUMINOUS CONCRETE WALK
 TYPICAL CROSS SECTION
 NOT TO SCALE



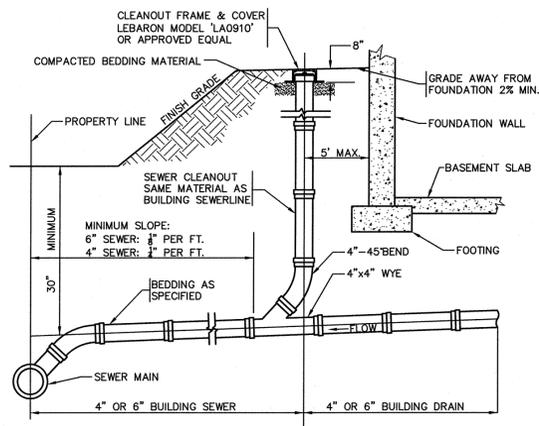
- NOTES:**
 [1] FLEXIBLE PAVEMENT REMOVAL SHALL BE INITIATED BY MAKING A FULL-DEPTH VERTICAL SAWCUT AT THE LOCATIONS INDICATED ON THE PLANS. SAWCUTS SHALL BE ACCOMPLISHED USING A STANDARD DIAMOND-TYPE BLADE SAW.
 [2] IF SAWCUT IS WITHIN THREE (3) FEET OF AN EXISTING BUILDING, CURB LINE OR EXISTING FENCE, COMPLETELY REMOVE EXISTING PAVEMENT AND REPLACE ACCORDING TO THE REQUIREMENTS OF THE BITUMINOUS CONCRETE PAVEMENT SECTION.

TRENCH PATCH
 TYPICAL CROSS SECTION
 NOT TO SCALE



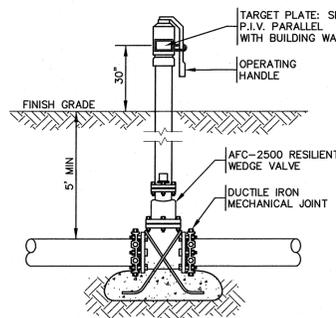
- NOTES:**
 [1] SLOPE AND SCARIFY SIDES OF PLANTING PIT. WIDTH OF PIT SHALL BE THREE TIMES WIDTH OF ROOT BALL. TOP OF BALL SHALL BE AT SAME GRADE AS GROWN IN NURSERY. TRUNK FLARE SHOULD BE SET 1 TO 2-INCHES ABOVE EXISTING GRADE.
 [2] BACKFILL WITH SOIL FROM DUG HOLE, UNLESS EXISTING SOIL IS OF POOR QUALITY. USE SUBSOIL MIXED WITH AMENDMENTS (IF NEEDED). ADD WATER HALFWAY THROUGH BACKFILLING. LET SOIL SETTLE AND WATER DRAIN, THEN FINISH FILLING HOLE WITH LOOSE SOIL. WATER THOROUGHLY AFTER THE BACKFILL IS COMPLETE.

PLANTING DETAIL
 TYPICAL CROSS SECTION
 NOT TO SCALE

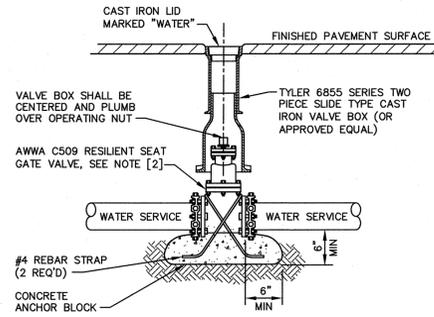


- NOTES:**
 [1] SEWER SERVICE CONNECTION PER TOWN OF ACTON REQUIREMENTS.

SEWER SERVICE CONNECTION
 TYPICAL CROSS SECTION
 NOT TO SCALE

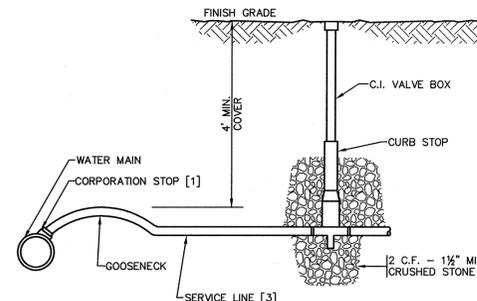


POST INDICATOR VALVE
 TYPICAL CROSS SECTION
 NOT TO SCALE



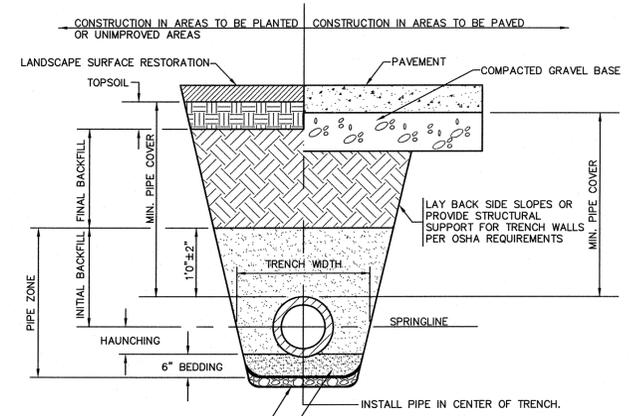
- NOTES:**
 [1] SET LID AND CONCRETE COLLAR 1/4" TO 1/2" BELOW GRADE IN PAVEMENT OR OTHER AREAS TO BE PLOWED. SET LID 3" ABOVE FINISHED GRADE ELSEWHERE.
 [2] VALVE SHALL OPEN IN DIRECTION AS SPECIFIED BY THE LOCAL WATER DEPARTMENT.
 [3] WRAP VALVE WITH 8 MIL POLYETHYLENE FILM AND SECURE WITH TAPE AT ALL THRUST BLOCKS.

GATE VALVE AND BOX
 TYPICAL CROSS SECTION
 NOT TO SCALE



- NOTES:**
 [1] WATER SERVICES LARGER THAN 1" ARE TO BE RESTRAINED TO MAIN WITH APPROVED SADDLE.
 [2] COORDINATE BUILDING CONNECTION WITH PLUMBING DRAWINGS.
 [3] ALL MATERIALS PER MUNICIPAL STANDARDS.

WATER SERVICE CONNECTION
 TYPICAL CROSS SECTION
 NOT TO SCALE



FOUNDATION STABILIZATION WHEN REQUIRED BY ENGINEER. OTHERWISE, PLACE BEDDING ON UNDISTURBED NATURAL SOIL.

SHAPE BEDDING BY HAND TO FIT BOTTOM OF PIPE. INSTALL PIPE ON STABLE BEDDING WITH UNIFORM BEARING UNDER FULL LENGTH OF PIPE BARREL.

- MATERIAL KEY NOTES (SEE TABLE BELOW):**
 [1] PLACE 2" MINUS CRUSHED STONE.
 [2] PLACE 1/2" MINUS SAND BORROW (MHD M1.04.1), AT OPTIMUM MOISTURE IN HORIZONTAL 8" DEEP LOOSE LAYERS. COMPACT TO 95% PER ASTM D-1557 MODIFIED PROCTOR METHOD.
 [3] IN PLANTED OR UNIMPROVED AREAS, USE 2-INCH MINUS ON-SITE EXCAVATED MATERIAL. COMPACT TO 90% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF 2-INCH MINUS ON-SITE EXCAVATED MATERIALS.

TRENCH WIDTH:
 [1] MINIMUM WIDTH OF TRENCH MEASURED AT SPRINGLINE OF PIPE, INCLUDING ANY NECESSARY SHEATHING:

PIPE I.D.	WIDTH
LESS THAN 21"	O.D. + 12"
21" TO 42"	O.D. + 24"
GREATER THAN 42"	O.D. + 30"

MINIMUM PIPE COVER:
 [1] MINIMUM SOIL COVER OVER TOP OF PIPE:

PIPE MATERIAL	HDPE, PVC	RC, DI
WATER	5' - 0"	5' - 0"
SEWER	4' - 0"	4' - 0"
DRAIN	2' - 0"	1' - 0"

FOUNDATION, BEDDING AND BACKFILL MATERIALS

PIPE MATERIAL	HDPE, PVC	RC, DI
FOUNDATION STABILIZATION	[NOTE 1]	[NOTE 1]
BEDDING	[NOTE 2]	[NOTE 2]
HAUNCHING	[NOTE 2]	[NOTE 2]
INITIAL BACKFILL	[NOTE 2]	[NOTE 2]
FINAL BACKFILL	[NOTE 3]	[NOTE 3]

PIPE TRENCH
 TYPICAL CROSS SECTION
 NOT TO SCALE

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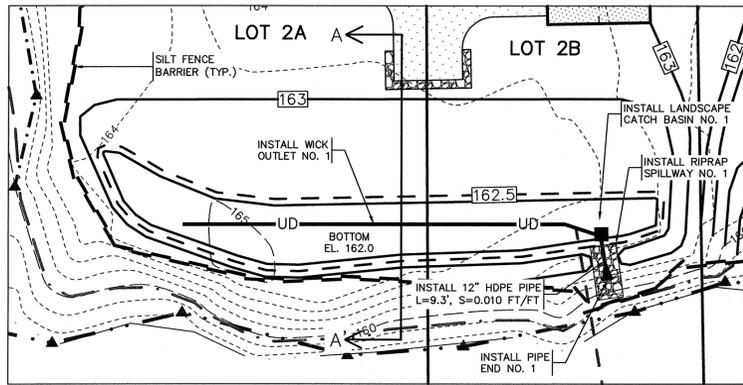
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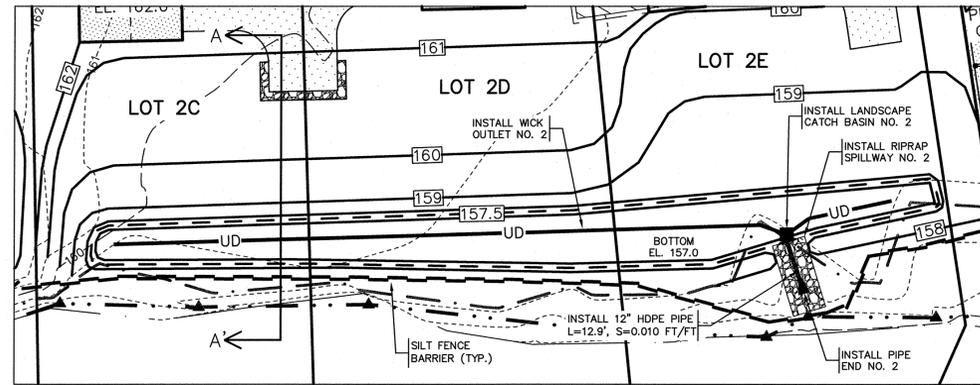
RESIDENTIAL DEVELOPMENT
CONSTRUCTION DETAILS

81 RIVER STREET
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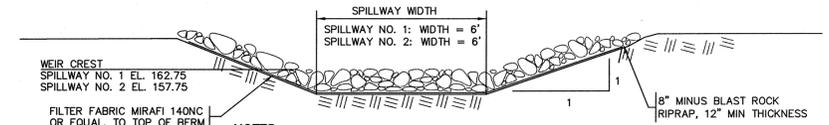
OWNER/APPLICANT:
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 544 MASSACHUSETTS AVENUE
 ACTON, MA 01720



BIORETENTION AREA NO. 1
PLAN VIEW
SCALE: 1"=20'

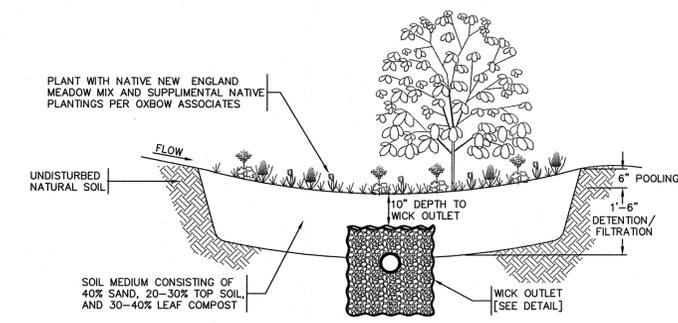


BIORETENTION AREA NO. 2
PLAN VIEW
SCALE: 1"=20'



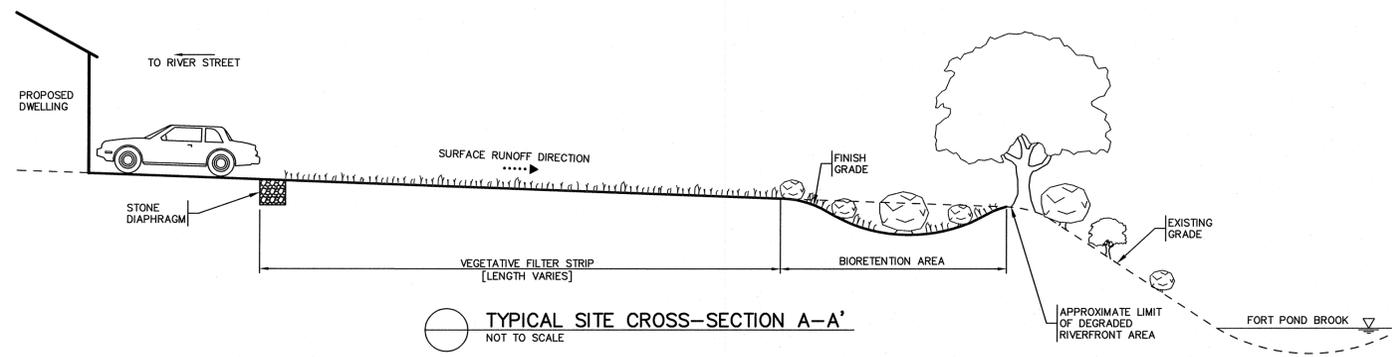
NOTES:
[1] RIPRAP WEIR TO BE A CONTINUOUS, SMOOTH SURFACE OF STONE TAMPED FIRMLY IN PLACE WITH NO MORE THAN 0.1 FOOT VARIATION FROM SPECIFIED ELEVATION ACROSS ENTIRE BREADTH OF WEIR, WITH NO STONE LESS THAN 6 INCH IN SMALLEST DIMENSION.

RIPRAP SPILLWAY
TYPICAL CROSS SECTION
NOT TO SCALE

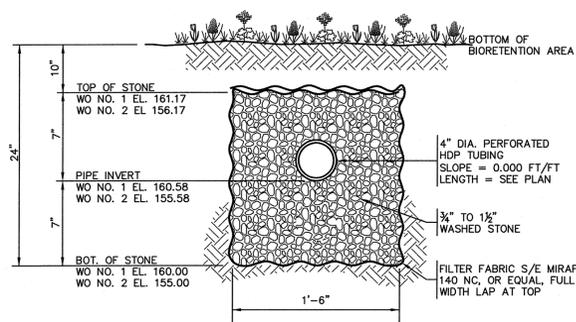


MATERIAL NOTES:
[1] SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%.
[2] SOIL pH SHOULD GENERALLY BE BETWEEN 5.5-6.5.
[3] USE SOILS WITH 1.5%-3% ORGANIC CONTENT AND MAXIMUM 500-PPM SOLUBLE SALTS.
[4] SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422.
[5] TOPSOIL COMPONENT SHALL BE SANDY LOAM, LOAMY SAND OR LOAM TEXTURE.
[6] COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE IN ACCORDANCE WITH MASS DEP GUIDELINES. COMPOST SHALL NOT CONTAIN BIOSOLIDS.
[7] ON-SITE SOIL MIXING OR PLACEMENT IS NOT ALLOWED IF SOIL IS SATURATED OR SUBJECT TO WATER WITHIN 48 HOURS. COVER AND STORE SOIL TO PREVENT WETTING OR SATURATION.
[8] TEST SOIL FOR FERTILITY AND MICRO-NUTRIENTS AND, ONLY IF NECESSARY, AMEND MIXTURE TO CREATE OPTIMUM CONDITIONS FOR PLANT ESTABLISHMENT AND EARLY GROWTH.
[9] GRADE THE AREA TO ALLOW A PONDING DEPTH OF 6-8 INCHES; DEPENDING ON SITE CONDITIONS, MORE OR LESS PONDING MAY BE APPROPRIATE.
[10] COVER THE SOIL WITH 2-3 INCHES OF FINE-SHREDDED HARDWOOD MULCH.

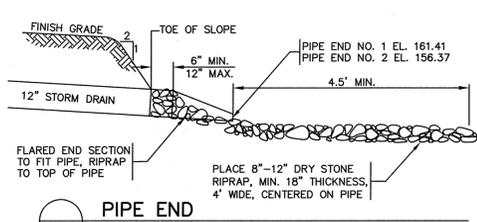
BIORETENTION AREA
TYPICAL CROSS SECTION
NOT TO SCALE



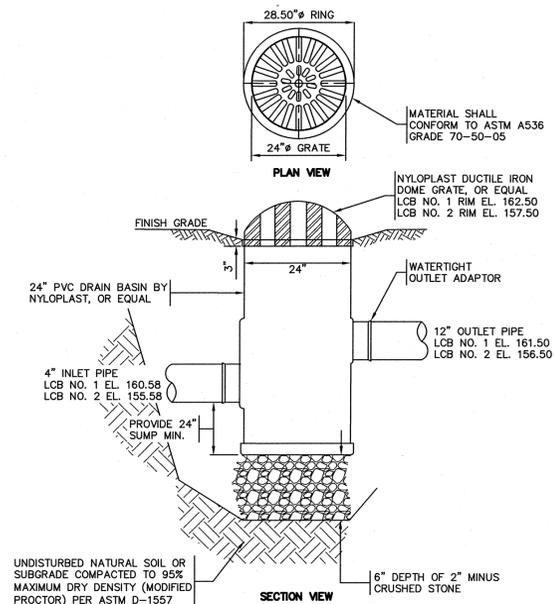
TYPICAL SITE CROSS-SECTION A-A'
NOT TO SCALE



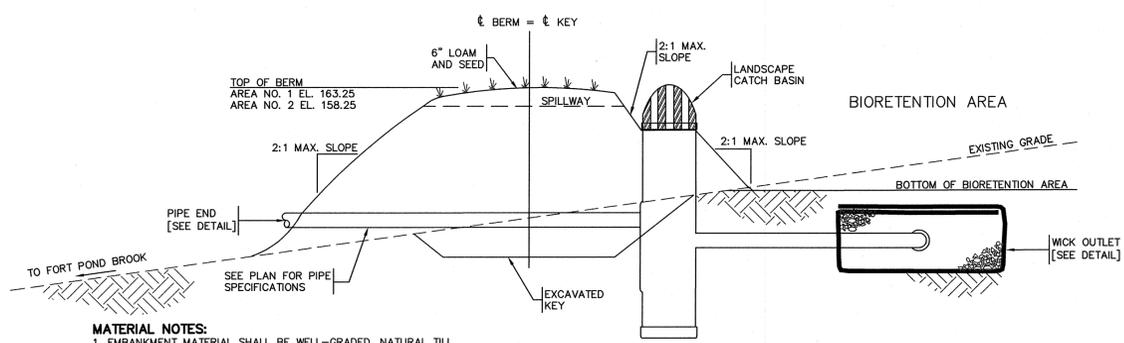
WICK OUTLET
TYPICAL CROSS SECTION
NOT TO SCALE



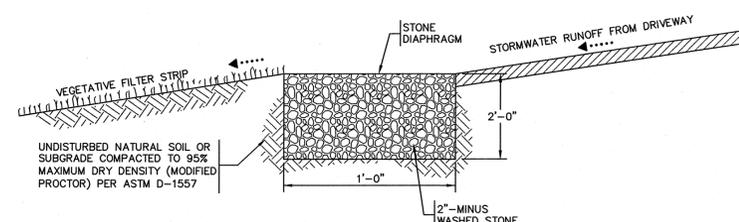
PIPE END
PROFILE
NOT TO SCALE



LANDSCAPE CATCH BASIN (LCB)
NOT TO SCALE



WATER QUALITY BASIN BERM
TYPICAL CROSS SECTION
NOT TO SCALE

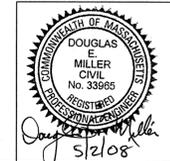


STONE DIAPHRAGM
TYPICAL CROSS SECTION
NOT TO SCALE

DRAWING ISSUED FOR:

- CONCEPT
- CONSTRUCTION
- PERMIT
- CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.



NO.	DATE	BY	APP.	REVISION DESCRIPTION

GPR Engineering Solutions for Land & Structures

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RESIDENTIAL DEVELOPMENT
CONSTRUCTION DETAILS

81 RIVER STREET
ACTON, MA 01720

OWNER/APPLICANT:
LOTHROP MILL, LLC
544 MASSACHUSETTS AVENUE
ACTON, MA 01720

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