

TOWN CENTER OVERLAY DISTRICT MIXED USE / RESIDENTIAL DEVELOPMENT BOYNTON MEADOWS AT GIBBET HILL GROTON, MA

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.
- FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- 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 STRAW WATTLES 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, 2.0 PSI GASKETED JOINT, 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 GROTON REQUIREMENTS.
- WHERE DIMENSIONS INVOLVE CURB, DIMENSIONS ARE TO FACE OF CURB, WHERE SLOPED GRANITE CURB IS SPECIFIED, FACE OF CURB IS EDGE OF FINISH PAVEMENT AT TOE OF CURB.
- NO DEBRIS, JUNK, RUBBISH OR OTHER NON-BIODEGRADABLE 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.

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.

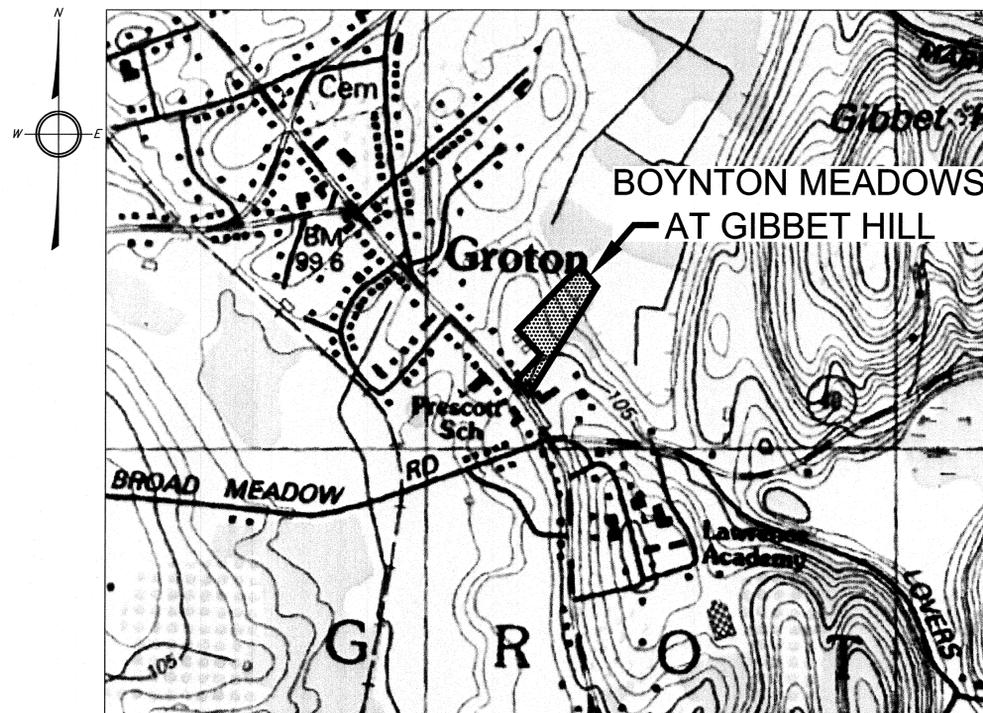
ASSESSORS REFERENCE

ASSESSORS MAP 113, LOT 9, 5.5± ACRES

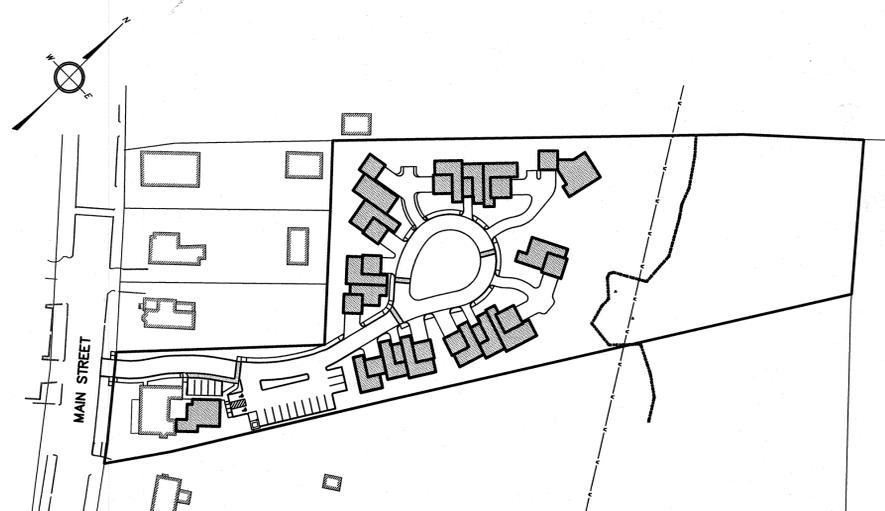
RECORD OWNER:
GROTON TRADING COMPANY, INC.
134 MAIN STREET
GROTON, MA 01450

COVERAGE COMPUTATIONS

Parameter	Area (acres)	Area (square feet)	Fraction of Total Lot Area (%)
EXISTING CONDITION			
Lot Area	4.21	183,255	100.0%
Buildings	0.25	10,937	6.0%
Other Impervious Surfaces	0.32	13,913	7.6%
Total Impervious Coverage	0.57	24,850	13.6%
DEVELOPED CONDITION			
Lot Area	4.21	183,255	100.0%
Buildings	0.58	25,339	13.8%
Other Impervious Surfaces	0.80	35,056	19.1%
Total Impervious Coverage	1.39	60,395	33.0%



VICINITY MAP
SCALE: 1" = 600'



PLOT PLAN
SCALE: 1" = 100'

ZONING

Parameter	Section [1]	Requirement	Remarks
Zoning District		B-1	Business District
Overlay District	218-29	Floodplain	None on site
	218-30	Water Resource	None on site
	218-30.1	Recreation	None on site
	218-30.2	Town Center	Entire site
Proposed Use	218-13	Special Permit from Planning Board	Multifamily per 218-27C
		Permitted	Retail store or service establishment
		Permitted	Restaurant or other place for serving food
	218-30.2	Mixed Use / Residential	Town Center Overlay Special Permit
Lot Area	218-20	40,000 SF	No minimum for nonresidential uses [see note 2]
Frontage	218-20	175 FT	No minimum for nonresidential uses
Lot Width	218-22.K	Min Frontage through front setback	
Min Building Setback	218-20	Front	50 FT
		Side	15 FT
		Rear	15 FT
Building Height	218-20	35 FT / 3 Stories	
Building Coverage	218-20	25%	Includes principle and accessory buildings
Town Center Overlay District Special Permit Requirements			
Lot Area	218-30.2.D.2	n/a	
Frontage	218-30.2.D.2	n/a	
Lot Width	218-30.2.D.2	n/a	
Building Height	218-30.2.D.3	35 FT	
Min Building Setback	218-30.2.D.4	15FT	
Coverage	218-30.2.D.5	not to exceed 75%	buildings and other impervious areas
Density	218-30.2.D.7	< 10 dwelling units per acre	units limited to 3 bedrooms and 2,000 SF gfa
Affordable Housing	218-30.2.D.8	0.15	within developments greater than 6 units
Parking	218-23.B	Dwellings	2 spaces per unit (except 1 space for one bedroom unit)
		Medial, dental or other care facility	6 spaces + 1 per 125 sf gfa in excess of 500 sf
		Office	2 spaces + 1 per 180 sf gfa
		Other Retail	1 space per 250 sf gfa less basement (not less than 5)
		Restaurant, sit down	5 spaces + 1 space per 2 seats
		Other Service establishments	5 spaces + 1 per 250 sf gfa less basement (not less than 5)
Other Uses	# determined by Planning Board in Site Plan process		
Driveways and Entrances	218-23.C(3)	2 points of access	for parking > 10 spaces
Parking Plantings	218-23.C(7)	landscape area	15% for >40 spaces
FEMA Floodplain	25017 C0202E		None on site
ACEC		Petapawag	Entire site within
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] per 218-22G - in computing lot area, no part of a public or private way and no part of a pond or river shall be included.

ABBREVIATIONS:
SF=square feet; CF=cubic feet; FT=feet; GFA=gross floor area; AC=acres; PB=Planning Board; ZBA=Zoning Board of Appeals; IWPA=interim wellhead protection area; ACEC=Area of Critical Environmental Concern; FIRI=Flood Insurance Rate Map; MDEP=Massachusetts Dept of Environmental Protection

DESIGN TEAM

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SHEET INDEX

- C1.1 TITLE SHEET
- C2.1 AREA LOCUS EXISTING CONDITIONS & ZONING DISTRICTS
- C2.2 EXISTING CONDITIONS & DEMOLITION PLAN
- C2.3 SITE ANALYSIS PLAN
- C3.1 SITE LAYOUT & UTILITIES PLAN
- C4.1 GRADING, DRAINAGE & PAVING PLAN
- C5.1 SEWER CONNECTION PLAN & PROFILE
- C6.1 EROSION & SEDIMENT CONTROL PLAN
- C7.1-C7.4 CONSTRUCTION DETAILS
- C8.1 STREET NAME & NUMBERING PLAN
- L1.1 LANDSCAPE PLAN
- L1.2 DETAILED PLANTING PLAN
- L1.3 WETLANDS BUFFER PLANTING PLAN
- P1.1 PHOTOMETRIC PLAN

APPROVED BY THE
GROTON PLANNING BOARD*

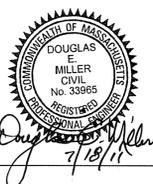
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____ APPLICATION FILED
____ HEARING DATE
____ ENDORSED DATE

*THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE GROTON ZONING BYLAW

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- 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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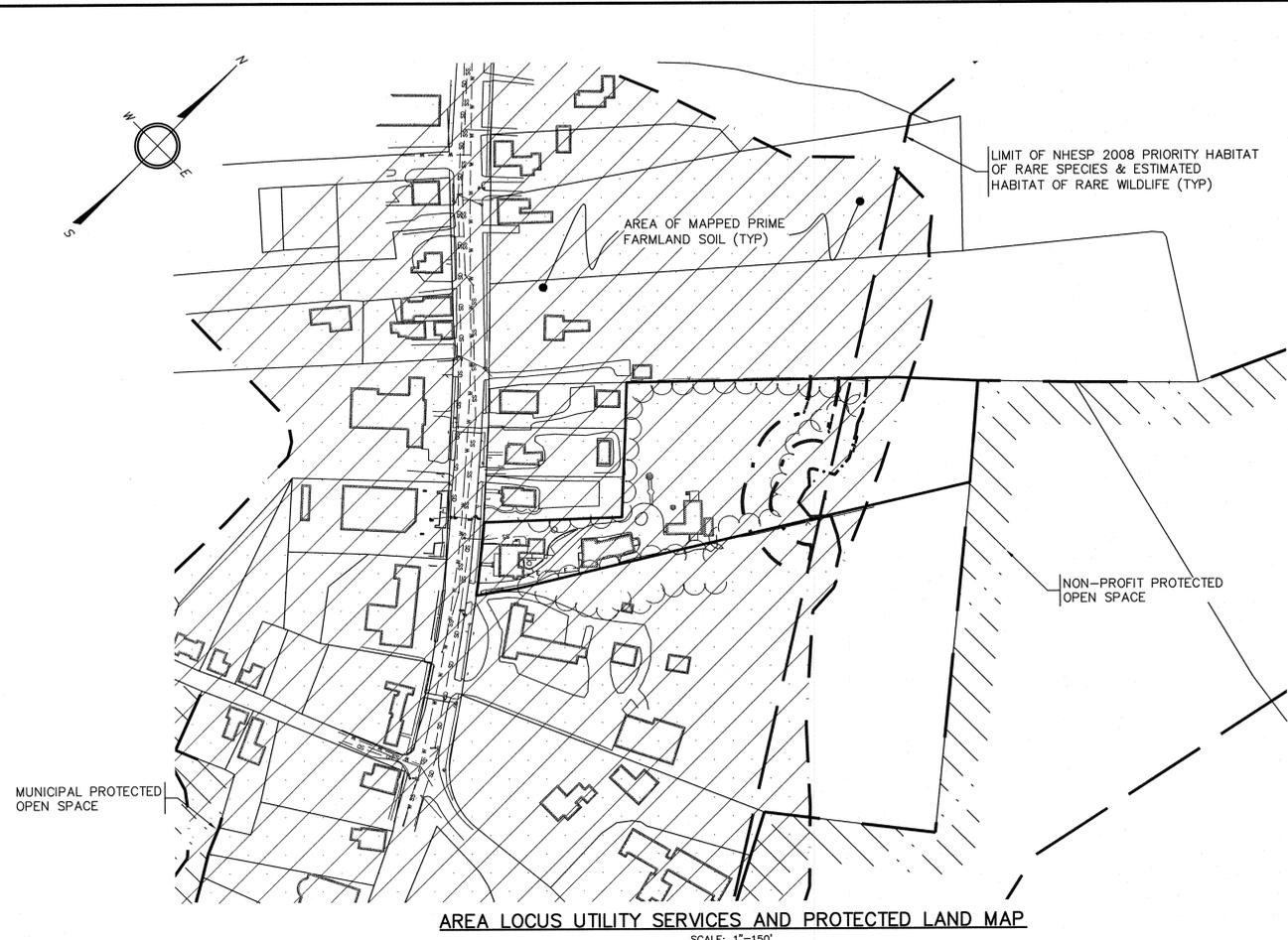
TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

TITLE SHEET

BLACKSMITH ROW
134 MAIN STREET
GROTON, MA

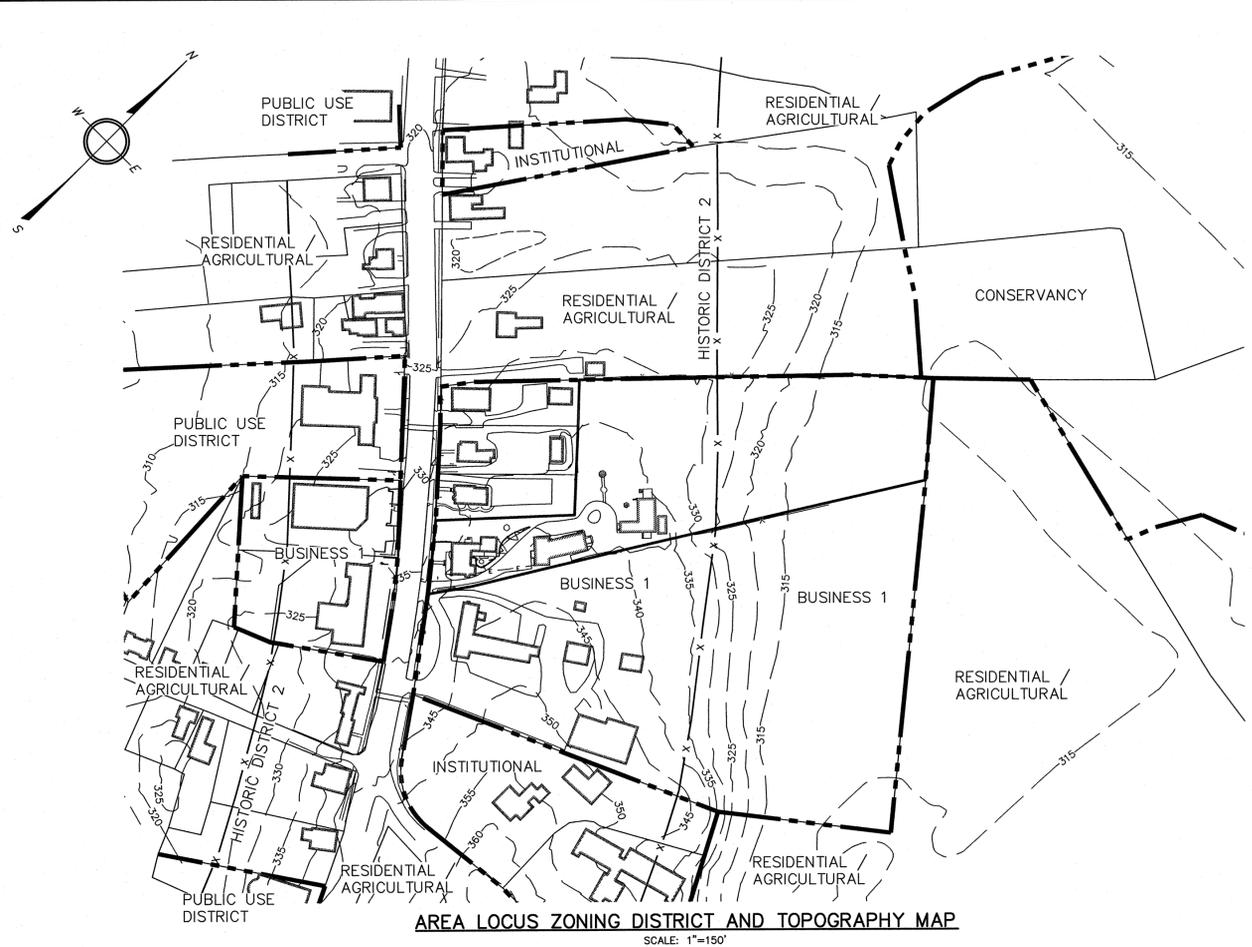
PREPARED FOR:
MOUNT LAUREL DEVELOPMENT, LLC
P.O. BOX 1444
1000 MOUNT LAUREL CIRCLE, SUITE 4
SHIRLEY, MA 01464

DES. BY: MKB DATE: JULY 2011 JOB 111007 C1.1
CHK. BY: DEM



AREA LOCUS UTILITY SERVICES AND PROTECTED LAND MAP

SCALE: 1"=150'



AREA LOCUS ZONING DISTRICT AND TOPOGRAPHY MAP

SCALE: 1"=150'



AREA LOCUS LAND USE MAP

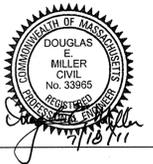
SCALE: 1"=150'

-  AGRICULTURAL
-  COMMERCIAL
-  FOREST
-  OPEN LAND / TRANSITIONAL
-  PUBLIC USE / INSTITUTIONAL
-  RESIDENTIAL
-  WETLANDS

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TOWN CENTER OVERLAY DISTRICT
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AREA LOCUS EXISTING
 CONDITIONS & ZONING DISTRICTS

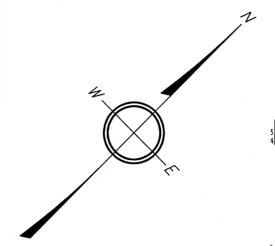
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APPROVED BY THE GROTON PLANNING BOARD*

CHAIR _____
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EXISTING		PROPOSED	
---	ELEVATION CONTOUR	---	ELEVATION CONTOUR
---	SPOT GRADE	---	SPOT GRADE
---	PROPERTY LINE	---	PROPERTY LINE
---	BUILDING ENVELOPE	---	BUILDING ENVELOPE
---	WETLAND DELINEATION	---	WETLAND DELINEATION
---	100 FT WETLAND BUFFER ZONE	---	100 FT WETLAND BUFFER ZONE
---	NHESP HABITAT LIMIT	---	NHESP HABITAT LIMIT
---	EDGE OF PAVEMENT	---	EDGE OF PAVEMENT
---	STOCKADE FENCE	---	STOCKADE FENCE
---	CHAINLINK FENCE	---	CHAINLINK FENCE
---	WIRE FENCE	---	WIRE FENCE
---	STONE WALL	---	STONE WALL
---	WATER MAIN	---	WATER MAIN
---	WATER SERVICE	---	WATER SERVICE
---	FIRE SERVICE	---	FIRE SERVICE
---	WATER VALVE	---	WATER VALVE
---	FIRE VALVE	---	FIRE VALVE
---	FIRE HYDRANT	---	FIRE HYDRANT
---	WATER SHUT-OFF VALVE	---	WATER SHUT-OFF VALVE
---	GRAVITY SEWER LINE	---	GRAVITY SEWER LINE
---	SEWER MANHOLE	---	SEWER MANHOLE
---	GAS LINE	---	GAS LINE
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---	UNDERGROUND TELEPHONE LINE	---	UNDERGROUND TELEPHONE LINE
---	ELECTRIC BOX	---	ELECTRIC BOX
---	ELECTRIC METER	---	ELECTRIC METER
---	STORM DRAIN	---	STORM DRAIN
---	UNDERDRAIN	---	UNDERDRAIN
---	ROOF DRAIN	---	ROOF DRAIN
---	CATCH BASIN	---	CATCH BASIN
---	DRAIN MANHOLE	---	DRAIN MANHOLE
---	STRAW WATTLES	---	STRAW WATTLES
---	DEEP SOIL OBSERVATION HOLE	---	DEEP SOIL OBSERVATION HOLE
---	SITE LUMINAIRE	---	SITE LUMINAIRE
---	SIGN	---	SIGN
---	ELEVATION BENCHMARK	---	ELEVATION BENCHMARK
---	SURFACE RUNOFF DIRECTION	---	SURFACE RUNOFF DIRECTION
---	STONE BOUND	---	STONE BOUND
---	DRILL HOLE	---	DRILL HOLE
---	IRON ROD	---	IRON ROD
---	NUMBER OF PARKING SPACES	---	NUMBER OF PARKING SPACES

ABBREVIATIONS			
EL	ELEVATION	N/F	NOW OR FORMERLY
INV	INVERT	SMH	SEWER MANHOLE
FG	FINISH GRADE	DMH	DRAIN MANHOLE
SF	SQUARE FEET	CB	CATCH BASIN
AC	ACRES	TOP	TOP OF FOUNDATION
BIT	BITUMINOUS	FES	FLARED END SECTION
CONC	CONCRETE	TW	TOP OF WALL
FF	FINISH FLOOR	BW	BOTTOM OF WALL
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
RET	RETAINING	EOP	EDGE OF PAVEMENT
R	RADIUS	VGC	VERTICAL GRANITE CURB
L	LENGTH	TP	TOP OF PAVEMENT
S	SLOPE	HP	HIGH POINT
C/O	CLEANOUT	HDPE	HIGH DENSITY POLYETHYLENE
GAR	GARAGE	BSMT	BASEMENT

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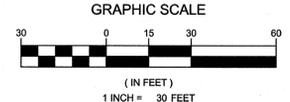
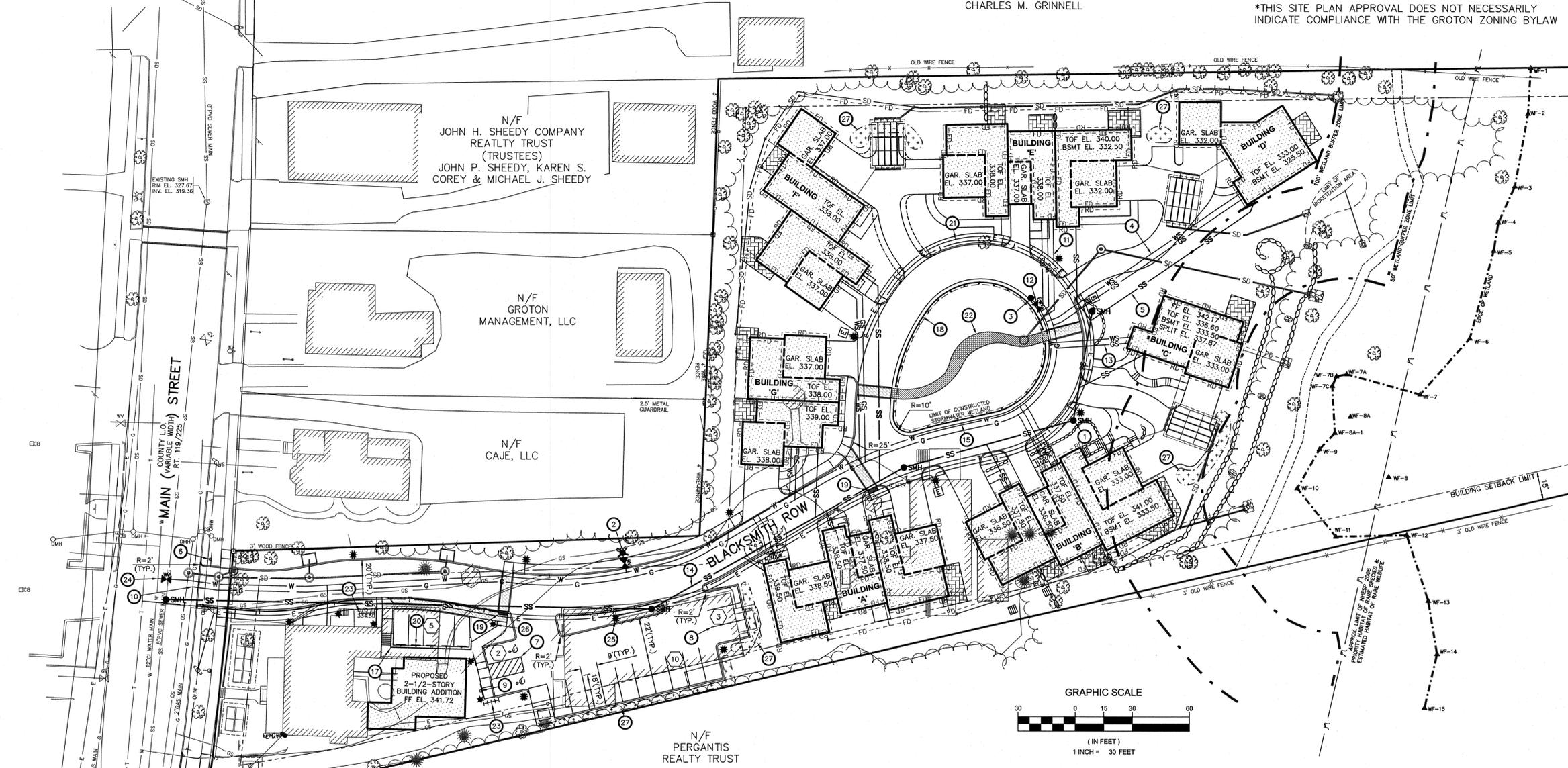
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BOYNTON MEADOWS AT GIBBET HILL

SITE LAYOUT & UTILITIES PLAN

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DES. BY: MKB DATE: JULY 2011 JOB 111007 **C3.1**
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PARKING COMPUTATIONS:

USE	FORMULA	VARIABLE	REQUIRED SPACES	PROPOSED SPACES
Residential	2 spaces/unit (except 1 space/one bedroom)	15	30	54
Mixed Use facility				
Restaurant (split functions - sit down and take out)	5 minimum, plus 1 space per 2 seats	30 seats	20	
	1 space/100 GFA - not less than 5	1000 SF	10	
Retail	1 space per 250 SF GFA	1000 SF	4	
Medical Prof Office	6 spaces + 1 space/125 SF GFA ≥ 500 SF	1300 SF	12	
Residential	2 spaces/unit (except 1 space/one bedroom)	3	6	
TOTAL			52	20
Shared parking	20% of Mixed Use requirements		10	
Main Street credit			5	
Modified totals			37	20

LANDSCAPING

REQUIRED	PROPOSED
1,030 SF Landscaped Area	> 2,630 SF Landscaped Area

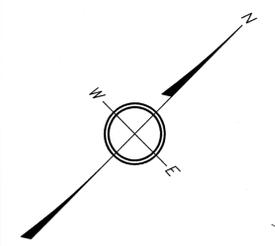
FORMULA FOR LOTS CONTAINING 6 to 40 PARKING SPACES:
 10% of parking area shall be maintained with landscaping

KEY NOTES
 (NOT A CONSTRUCTION SEQUENCE)

- INSTALL SEWER MANHOLE (TYP. OF 5)
- INSTALL HYDRANT ASSEMBLY
- INSTALL FLUSHING HYDRANT
- PROPOSED WATER SERVICE (TYP.)
- PROPOSED SEWER SERVICE (TYP.)
- INSTALL STOP SIGN
- STRIP 12 INCHES WIDE, 3 FEET ON CENTER @ 45 DEGREES, WHITE, 2 COATS
- STRIP 4 INCHES WIDE, WHITE, 2 COATS (TYP.)
- INSTALL HANDICAPP ACCESSIBLE ONLY PARKING SIGN (TYP. OF 2)
- CONNECT TO EXISTING GAS MAIN PER KEYSpan ENERGY DELIVERY REQUIREMENTS (SIZE, MATERIAL & LENGTH TO BE DETERMINED)
- PROPOSED FIRE SERVICE (TYP.)
- INSTALL GATE VALVE (TYP.)
- PROPOSED GAS SERVICE (TYP.)
- INSTALL 8" PVC SEWER MAIN
- INSTALL 8" D.I. WATER MAIN
- INSTALL UNDERGROUND COMMUNICATION LINES PER VERIZON REQUIREMENTS (SIZE, LENGTH & MATERIAL TO BE DETERMINED)
- PROVIDE HANDRAIL ALONG TOP OF RETAINING WALL EXTENDING ONE TREAD LENGTH FROM BOTTOM OF STAIRS (BY OTHERS)
- INSTALL WOOD GUARDRAIL
- INSTALL DETECTABLE WARNING PANEL AT CROSSING OF TRAVELED WAY [SEE HANDICAP ACCESSIBLE RAMP DETAIL FOR SPECS]
- INSTALL "COMPACT VEHICLE PARKING ONLY" SIGN (TYP. OF 5)
- INSTALL UNDERGROUND ELECTRIC LINES PER TOWN OF GROTON REQUIREMENTS (SIZE, LENGTH & MATERIAL TO BE DETERMINED)
- PROPOSED BOARDWALK (BY OTHERS)
- PROPOSED 6-BIKE BICYCLE RACK (BY OTHERS)
- CONNECT TO EXISTING WATER MAIN PER TOWN OF GROTON REQUIREMENTS
- PROPOSED AREA LUMINAIRE (TYP.) [SEE SHEET P1.1]
- PROPOSED BOLLARD LUMINAIRE (TYP.) [SEE SHEET P1.1]
- PROPOSED SNOW STORAGE AREA (TYP.)

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CUT/FILL COMPUTATIONS:
 TOTAL VOLUME OF CUT: 1190± CY
 TOTAL VOLUME OF FILL: 7280± CY

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---	ELECTRIC BOX	---	ELECTRIC BOX
---	ELECTRIC METER	---	ELECTRIC METER
---	STORM DRAIN	---	STORM DRAIN
---	UNDERDRAIN	---	UNDERDRAIN
---	ROOF DRAIN	---	ROOF DRAIN
---	CATCH BASIN	---	CATCH BASIN
---	DRAIN MANHOLE	---	DRAIN MANHOLE
---	STRAW WATTLES	---	STRAW WATTLES
---	DEEP SOIL OBSERVATION HOLE	---	DEEP SOIL OBSERVATION HOLE
---	SITE LUMINAIRE	---	SITE LUMINAIRE
---	SIGN	---	SIGN
---	ELEVATION BENCHMARK	---	ELEVATION BENCHMARK
---	SURFACE RUNOFF DIRECTION	---	SURFACE RUNOFF DIRECTION
---	STONE BOUND	---	STONE BOUND
---	DRILL HOLE	---	DRILL HOLE
---	IRON ROD	---	IRON ROD
---	NUMBER OF PARKING SPACES	---	NUMBER OF PARKING SPACES

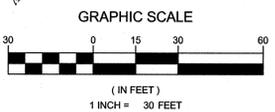
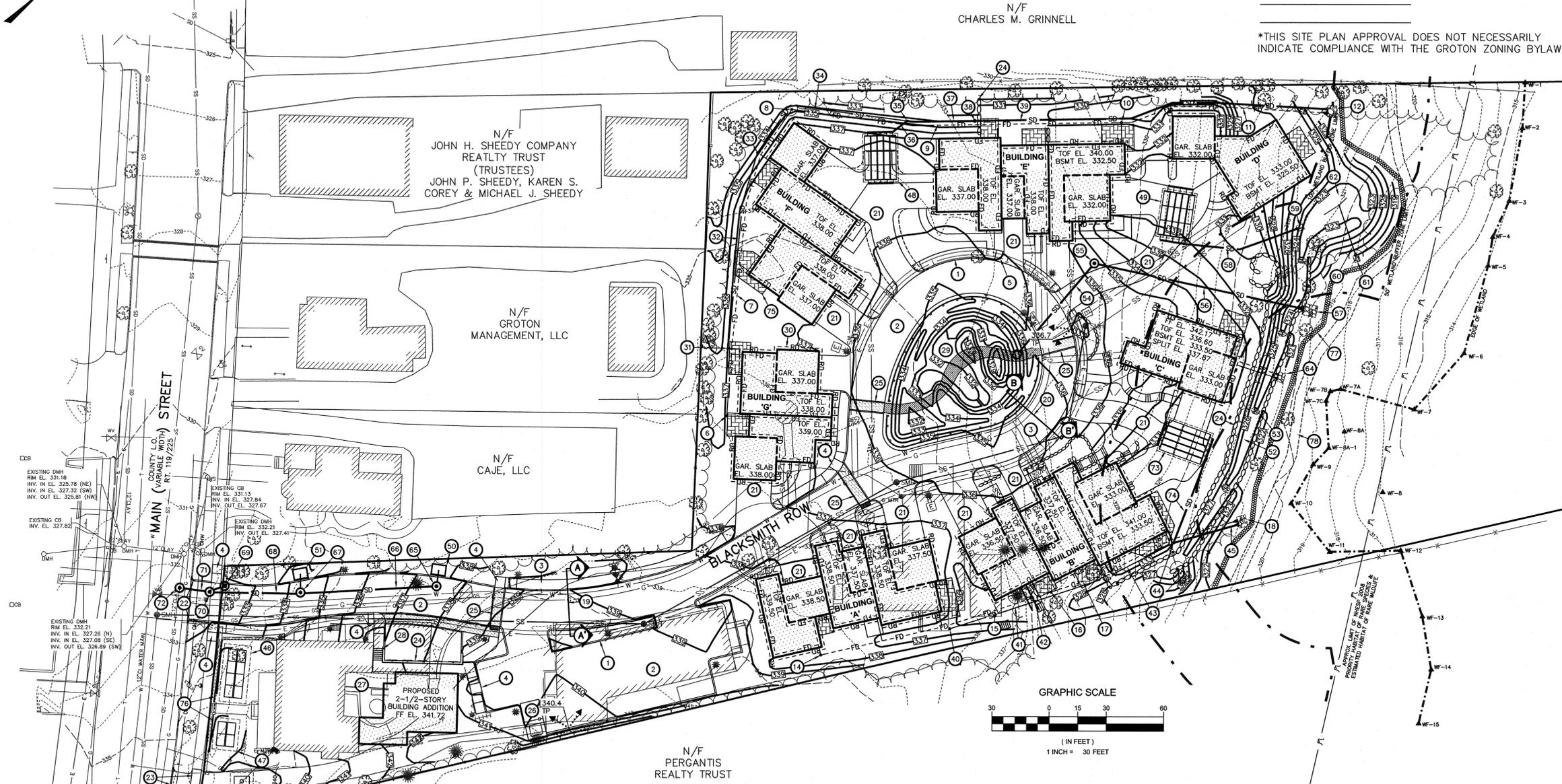
ABBREVIATIONS			
EL	ELEVATION	N/F	NOW OR FORMERLY
INV	INVERT	SMH	SEWER MANHOLE
FC	FINISH GRADE	DMH	DRAIN MANHOLE
SF	SQUARE FEET	CB	CATCH BASIN
AC	ACRES	TOP	TOP OF FOUNDATION
BIT	BITUMINOUS	FES	FLARED END SECTION
CONC	CONCRETE	TW	TOP OF WALL
FF	FINISH FLOOR	BW	BOTTOM OF WALL
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
RET	RETAINING	EOP	EDGE OF PAVEMENT
R	RADIUS	VGC	VERTICAL GRANITE CURB
L	LENGTH	TP	TOP OF PAVEMENT
S	SLOPE	HP	HIGH POINT
C/O	CLEANOUT	HDPE	HIGH DENSITY POLYETHYLENE
GAR	GARAGE	BSMT	BASEMENT

DRAWING ISSUED FOR:

<input type="checkbox"/> CONCEPT	<input type="checkbox"/> CONSTRUCTION
<input checked="" type="checkbox"/> PERMIT	<input type="checkbox"/> 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



KEY NOTES
 (NOT A CONSTRUCTION SEQUENCE)

- | | | | | | | | |
|--|---|--|--|---|--|---|---|
| 1. INSTALL SLOPED GRANITE CURB (TYP.) | 12. INSTALL FES AT DAYLIGHT OF FOUNDATION & ROOF DRAIN HEADERS, INV. EL. 323.00 | 22. INSTALL VERTICAL GRANITE CURB ON ENTRANCE RADIUS TO MATCH WITH EXISTING VERTICAL GRANITE CURBING ON MAIN STREET (TYP.) | 32. INSTALL 6" HDPE ROOF DRAIN HEADER; L=102.8', S=2.0% | 43. INSTALL 6" HDPE ROOF DRAIN HEADER; L=78.7', S=2.0% | 53. INSTALL 6" HIGH CHECK DAM (TYP.) | 64. INSTALL FES AT DAYLIGHT OF FOUNDATION & ROOF DRAIN, INV. EL. 321.00 | 73. INSTALL INFILTRATION BED #3, 15 CULTEC CONTACTOR 100HD CHAMBERS, 3X5 LAYOUT |
| 2. INSTALL BITUMINOUS CONCRETE PAVEMENT (TYP.) | 13. PROPOSED FOUNDATION DRAIN BY OTHERS (TYP.) | 23. INSTALL VERTICAL GRANITE CURB AND CONC. SIDEWALK AT PREVIOUS DRIVEWAY ENTRANCE TO MATCH WITH EXISTING MAIN STREET LAYOUT | 33. INSTALL RD CLEANOUT #2 INV. EL. 332.94 | 44. INSTALL RD CLEANOUT #7 INV. EL. 326.00 | 54. INSTALL 12" HDPE STORM DRAIN; L=57.8', S=6.6% | 65. INSTALL DMH #2, RIM EL. 337.51, INV. IN EL. 333.50, INV. OUT EL. 333.40 | 74. INSTALL 12" HDPE STORM DRAIN; L=44.6', S=6.4% |
| 3. INSTALL CEMENT CONCRETE WALK (TYP.) | 14. INSTALL FD CLEANOUT INV. EL. 330.50 | 24. PROPOSED RETAINING WALL (TYP.) (BY OTHERS) | 34. INSTALL 6" HDPE ROOF DRAIN HEADER; L=91.3', S=2.0% | 45. INSTALL 12" HDPE ROOF DRAIN HEADER; L=35.5', S=11.3% | 55. INSTALL DMH #2, RIM EL. 335.3, INV. EL. 323.18 | 66. INSTALL 12" HDPE STORM DRAIN; L=67.5', S=3.3% | 75. PROPOSED STONE TERRACE (TYP.) |
| 4. INSTALL HANDICAP ACCESSIBLE RAMP (TYP.) | 15. INSTALL 8" HDPE FOUNDATION DRAIN HEADER; L=125.0', S=3.2% | 25. PROPOSED BRICK PAVEMENT CROSSWALK (TYP.) | 35. INSTALL RD CLEANOUT #3 INV. EL. 333.11 | 46. INSTALL INFILTRATION BED #1, 6 CULTEC RECHARGER 330 CHAMBERS, 4X2 LAYOUT | 56. INSTALL 12" HDPE STORM DRAIN; L=109.1', S=2.0% | 67. INSTALL DMH #3, RIM EL. 334.35, INV. IN EL. 331.21, INV. OUT EL. 330.51 | 76. INSTALL 40-MIL P.E. BARRIER BEHIND RECONSTRUCTED WALL |
| 5. INSTALL ONE DIRECTION HANDICAP RAMP AT SIDEWALK INTERSECTION W/ DRIVEWAY (TYP.) | 16. INSTALL FD CLEANOUT INV. EL. 326.50 | 26. INSTALL TRASH ENCLOSURE | 36. INSTALL 12" HDPE STORM DRAIN; L=9.4', S=44.1% | 47. INSTALL INFILTRATION BED #2, 4 CULTEC RECHARGER 330 CHAMBERS, 2X2 LAYOUT | 57. INSTALL FES INV. EL. 321.0 | 68. INSTALL 12" HDPE STORM DRAIN; L=43.8', S=4.6% | 77. INSTALL STRAW WATTLES (TYP.) |
| 6. INSTALL FD CLEANOUT INV. EL. 331.00 | 17. INSTALL 12" HDPE FOUNDATION DRAIN HEADER; L=105.0', S=4.29% | 27. PROPOSED BRICK PAVEMENT COURTYARD (BY OTHERS) | 37. INSTALL 12" HDPE ROOF DRAIN HEADER; L=35.7', S=8.7% | 48. INSTALL INFILTRATION BED #3, 15 CULTEC CONTACTOR 100HD CHAMBERS, 3X5 LAYOUT | 58. INSTALL 6" HDPE STORM DRAIN; L=61.0', S=8.6% | 69. INSTALL CB, RIM EL. 333.63, INV. EL. 328.55 | 78. APPROXIMATE LOCATION OF FUTURE WALKING TRAIL ALONG GIBBET HILL MARSH |
| 7. INSTALL 8" HDPE FOUNDATION DRAIN HEADER; L=165.6', S=2.11% | 18. INSTALL FES AT DAYLIGHT OF FOUNDATION & ROOF DRAIN HEADERS, INV. EL. 322.00 | 28. PROPOSED STAIRS (TYP.) (BY OTHERS) | 38. INSTALL RD CLEANOUT #4 INV. EL. 328.00 | 49. INSTALL INFILTRATION BED #4, 15 CULTEC CONTACTOR 100HD CHAMBERS, 3X5 LAYOUT | 59. INSTALL FES INV. EL. 325.0 | 70. INSTALL DMH #4, RIM EL. 332.31, INV. IN EL. 328.50, INV. OUT EL. 328.40 | |
| 8. INSTALL FD CLEANOUT INV. EL. 327.50 | 19. SEE "DRIVEWAY CROSS-SECTION A-A" DETAIL ON SHEET C7.1 | 29. INSTALL CONSTRUCTED STORMWATER WETLAND | 39. INSTALL 12" HDPE ROOF DRAIN HEADER; L=187.1', S=2.7% | 50. INSTALL TREE BOX FILTER #1 | 60. INSTALL 6" HDPE STORM DRAIN; L=24.3', S=4.1% | 71. INSTALL 12" HDPE STORM DRAIN; L=11.9', S=6.9% | |
| 9. INSTALL 12" HDPE FOUNDATION DRAIN HEADER; L=173.4', S=1.3% | 20. SEE "DRIVEWAY CROSS-SECTION B-B" DETAIL ON SHEET C7.1 | 30. INSTALL ROOF LEADER CONNECTION (TYP.) | 40. INSTALL RD CLEANOUT #5 INV. EL. 334.00 | 51. INSTALL TREE BOX FILTER #2 | 61. INSTALL FES INV. EL. 319.0 | 72. INSTALL DMH #5 TO CONNECT TO EXISTING 12" CLAY STORM DRAIN, RIM EL. 332.24, INV. IN EL. 328.50, INV. OUT EL. 328.40 | |
| 10. INSTALL FD CLEANOUT INV. EL. 325.17 | 21. PROPOSED BIT. CONC. DRIVEWAY (TYP.) | 31. INSTALL RD CLEANOUT #1 INV. EL. 335.0 | 41. INSTALL 6" HDPE ROOF DRAIN HEADER; L=47.0', S=13.7% | 52. INSTALL WET WATER QUALITY SWALE | 62. INSTALL FILTERING BIORETENTION AREA | | |
| 11. INSTALL 12" HDPE FOUNDATION DRAIN HEADER; L=108.7', S=2.00% | | | 42. INSTALL RD CLEANOUT #6 INV. EL. 327.54 | | 63. INSTALL LEACHING CATCH BASIN | | |

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**TOWN CENTER OVERLAY DISTRICT
 BOYNTON MEADOWS AT GIBBET HILL**

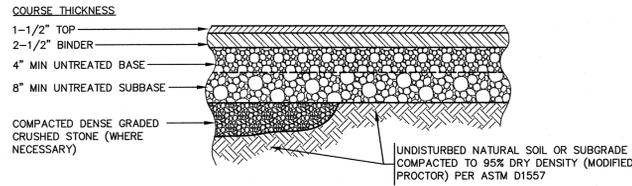
GRADING, DRAINAGE & PAVING PLAN

**BLACKSMITH ROW
 134 MAIN STREET
 GROTON, MA**

PREPARED FOR:
 MOUNT LAUREL DEVELOPMENT, LLC
 P.O. BOX 14444
 1000 MOUNT LAUREL CIRCLE, SUITE 4
 SHIRLEY, MA 01464

DES. BY: MKB	DATE: JULY 2011	JOB 111007	C4.1
CHK. BY: DEM			

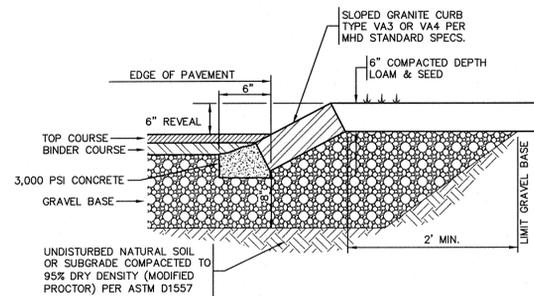
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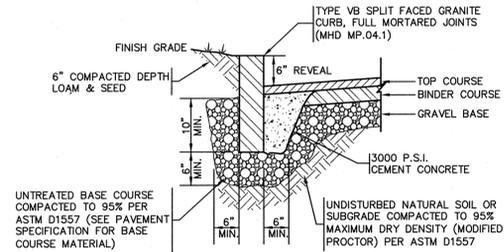
COURSE	MATERIAL	SPECIFICATION PER MASS HIGHWAY DEPARTMENT (MHD)	MAX AGG. SIZE (INCH)	COMPACTION REQUIREMENTS	TEST DESIGNATION
TOP	BITUMINOUS CONCRETE	M3.11.03 CLASS 1, TYPE 1-1	1/2	[NOTE 1]	AASHTO-T166
BINDER	BITUMINOUS CONCRETE	M3.11.03 CLASS 1, TYPE 1-1	3/4	[NOTE 1]	AASHTO-T166
BASE	GRAVEL BORROW	M1.03.0 TYPE C	2	95% [NOTE 3]	ASTM D1557/AASHTO-T99
SUBBASE	GRAVEL BORROW	M1.03.0 TYPE B	3	95% [NOTE 3]	ASTM D1557/AASHTO-T99
SUBGRADE	ORDINARY BORROW	M1.01.0 [SEE NOTE 2]	8	95% [NOTE 3]	ASTM D1557/AASHTO-T99

NOTES:
 [1] COMPACT TO TEST AVERAGE OF 95%; TEST SHALL NOT BE LOWER THAN 83%.
 [2] UNSUITABLE MATERIAL IN THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH AN ACCEPTABLE SUBSTITUTE MATERIAL: 3/4" MINUS DENSE GRADED CRUSHED STONE.
 [3] MATERIAL SHALL BE SPREAD AND COMPACTED IN LAYERS NOT EXCEEDING 8-INCHES IN DEPTH. COMPACTED MEASUREMENT; LAST LAYER OF MATERIAL SHALL NOT EXCEED 4-INCHES IN DEPTH, COMPACTED MEASUREMENT.

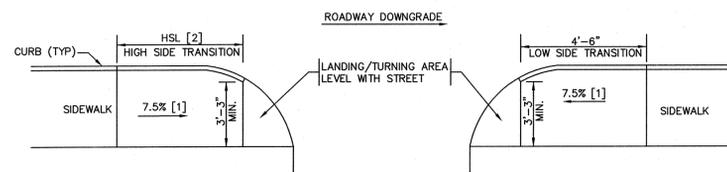
BITUMINOUS CONCRETE PAVEMENT
 TYPICAL CROSS SECTION
 NOT TO SCALE



SLOPED GRANITE CURB
 TYPICAL CROSS SECTION
 NOT TO SCALE

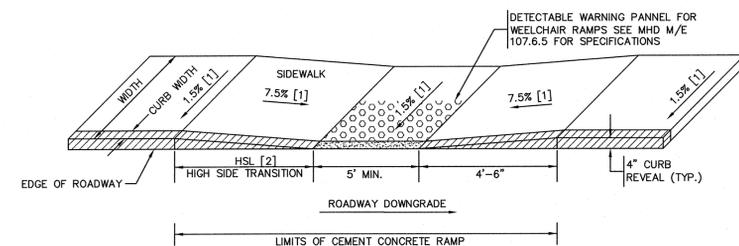


VERTICAL GRANITE CURB
 TYPICAL CROSS SECTION
 NOT TO SCALE



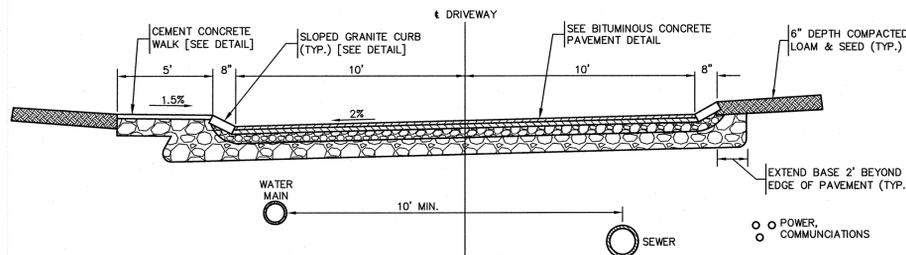
NOTES:
 [1] TOLERANCE FOR CONSTRUCTION ±0.5%
 [2] HIGH SIDE TRANSITION LENGTH SEE M/E 107.9.0

ONE DIRECTION HANDICAP RAMP
 TYPICAL CROSS SECTION
 NOT TO SCALE

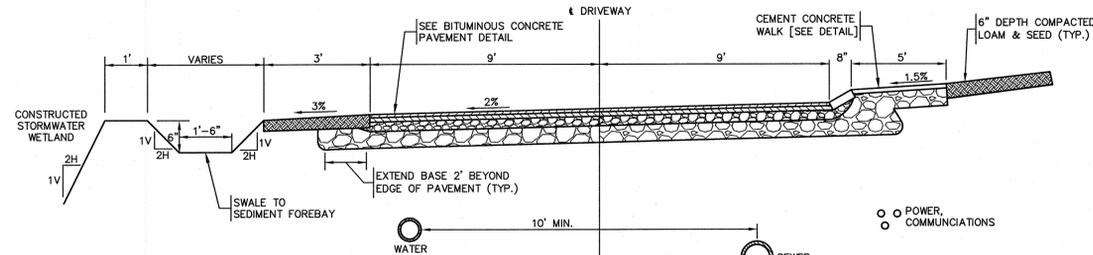


NOTES:
 [1] TOLERANCE FOR CONSTRUCTION 0.5%
 [2] HSL - HIGH SIDE TRANSITION LENGTH (SEE M/E 107.9.0)
 [3] USABLE SIDEWALK WIDTH PER AAB = WIDTH - CURB WIDTH

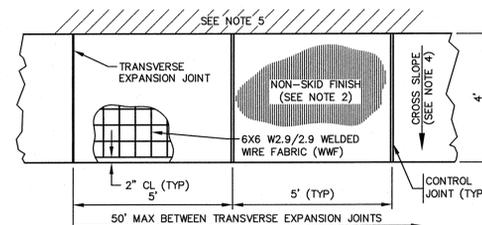
HANDICAP ACCESSIBLE RAMP
 TYPICAL PLAN VIEW
 NOT TO SCALE



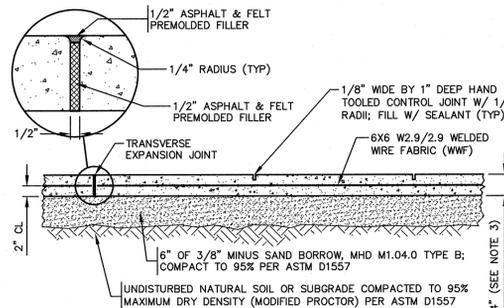
DRIVEWAY CROSS-SECTION A-A'
 NOT TO SCALE



DRIVEWAY CROSS-SECTION B-B'
 NOT TO SCALE



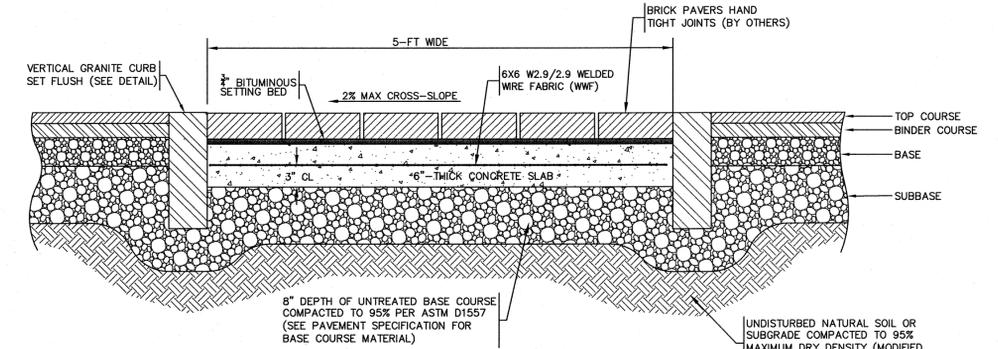
PLAN VIEW



SECTIONAL VIEW

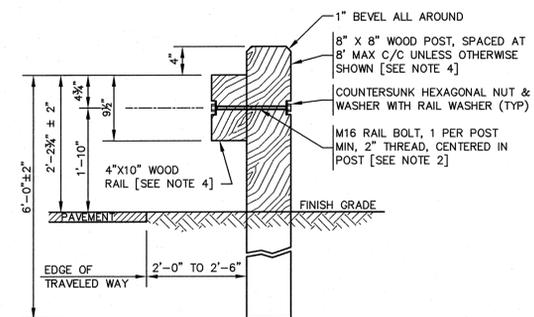
NOTES:
 [1] CEMENT CONCRETE: 4000 PSI AT 28 DAYS W/ 3/8" MINUS MAXIMUM PARTICLE SIZE (MHD M4.02.00).
 [2] PROVIDE MEDIUM HAIR BROOM FINISH TO ALL EXPOSED SURFACES. USE ROUGH HAIR BROOM ON GRADES OVER 6%.
 [3] A 6-INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS AND STREET INTERSECTIONS.
 [4] 5% MAXIMUM CROSS SLOPE UNLESS OTHERWISE SHOWN. MAXIMUM CROSS SLOPE SHALL NOT EXCEED 2% IN AREAS DICTATED BY MAAB AND/OR ADA.
 [5] WHERE SIDEWALK ABUTS FACE OF BUILDING, AN ISOLATION JOINT, SIMILAR TO TRANSVERSE EXPANSION JOINT, SHALL BE USED BETWEEN SIDEWALK AND BUILDING.

CEMENT CONCRETE WALK
 NOT TO SCALE



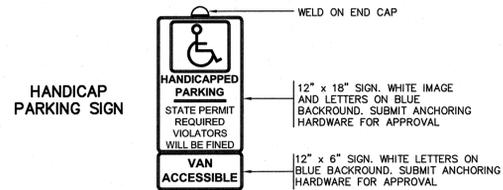
NOTES:
 [1] PORTLAND CEMENT CONCRETE: 4000 PSI AT 28 DAYS W/ 3/8" MINUS MAXIMUM PARTICLE SIZE (MHD M4.02.00). AIR ENTRAINMENT 5-8%.
 [2] PAVERS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND SHALL BE RATED FOR H-20 VEHICLE LOADING.
 [3] SET TOP OF BRICK PAVERS AND VERTICAL GRANITE CURB TO MATCH SURROUNDING PAVEMENT ELEVATION.

BRICK PAVER CROSSWALK
 NOT TO SCALE

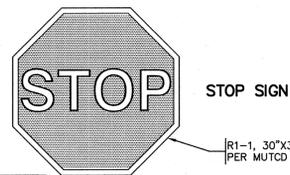


NOTES:
 [1] ALL NUTS, BOLTS & WASHERS ARE TO BE HIGH STRENGTH GALVANIZED STEEL.
 [2] ALL SPLICES ARE TO BE MADE AT POST; FOUR (4) BOLTS EACH SPLICE.
 [3] BACK-UP PLATE IS TO BE PLACED BEHIND RAIL ELEMENTS AT NON SPLICE LOCATIONS (INTERMEDIATE POSTS).
 [4] WOOD AND WOOD TREATMENT SHALL COMPLY WITH MASSACHUSETTS HIGHWAY DEPARTMENT SPECIFICATIONS AND STANDARDS.
 [5] TERMINAL SECTIONS SHALL BE IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT SPECIFICATIONS AND STANDARDS.

WOOD GUARDRAIL
 TYPICAL CROSS SECTION
 NOT TO SCALE



HANDICAP PARKING SIGN



STOP SIGN

SIGN ASSEMBLY
 NOT TO SCALE

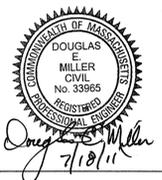
APPROVED BY THE GROTON PLANNING BOARD*

CHAIR _____
 APPLICATION FILED _____
 HEARING DATE _____
 ENDORSED DATE _____

*THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE GROTON ZONING BYLAW

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NO.	DATE	BY	APP.	REVISION DESCRIPTION

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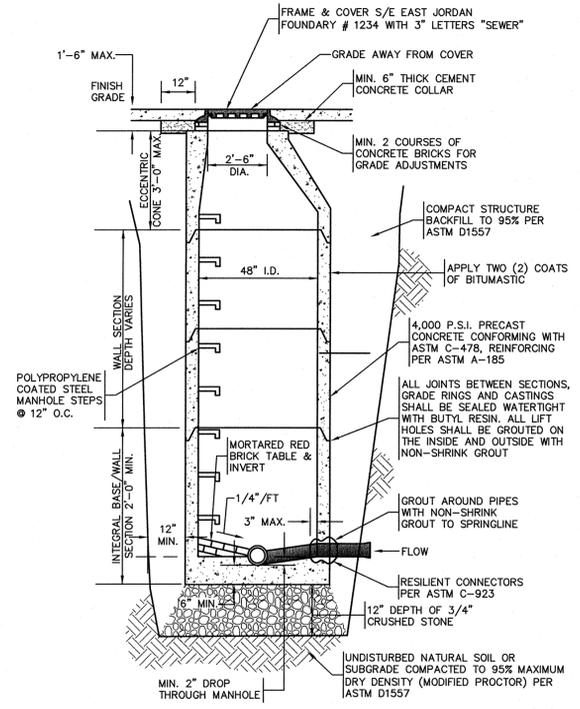
TOWN CENTER OVERLAY DISTRICT
 BOYNTON MEADOWS AT GIBBET HILL

CONSTRUCTION DETAILS

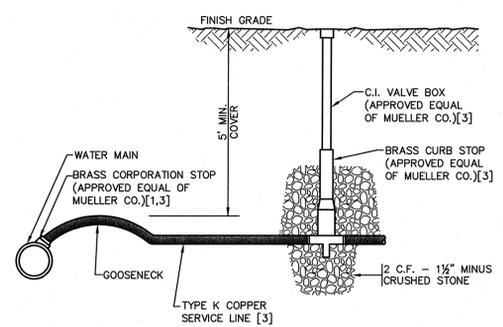
BLACKSMITH ROW
 134 MAIN STREET
 GROTON, MA

PREPARED FOR:
 MOUNT LAUREL DEVELOPMENT, LLC
 P.O. BOX 1444
 1000 MOUNT LAUREL CIRCLE, SUITE 4
 SHIRLEY, MA 01464

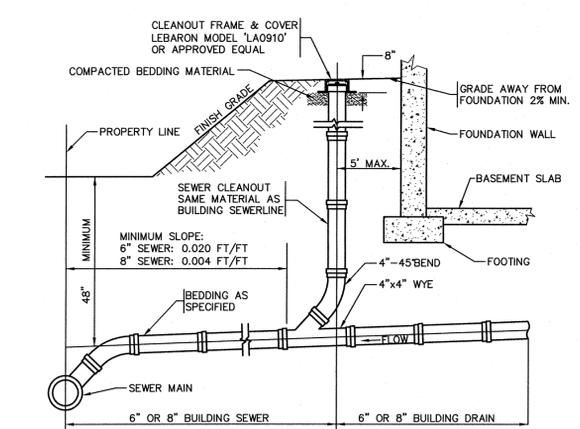
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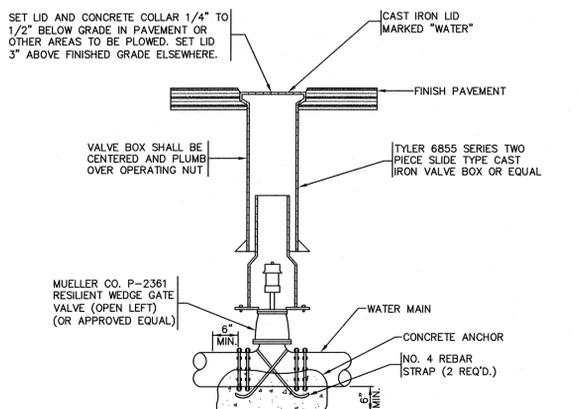
SEWER MANHOLE
TYPICAL CROSS SECTION
NOT TO SCALE



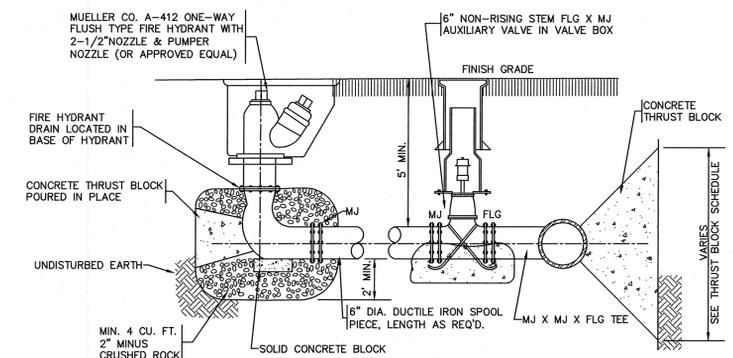
WATER SERVICE
TYPICAL CROSS SECTION
NOT TO SCALE



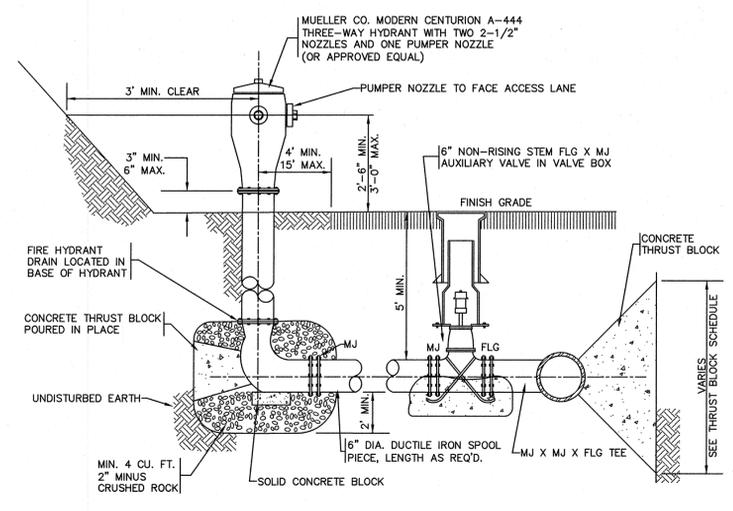
SERVICE CONNECTION TO SEWER
TYPICAL CROSS SECTION
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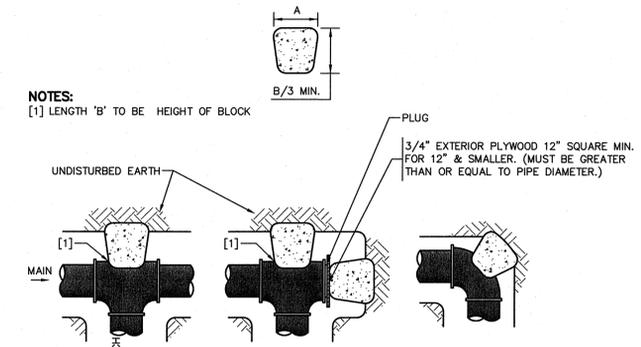
GATE VALVE
TYPICAL CROSS SECTION
NOT TO SCALE



FLUSHING HYDRANT ASSEMBLY
TYPICAL CROSS SECTION
NOT TO SCALE



FIRE HYDRANT ASSEMBLY
TYPICAL CROSS SECTION
NOT TO SCALE

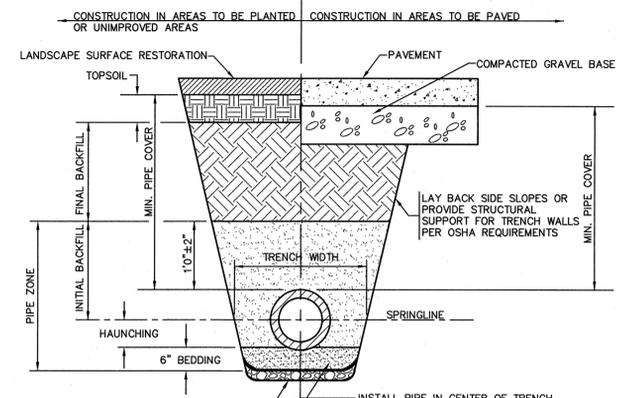


THRUST BLOCK SCHEDULE
TYPICAL CROSS SECTION
NOT TO SCALE

FITTING SIZES	DIMENSION FOR THRUST BLOCK							
	TEES & PLUGS [2]		90° BENDS		45° BENDS & "WYE'S"		22 1/2° BENDS	
	A	B	A	B	A	B	A	B
4"	1'-6"	1'-6"	1'-6"	1'-9"	1'-3"	0'-6"	1'-0"	0'-6"
6"	2'-0"	1'-0"	2'-0"	2'-0"	1'-3"	1'-6"	1'-0"	1'-5"
8"	2'-0"	1'-6"	2'-3"	2'-3"	1'-8"	1'-8"	1'-0"	1'-3"
10"	2'-6"	2'-3"	2'-9"	2'-10"	2'-3"	1'-10"	1'-3"	2'-0"
12"	3'-0"	2'-9"	3'-6"	3'-3"	2'-6"	2'-4"	2'-0"	1'-6"
14"	3'-5"	3'-0"	4'-0"	3'-8"	3'-6"	2'-4"	2'-0"	2'-3"
16"	4'-0"	3'-6"	5'-0"	4'-0"	3'-6"	3'-0"	2'-6"	2'-3"
18"	4'-0"	4'-3"	6'-0"	4'-0"	4'-0"	3'-3"	2'-9"	2'-6"
20"	5'-0"	4'-3"	6'-0"	5'-0"	4'-3"	4'-0"	3'-0"	2'-9"
24"	6'-0"	5'-3"	8'-0"	5'-6"	6'-0"	4'-0"	4'-0"	3'-0"

[2] FOR TEE PROVIDE THRUST BLOCKING FOR BRANCH SIZE
 [3] THIS TABLE IS BASED ON 200 P.S.I. MAIN PRESSURE AND 2000 P.S.F. SOIL BEARING PRESSURE. ADJUST BEARING AREAS IN ACCORDANCE WITH SOIL CONDITIONS AND PRESSURES ENCOUNTERED.
 [4] WRAP PIPE IN 8 MIL POLYETHYLENE FILM AND SECURE WITH TAPE AT ALL THRUST BLOCKS.
 [5] CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 P.S.I. AT 28 DAYS.
 [6] BLOCKING SIZE/FREQUENCY SHALL BE INCREASED IF REQUIRED BY ENGINEER.

THRUST BLOCK SCHEDULE
TYPICAL CROSS SECTION
NOT TO SCALE



PIPE TRENCH
TYPICAL CROSS SECTION
NOT TO SCALE

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"

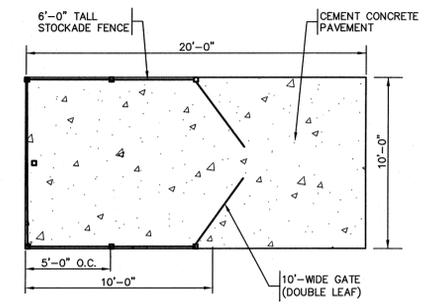
MINIMUM PIPE COVER:
 [1] MINIMUM SOIL COVER OVER TOP OF PIPE.

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

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 80% PER ASTM D-1557, IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF 2-INCH MINUS ON-SITE EXCAVATED MATERIALS.

FOUNDATION, BEDDING AND BACKFILL MATERIALS:

FOUNDATION STABILIZATION	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]



1-BAY TRASH ENCLOSURE
PLAN VIEW
NOT TO SCALE

APPROVED BY THE GROTON PLANNING BOARD*

CHAIR _____
 APPLICATION FILED _____
 HEARING DATE _____
 ENDORSED DATE _____

*THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE GROTON ZONING BYLAW

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, AVERMA, MA 01432
 CIVIL & STRUCTURAL ENGINEERING • LAND SURVEYING & LAND PLANNING
 VOICE: 978.772.1590 FAX: 978.772.1591
 www.gpr-inc.com

TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

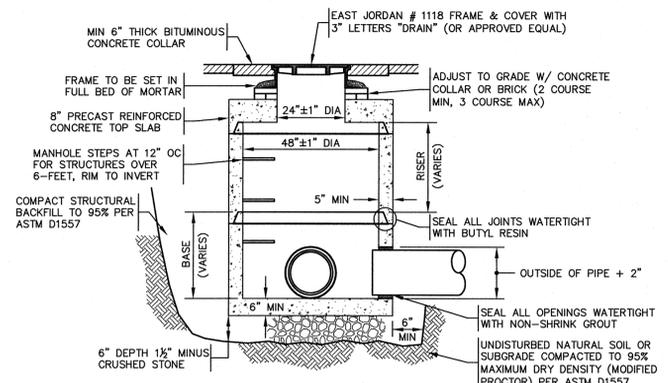
CONSTRUCTION DETAILS

BLACKSMITH ROW
134 MAIN STREET
GROTON, MA

PREPARED FOR:
 MOUNT LAUREL DEVELOPMENT, LLC
 P.O. BOX 1444
 1000 MOUNT LAUREL CIRCLE, SUITE 4
 SHIRLEY, MA 01464

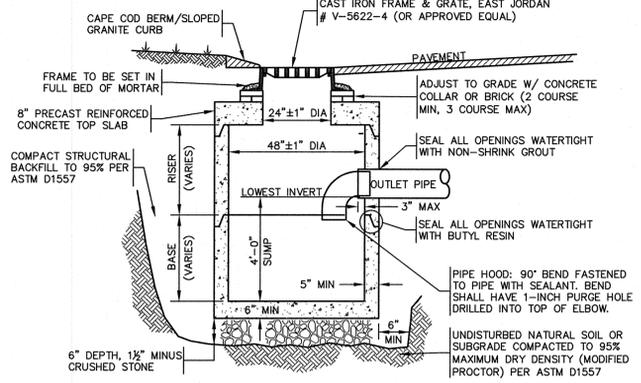
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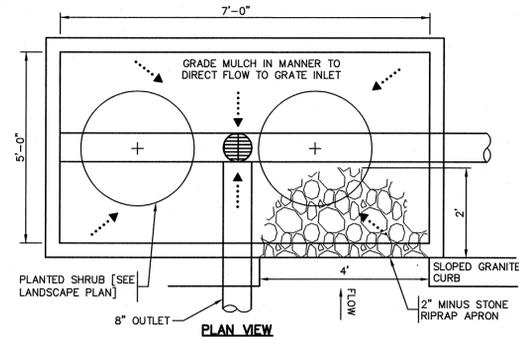
- NOTES:**
- [1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478.
 - [2] REINFORCING PER LATEST ASTM A185.
 - [3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.

DRAIN MANHOLE
TYPICAL CROSS SECTION
NOT TO SCALE

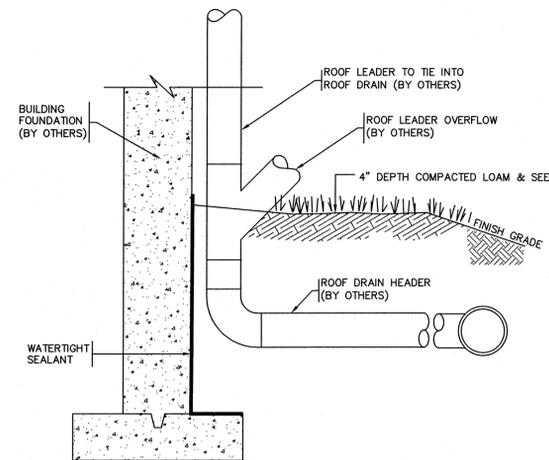


- NOTES:**
- [1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478.
 - [2] REINFORCING PER LATEST ASTM A185.
 - [3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.

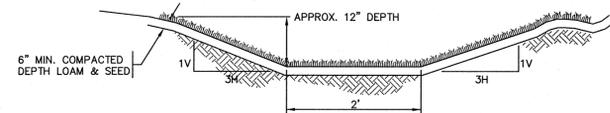
CATCH BASIN
TYPICAL CROSS SECTION
NOT TO SCALE



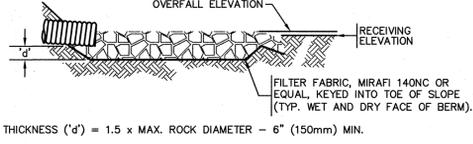
PLAN VIEW
NOT TO SCALE



ROOF LEADER CONNECTION
TYPICAL CROSS SECTION
NOT TO SCALE



BIOFILTER SWALE
PROFILE
NOT TO SCALE



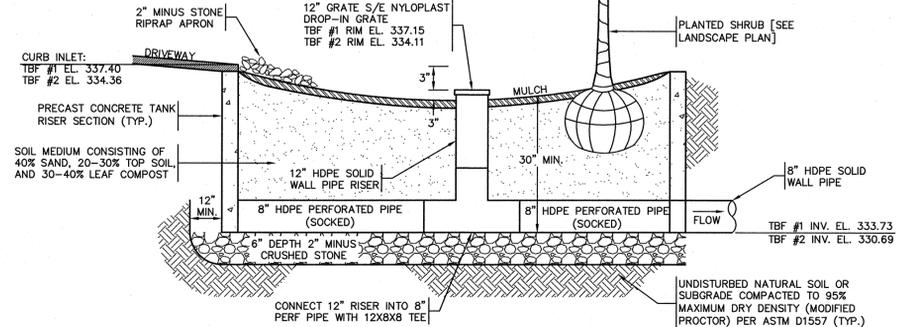
SECTION
THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.



PLAN

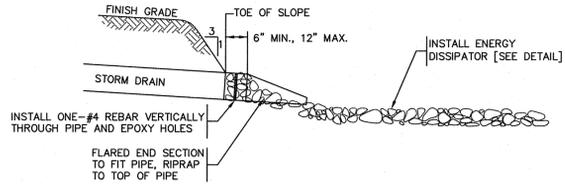
- NOTES:**
- [1] 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
 - [2] APRON SHALL BE SET AT ZERO GRADE AND SLOPED STRAIGHT.
 - [3] FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

ENERGY DISSIPATOR
NOT TO SCALE

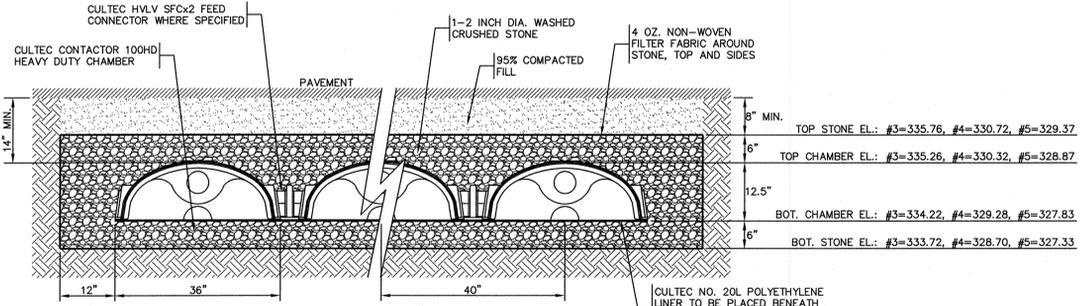


- NOTES:**
- [1] SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%.
 - [2] SOIL PH SHOULD GENERALLY BE BETWEEN 5.5-6.5.
 - [3] USE SOILS WITH 1.5%-3% ORGANIC CONTENT AND MAXIMUM 500-PPM SOLUBLE SALTS.
 - [4] SAND COMPONENT 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.

TREE BOX FILTER
NOT TO SCALE

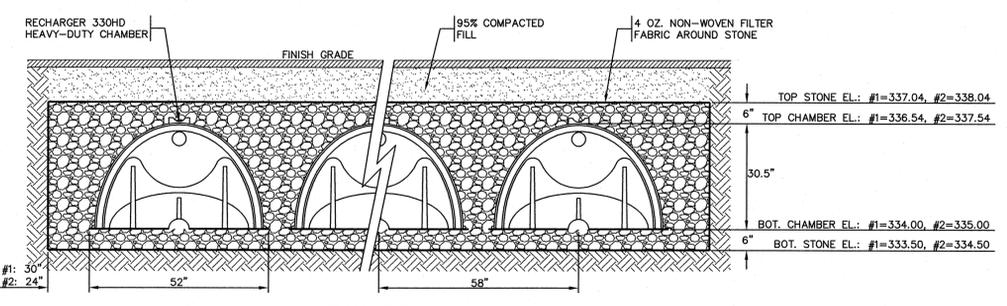


FLARED END SECTION
TYPICAL CROSS SECTION
NOT TO SCALE



- NOTES:**
- [1] SEE CULTEC DESIGN MANUAL FOR MANUFACTURERS SPECIFICATIONS AND MATERIAL SPECIFICATIONS.
 - [2] CONFIGURATION SHOWN MAY NOT BE ACCURATE, SEE SITE PLAN.
 - [3] ALL CHAMBERS MAY NOT BE SHOWN, SEE SITE PLAN FOR NUMBER AND CONFIGURATION.
 - [4] A AND B SOIL HORIZONS TO BE REMOVED PRIOR TO INSTALLATION.
 - [5] PLACE A MINIMUM OF TWO OBSERVATION PORTS IN EACH INFILTRATION BED.

INFILTRATION BED #3, #4 & #5
NOT TO SCALE



- NOTES:**
- [1] SEE CULTEC DESIGN MANUAL FOR MANUFACTURERS SPECIFICATIONS AND MATERIAL SPECIFICATIONS.
 - [2] CONFIGURATION SHOWN MAY NOT BE ACCURATE, SEE SITE PLAN.
 - [3] ALL CHAMBERS MAY NOT BE SHOWN, SEE SITE PLAN FOR NUMBER AND CONFIGURATION.
 - [4] A AND B SOIL HORIZONS TO BE REMOVED PRIOR TO INSTALLATION.
 - [5] PLACE AT LEAST ONE OBSERVATION PORT IN EACH INFILTRATION BED.

INFILTRATION BED #1 & #2
NOT TO SCALE

APPROVED BY THE GROTON PLANNING BOARD*

CHAIR _____

APPLICATION FILED _____

HEARING DATE _____

ENDORSED DATE _____

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TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

CONSTRUCTION DETAILS

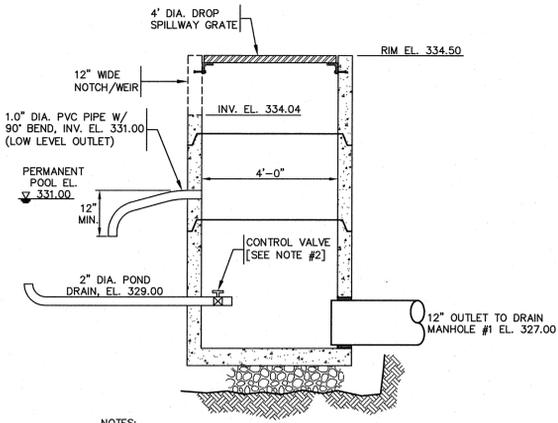
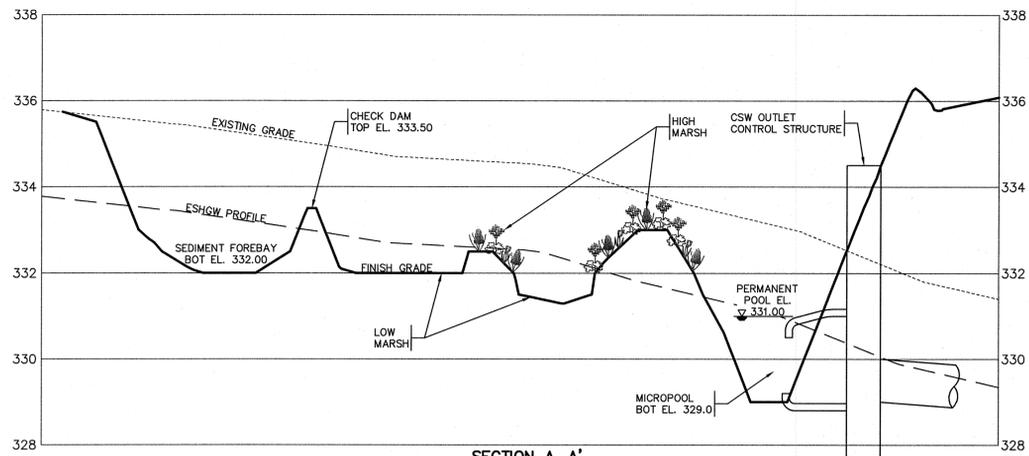
BLACKSMITH ROW
134 MAIN STREET
GROTON, MA

PREPARED FOR:
MOUNT LAUREL DEVELOPMENT, LLC
P.O. BOX 1444
1000 MOUNT LAUREL CIRCLE, SUITE 4
SHIRLEY, MA 01464

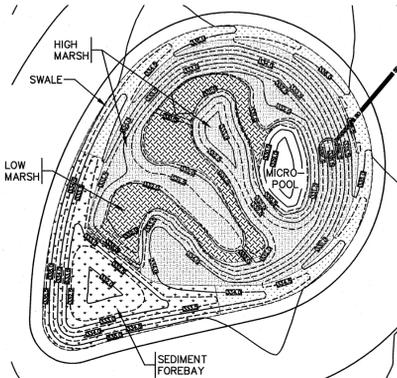
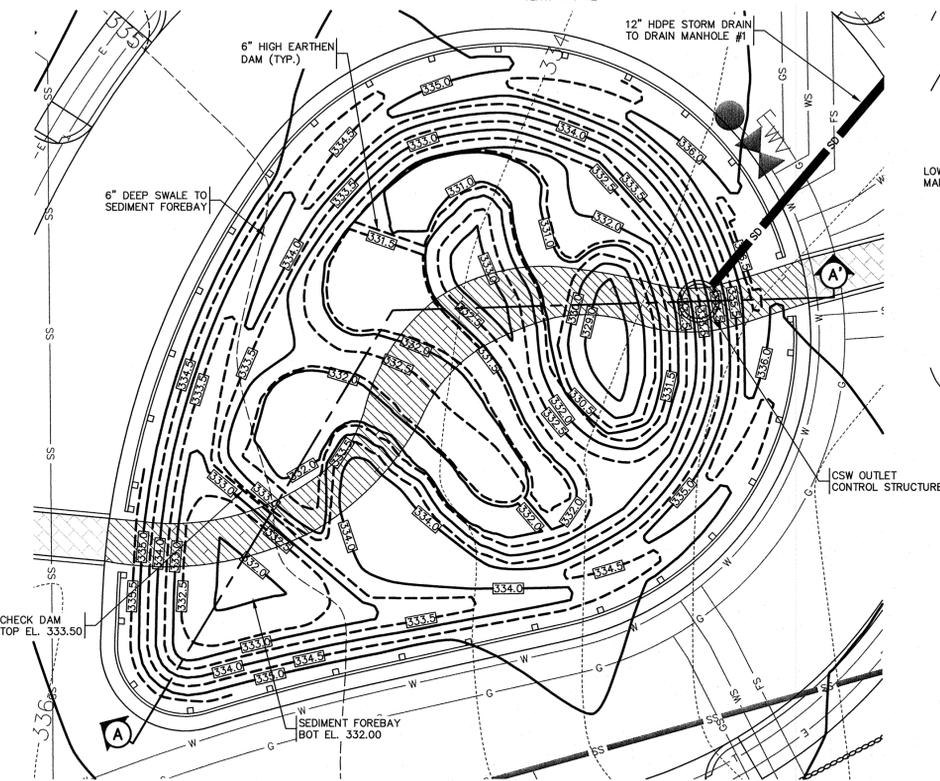
DES. BY: MKB	DATE: JULY 2011	JOB 111007	C7.3
CHK. BY: DEM			

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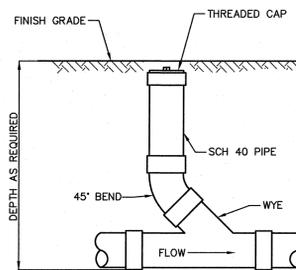
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NOTES:
[1] SEE 'CATCH BASIN' DETAIL FOR CONSTRUCTION SPECIFICATIONS.
[2] VALVE TO REMAIN CLOSED AND USED ONLY AS MEANS TO DRAIN CONSTRUCTED STORMWATER WETLAND FOR MAINTENANCE OR REPAIR.



NOTES:
SEE SHEET L1.3 FOR CONSTRUCTED STORMWATER WETLAND PLANTING SPECIFICATIONS.



NOTES:
DEPTH AS REQUIRED

APPROVED BY THE GROTON PLANNING BOARD*

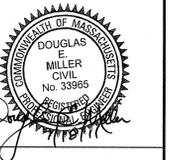
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____ HEARING DATE
____ ENDORSED DATE

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TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

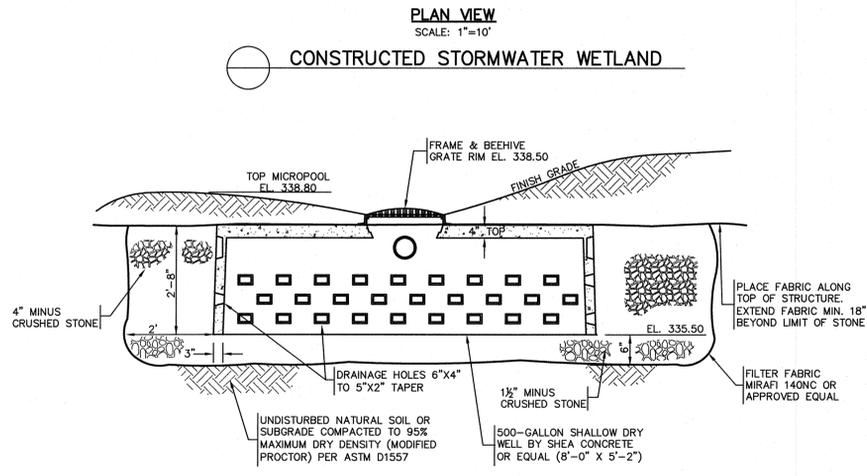
CONSTRUCTION DETAILS

BLACKSMITH ROW
134 MAIN STREET
GROTON, MA

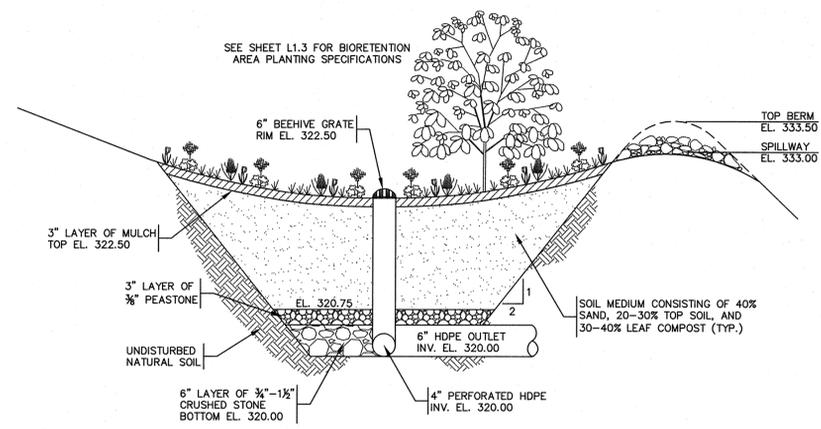
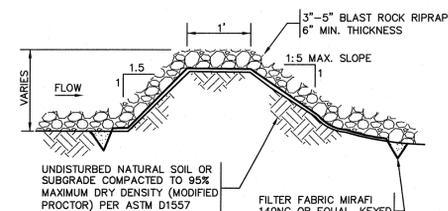
PREPARED FOR:
MOUNT LAUREL DEVELOPMENT, LLC
P.O. BOX 14444
1000 MOUNT LAUREL CIRCLE, SUITE 4
SHIRLEY, MA 01464

DES. BY: MKB DATE: JULY 2011 JOB 111007 **C7.4**
CHK. BY: DEM

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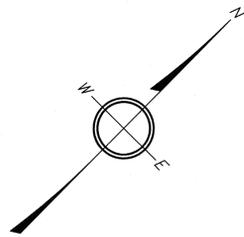


NOTES:
[1] 4,000 PSI PRECAST CONCRETE AFTER 28 DAYS CONFORMING WITH LATEST ASTM C478
[2] ALL JOINTS BETWEEN SECTIONS, GRADE RINGS AND CASTINGS SHALL BE SEALED WATER TIGHT.
[3] ALL LIFT HOLES SHALL BE GROUTED ON THE INSIDE AND OUTSIDE WITH NON-SHRINK GROUT.



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%.
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[10] COVER THE SOIL WITH 2-3 INCHES OF FINE-SHREDDED HARDWOOD MULCH.

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N/F
CHARLES M. GRINNELL

N/F
JOHN H. SHEEDY COMPANY
REALTY TRUST
(TRUSTEES)
JOHN P. SHEEDY, KAREN S.
COREY & MICHAEL J. SHEEDY

N/F
GROTON
MANAGEMENT, LLC

N/F
CAJE, LLC

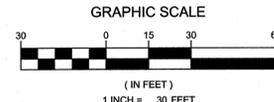
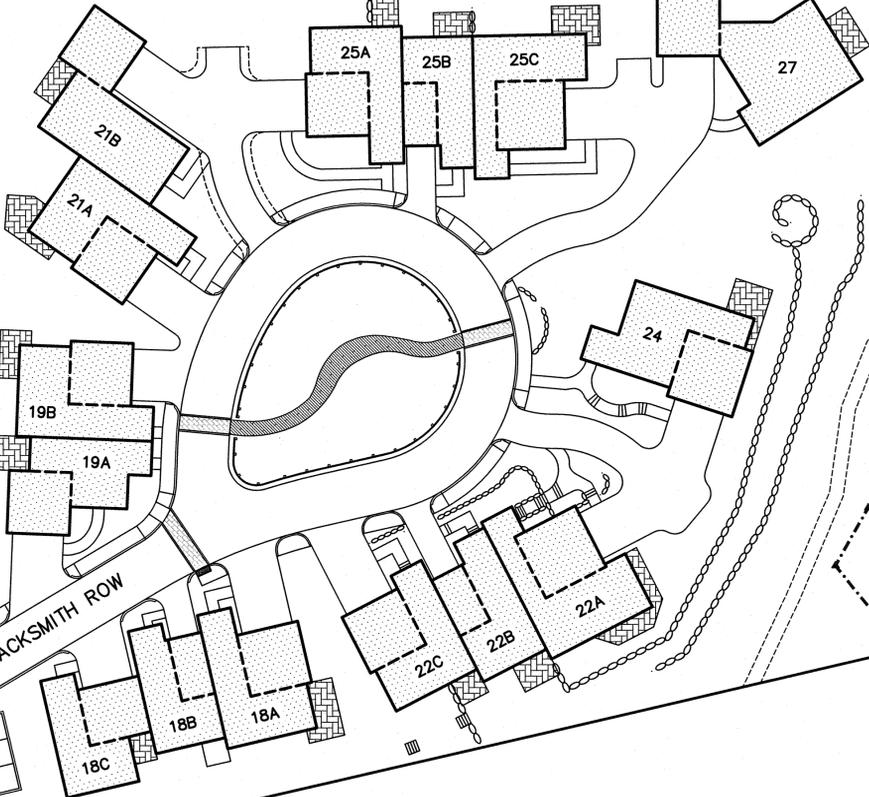
N/F
PERGANTIS
REALTY TRUST

MAIN
COUNTY L.O.
(VARIABLE WIDTH)
STREET
RT. 119/225

BLACKSMITH ROW

#134 MAIN ST
1A
2A
1B
2B

1C
2C



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TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

STREET NAME &
NUMBERING PLAN

**BLACKSMITH ROW
134 MAIN STREET
GROTON, MA**

PREPARED FOR:
MOUNT LAUREL DEVELOPMENT, LLC
P.O. BOX 1444
1000 MOUNT LAUREL CIRCLE, SUITE 4
SHIRLEY, MA 01464

APPROVED BY THE
GROTON PLANNING BOARD*

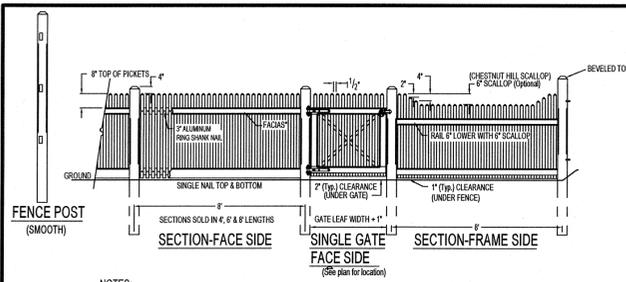
_____ CHAIR
 _____ APPLICATION FILED _____
 _____ HEARING DATE _____
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DES. BY: MKB	DATE: JULY 2011	JOB 111007	C8.1
CHK. BY: DEM			

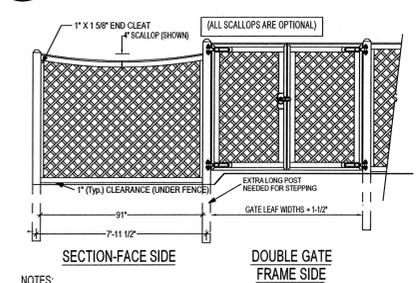
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NOTES:
 1. All information here is property of Walpole Woodworkers, Inc.
 2. Installation to be completed in accordance with manufacturer's specifications.
 3. Do not scale drawings
 4. Specifications shown can be changed by the manufacturer only.
 5. CONTRACTORS NOTE: For product and company information visit "www.CADdetails.com/info" Reference number 675-002.

1 Garden Fence by Walpole Woodworkers or Equal
 NOT TO SCALE



BATTEN: 5/8" X 1 1/8" \$4s
 RAIL: 1" X 2 7/8" \$4s
 CLEAT: 1" X 1 5/8" \$4s
 CAP: 3/4" X 4 5/8" \$4s

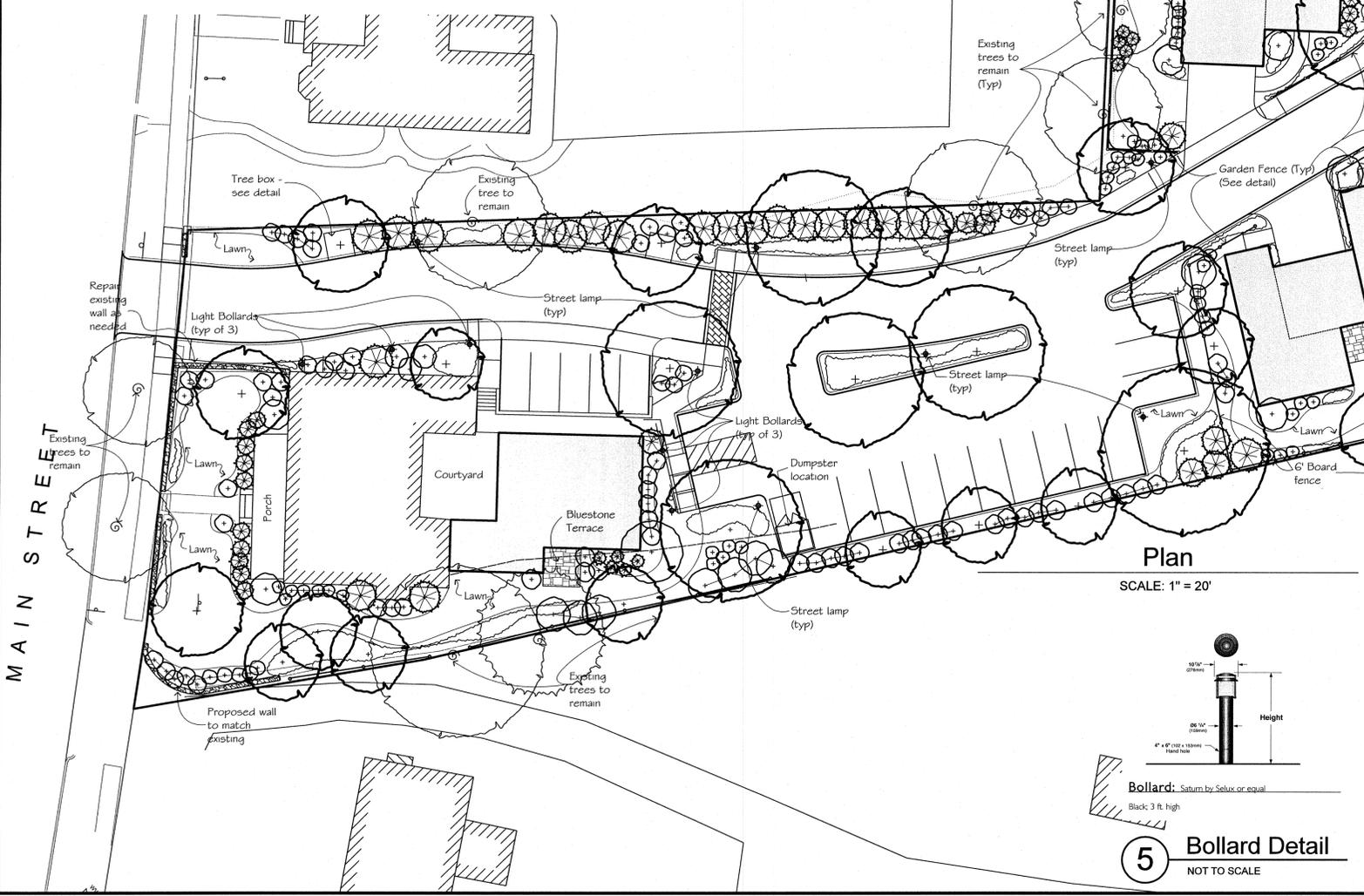
NOTES:
 1. All information here is property of Walpole Woodworkers, Inc.
 2. Installation to be completed in accordance with manufacturer's specifications.
 3. Do not scale drawings
 4. Specifications shown can be changed by the manufacturer only.
 5. CONTRACTORS NOTE: For product and company information visit "www.CADdetails.com/info" Reference number 675-046.

2 Screen Fence by Walpole Woodworkers or Equal (Ht as noted on plan)
 NOT TO SCALE

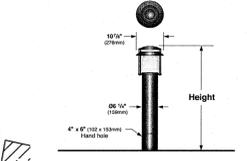


Street Lamp: Saturn 2 Cut-Off, by Selux or equal
 Single mount; Round stepped Steel Pole; Black; 12 ft. high
 150 watt HMT6; House Side Shield, as needed

3 Street Lamp Detail
 NOT TO SCALE

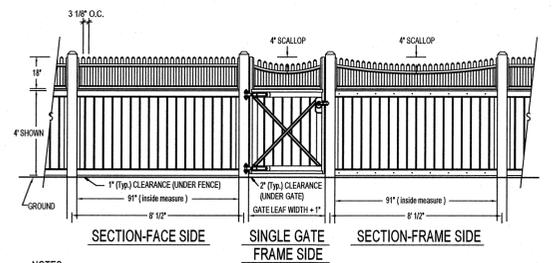


Plan
 SCALE: 1" = 20'



Bollard: Saturn by Selux or equal
 Black; 3 ft. high

5 Bollard Detail
 NOT TO SCALE



NOTES:
 1. All information here is property of Walpole Woodworkers, Inc.
 2. Installation to be completed in accordance with manufacturer's specifications.
 3. Do not scale drawings
 4. Specifications shown can be changed by the manufacturer only.
 5. CONTRACTORS NOTE: For product and company information visit "www.CADdetails.com/info" Reference number 675-053.

4 Board Fence 6'-0" by Walpole Woodworkers or Equal
 NOT TO SCALE

General Notes
 1. Base plan information from: "Town Center Overlay District, Mixed-Use Development, 134 Main Street, Groton, MA, July 2011", prepared by GPR, Inc., Ayer, MA
 2. All site information represented on this plan is illustrative, and must be verified by the Contractor. Written specifications shall take precedence over representations on drawings. All spot grades are approximate.
 3. It is the Contractor's responsibility to become apprised of existing conditions, underground utilities, and overhead utilities. Coordination with all relevant companies or agencies, including permitting, affected by this construction is Contractor's responsibility. The Contractor is required to obtain any necessary permits required from local authorities for all work in this contract.



Lorayne Black ASLA
 Landscape Architect

Project:
 Town Center Overlay District
 Boynton Meadows at Gibbet Hill
 134 Main Street
 Groton, MA 01450

Drawing Title:
Landscape Plan

Prepared For:
 Client Name
 Mt. Laurel Development, LLC
 P.O. Box 1444
 1000 Mt. Laurel Circle, Suite 4
 Shirley, MA 01464
 Date: July, 2011
 Scale: As Noted

phone: (978) 302-0448
 EMAIL: LBLack@groton.org
 P.O. Box 595, Groton, MA 01450

Revisions www.lorayneblack.com

Sheet
L1.1

Wetland Buffer Plant List

Key	Botanical Name	Common Name	Size	Remarks	Indicator Status
AA	Aronia arbutifolia	Red Chokeberry	#3 pot	Native/White spring flower/red fruit/fall color/native/8 ft.	Facultative wetland
AM	Amelanchier canadensis	Serviceberry	3-4 ft. C.	Native/white flowers early spring/ fall color/ 18 ft.	Facultative
AR	Acer rubrum	Red Maple	4-5 ft. C.	Native/ fall color/ 50 ft.	Facultative
CA	Clethra alnifolia	Summersweet	18"-24"	Native/white flowers in summer/yellow fall/5 ft.	Facultative
IG	Ilex glabra	Inkberry	#2; 12-15 in.	Native/ compact/ soft green/ 3 ft.	Facultative wetland
IV	Ilex verticillata	Winterberry	#2 pot	Native/red berries in fall-winter/ deciduous/ 8 ft.	Facultative wetland
QA	Quercus alba	White Oak	4-5 ft. C.	Native/ 75 ft.	Facultative
SC	Sambucus canadensis	Elderberry	18"-24"	Native/ Fast growing/ white flowers/ fruit/ 6 ft.	Facultative wetland
VA	Vaccinium angustifolia	Lowbush Blueberry	flats	Native/ groundcover/ 1 ft.	Facultative
VB	Viburnum dentatum	Arrowwood/Viburnum	2-3 ft. C.	Native/Rounded/white flowers in late May/ berries/ 8 ft.	Facultative
VC	Vaccinium corymbosum	Highbush Blueberry	#2 pot	Native/Plant 2 varieties/fruit/fall color/ 5 ft.	Facultative wetland

Rain Garden Plant List

Key	Botanical Name	Common Name	Size	Remarks	Indicator Status
AA	Aronia arbutifolia	Red Chokeberry	#3 pot	Native/White spring flower/red fruit/fall color/native/8 ft.	Facultative wetland
AM	Amelanchier canadensis	Serviceberry	3-4 ft. C.	Native/white flowers early spring/ fall color/ 18 ft.	Facultative
AV	Andropogon virginicus	Broomsedge	2" plug	Wet meadow grass/ 2 ft.	Facultative
CA	Clethra alnifolia	Summersweet	18"-24"	Native/white flowers in summer/yellow fall/5 ft.	Facultative
CV	Carex vulpinoidea	Fox Sedge	2" plug	Wet marsh grass/ 3 ft.	Obligate wetland
DC	Deschampsia cespitosa	Tufted Hairgrass	2" plug	Wet tolerant grass/ 2 ft.	Facultative wetland
IG	Ilex glabra	Inkberry	#2 pot	Native/ compact/ soft green/ 3 ft.	Facultative wetland
IV	Ilex verticillata	Winterberry	#2 pot	Native/red berries in fall-winter/ deciduous/ 8 ft.	Facultative wetland
VB	Viburnum dentatum	Arrowwood/Viburnum	2-3 ft. C.	Native/Rounded/white flowers in late May/ berries/ 8 ft.	Facultative

Constructed Pocket Wetland Plant List

High Marsh Zone					
AS	Acorus americanus	Sweetflag	2" plug		
CP	Cephalanthus occidentalis	Buttonbush	18"-24"		
CX	Carex stricta	Tussock Sedge	2" plug		
EP	Eupatorium perfoliatum	Boneset	2" plug		
PC	Pontederia cordata	Pickerelweed	2" plug		
RV	Rhododendron viscosum	Swamp Azalea	18-24 inches		
SL	Sagittaria latifolia	Northern Arrowhead	2" plug		
ST	Schoenoplectus tabernaemontani	Soft-stem Bulrush	2" plug		
Low Marsh Zone					
PC	Pontederia cordata	Pickerelweed	2" plug		
SA	Schoenoplectus acutus	Hard-stem Bulrush	2" plug		
SP	Sarracenia purpurea	Pitcher Plant	2" plug		
ST	Schoenoplectus tabernaemontani	Soft-stem Bulrush	2" plug		
TA	Typha angustifolia	Narrow-leaved Cattail	2" plug		
Standing Water					
PV	Peltandra virginica	Arrow Arum	2" plug		
PC	Pontederia cordata	Pickerelweed	2" plug		
SA	Schoenoplectus acutus	Hard-stem Bulrush	2" plug		
ST	Schoenoplectus tabernaemontani	Soft-stem Bulrush	2" plug		

Northeast Upland Native/Wildflower Mix

as per Southern Tier Consulting, Inc. or equal

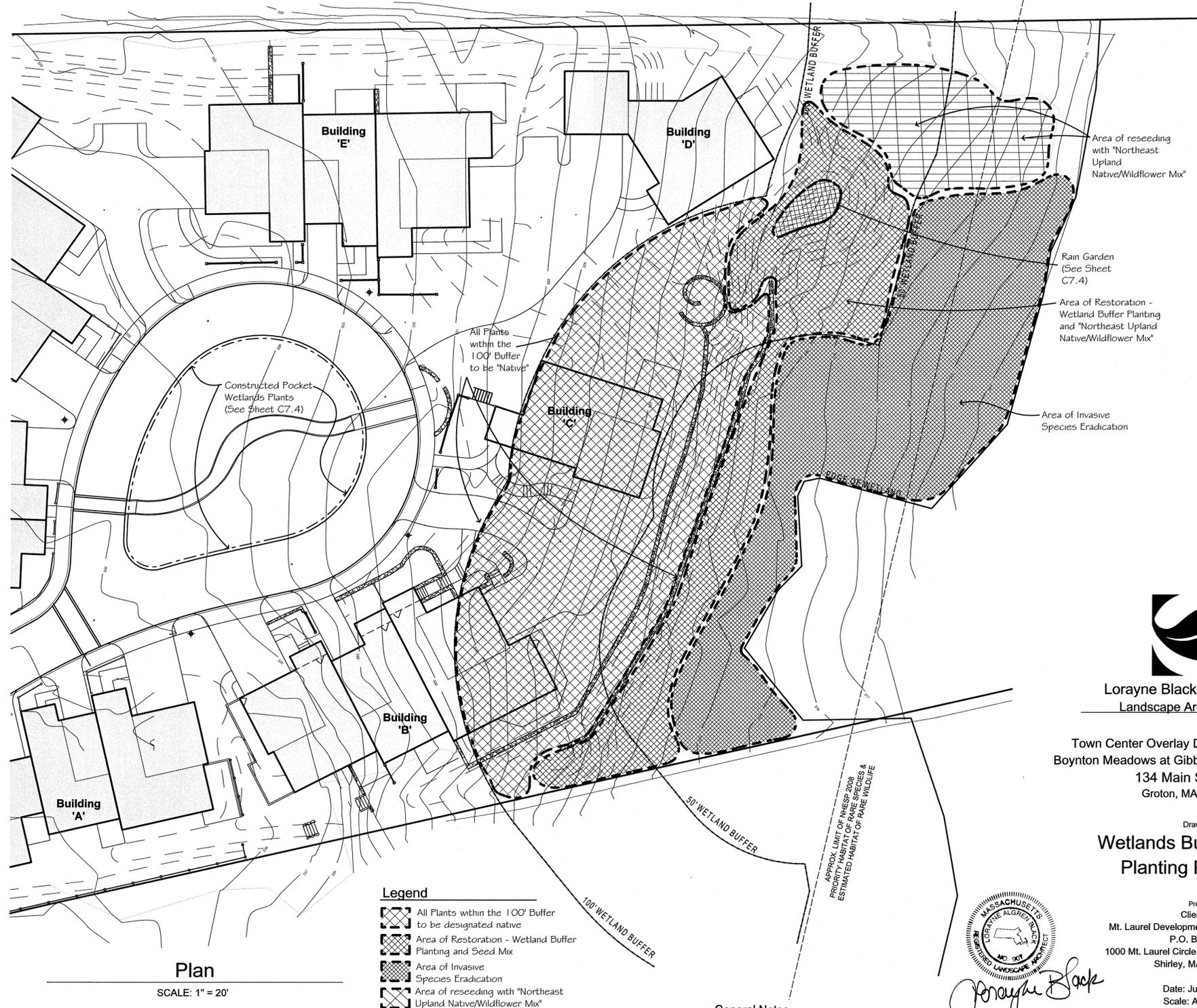
SPECIES PERCENT

Grass Portion (15 Pounds)

Festuca ovina	Sheep Fescue	28.10%
Panicum virgatum	Switchgrass	26.00%
Setaria italica	Foxtail Millet	15.30%
Anthoxanthum odoratum	Sweet Vernal Grass	12.80%
Lolium multiflorum	Annual Ryegrass	11.10%
Elymus canadensis	Wild Rye	6.70%

Wildflower Portion (8 Pounds)

Achillea millefolium	Common Yarrow	47.50%
Rudbeckia hirta	Black Eyed Susan	9.10%
leucanthem.	Ox-Eye Daisy	7.50%
Verbena hastata	Blue Vervain	7.40%
Cichorium intybus	Cichory	7.30%
Lotus corniculatus	Birdsfoot Trefoil	6.80%
Hesperis matronalis	Dame's Rocket	5.00%
Daucus carota	Queen Anne's Lace	2.20%
Solidago canadensis	Canada Goldenrod	2.00%
Euthamia graminifolia	Goldenrod	2.00%
Monarda fistulosa	Wild Bergamot	1.50%
Aster novae-angliae	New England Aster	1.30%
Asclepias syriaca	Common Milkweed	0.40%



- Legend**
- All Plants within the 100' Buffer to be designated native
 - Area of Restoration - Wetland Buffer Planting and Seed Mix
 - Area of Invasive Species Eradication
 - Area of reseeding with "Northeast Upland Native/Wildflower Mix"

Notes

- Native plant stock to be locally grown within Massachusetts or New Hampshire.
- Landscape architect to locate proposed planting within "Area of Restoration".

General Notes

- Base plan information from: "Town Center Overlay District, Mixed-Use Development, 134 Main Street, Groton, MA, July 2011", prepared by GPR, Inc., Ayer, MA
- All site information represented on this plan is illustrative, and must be verified by the Contractor. Written specifications shall take precedence over representations on drawings. All spot grades are approximate.
- It is the Contractors responsibility to become apprised of existing conditions, underground utilities, and overhead utilities. Coordination with all relevant companies or agencies, including permitting, affected by this construction is Contractor's responsibility. The Contractor is required to obtain any necessary permits required from local authorities for all work in this contract.



Lorayne Black ASLA
Landscape Architect

Project:
Town Center Overlay District
Boynton Meadows at Gibbet Hill
134 Main Street
Groton, MA 01450

Drawing Title:
**Wetlands Buffer
Planting Plan**



Lorayne Black

Prepared For:
Client Name
Mt. Laurel Development, LLC
P.O. Box 1444
1000 Mt. Laurel Circle, Suite 4
Shirley, MA 01464

Date: July, 2011
Scale: As Noted

phone: (978) 302-0448
EMAIL: LBLack@groton.org
P.O. Box 595, Groton, MA 01450

Revisions www.lorayneblack.com

Sheet
L1.3

SCHEDULE OF LUMINAIRES:

SITE AREA LUMINAIRE
 SYMBOL: *
 PRODUCT: SELUX "SATURN II" STREET LAMP
 QUANTITY: 9
 MOUNTING HEIGHT: 12'
 BALLAST: 150W METAL HALIDE

BOLLARD LUMINAIRE
 SYMBOL: ●
 PRODUCT: SELUX "SATURN BOLLARD"
 QUANTITY: 6
 MOUNTING HEIGHT: 3.5'
 BALLAST: 44W METAL HALIDE

APPROVED BY THE
 LITTLETON PLANNING BOARD

CHAIR _____
 APPLICATION FILED _____
 HEARING DATE _____
 PLAN APPROVED _____

LEGEND

EXISTING	PROPOSED
---100.0	ELEVATION CONTOUR
---	SPOT GRADE
---	PROPERTY LINE
---	BUILDING ENVELOPE
---	WETLAND DELINEATION
---	100 FT WETLAND BUFFER ZONE
---	NHESP HABITAT LIMIT
---	EDGE OF PAVEMENT
---	STOCKADE FENCE
---	CHAINLINK FENCE
---	WIRE FENCE
---	STONE WALL
---	WATER MAIN
---	WATER SERVICE
---	FIRE SERVICE
---	WATER VALVE
---	FIRE VALVE
---	FIRE HYDRANT
---	WATER SHUT-OFF VALVE
---	GRAVITY SEWER LINE
---	SEWER MANHOLE
---	GAS LINE
---	GAS SERVICE
---	GAS VALVE
---	GAS METER
---	BURIED POWER LINE
---	OVERHEAD POWER LINE
---	UTILITY POLE
---	GUY WIRE
---	UNDERGROUND TELEPHONE LINE
---	ELECTRIC BOX
---	ELECTRIC METER
---	STORM DRAIN
---	UNDERDRAIN
---	ROOF DRAIN
---	CATCH BASIN
---	DRAIN MANHOLE
---	STRAW WATTLES
---	DEEP SOIL OBSERVATION HOLE
---	SITE LUMINAIRE
---	SIGN
---	ELEVATION BENCHMARK
---	SURFACE RUNOFF DIRECTION
---	STONE BOUND
---	DRILL HOLE
---	IRON ROD
---	NUMBER OF PARKING SPACES

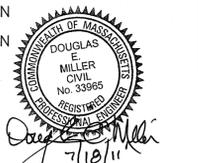
ABBREVIATIONS

EL	ELEVATION	N/F	NOW OR FORMERLY
INV	INVERT	SMH	SEWER MANHOLE
FC	FINISH GRADE	DMH	DRAIN MANHOLE
SF	SQUARE FEET	CB	CATCH BASIN
AC	ACRES	TOF	TOP OF FOUNDATION
BIT	BITUMINOUS	FES	FLARED END SECTION
CONC	CONCRETE	EOP	EDGE OF PAVEMENT
FF	FINISH FLOOR	BW	BOTTOM OF WALL
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
RET	RETAINING	EOP	EDGE OF PAVEMENT
R	RADIUS	VGC	VERTICAL GRANITE CURB
L	LENGTH	TP	TOP OF PAVEMENT
SLOPE	SLOPE	HP	HIGH POINT
C/O	CLEANOUT	HDPE	HIGH DENSITY POLYETHYLENE
GAR	GARAGE	BSMT	BASEMENT

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
 VOICE: 978.772.1590 FAX: 978.772.1591
 www.gpr-inc.com

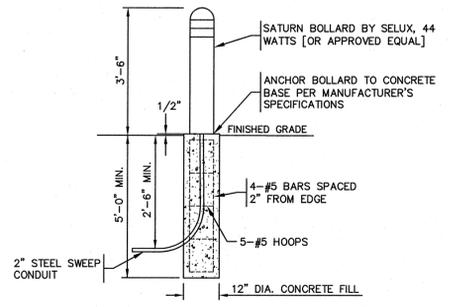
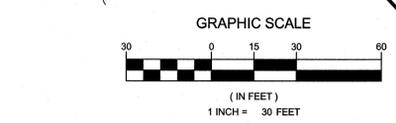
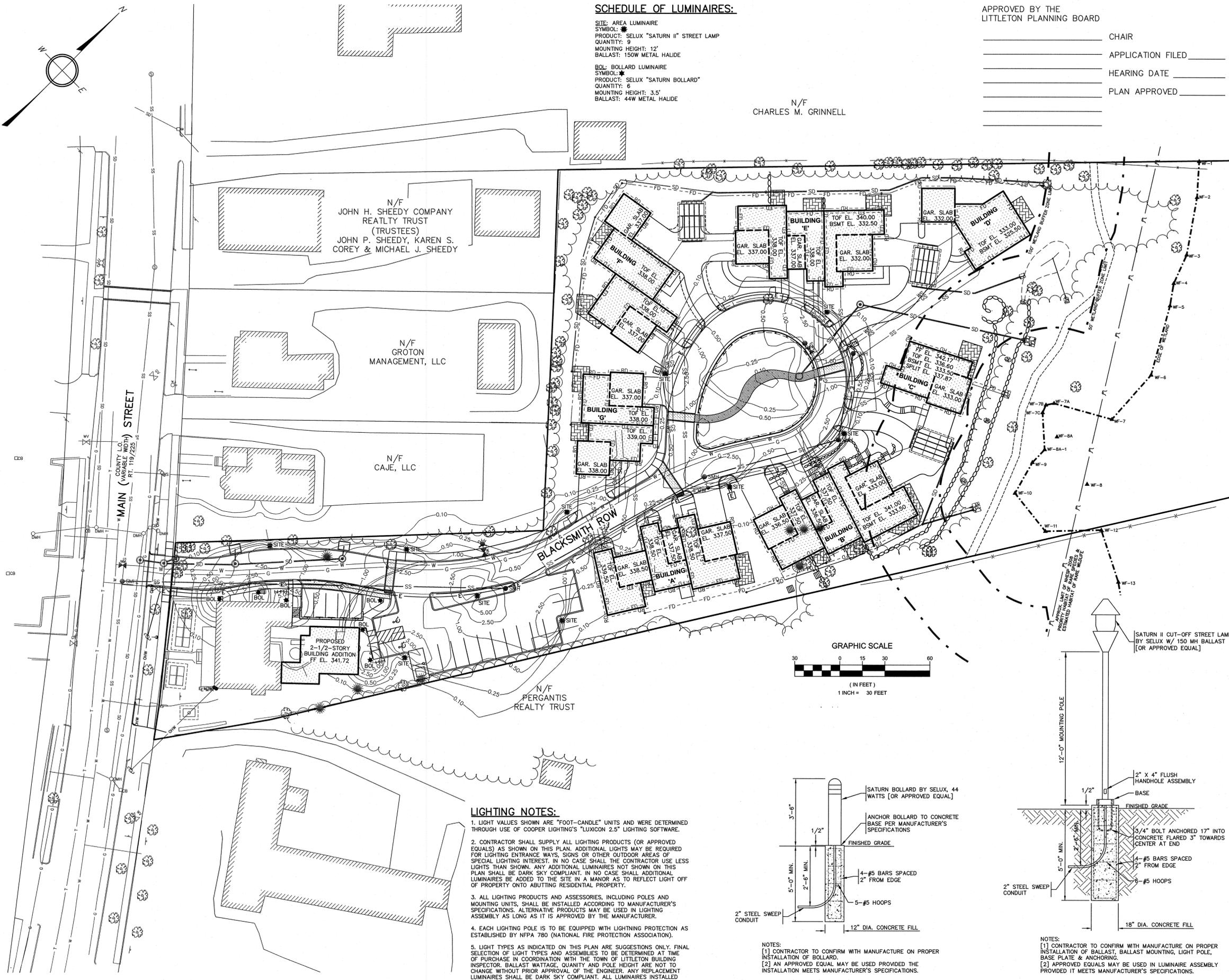
TOWN CENTER OVERLAY DISTRICT
BOYNTON MEADOWS AT GIBBET HILL

PHOTOMETRIC PLAN

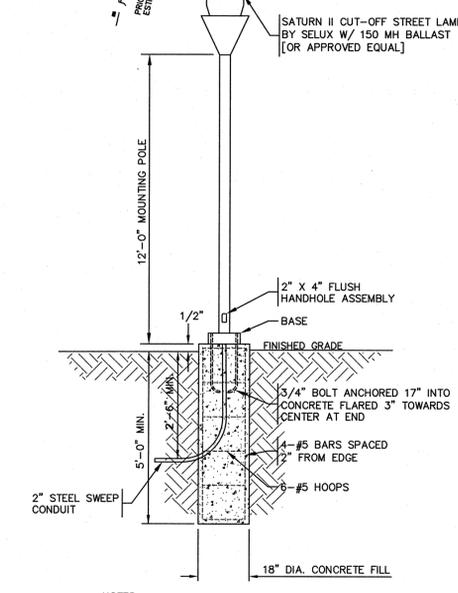
BLACKSMITH ROW
 134 MAIN STREET
 GROTON, MA

PREPARED FOR:
 MOUNT LAUREL DEVELOPMENT, LLC
 P.O. BOX 1444
 1000 MOUNT LAUREL CIRCLE, SUITE 4
 SHIRLEY, MA 01464

DES. BY: MKB	DATE: JULY 2011	JOB 111007	P1.1
CHK. BY: DEM			



BOLLARD LUMINAIRE ASSEMBLY
 TYPICAL CROSS SECTION
 NOT TO SCALE



SITE LUMINAIRE
 TYPICAL CROSS SECTION
 NOT TO SCALE

LIGHTING NOTES:

- LIGHT VALUES SHOWN ARE "FOOT-CANDLE" UNITS AND WERE DETERMINED THROUGH USE OF COOPER LIGHTING'S "LUXICON 2.5" LIGHTING SOFTWARE.
- CONTRACTOR SHALL SUPPLY ALL LIGHTING PRODUCTS (OR APPROVED EQUALS) AS SHOWN ON THIS PLAN. ADDITIONAL LIGHTS MAY BE REQUIRED FOR LIGHTING ENTRANCE WAYS, SIGNS OR OTHER OUTDOOR AREAS OF SPECIAL LIGHTING INTEREST. IN NO CASE SHALL THE CONTRACTOR USE LESS LIGHTS THAN SHOWN. ANY ADDITIONAL LUMINAIRES NOT SHOWN ON THIS PLAN SHALL BE DARK SKY COMPLIANT. IN NO CASE SHALL ADDITIONAL LUMINAIRES BE ADDED TO THE SITE IN A MANNER AS TO REFLECT LIGHT OFF OF PROPERTY ONTO ADJACENT RESIDENTIAL PROPERTY.
- ALL LIGHTING PRODUCTS AND ACCESSORIES, INCLUDING POLES AND MOUNTING UNITS, SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ALTERNATIVE PRODUCTS MAY BE USED IN LIGHTING ASSEMBLY AS LONG AS IT IS APPROVED BY THE MANUFACTURER.
- EACH LIGHTING POLE IS TO BE EQUIPPED WITH LIGHTNING PROTECTION AS ESTABLISHED BY NFPA 780 (NATIONAL FIRE PROTECTION ASSOCIATION).
- LIGHT TYPES AS INDICATED ON THIS PLAN ARE SUGGESTIONS ONLY. FINAL SELECTION OF LIGHT TYPES AND ASSEMBLIES TO BE DETERMINED AT TIME OF PURCHASE IN COORDINATION WITH THE TOWN OF LITTLETON BUILDING INSPECTOR. BALLAST WATTAGE, QUANTITY AND POLE HEIGHT ARE NOT TO CHANGE WITHOUT PRIOR APPROVAL OF THE ENGINEER. ANY REPLACEMENT LUMINAIRES SHALL BE DARK SKY COMPLIANT. ALL LUMINAIRES INSTALLED SHALL BE FULL CUTOFF AS TO NOT REFLECT LIGHT TO ADJACENT RESIDENTIAL PROPERTY.
- BOARDWALK LIGHTING BY OTHERS.

NOTES:
 [1] CONTRACTOR TO CONFIRM WITH MANUFACTURE ON PROPER INSTALLATION OF BOLLARD.
 [2] AN APPROVED EQUAL MAY BE USED PROVIDED THE INSTALLATION MEETS MANUFACTURER'S SPECIFICATIONS.

NOTES:
 [1] CONTRACTOR TO CONFIRM WITH MANUFACTURE ON PROPER INSTALLATION OF BALLAST, BALLAST MOUNTING, LIGHT POLE, BASE PLATE & ANCHORING.
 [2] APPROVED EQUALS MAY BE USED IN LUMINAIRE ASSEMBLY PROVIDED IT MEETS MANUFACTURER'S SPECIFICATIONS.