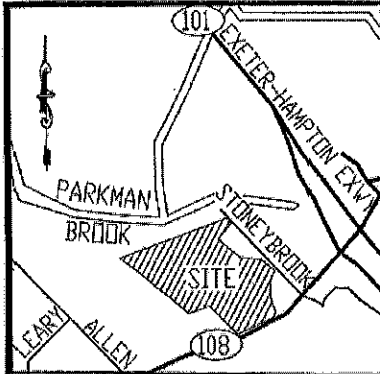


THESE PLANS ARE PERMIT DRAWINGS
ONLY AND NOT INTENDED FOR
CONSTRUCTION OR BIDDING



LOCATION PLAN
SCALE: 1" = 500'

SITE DEVELOPMENT PLANS FOR ROLLINSFORD ASSOCIATES, LLC

146 PORTSMOUTH AVENUE
EXETER, NEW HAMPSHIRE

JANUARY 16, 2013

PROPERTY OWNER:

MAP 51 LOT 1
ROLLINSFORD ASSOCIATES, LLC
3 INDUSTRIAL DRIVE, SUITE 6
WINDHAM, NH 03087

CIVIL ENGINEER/LAND SURVEYOR:



MSC CIVIL ENGINEERS & LAND SURVEYORS, INC.
170 COMMERCE WAY, SUITE 102
PORTSMOUTH, NH 03801
(603) 431-2222

IN ASSOCIATION WITH:

ENVIRONMENTAL CONSULTANT:

GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DRIVE, BUILDING 2, UNIT H
EXETER, NH 03833-7507
(603) 778-0644

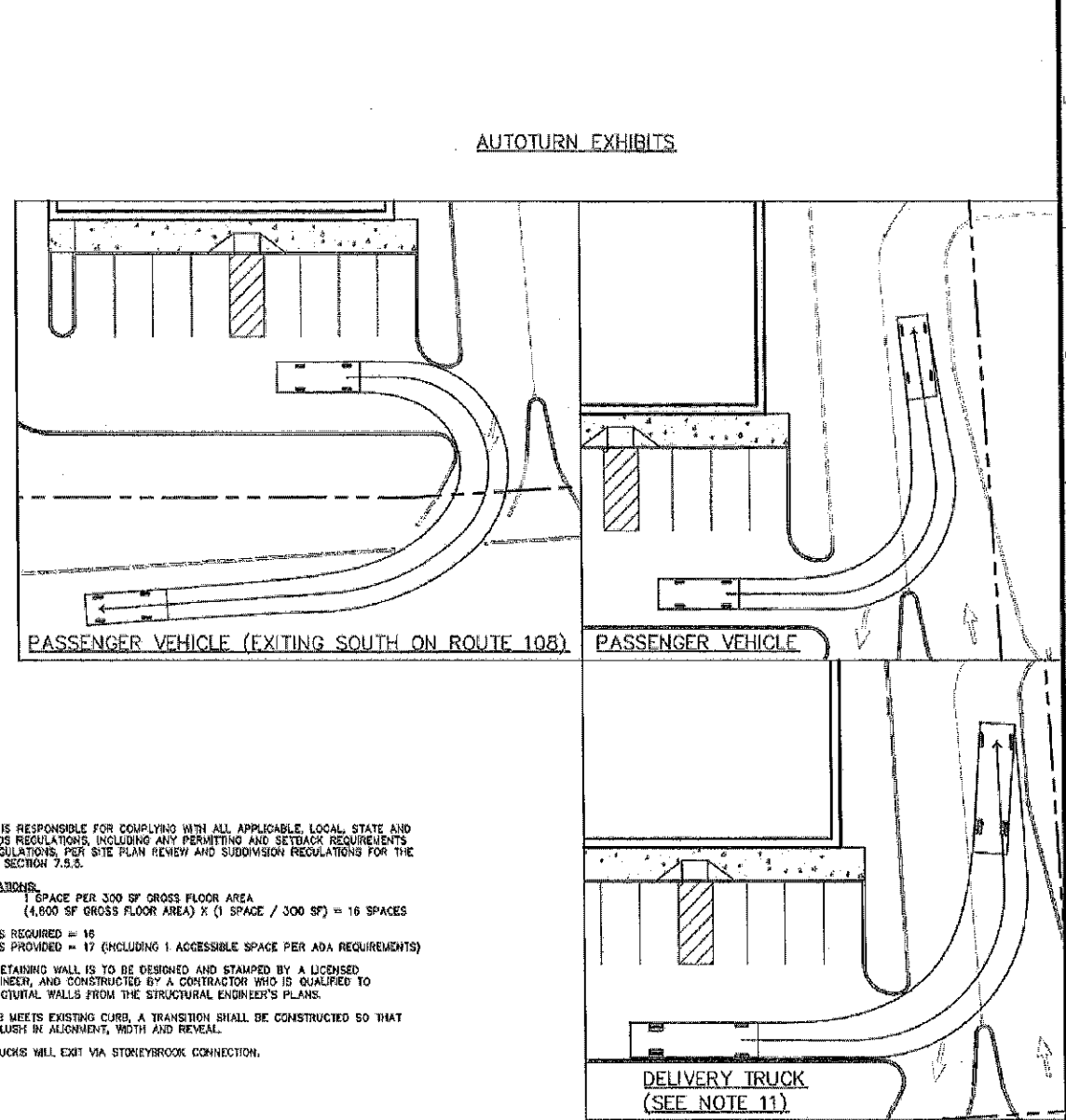
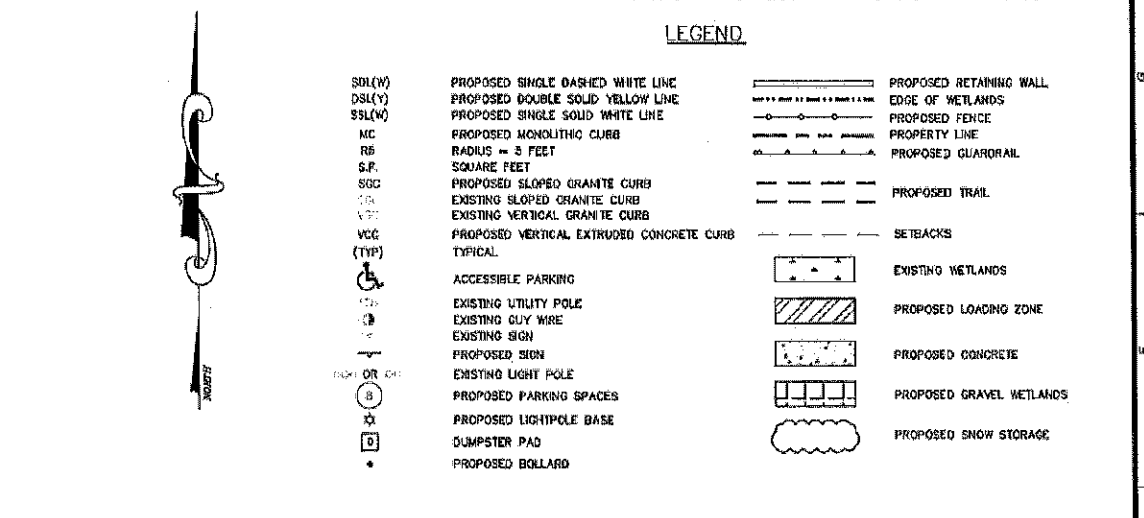
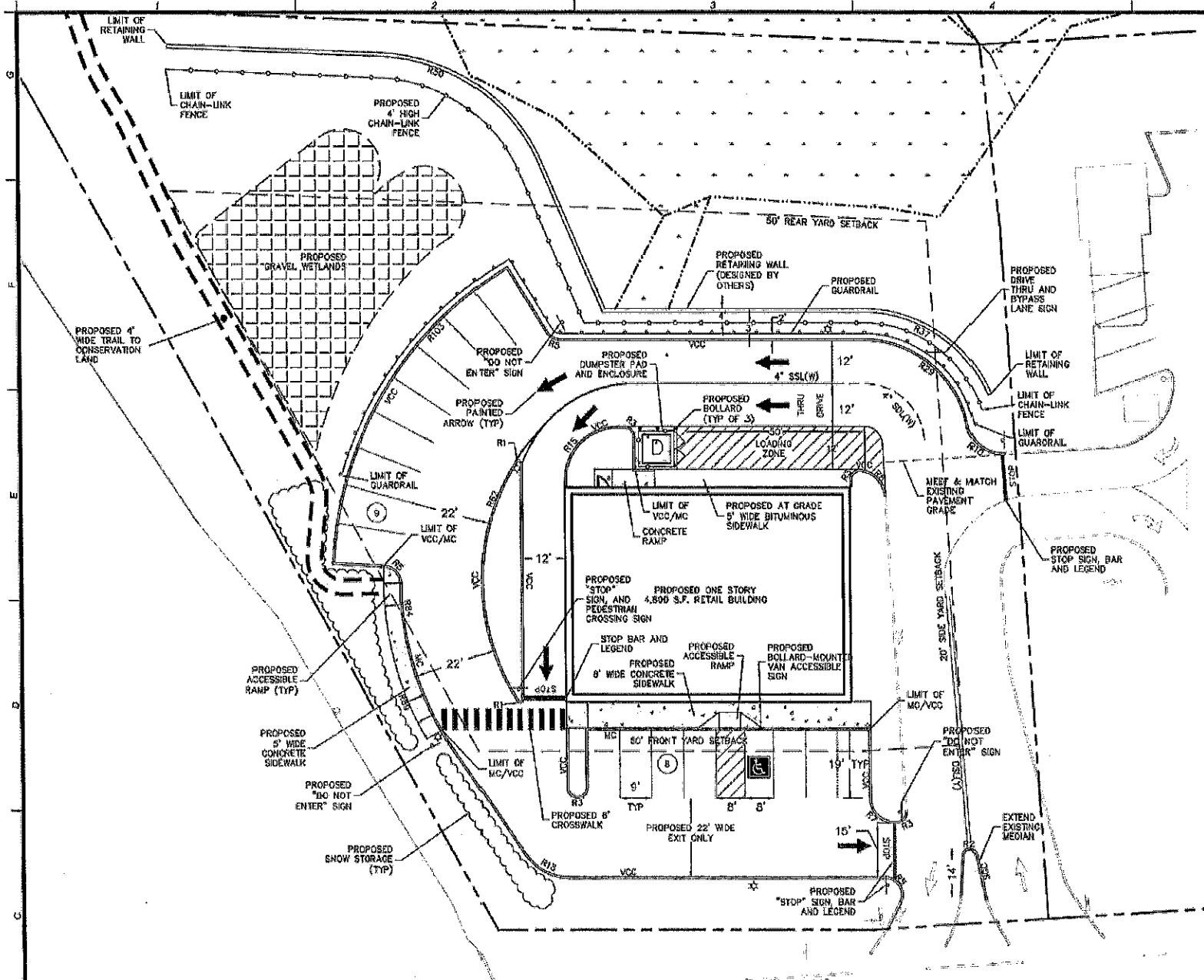
LANDSCAPE ARCHITECT:

HBLA, INC.
170 COMMERCE WAY, SUITE 102
PORTSMOUTH, NH 03801
(603) 431-4000

PLAN INDEX

SHEET #

EXISTING FEATURES PLAN	C - 1
SITE PLAN	C - 2
GRADING AND DRAINAGE PLAN	C - 3
UTILITY PLAN	C - 4
EROSION CONTROL PLAN	C - 5
LIGHTING PLAN	C - 6
DETAILS	C - 7 TO C - 10
WETLAND IMPACT PLAN	C - 11
LANDSCAPE PLAN	L - 1
LANDSCAPE DETAILS	L - 2



WAIVERS

- THE FOLLOWING WAIVERS FROM THE TOWN OF EXETER SITE PLAN REVIEW AND SUBDIVISION REGULATIONS ARE BEING REQUESTED:
- SECTION 9.5.1(4) -- TO PERMIT GRADING WITHIN 0.5 FEET OF THE PROPERTY LINE WHERE NO GRADING IS ALLOWED WITHIN 5 FEET OF PROPERTY LINE.
 - SECTION 9.9.2 -- TO PERMIT DISTURBANCE WITHIN WETLAND SETBACKS OF 50 FEET FOR VERY POORLY DRAINED SOILS AND WITHIN 40 FEET FOR POORLY DRAINED SOILS WHERE NO DISTURBANCE IS ALLOWED.
 - SECTION 9.12.1(1) -- TO PERMIT 1 OFF-STREET LOADING SPACE WHERE 2 ARE REQUIRED.

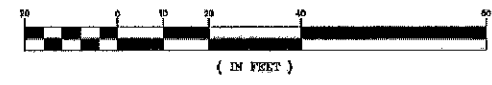
NOTES

- THE PARCEL IS LOCATED IN THE C-2 (HIGHWAY COMMERCIAL) ZONE.
- THE PARCEL IS AS SHOWN ON THE TOWN OF EXETER ASSESSOR'S MAP 51 AS LOT 1.
- ZONING REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT SIZE:	20,000 S.F.	54,877 S.F.
MINIMUM LOT WIDTH:	150'	154'
MINIMUM LOT DEPTH:	100'	216'
FRONT YARD:	50'	84'
SIDE YARD:	20'	44'
REAR YARD:	50'	125'
MAXIMUM BUILDING COVERAGE:	30%	8%
MINIMUM OPEN SPACE:	15%	55%
- OWNER OF RECORD: ROLLINSFORD ASSOCIATES, LLC
3 INDUSTRIAL DRIVE, SUITE 6
WINNHAM, NH 03087
RCRD BK #3349 PG.#0685
- TOTAL PARCEL AREA:
MAP 51 LOT 1
54,877 S.F.
1.26 ACRES
- THE PARCEL IS NOT LOCATED IN FLOOD HAZARD ZONE AS SHOWN ON "FLOOD INSURANCE RATE MAP ROCKINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C-0408" WITH EFFECTIVE DATE MAY 17, 2005.
- THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLANDS REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS UNDER THESE REGULATIONS, PER SITE PLAN REVIEW AND SUBDIVISION REGULATIONS FOR THE TOWN OF EXETER SECTION 7.5.5.
- PARKING CALCULATIONS:
RETAIL STORES: 1 SPACE PER 300 SF GROSS FLOOR AREA
(4,800 SF GROSS FLOOR AREA) X (1 SPACE / 300 SF) = 16 SPACES
PARKING SPACES REQUIRED = 16
PARKING SPACES PROVIDED = 17 (INCLUDING 1 ACCESSIBLE SPACE PER ADA REQUIREMENTS)
- THE PROPOSED RETAINING WALL IS TO BE DESIGNED AND STAMPED BY A LICENSED STRUCTURAL ENGINEER, AND CONSTRUCTED BY A CONTRACTOR WHO IS QUALIFIED TO CONSTRUCT STRUCTURAL WALLS FROM THE STRUCTURAL ENGINEER'S PLANS.
- WHERE NEW CURB MEETS EXISTING CURB, A TRANSITION SHALL BE CONSTRUCTED SO THAT CONNECTION IS FLUSH IN ALIGNMENT, WIDTH AND REVEAL.
- ALL DELIVERY TRUCKS WILL EXIT VIA STOREYBROOK CONNECTION.

TOWN OF EXETER PLANNING BOARD

CHAIRPERSON _____ DATE _____



MSC CIVIL ENGINEERS & LAND SURVEYORS, INC.
170 COMMERCE WAY SUITE 107 PORTSMOUTH, NH 03801
PHONE: 603-431-2222 FAX: 603-431-0910 www.mscengineers.com

SITE PLAN

REV.	DATE	DESCRIPTION

DESIGNED BY: JAV CHECKED BY: BJAN DRAWN BY: JAV

TAX MAP 51 LOT 1
PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC
PORTSMOUTH AVENUE / NH ROUTE 108
COUNTY OF ROCKINGHAM
NEW HAMPSHIRE

EXETER

DATE: SEPTEMBER 20, 2011
C-2
PROJECT NO. 11048
SCALE: 1" = 20'

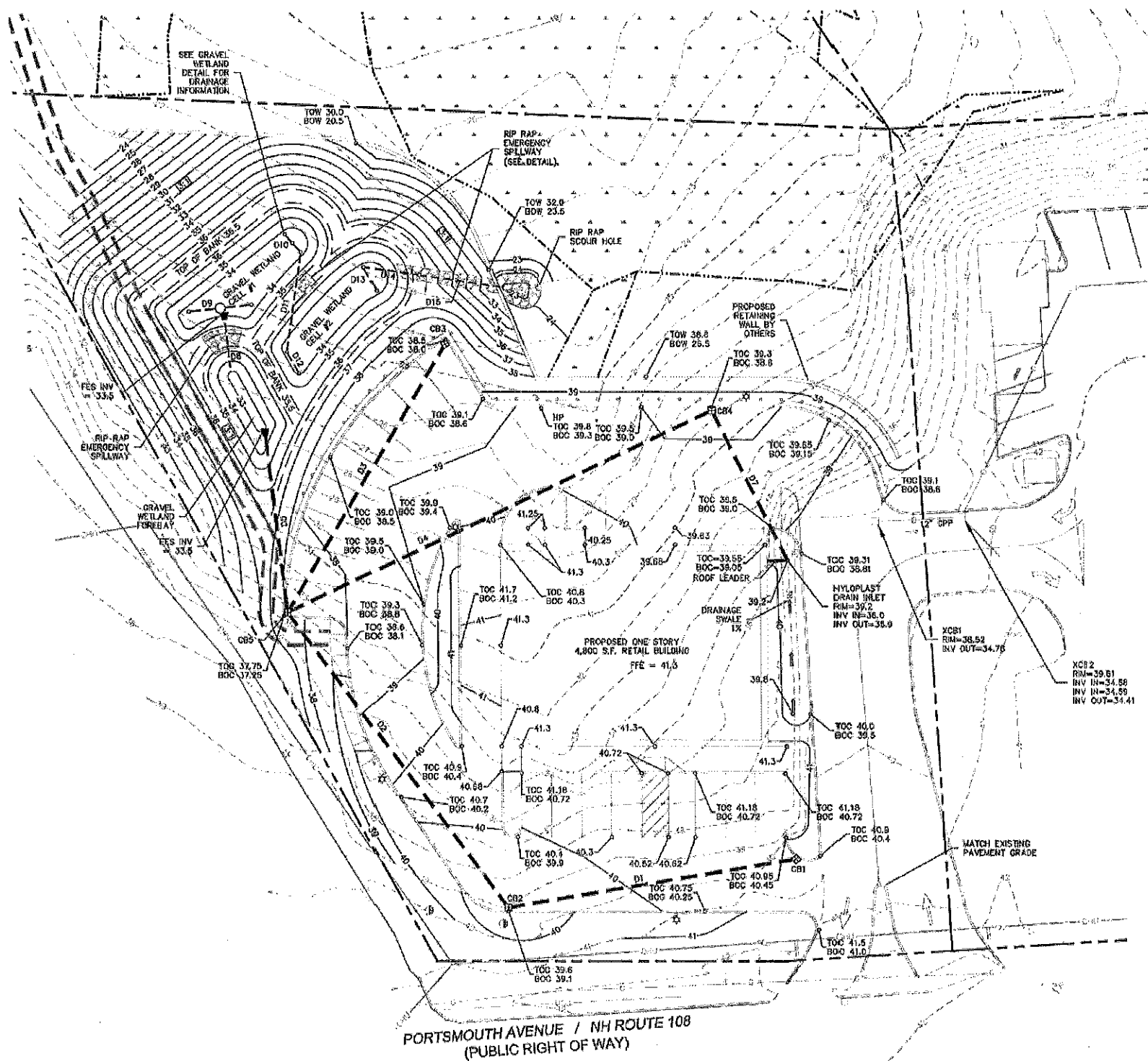
Jan 16, 2013 - 4:35pm
P:\11048\11048 SITE.dwg

Jan 10, 2013 10:55 AM
 P:\Projects\17005 GRADING DRAINAGE.dwg

TOWN OF EXETER PLANNING BOARD

CHAIRPERSON

DATE



LEGEND

FES	FLARED END SECTION	---	PROPOSED DRAINAGE
XCB	EXISTING CATCH BASIN	---	EXISTING DRAINAGE
CB	PROPOSED CATCH BASIN	---	EXISTING CONTOURS
HP	HIGH POINT	---	PROPOSED CONTOURS
INV.	INVERT	---	PROPOSED RETAINING WALL
(TYP)	TYPICAL	---	EDGE OF WETLANDS
S.F.	SQUARE FEET	---	PROPOSED FENCE
HOPE	HIGH DENSITY POLYETHYLENE	---	PROPERTY LINE
---	EDGES OF PAVEMENT	---	PROPOSED GUARDRAIL
---	TOP OF CURB	---	PROPOSED TRAIL
---	BOTTOM OF CURB	---	PROPOSED SPOT GRADE
---	TOP OF WALL	---	EXISTING WETLANDS
---	BOTTOM OF WALL	---	DUMPSYER PAD
---	FINISH FLOOR ELEVATION	---	
---	PROPOSED DRAINAGE FLOW	---	
---	PROPOSED CATCH BASIN	---	
---	EXISTING CATCH BASIN	---	
---	EXISTING UTILITY POLE	---	
---	EXISTING GUY WIRE	---	
---	EXISTING SEWER MANHOLE	---	
---	EXISTING LIGHT POLE	---	
---	PROPOSED LIGHT POLE	---	
---	PROPOSED FLARED END SECTION	---	
---	PROPOSED SWALE FLOW ARROW	---	

GRADING NOTES

- ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE LOAM, SIEB, FERTILIZER AND MULCH.
- DENSITY REQUIREMENTS:

LOCATION	MINIMUM DENSITY
BELOW PAVED OR CONCRETE AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM D-6938.
- ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE PRIOR TO INSTALLATION OF FINISHED PAVEMENT.
- CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE, RAMPS, LOADING AREA AND ACCESSIBLE PARKING SPACES.
- SEE EXISTING FEATURES PLAN FOR BENCHMARK INFORMATION.
- ALL SIDEWALK AND OTHER CURB REVEALS SHALL BE 6" WITH A TOLERANCE OF PLUS OR MINUS 3/8".
- THE SITE SHALL BE GRADED SO ALL FINISHED PAVEMENT HAS POSITIVE DRAINAGE AND SHALL NOT POND WATER DEEPER THEN 1/8" INCH FOR A PERIOD OF MORE THEN 15 MINUTES AFTER FLOODING.
- THE FINISHED GRADE AT BOTTOM OF ALL ACCESSIBLE RAMPS SHALL BE FLUSH WITH PAVEMENT WITH A TOLERANCE OF PLUS OR MINUS 1/8".
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SLOPE STABILITY DURING CONSTRUCTION.
- THE PROPOSED RETAINING WALL IS TO BE DESIGNED AND STAMPED BY A LICENSED STRUCTURAL ENGINEER, AND CONSTRUCTED BY A CONTRACTOR WHO IS QUALIFIED TO CONSTRUCT STRUCTURAL WALLS FROM THE STRUCTURAL ENGINEER'S DESIGN PLANS.
- JUTE MATTING SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 3:1.

DRAINAGE NOTES

- ALL CATCH BASINS, MANHOLES, AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER ALL AREAS HAVE BEEN STABILIZED.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE TOWN, COUNTY, AND STATE CODES.
- LENGTH OF PIPE IS PROVIDED FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
- COORDINATE ROOF DRAINS WITH BUILDING PLANS.
- WHERE EXISTING MANHOLES AND CATCH BASINS ARE TO BE RETROFITTED TO ACCEPT NEW PIPES, CONTRACTOR SHALL MAKE ALL NEW PENETRATIONS WITH CONCRETE CURBS. THE CONNECTION BETWEEN THE STRUCTURE AND PIPE SHALL BE MADE WATER TIGHT WITH NON-SHRINK GROUT. CONTRACTOR SHALL VERIFY SIZE OF STRUCTURE AND INVERT ELEVATIONS PRIOR TO COMPLETING WORK AND REPORT ANY DISCREPANCIES TO ENGINEER.
- GRAVEL WETLAND FOREBAY AND CELLS ARE TO BE INSPECTED AFTER ALL SIGNIFICANT RAINFALL EVENTS.

DRAINAGE PIPE TABLE

NO	DIA (IN)	LENGTH (FT)	TYPE	SLOPE (FT/FT)	UPSTREAM STRUCTURE
D1	12	88	HDPE	0.01	CB1
D2	15	109	HDPE	0.011	CB2
D3	12	93	HDPE	0.009	CB3
D4	15	140	HDPE	0.008	CB4
D5	15	53	HDPE	0.011	CB5
D7	10	50	NYLOPLAST	0.01	NYLOPLAST
D8	12	17	HDPE	0	SEE DETAIL
D9	6	19	PERFORATED HDPE	0	SEE DETAIL
D10	6	8	PERFORATED HDPE	0	SEE DETAIL
D11	10	30	HDPE	0	SEE DETAIL
D12	6	7	PERFORATED HDPE	0	SEE DETAIL
D13	6	8	PERFORATED HDPE	0	SEE DETAIL
D14	6	13	PERFORATED HDPE	0	SEE DETAIL
D15	8	23	HDPE	0.09	SEE DETAIL

DRAINAGE STRUCTURE SCHEDULE

CB1	CB2	CB3	CB4	CB5 (6" DIAMETER)
LEACHING CB (SEE DETAILS)	LEACHING CB (SEE DETAILS)	LEACHING CB (SEE DETAILS)	LEACHING CB (SEE DETAILS)	LEACHING CB (SEE DETAILS)
RM=40.35	RM=38.1	RM=38.8	RM=38.8	RM=37.25
INV OUT (12")=36.37	INV IN (12")=35.49	INV IN (10")=35.42	INV IN (10")=35.42	INV IN (10")=34.2
	INV OUT (15")=35.39	INV OUT (15")=35.32	INV OUT (15")=34.1	INV IN (15")=34.2



GRADING AND DRAINAGE PLAN

MSC
 CIVIL ENGINEERS &
 LAND SURVEYORS, INC.

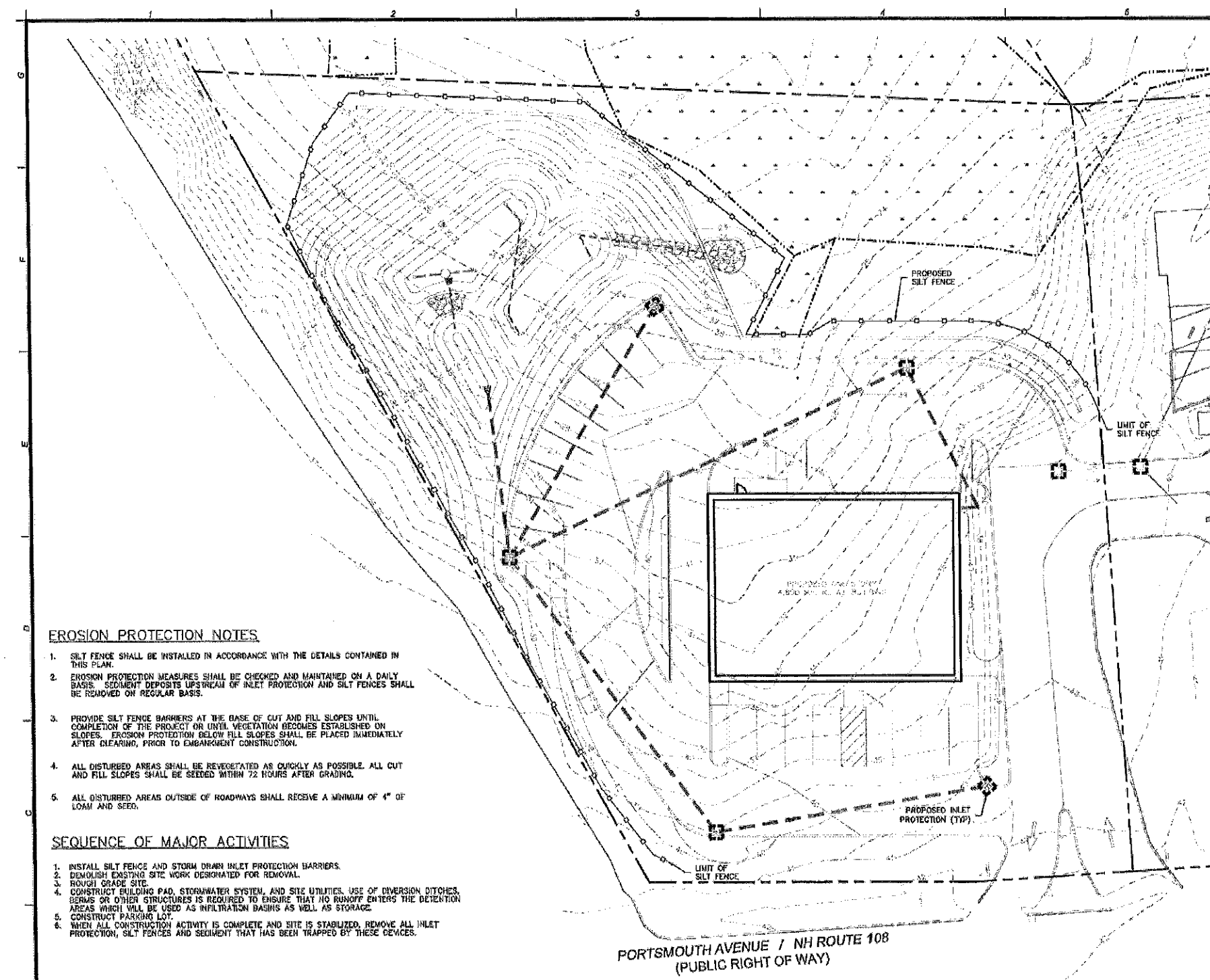
170 COMMERCE WAY
 SUITE 102
 PORTSMOUTH, NH 03804

PHONE: 603-431-2222
 FAX: 603-431-0840
 www.mscengineers.com

TAX MAP 51 LOT 1
 PROPERTY OF
 ROLLINSFORD ASSOCIATES, LLC
 PORTSMOUTH AVENUE / NH ROUTE 108
 COUNTY OF ROCKINGHAM
 NEW HAMPSHIRE

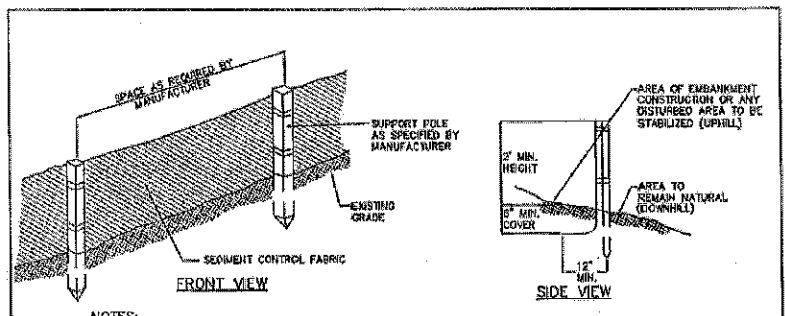
EXETER

DATE: JANUARY 10, 2013
C-3
 PROJECT NO. 11046
 SCALE: 1" = 20'



LEGEND

□	SQUARE FEET	---	PROPOSED RETAINING WALL
▭	PROPOSED CATCH BASIN	---	EDGE OF WETLANDS
▭	EXISTING CATCH BASIN	---	PROPOSED DUMPSTER ENCLOSURE
---	PROPOSED DRAINAGE	---	PROPERTY LINE
---	EXISTING DRAINAGE	---	PROPOSED GUARDRAIL
---	EXISTING CONTOURS	---	PROPOSED SILT FENCE
---	PROPOSED CONTOURS	---	EXISTING WETLANDS
□	DUMPSTER PAD	---	
□	PROPOSED INLET PROTECTION		



- NOTES:**
1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR BEST MANAGEMENT PRACTICE FOR SILT FENCES, OF THE MOST RECENT NEW HAMPSHIRE STORMWATER MANUAL.
 2. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 36 INCHES.
 3. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATIONS.
 4. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 16 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS MANUFACTURER RECOMMENDS.
 5. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS.
 6. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND TO A MINIMUM OF 8 INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED INTO EXISTING TREES.
 7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
 8. FILTER BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
 9. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 10. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
 11. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
 12. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEED.

SILT FENCE
NOT TO SCALE

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 90 DAYS OF INITIAL DISTURBANCE. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
- A MINIMUM OF 65% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- A MINIMUM OF 3" OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES. ALL STORM DRAIN INLETS SHALL BE PROVIDED WITH BARRIER FILTERS. ALL CATCHBASINS WILL BE COVERED WITH A GEOTEXTILE FABRIC PRIOR TO THE BASE PAVEMENT COURSE BEING PLACED. STONE RIPRAP SHALL BE PROVIDED AT THE OUTLETS OF DRAINAGE PIPES WHERE EROSION VELOCITIES ARE ENCOUNTERED. ALL AREAS, INCLUDING BUT NOT LIMITED TO ROADWAYS, PARKING LOTS AND CUT AND FILL SLOPES, SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

EROSION PROTECTION NOTES

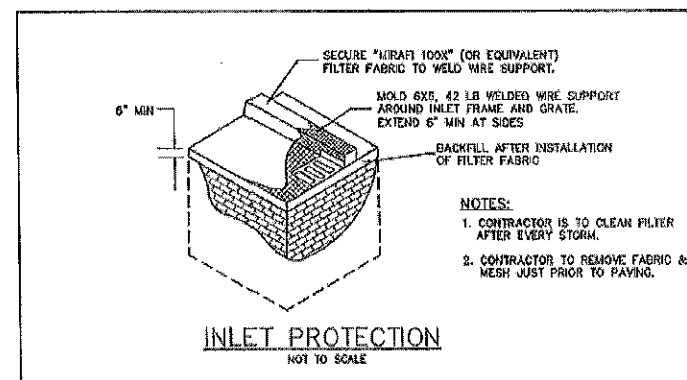
1. SILT FENCE SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS CONTAINED IN THIS PLAN.
2. EROSION PROTECTION MEASURES SHALL BE CHECKED AND MAINTAINED ON A DAILY BASIS. SEDIMENT DEPOSITS UPSTREAM OF INLET PROTECTION AND SILT FENCES SHALL BE REMOVED ON REGULAR BASIS.
3. PROVIDE SILT FENCE BARRIERS AT THE BASE OF CUT AND FILL SLOPES UNTIL COMPLETION OF THE PROJECT OR UNTIL VEGETATION BECOMES ESTABLISHED ON SLOPES. EROSION PROTECTION BELOW FILL SLOPES SHALL BE PLACED IMMEDIATELY AFTER CLEARING, PRIOR TO EMBANKMENT CONSTRUCTION.
4. ALL DISTURBED AREAS SHALL BE REVEGETATED AS QUICKLY AS POSSIBLE. ALL CUT AND FILL SLOPES SHALL BE SEEDING WITHIN 72 HOURS AFTER GRADING.
5. ALL DISTURBED AREAS OUTSIDE OF ROADWAYS SHALL RECEIVE A MINIMUM OF 4" OF LOAM AND SEED.

SEQUENCE OF MAJOR ACTIVITIES

1. INSTALL SILT FENCE AND STORM DRAIN INLET PROTECTION BARRIERS.
2. DEMOLISH EXISTING SITE WORK DESIGNATED FOR REMOVAL.
3. ROUGH GRADE SITE.
4. CONSTRUCT BUILDING PAD, STORMWATER SYSTEM, AND SITE UTILITIES. USE OF DIVERSION DITCHES, CATCH BASINS OR OTHER STRUCTURES IS REQUIRED TO ENSURE THAT NO RUNOFF ENTERS THE DETENTION AREAS WHICH WILL BE USED AS INFILTRATION BASINS AS WELL AS STORAGE.
5. CONSTRUCT PARKING LOT.
6. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE ALL INLET PROTECTION, SILT FENCES AND SEDIMENT THAT HAS BEEN TRAPPED BY THESE DEVICES.

WINTER CONSTRUCTION NOTES

1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 65% VEGETATED GROWTH BY OCTOBER 15th, OR WHICH ARE DISTURBED AFTER OCTOBER 15th, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 2:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORING NETTING ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 65% VEGETATED GROWTH BY OCTOBER 15th, OR WHICH ARE DISTURBED AFTER OCTOBER 15th, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR DESIGN FLOW CONDITIONS.
3. AFTER NOVEMBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER MHOT ITEM 304.3.



- NOTES:**
1. CONTRACTOR IS TO CLEAN FILTER AFTER EVERY STORM.
 2. CONTRACTOR TO REMOVE FABRIC & MESH JUST PRIOR TO PAVING.

INLET PROTECTION
NOT TO SCALE



TOWN OF EXETER PLANNING BOARD

CHAIRPERSON	DATE

MSC
CIVIL ENGINEERS &
LAND SURVEYORS, INC.

170 COMMERCE WAY
SUITE 102
PORTSMOUTH, NH 03801

PHONE: 603-431-2222
FAX: 603-431-0910
www.mscengineers.com

EROSION CONTROL PLAN

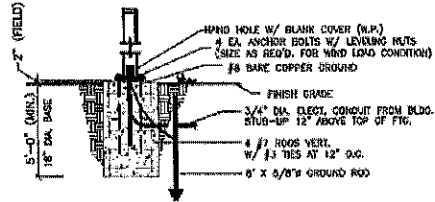
REV.	DATE	DESCRIPTION

DESIGNED BY: JBY
CHECKED BY: MSB

TAX MAP 51 LOT 1
PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC
PORTSMOUTH AVENUE / NH ROUTE 108
COUNTY OF ROCKINGHAM
NEW HAMPSHIRE
EXETER

DATE: JANUARY 16, 2013
C-5
PROJECT NO. 11046
SCALE: 1" = 20'

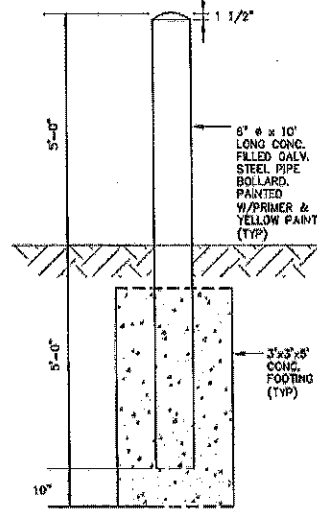
Jan 16, 2013 - 3:52pm
P:\1046\erocn\11046 EROSION CONTROL.dwg



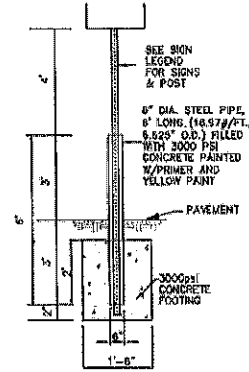
NOTES:

1. BASE CONCRETE TO BE 4,000 PSI, SMOOTH FINISH.
2. LIGHT POLE BASES TO BE PLACED 2" ABOVE FINISHED GRADE.
3. MOUNTING HEIGHT OF FIXTURES SHALL BE 18 FEET ABOVE FINISHED GROUND.
4. POLES SHALL BE FACTORY CUT TO PROVIDE REQUIRED MOUNTING HEIGHTS.
5. BASE, GROUND ROD AND ELECTRICAL SHOWN ARE PROTOTYPICAL. VERIFY THAT LIGHT POLE BASE INSTALLED MEETS LIGHT POLE MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR.

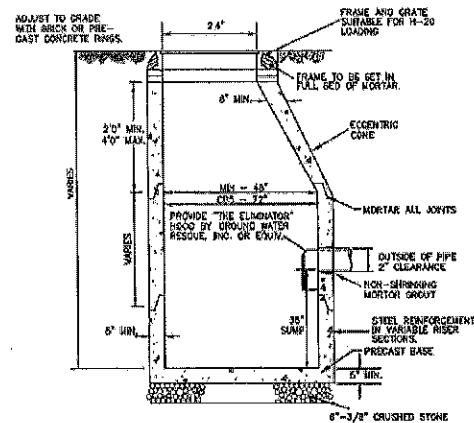
LIGHT POLE BASE
NOT TO SCALE



BOLLARD
NOT TO SCALE

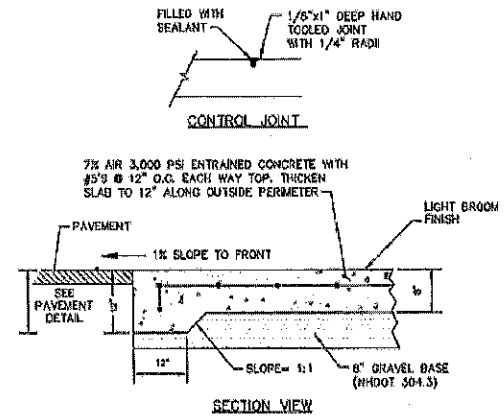


SIGN BOLLARD
NOT TO SCALE

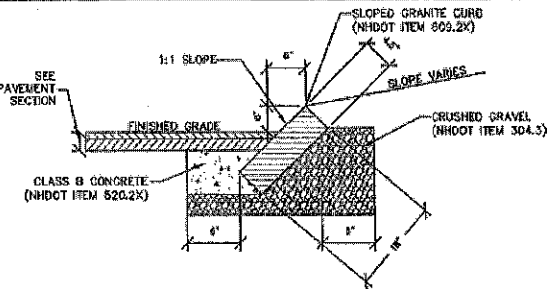


- NOTES:**
1. ALL SECTIONS SHALL BE PRECAST CONCRETE MIX CLASS AA, 4,000 PSI.
 2. CURB GRADING SHALL MEET BEST PRACTICES.
 3. ALL CONCRETE SHALL BE CURED FOR 14-28 DAYS.
 4. LARGER DIAMETER STRUCTURES SHALL BE USED AS REQUIRED DUE TO NUMBER, ANGLE OR SIZE OF PIPES AT THE STRUCTURE.

ECCENTRIC CATCH BASIN
NOT TO SCALE

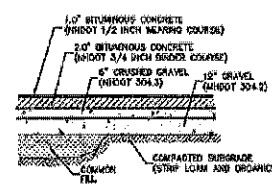


TYPICAL CONCRETE PAD
NOT TO SCALE



- NOTES:**
1. MORTAR JOINTS AND OTHER INSTALLATION TO BE AS SPECIFIED IN MHDOT SECTION 609.
 2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

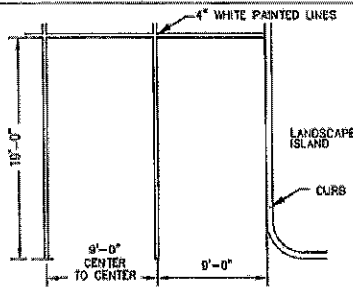
SLOPED GRANITE CURB
NOT TO SCALE



NOTES:

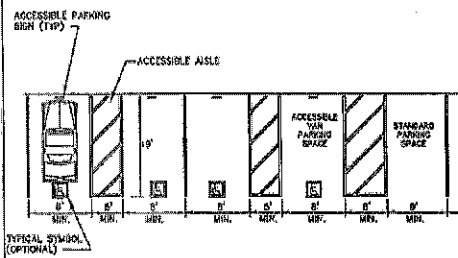
1. PROVIDE CLEAN CUT TO EXISTING PAVEMENT- USE TACK COAT.
2. REMOVE ALL LOAM AND/OR YIELDING MATERIAL BELOW PAVEMENT.
3. SPURIOUS MATERIALS SHALL CONFORM TO MHDOT SPECIFICATION SUBSECTION 601.3.5.
4. PAVEMENT BASE COURSE APPROXIMATE SHALL CONFORM TO MHDOT SPECIFICATION SECTION 304. ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MHDOT PROCTOR MAXIMUM DRY DENSITY.

PAVEMENT SECTION
NOT TO SCALE



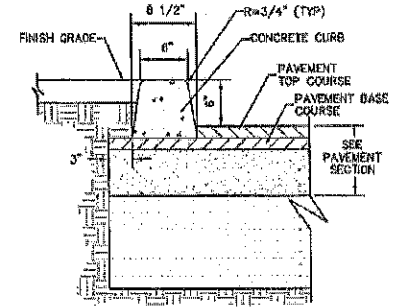
- NOTES:**
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.

PARKING STALL
NOT TO SCALE

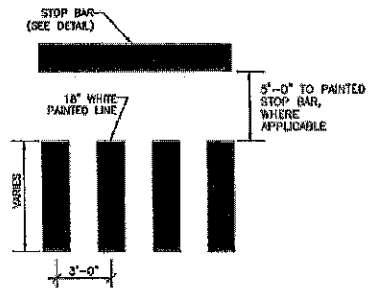


- GENERAL PARKING NOTES:**
1. ACCESSIBLE SPACE MUST PERMIT USE OF EITHER OF CAR DOORS.
 2. BUMPER REQUIRED WHEN NO CURB OR BARRIER IS PROVIDED, WHICH WILL PREVENT ENCRoACHMENT OF CURB OVER WALK WAY.
 3. 2% MAXIMUM CROSS SLOPE ALLOWED IN PARKING SPACE AND ACCESS AISLE.
 4. LOADING/UNLOADING AREA MUST CONNECT TO AN ACCESSIBLE PATH OF TRAVEL.
 5. REFER TO HANDICAP FORMULA FOR NUMBER OF PARKING SPACES REQUIRED.
 6. SEE PLAN FOR ACTUAL LAYOUT OF ACCESSIBLE SPACES.

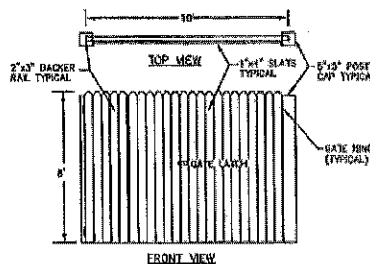
PARKING SPACE DETAIL
NOT TO SCALE



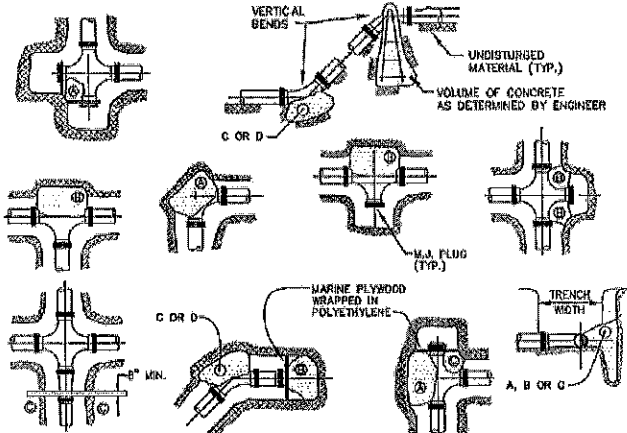
EXTRUDED VERTICAL CONCRETE CURB
NOT TO SCALE



CROSSWALK STRIPING DETAIL
NOT TO SCALE



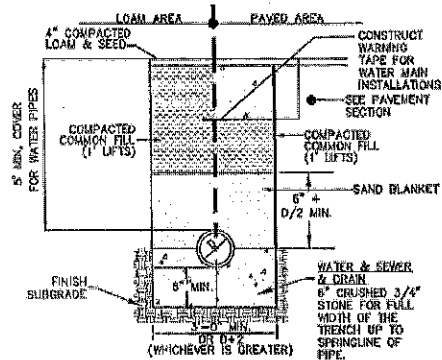
STOCKADE FENCE AND GATE DETAIL FOR DUMPSTER ENCLOSURE
NOT TO SCALE



REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24
B 180°	0.65	1.55	2.78	8.39	12.00
C 45°	0.48	1.19	2.12	6.02	9.32
D 22-1/2°	0.28	0.80	1.06	3.08	4.74
E 11-1/4°	0.13	0.30	0.54	1.54	2.36

- NOTES:**
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL, AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. JOINTS SHALL BE COVERED WITH CONCRETE.
 2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
 5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH TOWN OF EXETER & WATER COMPANY ESTABLISHED RULES AND PROCEDURES.

THRUST BLOCKS
NOT TO SCALE



- NOTES:**
1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, & SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO 199, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
 2. CONSTRUCT SECTION FOR ALL WATERLINES, SANITARY SEWERS & SOLID DRAINAGE PIPES.
 3. WATER, SEWER & STORM DRAIN LINES INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH TOWN ESTABLISHED RULES AND PROCEDURES.
 4. WARNING/MARKING TAPE FOR WATER LINE SHALL BE BLUE, PRINTED WITH "CAUTION - WATER LINE BELOW" & INSTALLED 24" ABOVE THE TOP OF THE PIPE.

UTILITY TRENCH
NOT TO SCALE

DETAILS

REV.	DATE	DESCRIPTION

MSC
CIVIL ENGINEERS &
LAND SURVEYORS, INC.

170 COMMERCE WAY
SUITE 302
PORTSMOUTH, NH 03801
PHONE: 603-431-2222
FAX: 603-431-0910
www.msccivil.com

MAP 51 LOT 1

PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC

PORTSMOUTH AVENUE / NH ROUTE 108
COUNTY OF ROCKINGHAM

NEW HAMPSHIRE

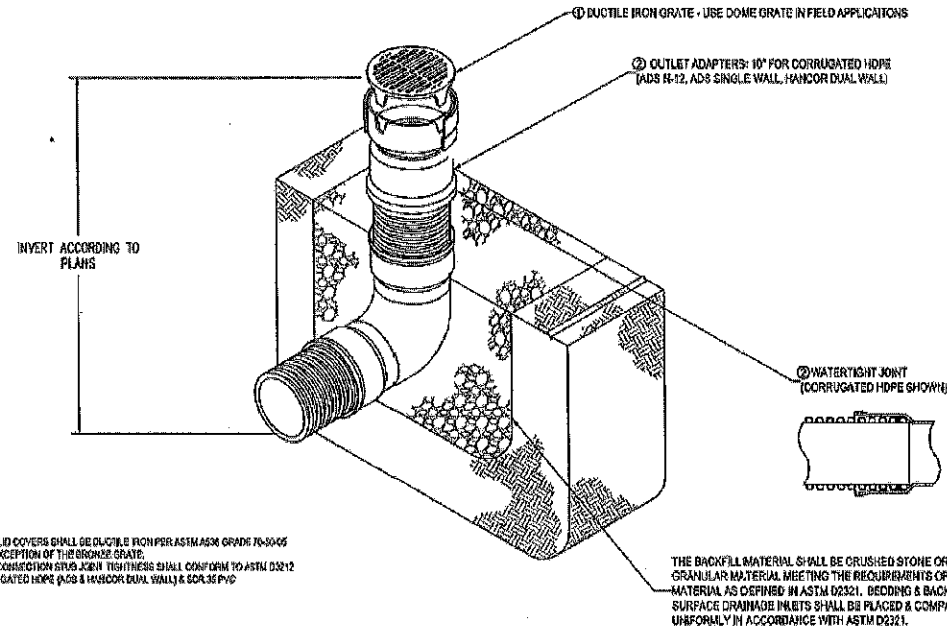
EXETER

DATE: JANUARY 16, 2013

G-7

PROJECT NO. 11048
SCALE: NTS

NYLOPLAST 10" INLINE DRAIN: 2710AG10X



- 1. GRATES/GRID COVERS SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70-30-05 WITH THE EXCEPTION OF THE DOME GRATE.
- 2. DRAINAGE CONNECTION AT JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & DCR-35 PVC.

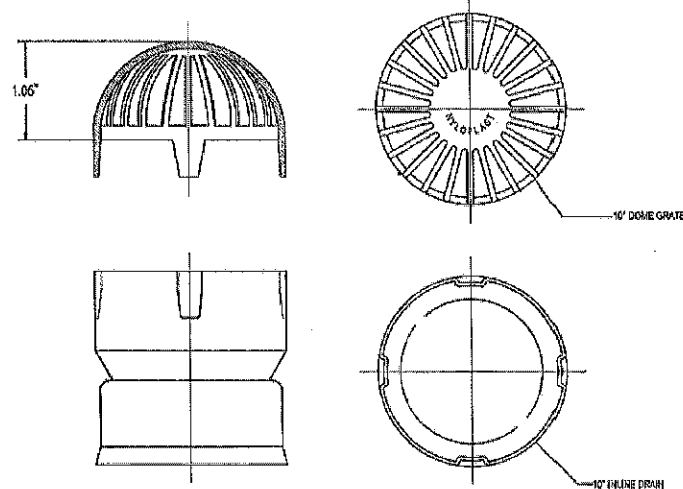
GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
REGULAR STANDARDS	LIGHT DUTY	1099-001	2701-10-001
SCALE COVER	LIGHT DUTY	1099-002	2701-10-002
WALK	LIGHT DUTY	1099-003	2701-10-003
DECK	HA	1099-004	2701-10-004
DRIP BY GRATE	LIGHT DUTY	1099-005	2701-10-005

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MAKE USE OF ANY ARTICLES HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.

DRAWN BY: EDC DATE: 11-19-06 APP'D BY: CJA DATE: 11-15-06 DWG. SIZE: A SCALE: 1/2" = 1'-0" SHEET: 1 OF 1 DWG. NO.: 7000-110-004 REV: 0	Nyloplast 3130 VERDIA AVE BENTON, MA 01928 PH: (774) 332-3445 FAX: (774) 332-3448 www.nyloplast.com
--	---

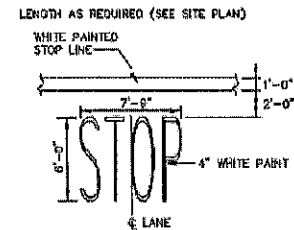
1099CGD

APPROX. DRAIN AREA = 3400 SQ IN
APPROX. WEIGHT = 8.25 LBS



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE. GRATE HAS A LIGHT DUTY PAINTED. QUALITY MATERIALS SHALL CONFORM TO ASTM A538 GRADE 70-30-05, PAINT. CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICES AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-11-101.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MAKE USE OF ANY ARTICLES HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DRAWN BY: ZMG DATE: 5-3-06 APP'D BY: ZAA DATE: 4-3-06 DWG. SIZE: A SCALE: 1/2" = 1'-0" SHEET: 1 OF 1 DWG. NO.: 1091-006-001 REV: A	Nyloplast 3130 VERDIA AVE BENTON, MA 01928 PH: (774) 332-3445 FAX: (774) 332-3448 www.nyloplast.com
--	--	---



NOTE: PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS

STOP BAR & LEGEND
NOT TO SCALE

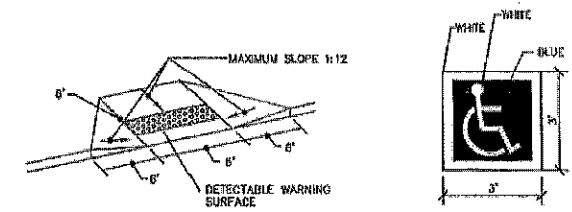
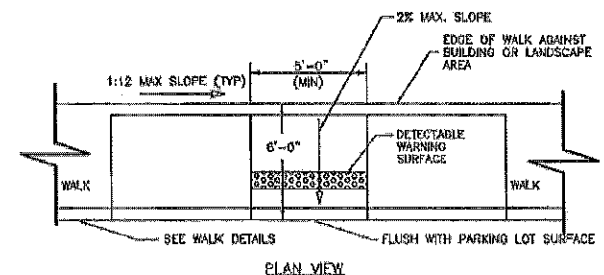
MSC
CIVIL ENGINEERS &
LAND SURVEYORS, INC.

170 COMMERCE WAY
SUITE 102
PORTSMOUTH, NH 02801

PHONE: 603-431-2222
FAX: 603-431-4910
www.mscengineers.com

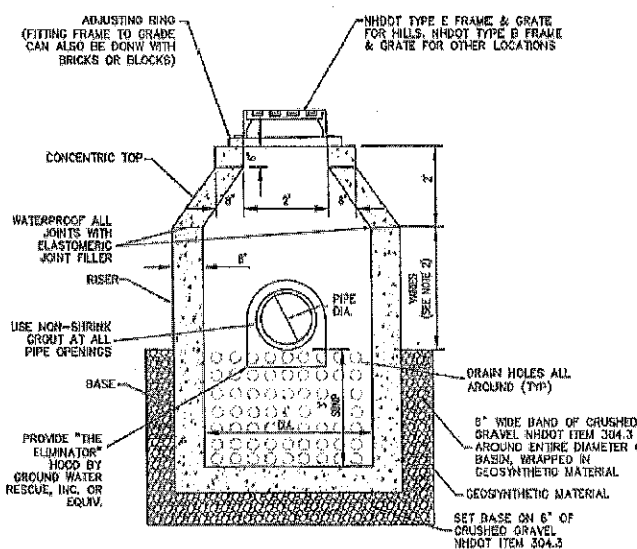
REV.	DATE	DESCRIPTION

CHECKED BY: JPL
DRAWN BY: JPL



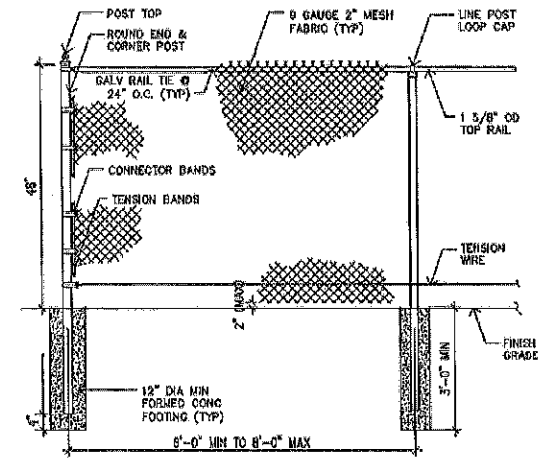
- NOTES:**
- RAMPS AND DETECTABLE WARNING SURFACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT ADA GUIDELINES.
 - DETECTABLE WARNING SURFACE TO BE YELLOW AND SHALL EXTEND THE FULL WIDTH OF THE RAMP.
 - RAMP SHALL BE BROOM FINISHED.

ACCESSIBLE DETAILS
NOT TO SCALE



- NOTES:**
- ALL SECTIONS SHALL BE PRECAST CONCRETE NHDOT CLASS AA, 4000 PSI.
 - RISERS MAY BE 1', 2', 3' AND 4' HIGH TO REACH THE DESIRED DEPTH.
 - CATCH BASINS SHALL MEET NHDOT SPECIFICATIONS.
 - ALL COMPONENTS SHALL BE DESIGNED FOR HS-20 LOADING.

LEACHING CATCH BASIN
BASE FOR 6" AND 8" DIA.
NOT TO SCALE



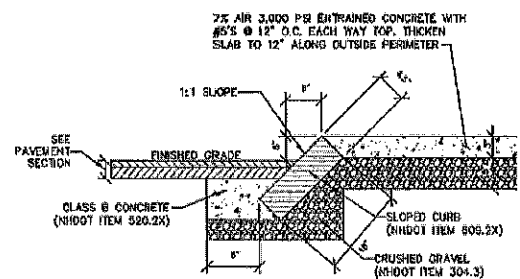
* ALL POSTS & FENCING SHALL BE COATED IN BLACK VINYL.

4' CHAIN LINK FENCE
NOT TO SCALE

Jan 16, 2013 - 3:26pm
P:\2012\1049-Details.dwg

MAP 51 LOT 1
PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC
PORTSMOUTH AVENUE / NH ROUTE 108
COUNTY OF ROCKINGHAM
NEW HAMPSHIRE
EXETER

DATE: JANUARY 16, 2013
C-8
PROJECT NO. 1104B
SCALE: NTS

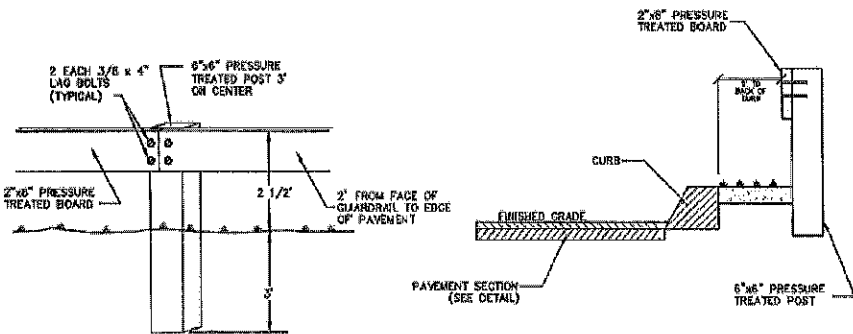


- NOTES:
 1. MORTAR JOINTS AND OTHER INSTALLATION TO BE AS SPECIFIED IN NHOOT SECTION 609.
 2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

RAISED MEDIAN

(WITH SLOPED GRANITE CURB)

NOT TO SCALE



WOODEN GUARDRAIL DETAIL

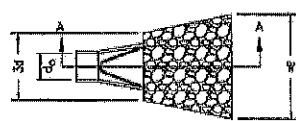
NOT TO SCALE

MAINTENANCE:

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12\"/>
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- 5. ADD ANIMAL SCREEN TO FLARED END SECTION OUTLET.



RIP RAP DIMENSIONS

LOCATION	PIPE DIA.	PIPE OR SCOUR HOLE (DIB)
APRON STONE SIZE	6"	6"
LENGTH OF APRON (L)	12'	12'
WIDTH OF APRON (W)	9'	0'
DEPTH OF RIP RAP (T)	12"	12"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE, SIZE OF STONE (INCHES)

100	9.00 TO 12.00
85	7.80 TO 10.80
50	8.00 TO 9.00
10	1.80 TO 3.00

RIP RAP AND FLARED END SECTION DETAIL

WITH OUTLET PROTECTION

NOT TO SCALE

- DRAINAGE NOTES:**
1. CONTRACTOR SHALL DIRECT SURFACE RUNOFF AWAY FROM THE WALL DURING CONSTRUCTION.
 2. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT OR OTHER SURFACE TREATMENT SHALL BE INSTALLED IN THE AREA OF THE WALL CONCURRENTLY WITH WALL CONSTRUCTION.

- GENERAL NOTES:**
1. STRIP DRAGGAGE SOILS FROM THE WALL AND GRID ALIGNMENT AREA.
 2. BENCH CUT ALL EXCAVATED SLOPES.
 3. DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE GEOTECHNICAL ENGINEER.
 4. GEOTECHNICAL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
 5. MINIMUM EMBEDEDMENT OF WALL BELOW FINISH GRADE SHALL BE INDICATED ON THE WALL DESIGN DRAWINGS.
 6. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE (SEE MANUFACTURER'S SPECIFICATIONS).
 7. PROVIDE UNDERDRAIN OUTLETS AT THE ENDS OF THE WALL.
 8. BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL IN 12 INCH MAXIMUM LIFTS AS THE WALL IS INSTALLED.
 9. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED, EACH LIFT SHALL BE TESTED AT INTERVALS NOT EXCEEDING 100 FEET OF WALL LENGTH.
 10. COMPACTION SHALL BE TO 95% OF MAXIMUM MODIFIED PROCTOR DENSITY OF THE FILL MATERIAL (ASTM D-1557).
 11. PULL GEOTRID TIGHT PRIOR TO BACKFILLING.
 12. SEE GRADING PLAN FOR FINISH GRADE AT TOP AND ENDS OF WALL.
 13. SEE SITE PLAN FOR WALL LAYOUT INFORMATION.
 14. PLATE VIBRATORY TAMPERS SHALL BE USED IN AREAS WITHIN 5 FEET OF THE WALL.
 15. GEOTRID CUT LENGTHS ARE MEASURED FROM THE FACE OF THE RETAINING WALL.
 16. GEOSYNTHETIC SHALL BE PLACED WITH STRONGER DIRECTION PERPENDICULAR TO WALL FACE.
 17. WHERE LIGHT POLE BASES ARE INSTALLED SUCH THAT THEY WILL PENETRATE A GEOTRID LAYER, THE GEOTRID SHALL BE PRE-CUT AND SLEEVED SO AS NOT TO DISTURB THE GEOTRID WITH THE INSERTION OF THE BASE. THE BASE SHALL NOT BE FORCED THROUGH ANY LAYER OF GEOTRID. FORCING A BASE THROUGH A GEOTRID LAYER WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE GEOTRID AND, HENCE, THE RETAINING WALL SYSTEM.
 18. ANY PLANTINGS SET BEHIND THE WALLS SHALL BE PLACED WITHOUT CUTTING OF THE GEOTRID REINFORCING LAYERS. THIS CAN BE ACCOMPLISHED BY SETTING PLANTINGS ABOVE THE GEOTRID LAYERS OR BEYOND THE LIMITS OF THE GEOTRID LAYERS.
 19. INSTALLATION OF A VERTICAL SEGMENTAL RETAINING WALL REQUIRES THAT EXTRA ATTENTION BE GIVEN TO LEVELING OF THE BLOCK, AT ALL ELEVATIONS AND IN ALL DIRECTIONS.
 20. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
 21. WALL DESIGNS SHALL CONSIDER EFFECTS OF SLOPE, TRAFFIC LOADS, AND/OR BUILDING LOADS AS REQUIRED.
 22. BLOCK COLOR SHALL BE DETERMINED BY OWNER'S REPRESENTATIVE.
 23. THIS DETAIL IS GENERIC IN NATURE AND SHALL NOT BE USED FOR CONSTRUCTION. WALL SHALL BE CONSTRUCTED FROM STRUCTURAL WALL DESIGN PLANS CREATED AND STAMPED BY A LICENSED STRUCTURAL ENGINEER.

REINFORCED BACKFILL

NOTE: THE DESIGN ENGINEER MUST BE MADE AWARE WHENEVER THE PERCENT PASSING THE #200 SIEVE EXCEEDS 10%.

SIEVE SIZE	% PASSING BY WEIGHT
3 INCH	100
1/2 INCH	50-85
No. 4	40-75
No. 50	8-28
No. 200	0-10

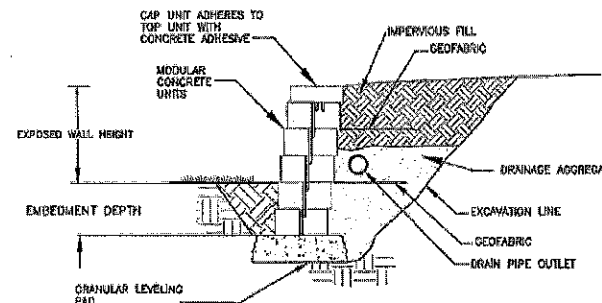
DRAINAGE AGGREGATE

DRAINAGE FILL SHALL BE CLEAN 1 INCH MAXIMUM CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 INCH	75-100
3/4 INCH	80-76
No. 4	0-50
No. 40	0-50
No. 200	0-5

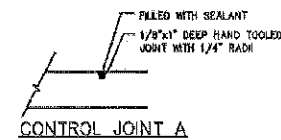
- MANUFACTURER'S DESIGN:**
1. DESIGN SHALL BE FROM THE WALL MANUFACTURER.
 2. MANUFACTURER DESIGN ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW HAMPSHIRE.
 3. DESIGN CALCULATIONS AND PLANS SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.
 4. DESIGN CALCULATIONS TO INCLUDE SAFETY FACTORS AGAINST OVERTURNING, SLIDING, BEARING CAPACITY, GEOTRID PULLOUT AND GLOBAL STABILITY. MINIMUM FACTORS OF SAFETY ARE INDICATED BELOW.
 5. THE WALL DESIGN ENGINEER SHALL COMPLETE SUFFICIENT INSPECTIONS DURING CONSTRUCTION TO CERTIFY WORK IS COMPLETE IN ACCORDANCE WITH DESIGN.
 6. SUBMIT ASBUILT DRAWINGS OF WALL WITH WALL DESIGNERS CERTIFICATION TO OWNER.

MINIMUM SAFETY FACTORS
 GLOBAL STABILITY F.S. = 1.5
 OVERTURNING F.S. = 2.0
 SLIDING F.S. = 1.5
 BEARING CAPACITY F.S. = 2.0
 GEOTRID PULLOUT F.S. = 1.5

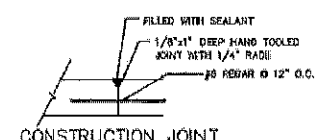


TYPICAL SECTION REINFORCED SEGMENTAL BLOCK RETAINING WALL

NOT TO SCALE



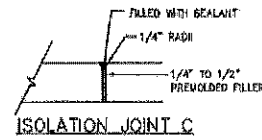
CONTROL JOINT A



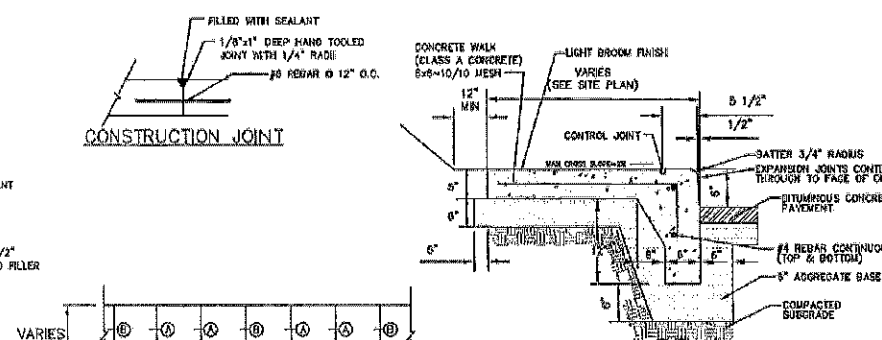
CONSTRUCTION JOINT



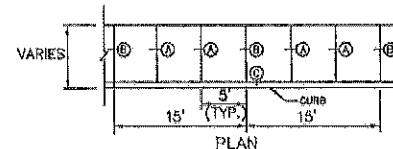
EXPANSION JOINT B



ISOLATION JOINT C



SECTION (WITH MONOLITHIC CURB)



CONCRETE SIDEWALK

NOT TO SCALE

MSC
 CIVIL ENGINEERS &
 LAND SURVEYORS, INC.

170 COMMERCE WAY
 SUITE 102
 PORTSMOUTH, NH 03801

PHONE: 603-431-2222
 FAX: 603-431-0810
 www.mscengineers.com

DETAILS

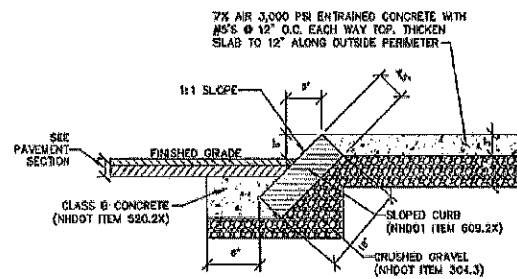
REV.	DATE	DESCRIPTION

DRAWN BY: JWF
 CHECKED BY: JWF

MAP 51 LOT 1
 PROPERTY OF
 ROLLINSFORD ASSOCIATES, LLC
 PORTSMOUTH AVENUE / NH ROUTE 108
 COUNTY OF ROCKINGHAM
 NEW HAMPSHIRE
 EXETER

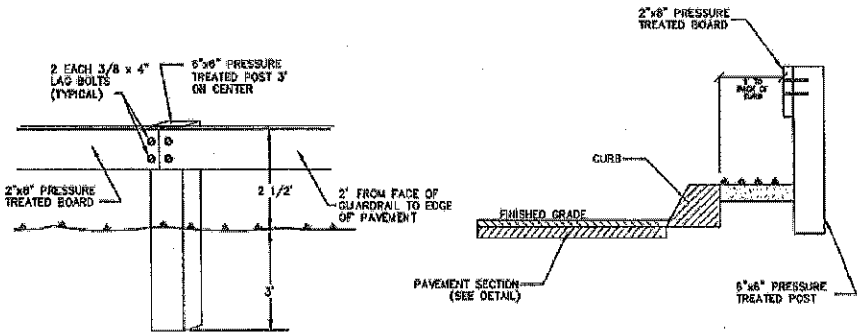
DATE: JANUARY 10, 2013
 C-9
 PROJECT NO. 1104B
 SCALE: NTS

Jan 10, 2013 - 10:29am
 P:\rockingham\details.dwg



- NOTES**
1. JOINTS AND OTHER INSTALLATION TO BE AS SPECIFIED IN NHDOT SECTION 609.
 2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

RAISED MEDIAN
WITH SLOPED GRANITE CURB
NOT TO SCALE



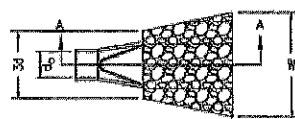
WOODEN GUARDRAIL DETAIL
NOT TO SCALE

MAINTENANCE:

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED IT SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12\"/>
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- 5. ADD ANNUAL SCREEN TO FLARED END SECTION OUTLET.



RIP RAP DIMENSIONS

LOCATION	PIPE D5	PIPE D8	SOOUR HOLE (D18)
450 STONE SIZE	6"	6"	6"
LENGTH OF APRON (L)	14'	12'	12' MAX
WIDTH OF APRON (W)	9'	8'	11' MAX
DEPTH OF RIP RAP (T)	12"	12"	12"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	9.00 TO 12.00
85	7.80 TO 10.80
50	5.00 TO 9.00
15	1.50 TO 3.00

RIP RAP AND FLARED END SECTION DETAIL
WITH OUTLET PROTECTION
NOT TO SCALE

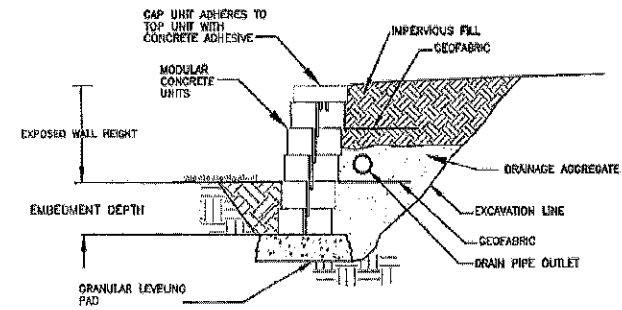
- DRAINAGE NOTES**
1. CONTRACTOR SHALL DIRECT SURFACE RUNOFF AWAY FROM THE WALL DURING CONSTRUCTION.
 2. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT OR OTHER SURFACE TREATMENT SHALL BE INSTALLED IN THE AREA OF THE WALL CONCURRENTLY WITH WALL CONSTRUCTION.
- GENERAL NOTES**
1. STRIP ORGANIC SOILS FROM THE WALL AND GRID ALIGNMENT AREA.
 2. BENCH OUT ALL EXCAVATED SLOPES.
 3. DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE GEOTECHNICAL ENGINEER.
 4. GEOTECHNICAL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
 5. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE INDICATED ON THE WALL DESIGN DRAWINGS.
 6. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE (SEE MANUFACTURER'S SPECIFICATIONS).
 7. PROVIDE UNDERDRAIN OUTLETS AT THE ENDS OF THE WALL.
 8. BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL IN 12 INCH MAXIMUM LIFTS AS THE WALL IS INSTALLED.
 9. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. EACH LIFT SHALL BE TESTED AT INTERVALS NOT EXCEEDING 100 FEET OF WALL LENGTH.
 10. COMPACTION SHALL BE TO 95% OF MAXIMUM MODIFIED PROCTOR DENSITY OF THE FILL MATERIAL (ASTM D-1557).
 11. PULL GEOSGRID TIGHT PRIOR TO BACKFILLING.
 12. SEE GRADING PLAN FOR FINISH GRADE AT TOP AND ENDS OF WALL.
 13. SEE SITE PLAN FOR WALL LAYOUT INFORMATION.
 14. PLATE VIBRATORY TAMPERS SHALL BE USED IN AREAS WITHIN 5 FEET OF THE WALL.
 15. GEOSGRID CUT LENGTHS ARE MEASURED FROM THE FACE OF THE RETAINING WALL.
 16. GEOSYNTHETIC SHALL BE PLACED WITH STRONGER DIRECTION PERPENDICULAR TO WALL FACE.
 17. WHERE LIGHT POLE BASES ARE INSTALLED SUCH THAT THEY WILL PENETRATE A GEOSGRID LAYER, THE GEOSGRID SHALL BE PRE-CUT AND SLEEVED SO AS NOT TO DISTURB THE GEOSGRID WITH THE INSERTION OF THE BASE. THE BASE SHALL NOT BE FORGED THROUGH ANY LAYER OF GEOSGRID, FORGING A BASE THROUGH A GEOSGRID LAYER WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE GEOSGRID AND, HENCE, THE RETAINING WALL SYSTEM.
 18. ANY PLANTINGS SET BEHIND THE WALLS SHALL BE PLACED WITHOUT CUTTING OF THE GEOSGRID REINFORCING LAYERS. THIS CAN BE ACCOMPLISHED BY SETTING PLANTINGS ABOVE THE GEOSGRID LAYERS OR BEYOND THE LIMITS OF THE GEOSGRID LAYERS.
 19. INSTALLATION OF A VERTICAL SEGMENTAL RETAINING WALL REQUIRES THAT EXTRA ATTENTION BE GIVEN TO LEVELING OF THE BLOCK, AT ALL ELEVATIONS AND IN ALL DIRECTIONS.
 20. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
 21. WALL DESIGNS SHALL CONSIDER EFFECTS OF SLOPE, TRAFFIC LOADS, AND/OR BUILDING LOADS AS REQUIRED.
 22. BLOCK COLOR SHALL BE DETERMINED BY OWNERS REPRESENTATIVE.
 23. THIS DETAIL IS GENERAL IN NATURE AND SHALL NOT BE USED FOR CONSTRUCTION. WALL SHALL BE CONSTRUCTED FROM STRUCTURAL WALL DESIGN PLANS CREATED AND STAMPED BY A LICENSED STRUCTURAL ENGINEER.

MANUFACTURER'S DESIGN:

1. DESIGN SHALL BE FROM THE WALL MANUFACTURER.
2. MANUFACTURER DESIGN ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW HAMPSHIRE.
3. DESIGN CALCULATIONS AND PLANS SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.
4. DESIGN CALCULATIONS TO INCLUDE SAFETY FACTORS AGAINST OVERTURNING, SLIDING, BEARING CAPACITY, GEOSGRID PULLOUT AND GLOBAL STABILITY. MINIMUM FACTORS OF SAFETY ARE INDICATED BELOW.
5. THE WALL DESIGN ENGINEER SHALL COMPLETE SUFFICIENT INSPECTIONS DURING CONSTRUCTION TO CERTIFY WORK IS COMPLETE IN ACCORDANCE WITH DESIGN.
6. SUBMIT ASBUILT DRAWINGS OF WALL WITH WALL DESIGNERS CERTIFICATION TO OWNER.

MINIMUM SAFETY FACTORS

GLOBAL STABILITY F.S. = 1.5
OVERTURNING F.S. = 2.0
SLIDING F.S. = 1.5
BEARING CAPACITY F.S. = 2.0
GEOSGRID PULLOUT F.S. = 1.5



TYPICAL SECTION REINFORCED SEGMENTAL BLOCK RETAINING WALL
NOT TO SCALE

REINFORCED BACKFILL

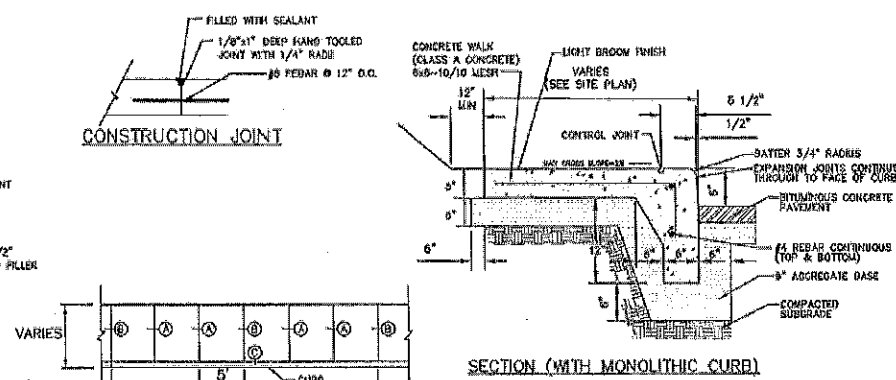
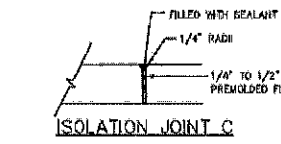
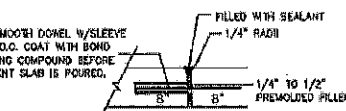
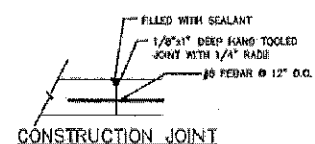
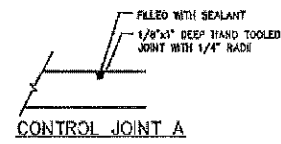
NOTE: THE DESIGN ENGINEER MUST BE MADE AWARE WHENEVER THE PERCENT PASSING THE #200 SIEVE EXCEEDS 10%.

SIEVE SIZE	% PASSING BY WEIGHT
3 INCH	100
1/2 INCH	50-60
No. 4	40-75
No. 50	8-28
No. 200	0-10

DRAINAGE AGGREGATE

DRAINAGE FILL SHALL BE CLEAN 1 INCH MINUS CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 INCH	75-100
3/4 INCH	50-75
No. 4	0-60
No. 40	0-50
No. 200	0-5



CONCRETE SIDEWALK
NOT TO SCALE

MSC
CIVIL ENGINEERS &
LAND SURVEYORS, INC.

170 COMMERCE WAY
SUITE 102
PORTSMOUTH, NH 02801

PHONE: 603-431-2222
FAX: 603-431-0910
www.msccivil.com

DETAILS

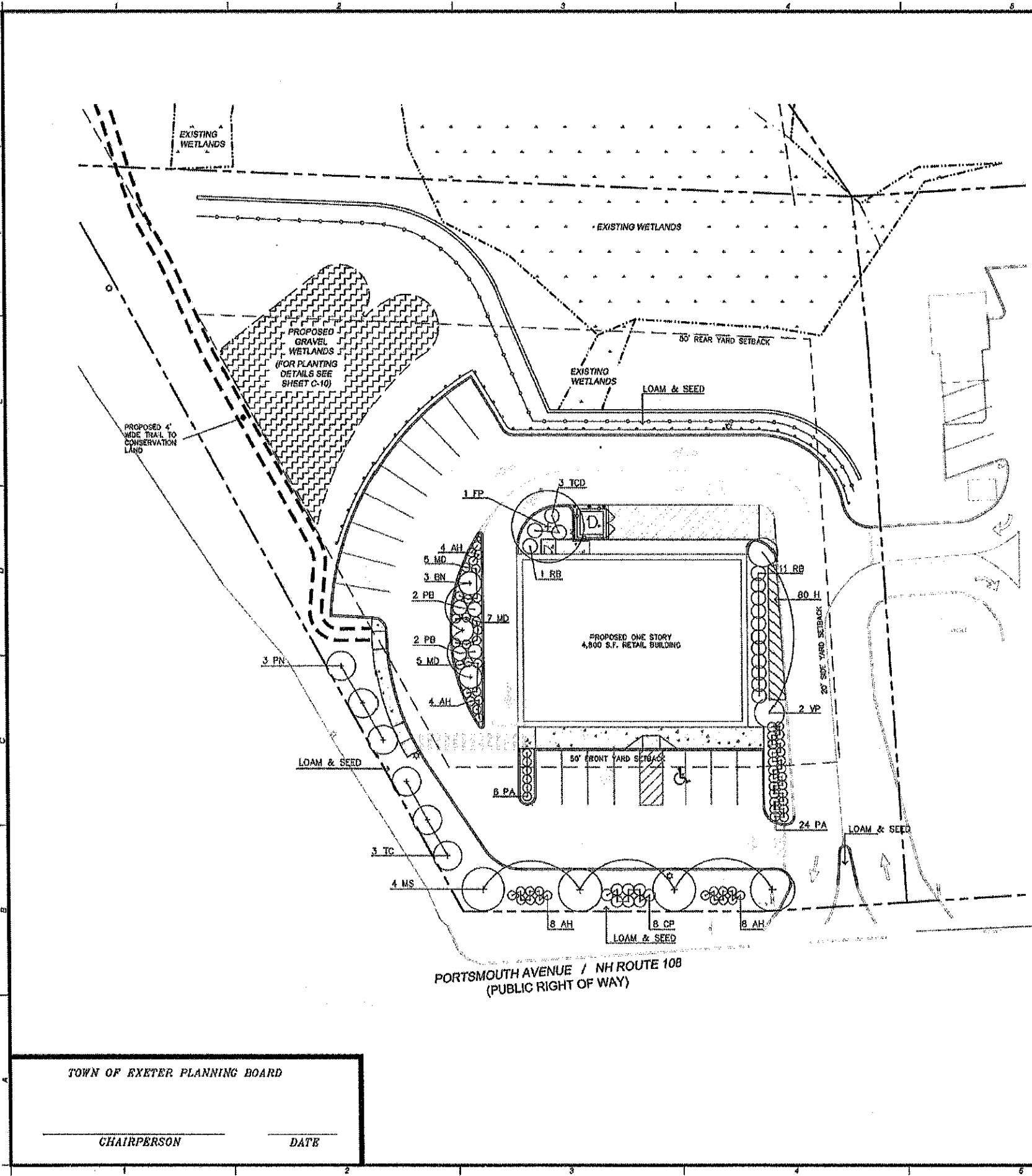
REV.	DATE	DESCRIPTION

DESIGNED BY: JMV
CHECKED BY: JPL

MAP 51 LOT 1
PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC
PORTSMOUTH AVENUE / NH ROUTE 108
COUNTY OF ROCKINGHAM
NEW HAMPSHIRE
EXETER

DATE: JANUARY 16, 2013
C-9
PROJECT NO. 11049
SCALE: N7S

Jan 17, 2013 - 10:28am
 P:\11048\dwg\11048 LS.dwg



LEGEND

- PROPOSED TREE
- PROPOSED SHRUBS
- SQUARE FEET
- LIGHT POST
- HANDICAPPED
- DIRECTION OF TRAFFIC
- EXISTING SIGN
- PROPOSED SIGN
- PROPERTY LINE
- PROPOSED FENCE
- EDGE OF WETLANDS
- PROPOSED GUARD RAIL

PLANT LIST

TREES:

CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	ROOTS	COMMENTS
BN	BETULA NIGRA 'LITTLE KING'	FOX VALLEY RIVER BIRCH	3	5' HT.	B&B	SINGLE STRAIGHT TRUNK, FULL & BUSHY, WELL FORMED CROWN
FP	FRAXINUS PENNSYLVANICA 'PATMORE'	PATMORE GREEN ASH	1	4" CAL.	B&B	SINGLE STRAIGHT MAIN TRUNK, FULL & BUSHY CROWN
MS	MALUS 'SUGAR TINE'	SUGAR TINE CRABAPPLE	4	3" CAL.	B&B	SINGLE STRAIGHT MAIN TRUNK, FULL & BUSHY CROWN
PN	PINUS NIGRA	AUSTRIAN PINE	3	5' HT.	B&B	FULL & BUSHY
TC	TSUGA CANADENSIS	CANADIAN HENLOCK	3	8' HT.	B&B	FULL & BUSHY

SHRUBS:

CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	ROOTS	COMMENTS
AH	AZALEA 'HINO CRIMSON'	HINO CRIMSON AZALEA	24	2' HT.	CONTAINER	1' O.C., FULL & BUSHY, EQUAL SPREAD, STAGGERED ROWS
CP	CHAMAECYPARIS FISIFERA 'MOPS'	MOPS THREADLEAF FALSECYPRESS	8	2' HT.	B&B	FULL & BUSHY
PB	PIERIS 'BROUWER'S BEAUTY' ANDROMEDA	BROUWER'S BEAUTY ANDROMEDA	4	3' HT.	CONTAINER	5' O.C., FULL & BUSHY
RD	RHODODENDRON 'BOULE DE NEIGE'	BOULE DE NEIGE RHODODENDRON	12	3' HT.	B&B	FULL & BUSHY
TD	TAXUS CUSPIDATA 'DWARF BRIGHT GOLD'	DWARF BRIGHT GOLD YEW	3	12" HT.	CONTAINER	16" O.C., FULL & BUSHY
VP	VIBURNUM P.T. SHIATA	SHIATA VIBURNUM	2	4' HT.	B&B	FULL & BUSHY

GRASSES, GROUND COVERS AND BULBS:

CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	ROOTS	COMMENTS
H	HEMEROCALLIS 'STELLA DORO'	STELLA DORO DAYLILY	80	12" HT.	CONTAINER	16" O.C., FULL HEALTHY GROWTH
MD	MICROBIOTA DECUSATA	RUSSIAN CYPRESS	17	12" SPREAD	CONTAINER	FULL & BUSHY
PA	PENNISETUM ALOPECUROIDES 'HAMELY'	DWARF FOUNTAIN GRASS	30	18" HT.	CONTAINER	3' O.C., FULL & BUSHY

GENERAL NOTES

- SEE L-2 FOR LANDSCAPE DETAILS AND PLANTING NOTES.
- SEE L-2 FOR LAWN SEED MIXES.



LANDSCAPE ARCHITECT:
HBLA INC
 170 Commerce Way, Suite 102
 Portsmouth, NH 03801
 P 603-431-4000

LANDSCAPE PLAN

REV.	DATE	DESCRIPTION	CHECKED BY:	DRAWN BY:

TAX MAP 51 LOT 1
 PROPERTY OF
ROLLINSFORD ASSOCIATES, LLC
 PORTSMOUTH AVENUE / NH ROUTE 108
 COUNTY OF ROCKINGHAM
 NEW HAMPSHIRE
EXETER

DATE: SEPTEMBER 28, 2011

L-1

PROJECT NO. 11048
 SCALE: 1" = 20'

TOWN OF EXETER PLANNING BOARD

CHAIRPERSON _____ DATE _____

