

SITE PLAN

for
TOOMERFS, LLC
 18 MAIN STREET & 12 COWELL DRIVE
 DURHAM, NH
 REVISED FEBRUARY 5, 2019

LEGEND

.....	EXISTING PROPERTY LINE
-----	SEBACK EDGE OF GRAVEL
-----	EXISTING EDGE OF PAVEMENT
-----	EXISTING TREE LINE
-----	PROPOSED TREE LINE
-----	TO BE REMOVED TREE LINE
-----	PROPOSED TREE LINE
-----	PROPOSED PARKING SPACES
-----	PROPOSED SILT SOCK
-----	PROPOSED PAVEMENT RADIIUS
-----	PROPOSED CONTOUR LINE
-----	EXISTING CONTOUR LINE

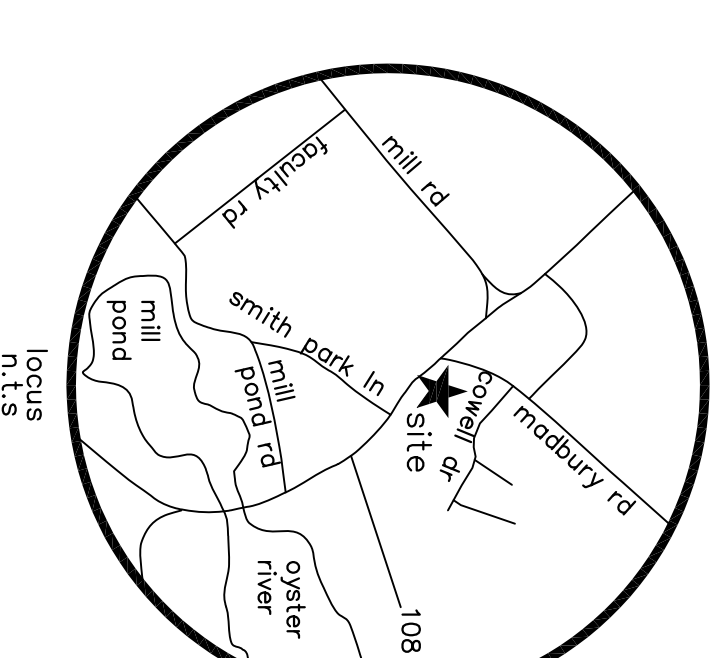
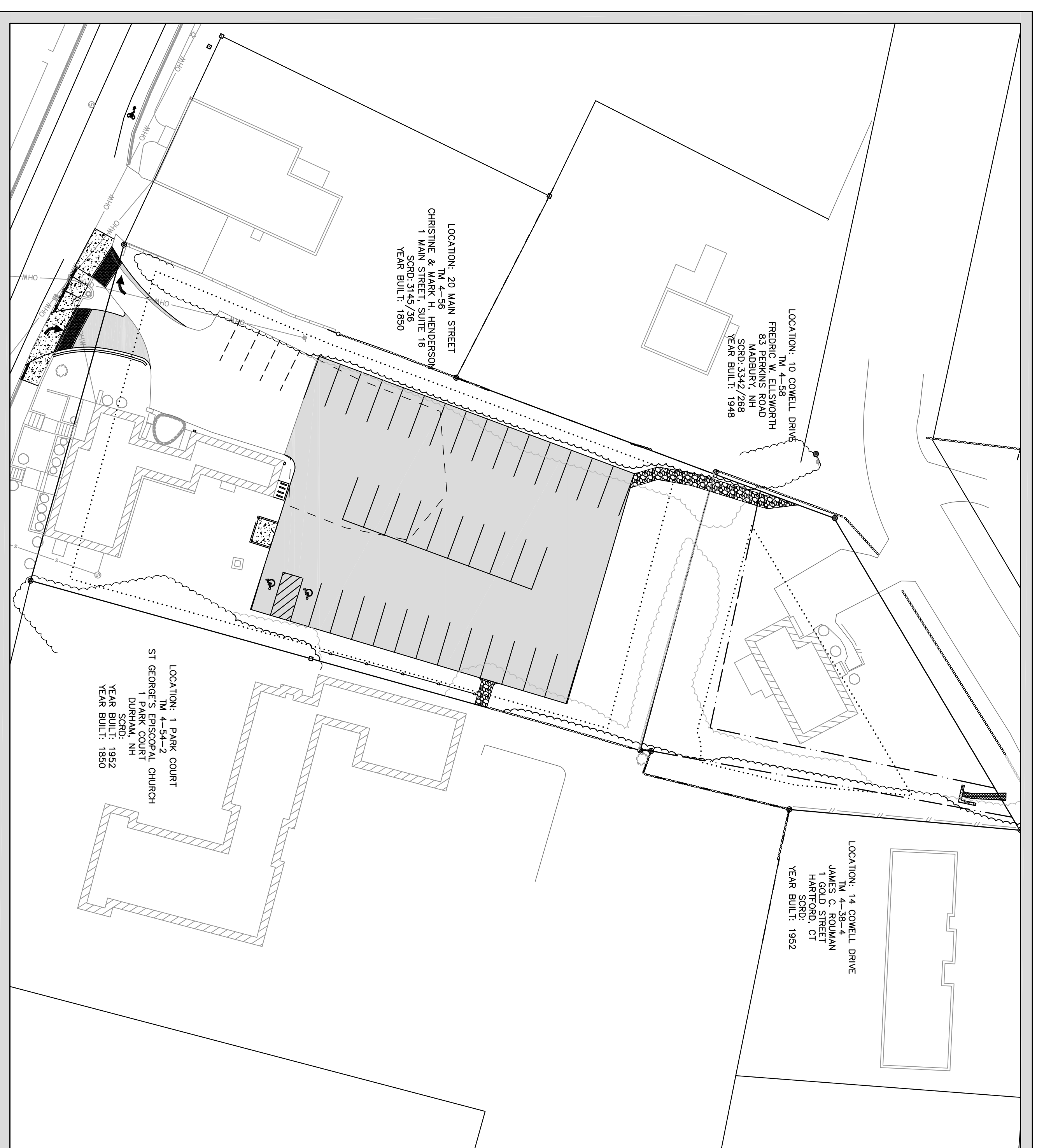
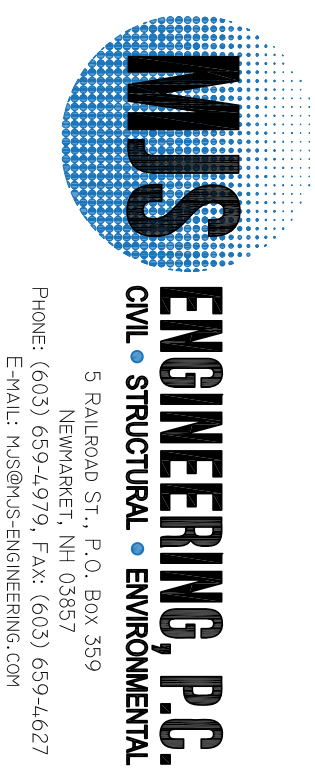


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OWNER
 TOOMERFS, LLC
 37 MAIN STREET
 UNIT 0
 DURHAM, NH 03824

CIVIL ENGINEER



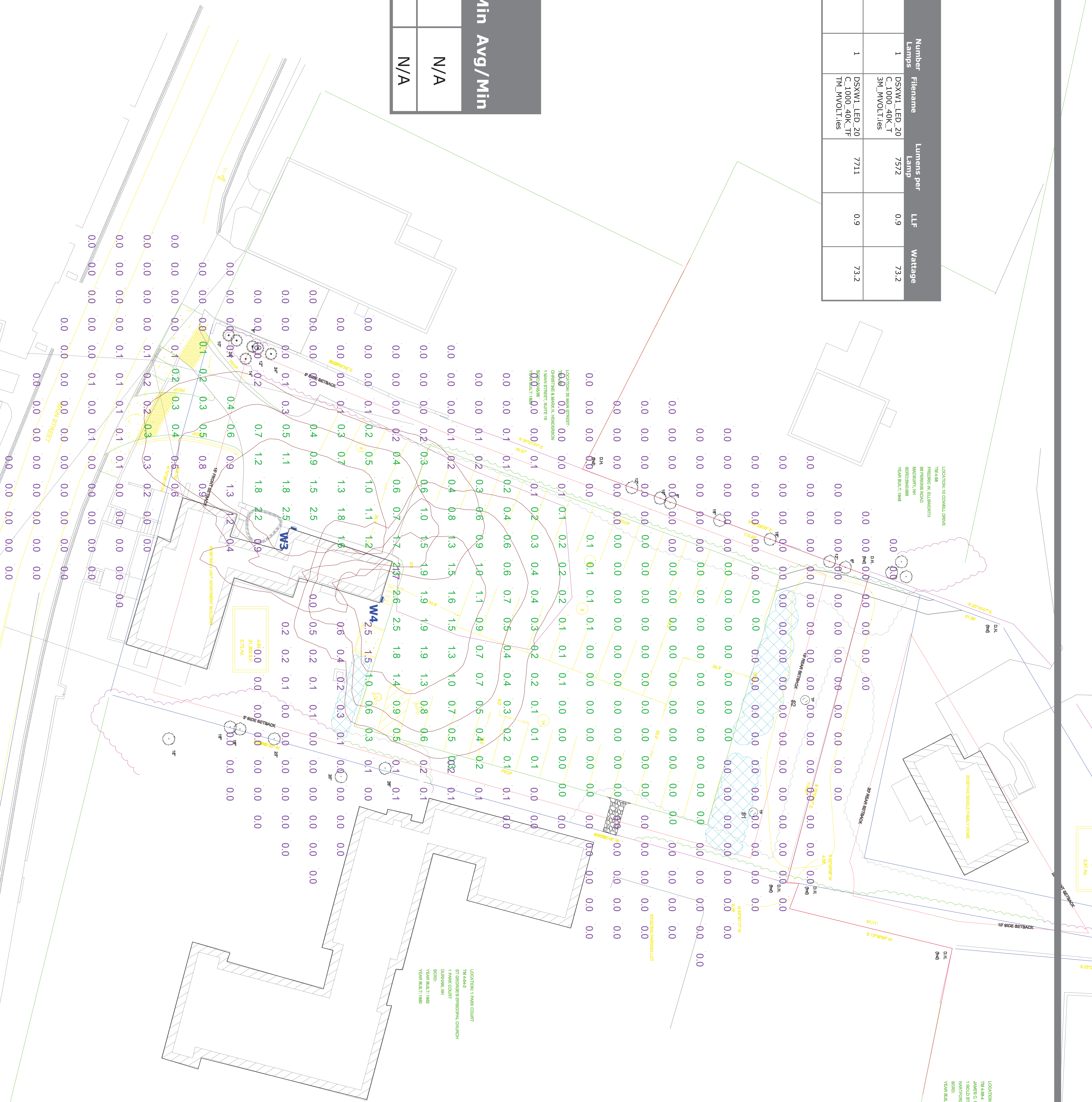
SURVEYOR
 NORWAY PLAINS ASSOCIATES, INC.
 2 CONTINENTAL BOULEVARD
 ROCHESTER, NEW HAMPSHIRE
 03867 (603) 335-3948

LANDSCAPE ARCHITECT
 WOODBURN & COMPANY
 103 KENT PLACE
 NEWMARKET, NEW HAMPSHIRE
 (603) 659-5949

NO.	REVISIONS	DATE	INT.
3.	DESIGN AND GRADING CHANGES	2/6/19	EHK
2.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/23/19	EHK
1.	PLAN UPDATES	11/29/18	EHK
0.	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens per Lamp	LLF	Wattage
	W3	1	Lithonia Lighting	DSXW1 LED 20C 1000 40K T3M MVOLT	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T3M OPTIC, 4000K, @ 10000mA; mounted at 16ft	LED	1	DSXW1_LED_20_C_1000_40K_T3M_MVOLT.rvs	7572	0.9	73.2
	W4	1	Lithonia Lighting	DSXW1 LED 20C 1000 40K T3FM MVOLT DD8XD	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T3FM OPTIC, 4000K, @ 10000mA; mounted at 16ft	LED	1	DSXW1_LED_20_C_1000_40K_T3FM_MVOLT.rvs	7711	0.9	73.2

Statistics		Symbol	Avg	Max	Min	Max/Min	Avg/Min
Description	Outside of Parking Lot	+	0.1 fc	2.5 fc	0.0 fc	N/A	N/A
	Parking Lot	+	0.5 fc	2.6 fc	0.0 fc	N/A	N/A



VISUAL

18 MAIN ST Durham, NH Site Lighting Layout

Designer

Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842

Date

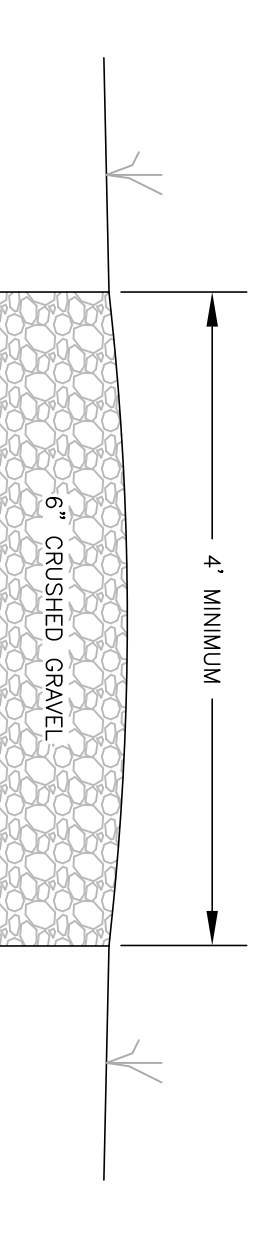
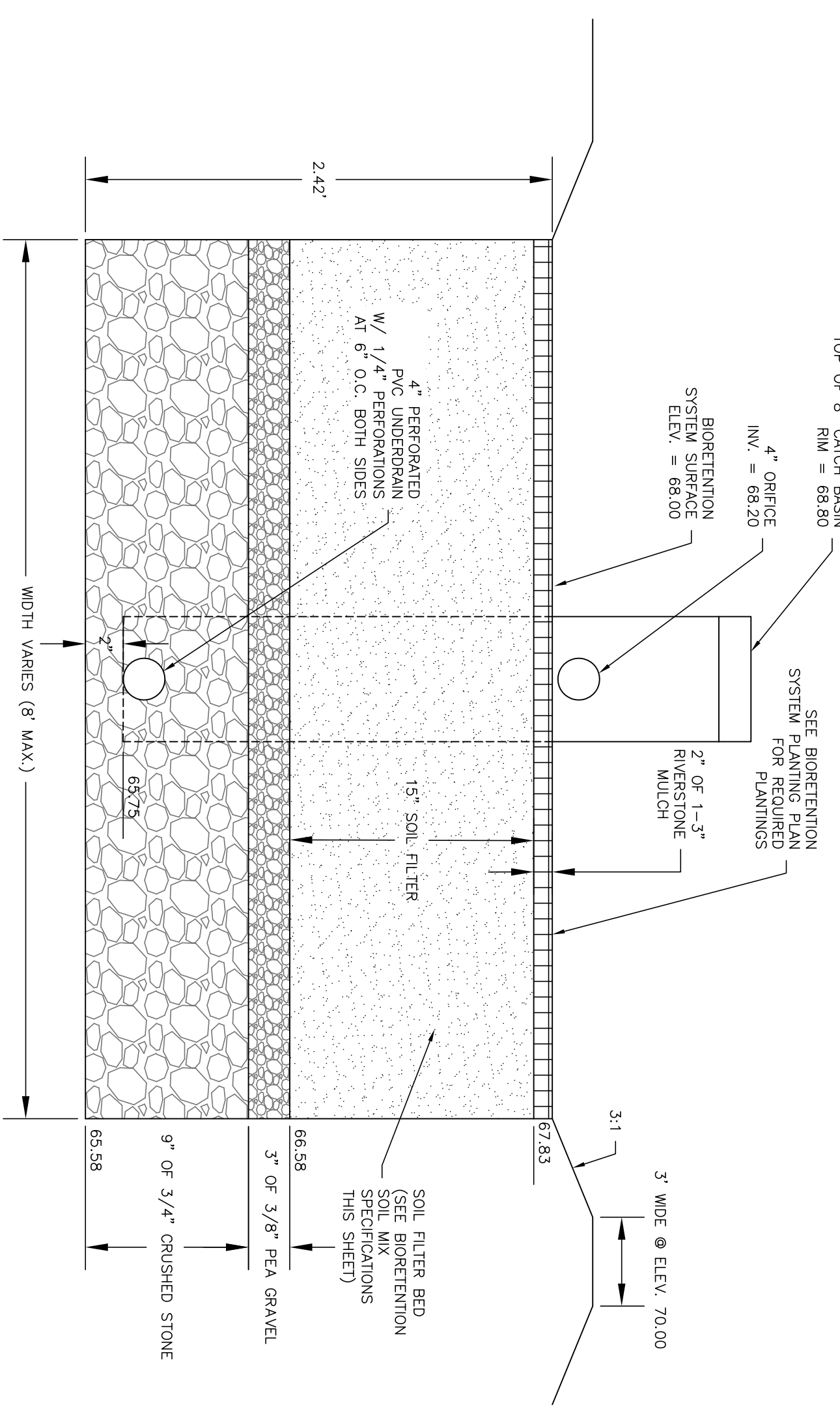
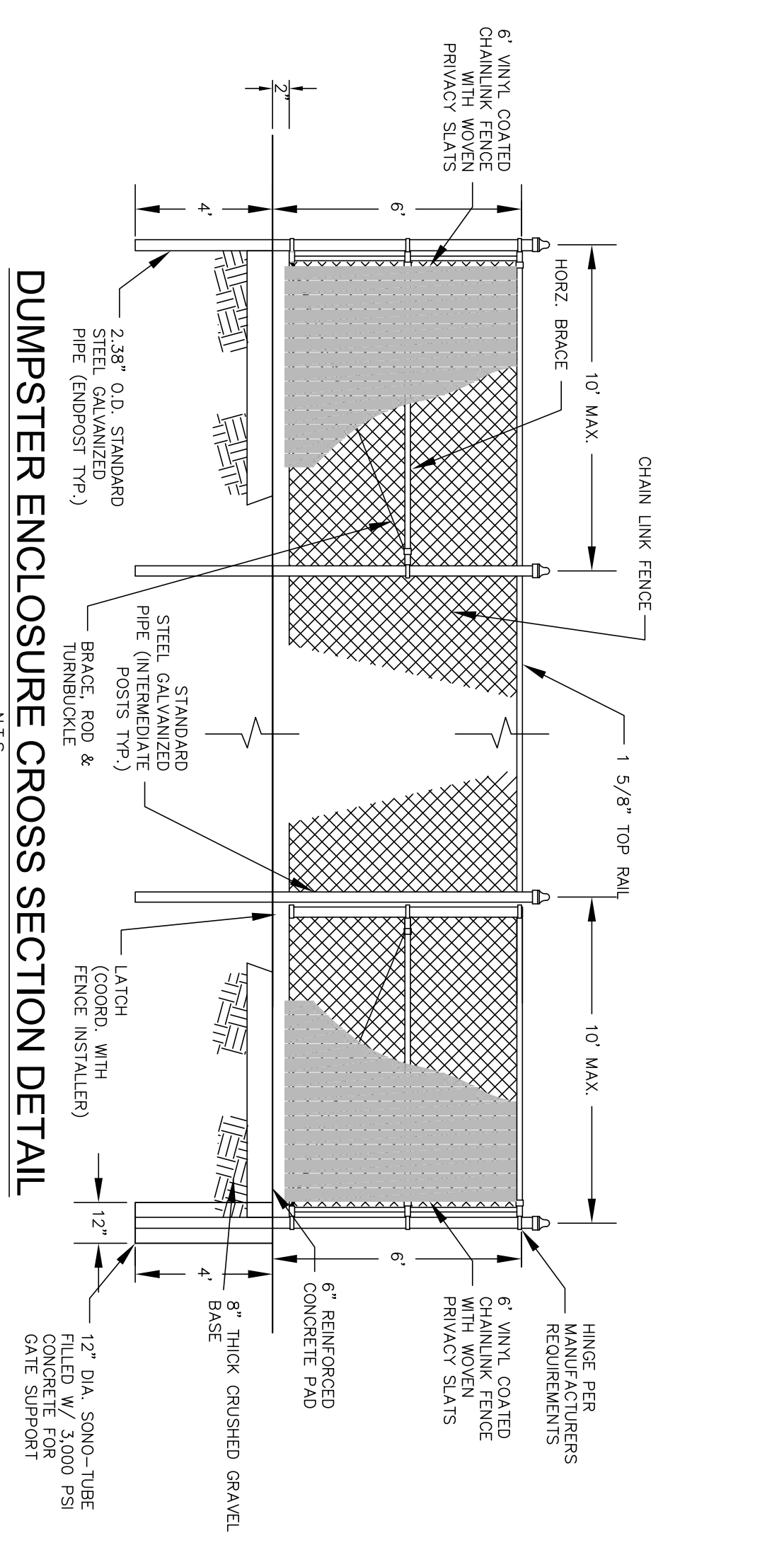
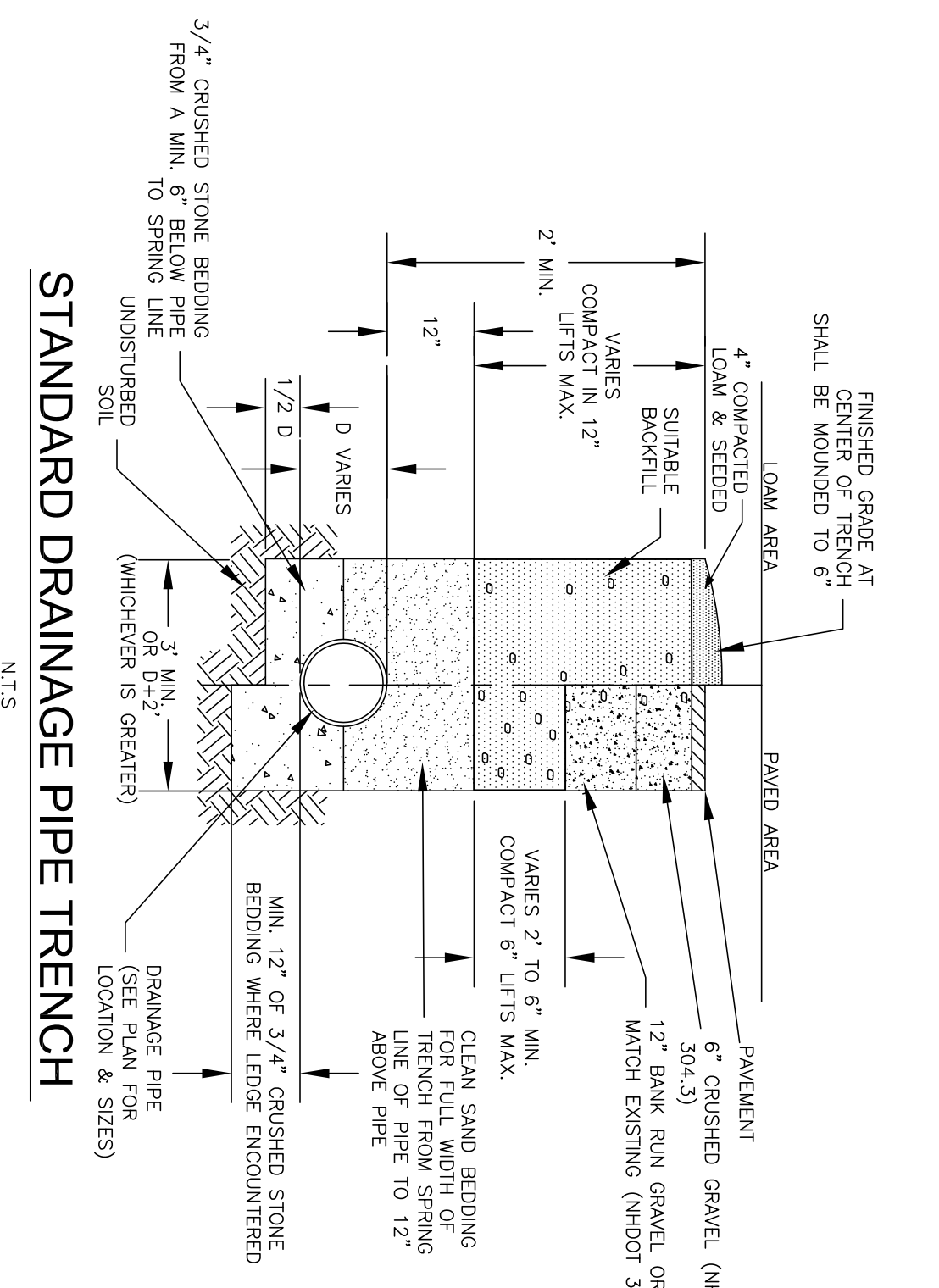
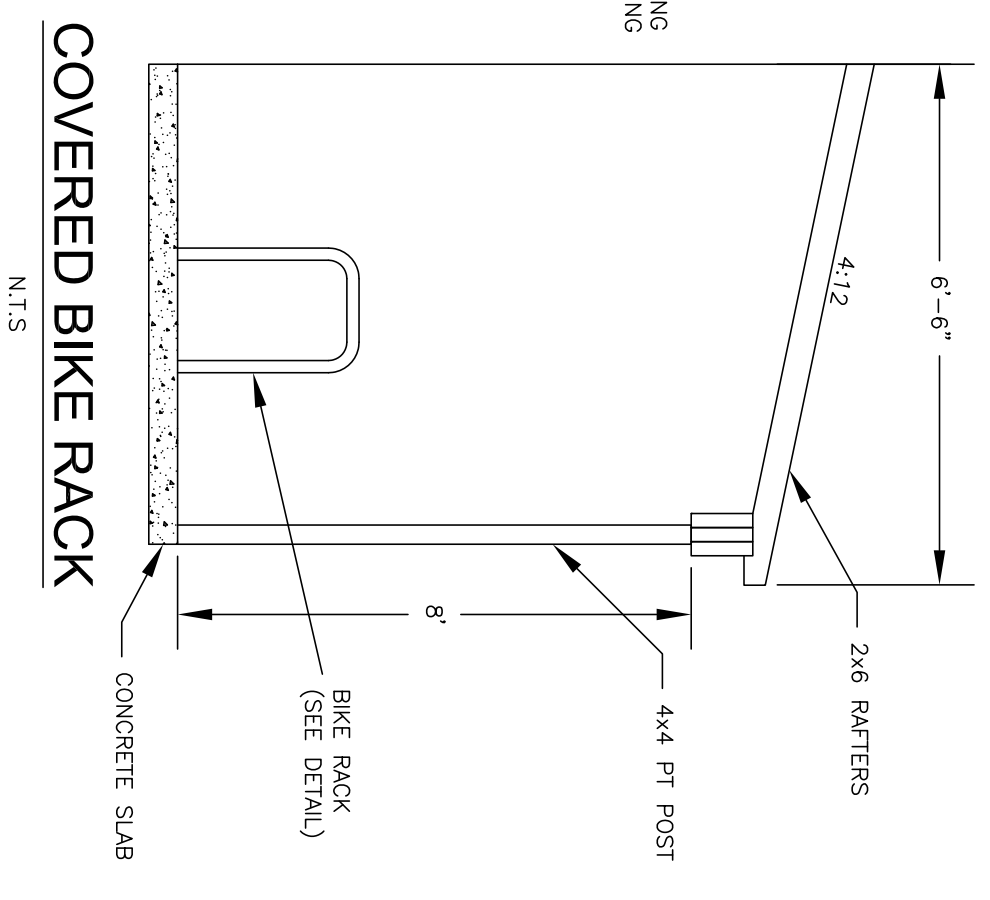
1/24/2019

Scale

1"=40'

Drawing No.

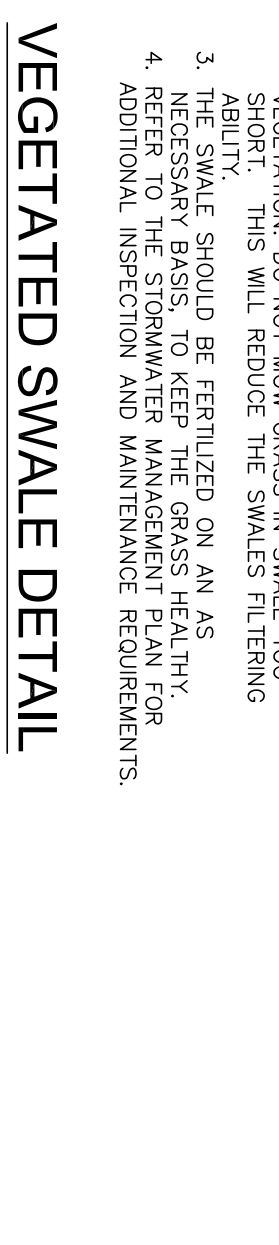
Summary



DSXW1 LED WALL MOUNTED LIGHT FIXTURE
N.T.S.

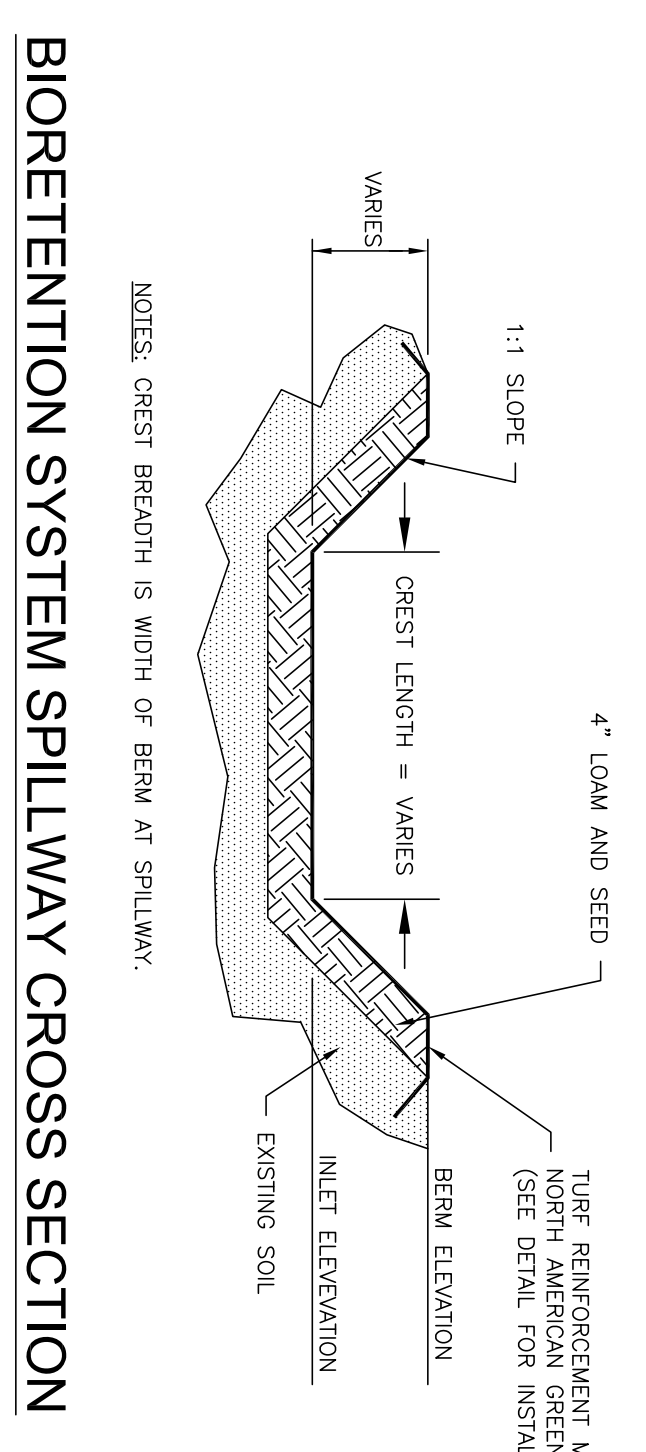
- GENERAL LIGHTING NOTES:**
1. LIGHTING FIXTURES SHALL BE LOCATED AS SHOWN ON THE SITE PLAN.
 2. OWNER MAY ELECT TO USE ALTERNATIVE LIGHT FIXTURES IF FIRST APPROVED BY DESIGNER AND TOWN.
 3. ALL NON-ESSENTIAL LIGHTING WILL BE REQUIRED TO BE TURNED OFF AFTER BUSINESS HOURS, LEAVING ONLY THE NECESSARY LIGHTING FOR SECURITY.
 4. ALL LIGHTING FOR SECURITY OR ASSISTANCE WILL BE FULLY OUT-OF-OR A SHIELDED PRECAST CONCRETE POLE BASE SHEA CONCRETE OR EQUAL.

TYPICAL PEDESTRIAN PATH CROSS SECTION
N.T.S.



- NOTES:**
1. REFER TO BERM CONSTRUCTION NOTES IN BIORETENTION SYSTEM DETAIL FOR BERM CONSTRUCTION REQUIREMENTS.
 2. SITES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY SHORT. THIS WILL REDUCE THE SWALES FILTERING ABILITY.
 3. NECESSARY SHOULD BE ESTABLISHED ON AN AS NECESSARY BASIS.
 4. REFER TO THE STORMWATER MANAGEMENT PLAN FOR ADDITIONAL INSPECTION AND MAINTENANCE REQUIREMENTS.

VEGETATED SWALE DETAIL
N.T.S.



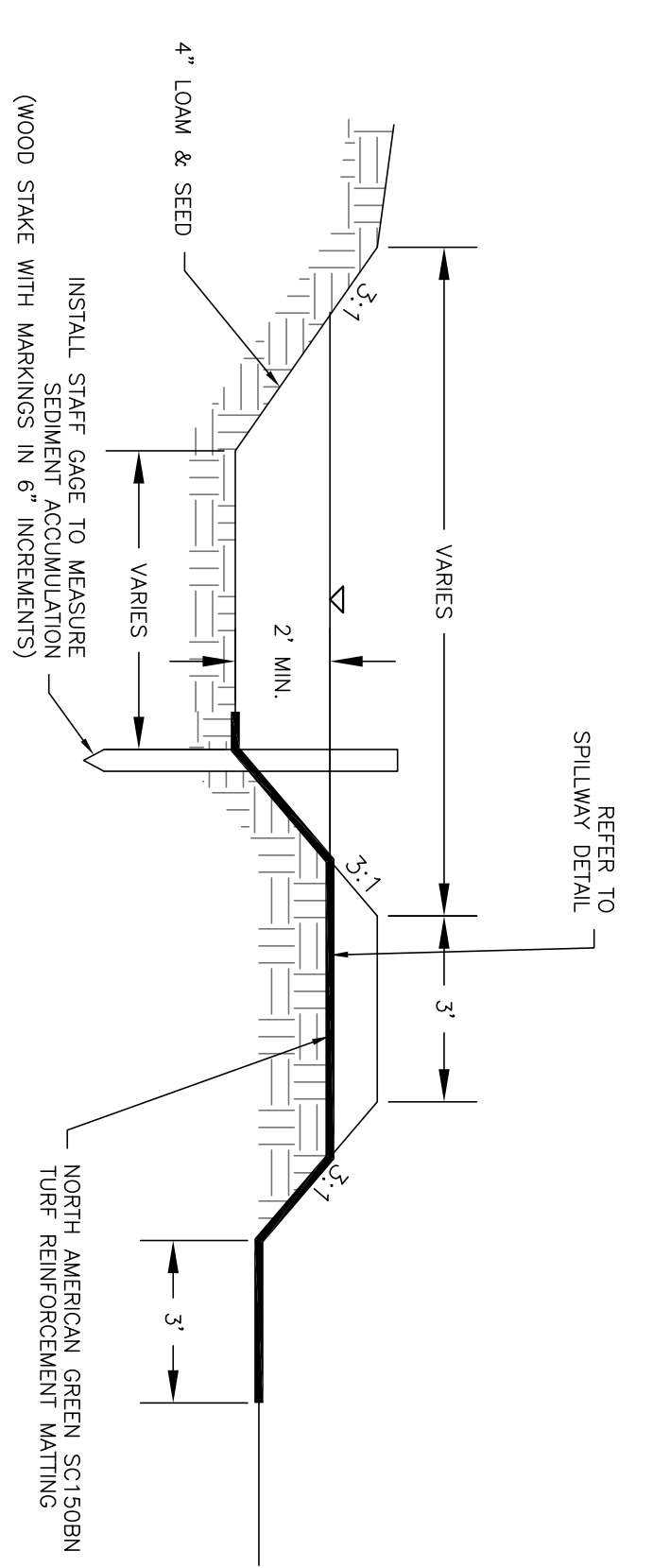
BIORETENTION SYSTEM SPILLWAY CROSS SECTION
NOT TO SCALE

SPILLWAY DIMENSION TABLE

NOTE: SPILLWAY TO BE CONSTRUCTED TO THE DIMENSIONS AND SPECIFICATIONS SHOWN. REFER TO DETAIL ABOVE FOR LOCATION OF WIDTH AND LENGTH.

LOCATION	CREST ELEV.	BERM ELEV.	LENGTH	WIDTH*
SPILLWAY #1 - SEDIMENT FOREBAY	70.00	69.15	6'	9'
SPILLWAY #2 - BIORETENTION SYSTEM	69.60	70.00	5'	11'

SEDIMENT FOREBAY TYPICAL CROSS SECTION DETAIL
N.T.S.



- NOTES:**
1. REFER TO BERM CONSTRUCTION NOTES IN BIORETENTION SYSTEM DETAIL FOR BERM CONSTRUCTION REQUIREMENTS.
 2. REFER TO SPILLWAY CROSS SECTION DETAIL FOR SPILLWAY CONSTRUCTION REQUIREMENTS.
 3. REFER TO SPILLWAY CROSS SECTION DETAIL FOR SPILLWAY CONSTRUCTION REQUIREMENTS.
 4. WEEDS AND WOODY VEGETATION SHALL BE REMOVED AFTER SEEDMENT ACCUMULATION. SEEDMENT SHALL BE REMOVED AFTER SEEDMENT ACCUMULATES TO A DEPTH OF 1' FROM.

SEDIMENT FOREBAY TYPICAL CROSS SECTION DETAIL
N.T.S.

- CONSTRUCTION NOTES:**
1. DO NOT PLACE BIORETENTION SYSTEM INTO SERVICE UNTIL THE SYSTEM HAS BEEN FULLY STABILIZED.
 2. TO PREVENT DEGRADATION OF INFILTRATION FUNCTION, DO NOT OPERATE SEVERE EQUIPMENT OR VEHICLES ON THE BIORETENTION SYSTEM DURING ANY STAGE OF CONSTRUCTION. DO NOT OPERATE SEVERE EQUIPMENT WITH CONSTRUCTION EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
 3. CLEAR AND GRUB THE AREA WHERE THE BIORETENTION SYSTEM IS TO BE LOCATED. STOCKPILE LOAM FOR REUSE LATER.
 4. THE FOUNDATION AREA SHALL BE SCARIFIED PRIOR TO PLACING FILL. ALL UNSUITABLE MATERIAL UNDER THE BERM SHALL BE REMOVED AND REPLACED WITH SUITABLE FOUNDATION MATERIAL.
 5. THE BERM SHALL BE CONSTRUCTED BEGINNING FROM THE LOWEST IN MAXIMUM 12" LOOSE LIFTS COMPACTED TO 95% MAXIMUM MODIFIED PROCTOR DENSITY. EMBANKMENT SOIL SHALL HAVE NO ORGANIC MATTER OR FROZEN MATERIAL AND NO STONES LARGER THAN 3" IN ANY DIMENSION. THE EMBANKMENT SHALL BE 3' WIDE AND 3" HIGH. EMBANKMENT FILL MATERIAL SHALL HAVE THE FOLLOWING GRADATION:

BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS

COMPONENT MATERIAL	PERCENT OF MIXTURE	SIEVE NO.	% BY WEIGHT PASSING
ASTM C-33 CONCRETE SAND	50 TO 55		15 TO 25
LOAMY SAND TOPSOIL WITH FINE SAND INDICATED	20 TO 30		200
LOAMY SAND TOPSOIL WITH FINE SAND INDICATED	20 TO 30		200
UNDEGRADED FINE SHREDDED BARK OR WOOD FIBER MULCH WITH FINES AS INDICATED	20 TO 30		< 5
UNDEGRADED FINE SHREDDED BARK OR WOOD FIBER MULCH WITH FINES AS INDICATED	20 TO 30		< 5
LOAMY COARSE SAND	70 TO 80		85 TO 100
	60		70 TO 100
	200		8 TO 15

- GENERAL MAINTENANCE:**
1. THE BIORETENTION BASIN SHALL BE INSPECTED TWICE EACH YEAR WITH PREVENTATIVE MAINTENANCE PROVIDED.
 2. EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
 3. RASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE BIORETENTION SYSTEM FOR PROBLEMS. REPAIRS TO THE BIORETENTION SYSTEM SHALL BE LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
 4. THE FILTER MEDIA SHALL BE INSPECTED AT LEAST ANNUALLY AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
 5. PLANTING REQUIREMENTS:
 THE BIORETENTION BASIN AND SEDIMENT FOREBAY BERM, BOTTOM AND INTERIOR SIDE SLOPES SHALL BE PLANTED WITH A 50:50 MIX OF NEW ENGLAND ERIGON AND NEW ENGLAND WETLAND PLANTS, INC.
 NEW ENGLAND WETLAND PLANTS, INC.
 1000 WILSON STREET
 AMHERST, MA 01002

- BIORETENTION SYSTEM GENERAL NOTES:**
1. BIORETENTION SYSTEM FILTER SOIL MIX SHALL MEET THE FOLLOWING REQUIREMENTS OF FILTER MEDIA OPTION A OR OPTION B.

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	60		70 TO 100
	200		8 TO 15

FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 DATE _____

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL

5 RAILROAD ST., P.O. BOX 359
 NEWBURN, NH 03877
 PHONE: (603) 659-4979, FAX: (603) 659-4627
 E-MAIL: MJS@MJS-ENGINEERING.COM

CONSTRUCTION DETAILS
 prepared for
 TOOMERFS, LLC

TAX MAP 4, LOTS 38-5 AND 55
 18 MAIN ST AND 12 COWELL DR., DURHAM, NH

DATE: 10/5/18
 SCALE: 1"=20'
 DESIGNED BY: EHK
 DRAWN BY: EHK
 APPROVED BY: MJS
 DWG FILE: 18-040 CivilM.dwg

SEAL: MICHAEL BEHRENDT, TOWN PLANNER, LICENSE NO. 6387

NO.	REVISIONS	DATE	INT.
2.	DESIGN REVISIONS PER PUBLIC HEARING ON 1/9/19	2/5/19	EHK
1.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
0.	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK

JOB: 18-040
 D2

