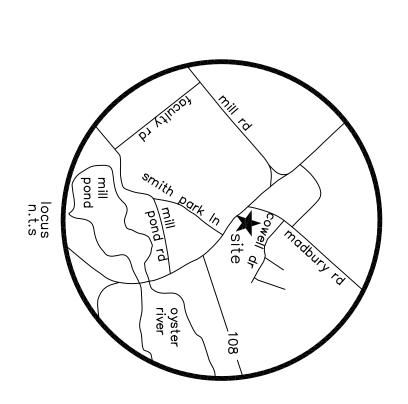
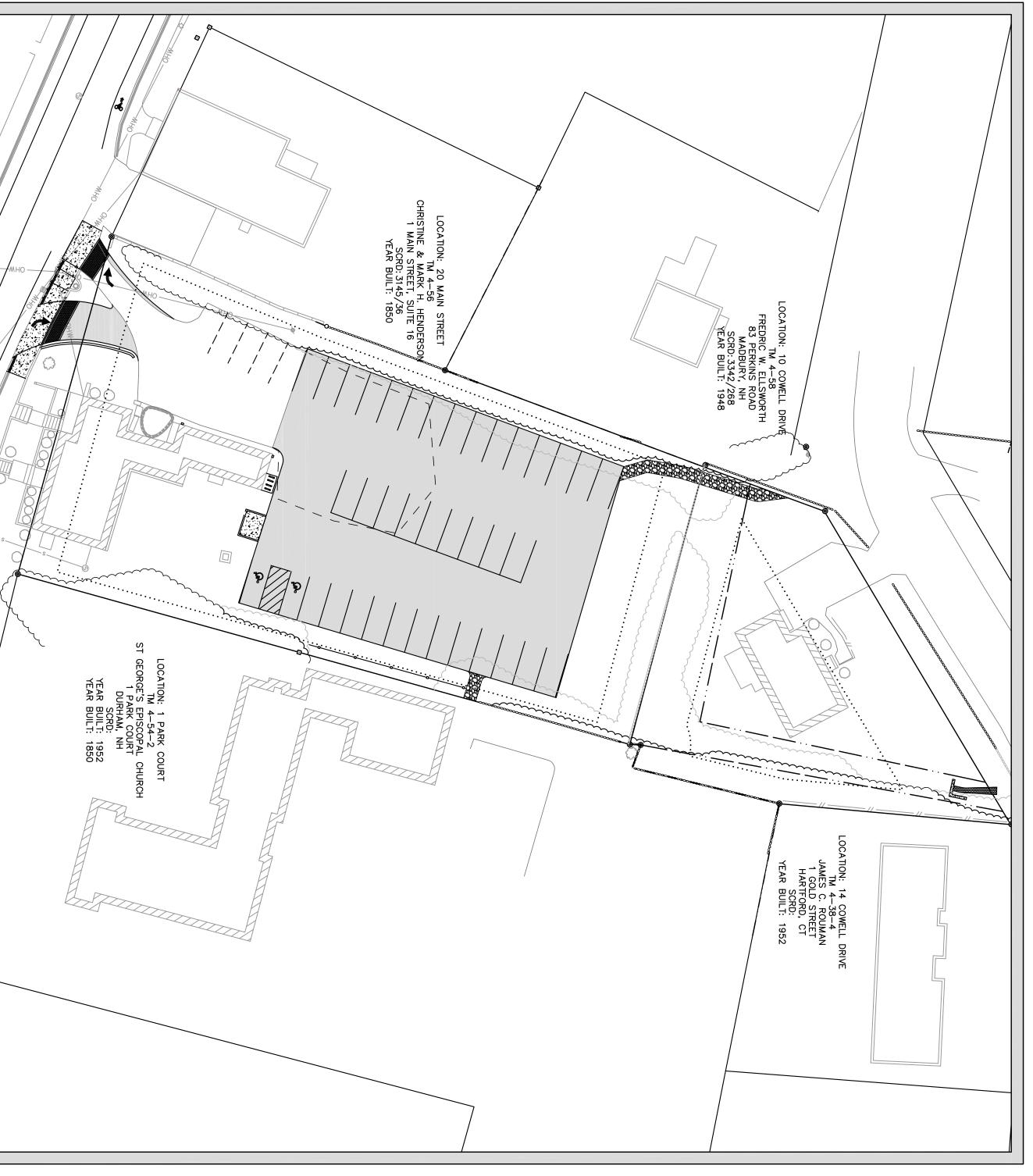
TOOMERFS, LLC

18 MAIN STREET & 12 COWELL DRIVE DURHAM, NH

REVISED FEBRUARY 5, 2019

EXISTING PROPERTY LINE	
LOCATION: 10 COWELL DRIVE	
LOCATION: 14 COWELL DRIVE TM 4-38-4 JAMES C. ROUMAN 1 GOLD STREET HARTFORD, CT SCRD: YEAR BUILT: 1952	





TOOMERFS, LLC 37 MAIN STREET UNIT O DURHAM, MH 03824

CIVIL ENGINEER

ENGINEERING, P.C.

CIVIL • STRUCTURAL • ENVIRONMENTAL

5 RAILROAD ST., P.O. Box 359

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

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

LANDSCAPE ARCHITECT

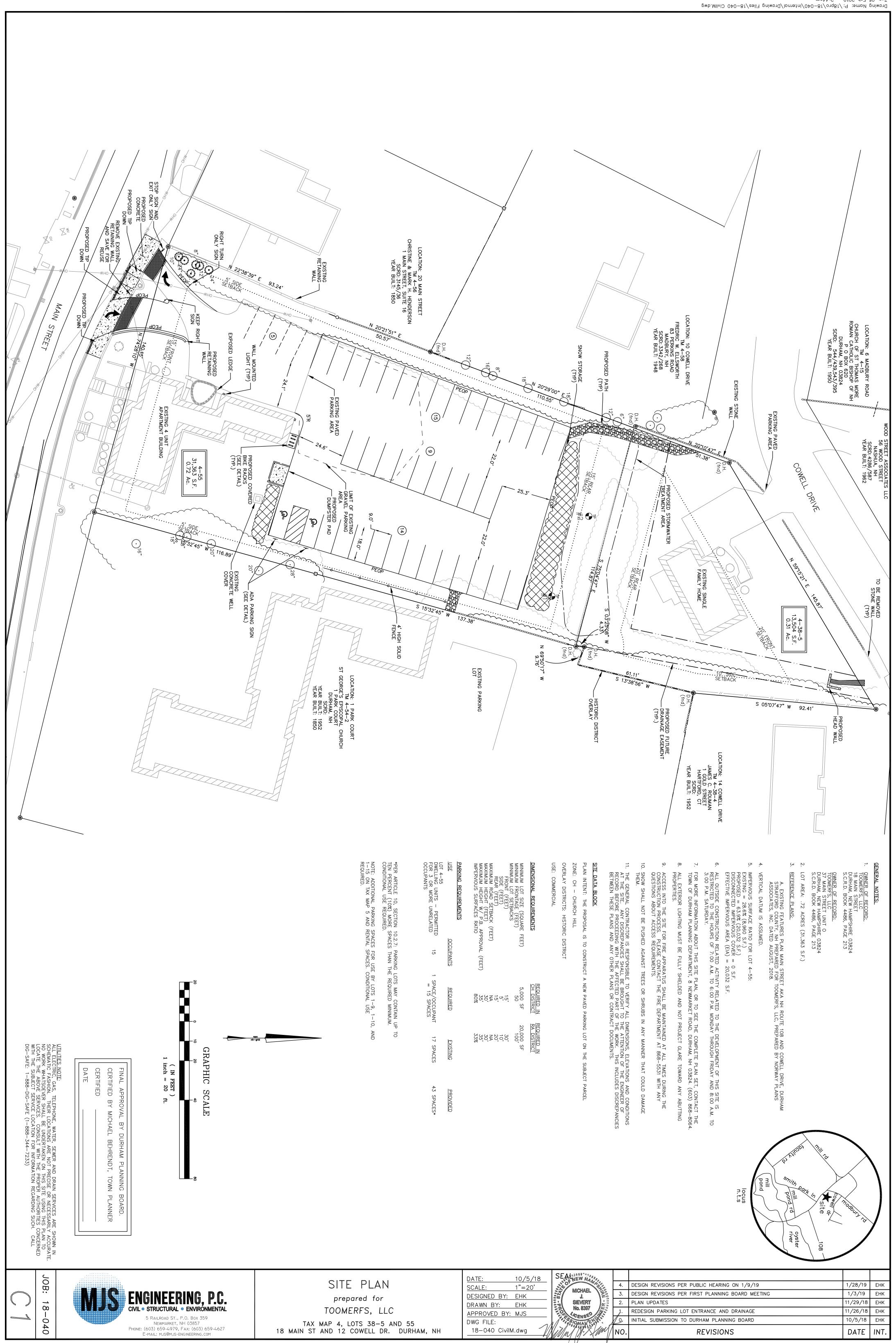
SURVEYOR

OWNER

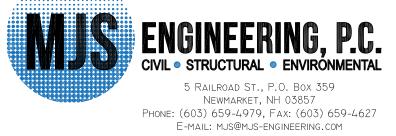
TABLE OF CONTENTS

CONSTRUCTION DETAILS D'	LIGHTING PLAN	LANDSCAPING PLAN L1	UTILITY & EROSION CONTROL PLAN	PROPOSED SITE PLAN	TITLE	
. D1-D3		<u> </u>	2	<u> </u>	SHEET	

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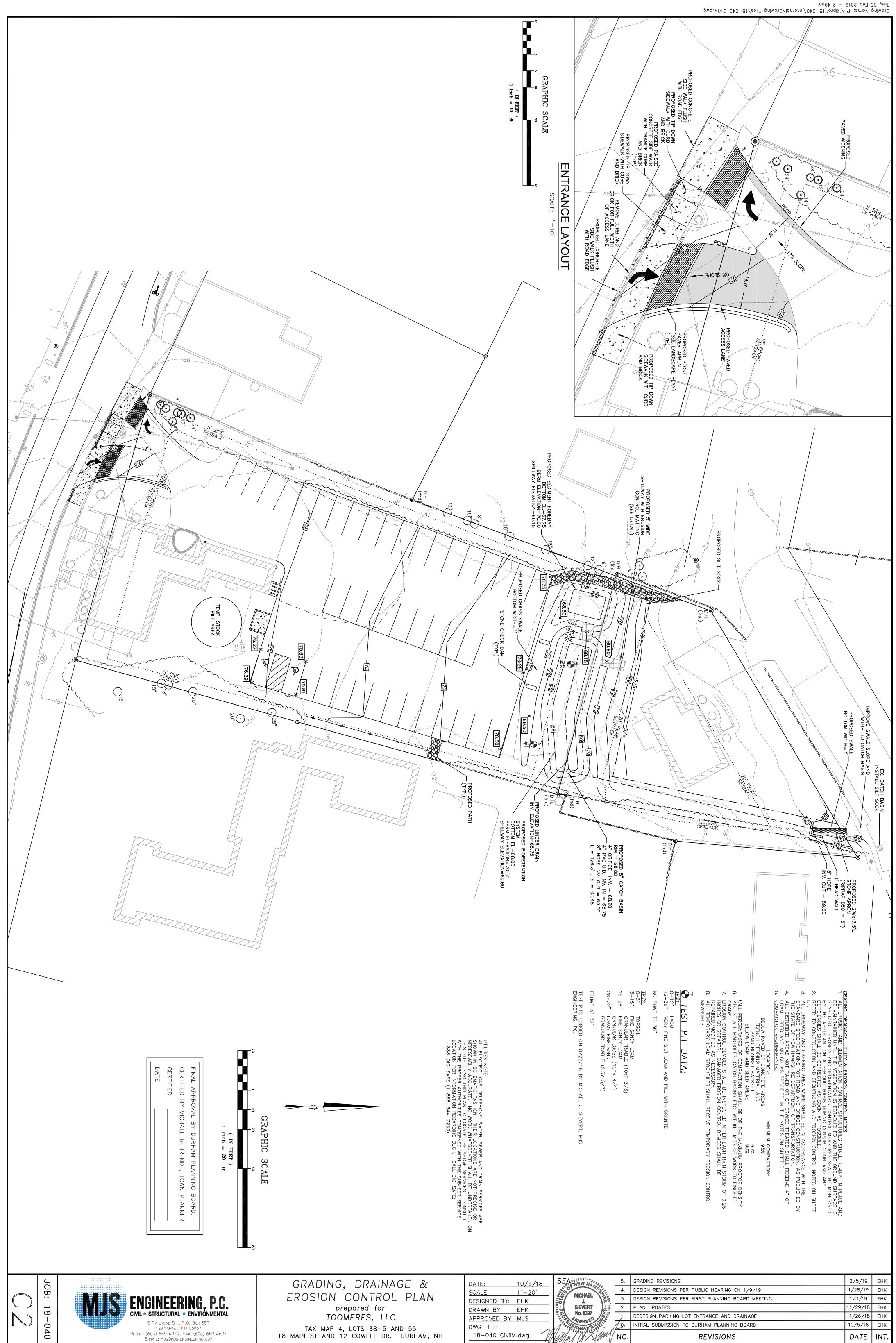


TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM, NH

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

NEW HANDO		
1000	4.	DESIGN REVISIONS PER PUBLIC HEARING ON 1/9/19
MICHAEL THE	3.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETII
SIEVERT	2.	PLAN UPDATES
No. 8397	1.	REDESIGN PARKING LOT ENTRANCE AND DRAINAGE
CENSED ST.	10	INITIAL SUBMISSION TO DURHAM PLANNING BOARD
1 Y Med	NO.	REVISIONS

DATE

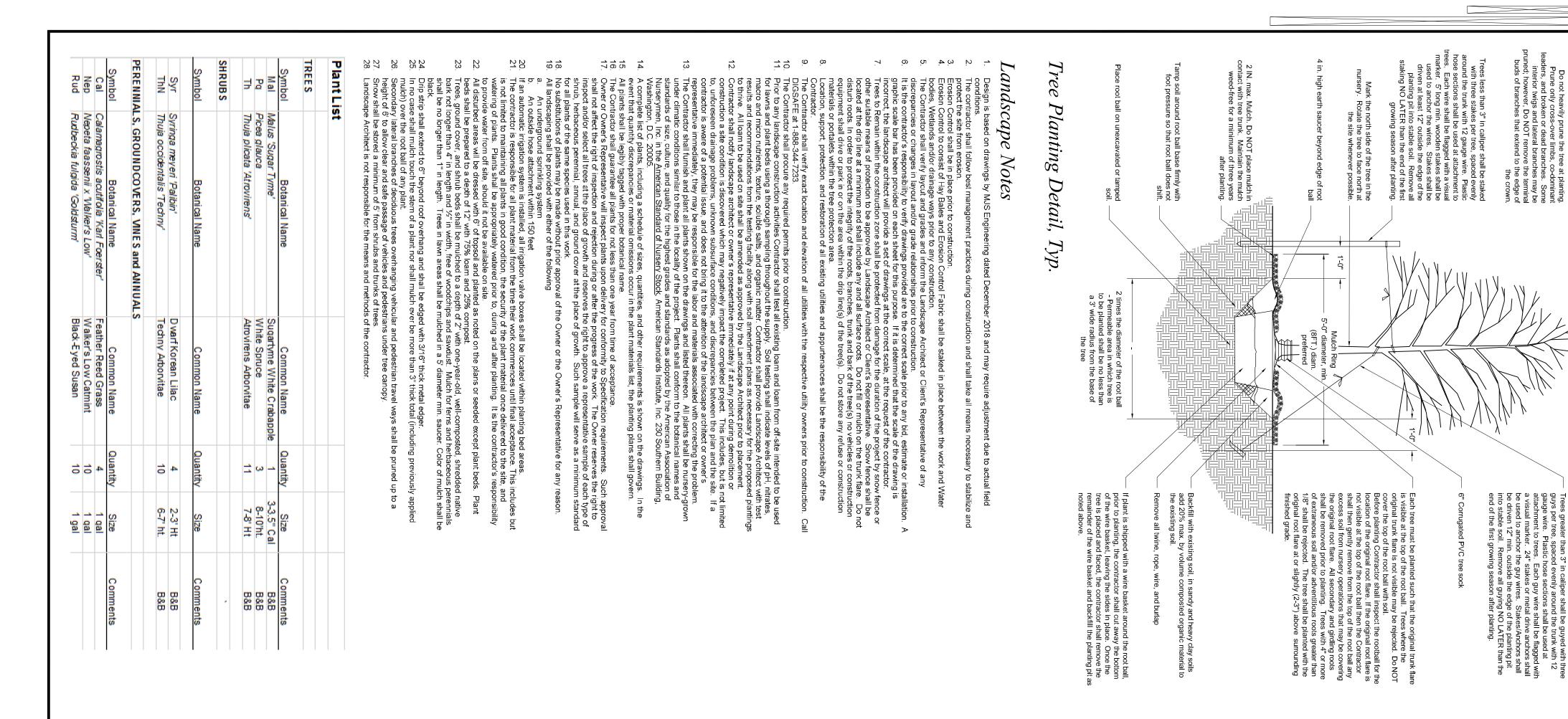


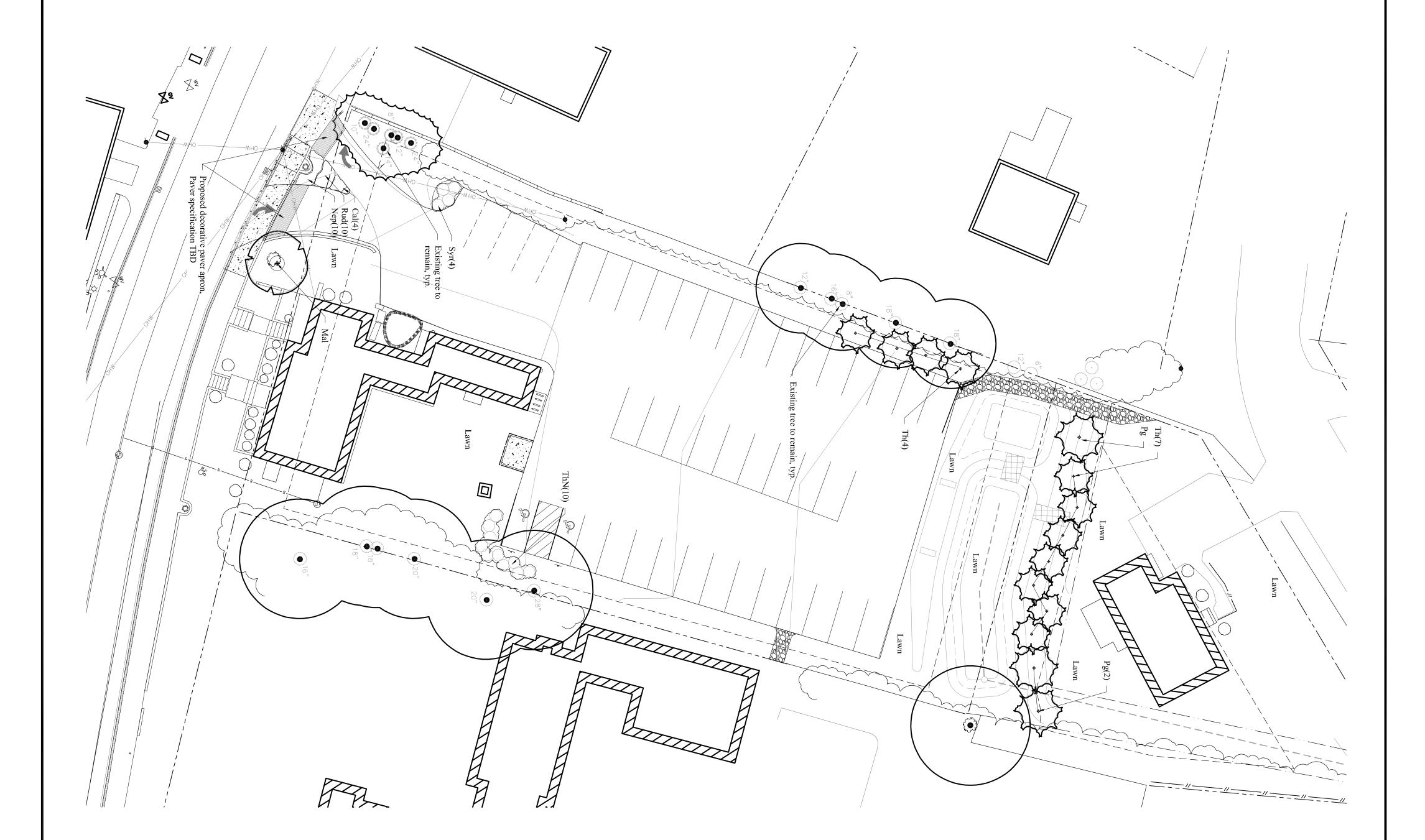
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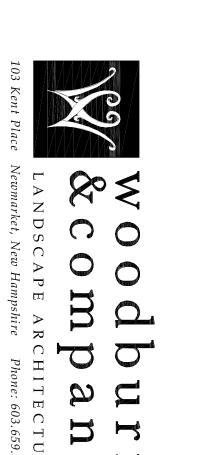
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REVISIONS

DATE







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GRAPHIC SCALE

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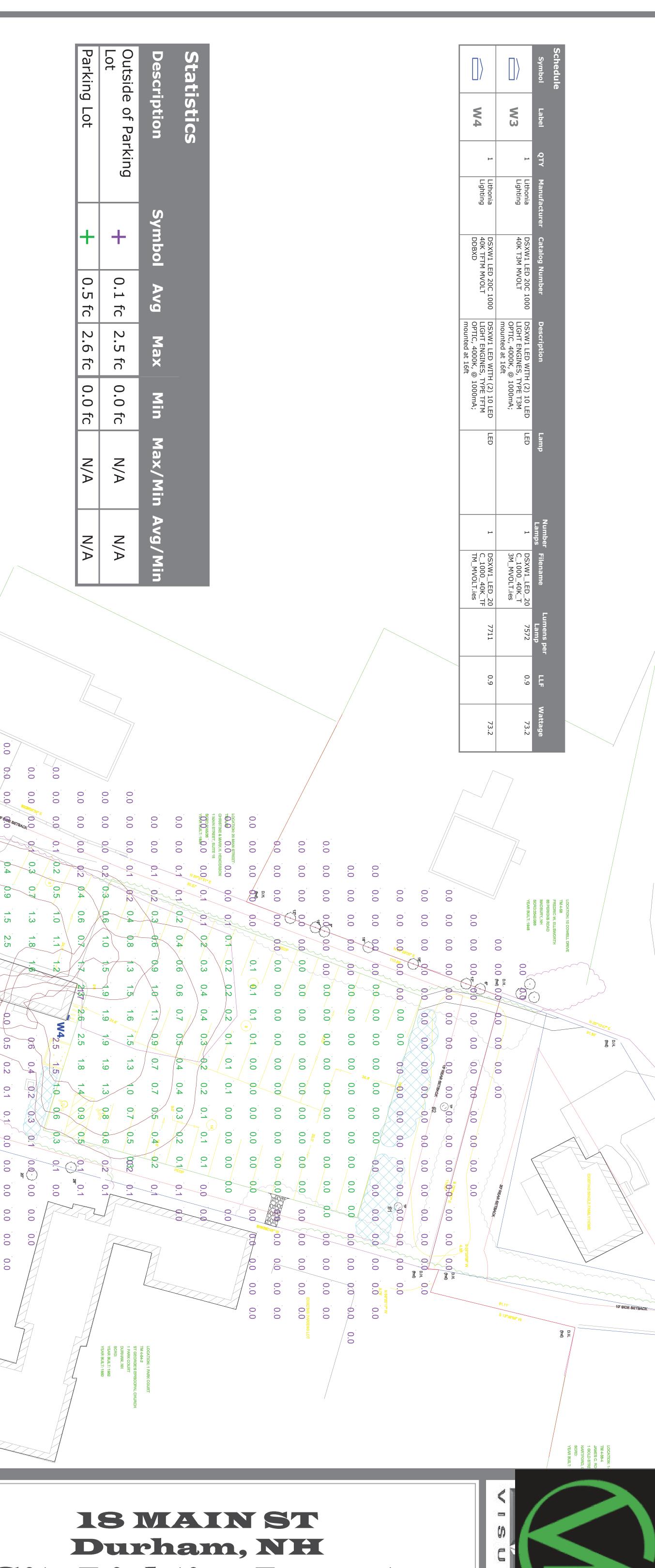
CIVIL • STRUCTURAL • ENVIRÓNMENTAL 5 RAILROAD ST., P.O. Box 359 Newmarket, NH 03857 PHONE: (603) 659-4979, FAX: (603) 659-4627 E-MAIL: MJS@MJS-ENGINEERING.COM

LANDSCAPE PLAN prepared for TOOMERFS, LLC. TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM, NH

9/28/18 DATE: 1"=20' SCALE: DESIGNED BY: VM DRAWN BY: APPROVED BY: RW DWG FILE:

SEAL

2	PER REVISED SITE PLAN	01-24-19	
1.	PER REVISED SITE PLAN	12/27/18	VM
0.	INITIAL SUBMISSION TO LEE PLANNING BOARD	9/28/18	VM
NO.	REVISIONS	DATE	INT.



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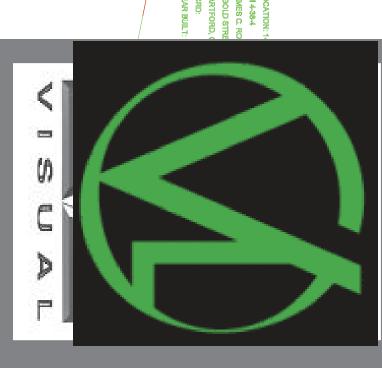
Summary

Date 1/24/2019

0.0

0.0

Site Lighting Layout



THE AREA OF UNSTABILIZED SUIL EACELD STABILIZED.

S STABILIZED.

EA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS
NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2006, ITEM
. 304.1 OR 304.2 HAVE BEEN INSTALLED;
AREAS NOT TO BE PAVED

1. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
1. NIMIMUM OF 3" OF NON—EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
1. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV—WQ
1506.03.

1506.03.

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1506.03.

1506.03.

SION CONTROL INSTALLATION:

CTURER'S SPECIFICATIONS SHALL BE FOLLOWED.

1. INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY RAIN EVENT OF (
OR GREATER UNLESS OTHERWISE NOTED.
2. TEMPORARY STABILIZATION PRACTICES SHALL BE INSPECTED ONCE PER WEEK
CONSTRUCTION UNTIL EXPOSED SURFACES ARE STABILIZED.
3. ANY SIGNS OF RILL OR GULLY EROSION SHALL BE IMMEDIATELY REPAIRED.
MAINTENANCE:
1. MAINTAIN EROSION CONTROLS PER THE TYPICAL DETAILS AND IN CONFORMANC
EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE.

IN CONFORMANCE WITH

S OTHERWISE NOTED, GRASS SEED MIXTURE 'C' SHALL BE APPLIED AT THE SPECIFIED AS NOTED IN THE 'SEED MIXTURES FOR PERMANENT VEGETATION' TABLE.

AS NOTED IN THE 'SEED MIXTURES FOR PERMANENT VEGETATION' TABLE.

SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.

G OPERATIONS SHOULD BE ON THE CONTOUR.

FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, HT DRAC

OF 0.5 INCHES

TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 85% VEGETATIVE VER HAS BEEN ESTABLISHED.

TER REMOVAL, ALL DISTURBED AREAS SHALL BE REGRADED, FERTILIZED, AND RESEEDED.

NITOR TO ENSURE VEGETATIVE GROWTH IS ESTABLISHED AND REPAIR AS NEEDED UNTIL

IMUM OF 85% VEGETATIVE COVER IS ESTABLISHED.

CONSTRUCTION SEQUENCING

AND

EROSION CONTROL

NOTE

RBED DUR 5 ACRES

CONSTRUCTION, BUT IN ANY ONE TIME BEFORE

CASE

A. SITE PREPARATION
A. SITE PREPARATION
1. REFER TO SITE
B. SEED BED PREPARA
1. REFER TO SEE
NOTES.
2. WORK LIME AN

WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.

INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.

APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10—10—10. APPLY LIMESTONE PER ACRE.

(EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.

CONTROL

DUST SHALL BE CONTROLLED ON SITE DURING CONSTRUCTIO
FOLLOWING DUST CONTROL MEASURES
MULCHING AND VEGETATIVE COVER TO REDUCE DUST.
MECHANICAL SWEEPERS AND FINE WATER SPRAYS.
COVER SURFACES WITH CRUSHED STONE OR COARSE GRAVEL

ING CONSTRUCTION

SEED

MIXTURE SELECTION BASED ON SOIL TYPE

SOIL DRAINAGE

GENERAL
STOCKPILES MUST BE LOCATED 50 FEET FROM DITCHES AND CULVERT INLETS.
PROTECTION OF STOCKPILES
PROTECT SOIL AND AGGREGATE STOCKPILES WITH TEMPORARY PERIMETER
SEDIMENT BARRIER SUCH AS SILT FENCE OR SILT SOCK.
COVER ACTIVE STOCKPILES WITH ANCHORED PROTECTIVE COVERING PRIOR
TO EXPECTED STORM EVENTS.
INACTIVE STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR
TEMPORARILY SEEDED AND MULCHED PER THE TEMPORARY VEGETATION
AND MULCHING NOTES ON THIS PAGE.
STOCKPILES THAT ARE A SOURCE OF DUST SHALL BE COVERED.

ВY BEHRENDT, TOWN

> **TYPICAL** AVED PARKING LOT

NOTE:

1. LOAM SHALL BE REMOVED TO A MINIMUM DEPTH OF
TO PLACING SELECT MATERIALS.
2. PROVIDE 1 FOOT GRAVEL SHOULDER ALONG LIMITS O
AREA.

15" PRIOR

(TYP.)

AS NECESSARY.

ANNENT MULCHING

NOOD CHIPS OR GROUND BARK

1.A. APPLY TO A THICKNESS OF 2 TO 6 INCHES. APPLICATION RATES ARE 10-20

TONS/ACRE OR 460-920 POUNDS/1,000 SF.

1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN

A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.

PROSION CONTROL MIX

2.A. SHALL BE PLACED AT A THICKNESS OF 2 INCHES OR MORE FOR MULCHING.

2.B. COMPOSITION OF THE MIX SHALL BE AS FOLLOWS.

2.B. COMPOSITION OF THE MIX SHALL BE ESTIMEEN 25-65% DRY WEIGHT BASIS.

2.B. THE ONCE SIZE BY WEIGHT SHALL BE BETWEEN 25-65% DRY WEIGHT BASIS.

2.B. THE ONCE SIZE BY WEIGHT SHALL BE BETWEEN 25-65% DRY WEIGHT BASIS.

2.B. SCREEN, AND 30-75% PASSING THE 0.25 INCH SCREEN.

2.B. STREEDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL BE CLONGATED AND FIBROUS SUCH AS FROM SHREEDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL NOT CONTAIN WOOD AND BARK CHIPS, CRUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS.

2.B.4. THE MIX SHALL NOT CONTAIN SILTS, CLAYS, OR FINE SANDS.

2.C. PLACEMENT OF BERM ALONG A LEYEL CONTOUR. BERM MUST BE A MINIMUM OF 12" HIGH ON THE UPHILL SIDE AND 2 FEET WIDE. UPSLOPE AREA MUST HAVE A SLOPE OF LESS THAN 5%.

2.D. MAINTENANCE: INSPECT PERIODICALLY AND AUGMENT AS NEEDED TO MAINTAIN INITIAL THICKNESS. REPLACE IF NO LONGER FUNCTIONING AS INTENDEED. 9" BANK RUN GRAVEL (NHDOT 304.2) (NHDOT 304. **CROSS** (6) **SECTION**

CRUSHED

Notes:

1. All material to meet Filtrexx® specifications.

2. Use Certified Filtrexx FilterMedia.

3. Compost material to be dispersed on site up slope from protected SILTSOXX DETAIL ®SiltSoxx™ Plan View

TING. :: ASTM A53

₩ STAND IN ACCORDANCE WITH MANUFACTURER'S CATIONS
SEL MEMBERS SHALL BE COATED W/ ZINC RICH THEN FINISHED W/ POLYESTER POWDER

DETAIL

E-MAIL: MJS@MJS-ENGINEERING.COM

ASTM 136 % INCH THICK PLATE WITH THREE ¾ IA. HOLES AT 120 DEGREE SPACING.

DRIVE TYPE ANCHOR BOLT MADE OF ZINC
AISI 1038 HEAT TREATED CARBON STEEL, ½
IA. BY 3 INCHES LONG.

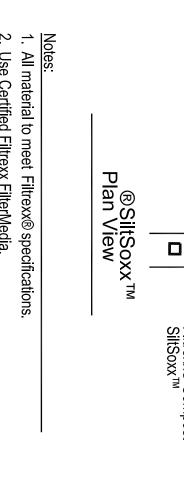
ETE STRENGTH TO BE 3,000 PSI AT 28 DAYS.

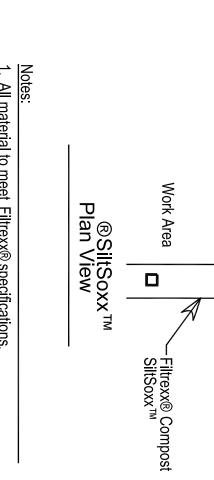
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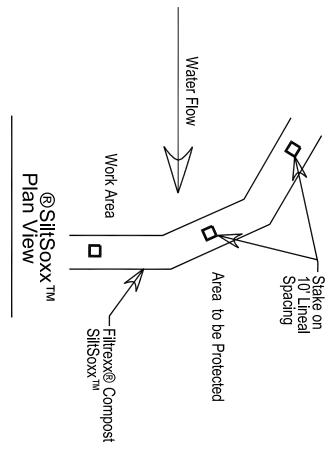
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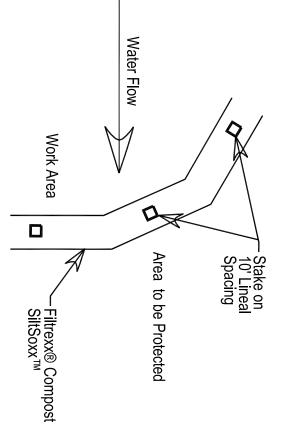
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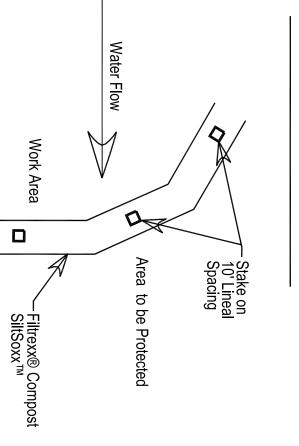


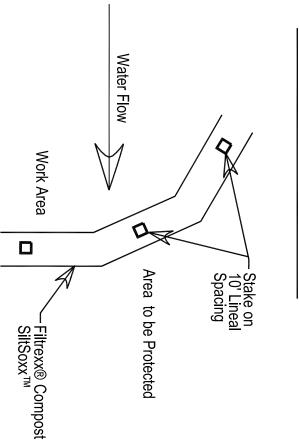




3" BITUMINOUS PAVEMENT
1" WEARING COURSE (NHDOT 1/2")
2" BINDER COURSE (NHDOT 3/4")







NOTION MATERIALS SHALL BE SELECTED BY NODITIONS, AND TIME OF YEAR; NODITIONS, AND TIME OF YEAR; YOR STRAW MULCH SHALL BE APPLIED FOR TO 70 TO 90 POUNDS TATED GROWTH COVERING AT LEAST 85 PRIOR TO OCTOBER 15TH, ONE OR SOME SHALL BE IMPLEMENTED.

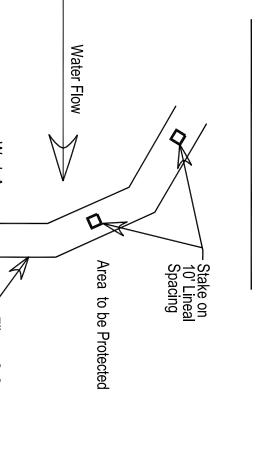
PLIED AT A RATE OF 1.5 TO 2 TONS PEINDS PER 1,000 SQUARE FEET;
85% OF THE DISTURBED AREA IS NOT OR MORE ADDITIONAL EROSION CONTROL

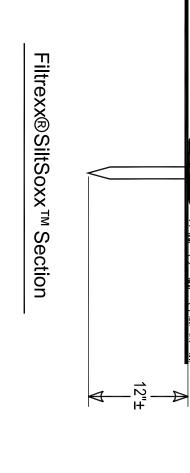
STH AND AUGUST 15TH SHALL BE COVERED WITH HAT OR LOWING CRITERIA:
SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER LOWN AWAY BY WIND OR WASHED AWAY BY FLOWING

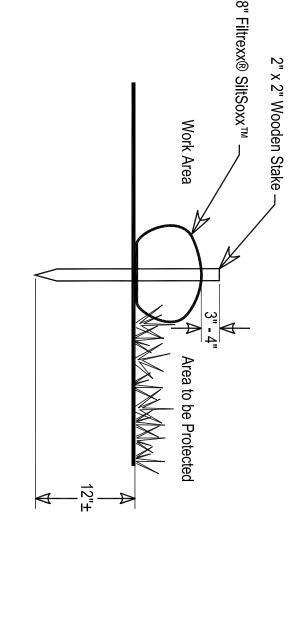
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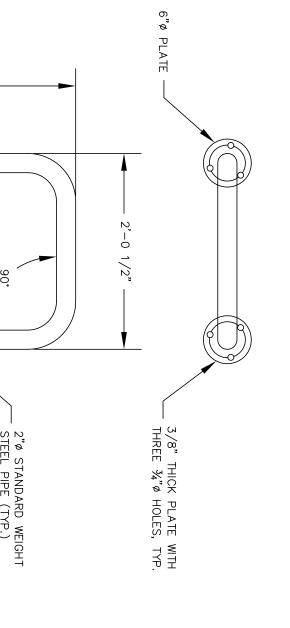
BASED UPON

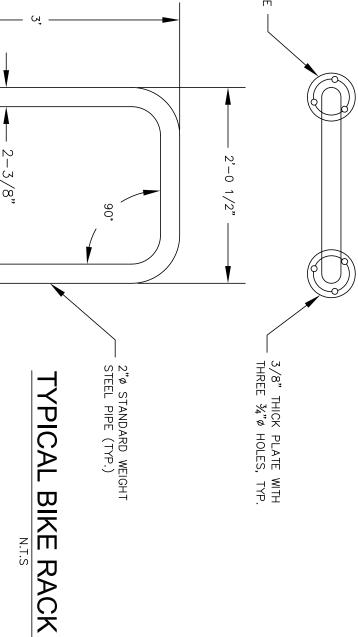






PROPOSED 12" BANK RUN GRAVEL (MINIMUM OR MATCH EXISTING DEPTH)— (NHDOT 304.2)	PROPOSED 1" WEARING COURSE (NHDOT 1/2") PROPOSED 2" BINDER COURSE (NHDOT 3/4") PROPOSED 6" CRUSHED GRAVEL (MINIMUM OR MATCH EXISTING DEPTH) (NHDOT 304.3)	
EXISTING SUBGRADE (DEPTH VARIES)	EXISTING EDGE OF PAVEMENT GRIND 1" DEEP OFF EXISTING PAVEMENT EXISTING PAVEMENT (DEPTH VARIES) TACK COAT	





ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRÓNMENTAL 5 RAILROAD ST., P.O. BOX 359 NEWMARKET, NH 03857 PHONE: (603) 659-4979, FAX: (603) 659-4627

CONSTRUCTION DETAILS prepared for TOOMERFS, LLC

DATE: 10/5/18 SCALE: AS SHOWN DESIGNED BY: EHK EHK DRAWN BY: APPROVED BY: MJS DWG FILE: 18-040 CivilM.dwg

SEAL NEW HAMP MICHAEL SIEVERT No. 8397

200			
	1.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19
1	10	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18
	NO.	REVISIONS	DATE

TYPICAL PAVEMEN SAWCU	PROPOSED 12" BANK RUN GRAVEL (MINIMUM OR MATCH EXISTING DEPTH)— (NHDOT 304.2)	PROPOSED 6" CRUSHED GRAVEL (MINIMUM OR MATCH EXISTING— DEPTH) (NHDOT 304.3)	PROPOSED 1" WEARING COURSE (NHDOT 1/2") PROPOSED 2" BINDER COURSE (NHDOT 3/4")
TYPICAL PAVEMENT CROSS SECTION & SAWCUT DETAIL SCALE: N.T.S.	EXISTING SUBGRADE (DEPTH VARIES)	TACK	EXISTING EDGE OF PAVEMENT GRIND 1" DEEP OFF EXISTING PAVEMENT 12" EXISTING PAVEMENT (DEPTH VARIES)

NTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND HE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF NEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

N VEHICLES SHALL USE MAIN ST. ENTRANCE

D

A WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.

5. SLOPES MUST BE NO STEEPER THAN 2 TO 1.

6. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.

7. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.

8. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDED WAS DISTURBED.

9. AREAS SEEDED BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:

9.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY MIND OR WASHED AWAY BY FLOWING WATER;

9.A. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;

9.B. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;

10. IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.

MAINTENANCE

1. PERMANENTLY SEEDED AREAS SHOULD BE INSPECTED MONTHLY.

MOW SEEDED AREAS AS NECESSARY.

3. BASED ON INSPECTION, AREAS SHOULD BE REPAIRED AND/OR RESEEDED TO ENSURE 85% OF THE SOIL SURFACE IS COVERED BY VEGETATION.

SUSLY WITH THE SEED. THE USE OF ENDED (UNLESS IT IS USED TO HOLD BY USING STRAW MULCH AND HOLDING IT ACRE OF WOOD FIBER MULCH.

AYDROSEEDING.

TEMBER 15TH IN THE YEAR IN WHICH THE

NOTE: POORLY DRAINED SOILS ARE NOT DESIRABLE

FOR

PLAYING

AREAS

MIXTURE

SEED MIXTURES FOR PERMANENT VEGETATION

POUNDS PER ACRE

POUNDS PER 1,000 SF

0.45 0.45 0.05 0.05 0.95 0.35 0.35

 \triangleright

AY AREAS AND ATHLETIC FIELDS. (TOPSOIESSENTIAL FOR GOOD TURF.)

WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.

GOOD EXCELLENT GOOD EXCELLENT

GOOD FAIR EXCELLENT GOOD EXCELLENT GOOD FAIR EXCELLENT EXCELLENT

STEEP CUTS AND DISPOSAL AREAS

FILLS,

AND

ITE PREPARATION

INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED AI INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED AI ENSURE RUNOFF IS DIVERTED FROM SEEDED AREA.

ON SLOPES OF 4:1 OR STEEPER, CREATE HORIZONTAL GROOVES PERFORECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

EED BED PREPARATION

REMOVE STONES AND TRASH FROM AREA TO BE SEEDED.

COMPACTED SOIL SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEIFERTILIZER, LIME, AND SEED.

APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10.

(EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A PER ACRE.

F 10-10-10.
1 OXIDE) AT A

APPLY LIMESTONE RATE OF 3 TONS

TO

YEAK.

IPORARY MULCHING

HAY OR STRAW MULCHES

1.A. ORGANIC MULCHES INCLUDING HAY AND STRAW SHALL BE AIR—UKILU,

1.B. APPLICATION RATE SHALL BE 2 BALES/1,000 SF (70–90 POUNDS) OR 1.5–2.0

TONS/ACRE TO COVER 75–90% OF THE GROUND.

1.C. ANCHORING SHALL BE ONE OF THE FOLLOWING

1.C.1. NETTING SHALL BE JUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

1.C.2. TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OR STR. MULCH. APPLY POLYMER OR ORGANIC TACKIFIER AND 80–120 LBS/ACRE FOR POLYMER MATERIAL RBOVE LIST

INCHES OR DOUBLE THE ABOVE LISTED NECESSARY, MULCH WILL NEED TO BE D IN THE SPRING.

NTINUE INSPECTIONS UNTIL 85%

MATTING DETAIL.

INSTALL PER

OR BIODEGRADABLE PLASTIC NETTING FICATIONS.
C TACKIFIER TO ANCHOR HAY OR STRAW SPECIFICATIONS. TYPICAL APPLICATION YMER MATERIAL AND 80-120 LBS/ACRE

æ

1. APPLY PRIOR TO A STORM EVENT. CLOSELY MONITOR THE WEATHER TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.

2. MULCHING WITHIN A SPECIFIED TIME PERIOD FROM ORIGINAL SOIL EXPOSURE

2.A. WITHIN 100 FEET OF WETLANDS THE TIME PERIOD SHOULD BE NO GREATER THAN 7

DAYS.

2.B. IN OTHER AREAS IT SHALL BE NO GREATER THAN 14 DAYS.

3. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, FLOW CONDITIONS, AND TIME OF YEAR.

TEMPORARY MULCHING

1. HAY OR STRAW MULCHES

1. A. ORGANIC MULCHES

C

TALL FESCUE CREEPING RED FESCUE BIRDSFOOT TREFOIL TOTAL

0.75 0.45 0.45 0.45 0.20 1.10 0.45 0.75 1.20

 ϖ

TALL FESCUE
CREEPING RED FESCUE
CROWN VETCH
OR
FLATPEA
TOTAL

D

TALL FESCUE FLATPEA TOTAL

ш

CREPPING RED FESCUE KENTUCKY BLUEGRASS TOTAL

TALL FESCUE

3.60

CATION DATE

MIXTURE

2.B.

N 5/15

RYE

30

2.B.2.

15 — SEPTEMBER 15) USE ON THE SLOPES (15% OR GREATER), ANY LAKES, STREAMS, AND WETLANDS. SEPTEMBER 15 — APRIL 15) IN E ON SIDE SLOPES OF GRASSED GREATER THAN 8%).

PERIODICALLY AND BEFORE AND AFTER SOIL UNTIL 85% VEGETATIVE COVER IS

STORM EVENTS TO ENSURE CONTACT ESTABLISHED. REPAIR AND RESTAPLE

ANNUAL RYE

40

BE STORED ON SITE DURING CONSTRUCTION.

ZUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.

FION MATERIALS THAT ARE SPILLED OR DEPOSITED ON THE PUBLIC ROADWAYS DVED BY THE CONTRACTOR.

CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN ND RECEIVED.

CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS.

OT

A. PLACE MAXIMUM 12" LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY.

B. ALL MATERIAL BASED ON PROCTOR TEST SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS LC STUMPS, BRUSH, AND ROCKS LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING PLACED.

C. BASE MATERIALS: BANK RUN AND CRUSHED GRAVEL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 9 MAXIMUM DRY DENSITY TO THE DEPTHS SPECIFIED IN THE PARKING LOTS CROSS-SECTION DETAILS.

D. STABILIZE ALL PARKING AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

E. PAVEMENT

1. PLACE S AS SOON AS POSSIBLE AFTER THE SELECT MATERIALS APF

1. PLACE AS SOON AS POSSIBLE AFTER THE SELECT MATERIALS APF

1. CONSTRUCT BIORETENTION SYSTEM AFTER UP SLOPE

1. REMOVE ALL TEMPOR

LOAM FOR RE-USE AS NEEDED.

LY STABILIZE LOAM STOCKPILES WITH:

TER RYE GRASS- PRIOR TO SEPTEMBER 15TH

CH- FROM SEPTEMBER 15TH TO MAY 1ST

ND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS. CONSTRUCT SWALES I FOREBAY AND STABILIZE. SEDIMENT FOREBAY SHALL BE USED AS A SEDIMENT TRAP WITH SPILLWAY BE UNDISTURBED AREA DOWNSLOPE.

HALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.

HALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.

AREAS ARE STABILIZED. UNSTABILIZED AREAS THAT DRAIN TO THE BIORETENTION SYSTEM WILL DECREASE ION CAPACITY OF THE UNDERLYING SOILS.

CONSTRUCTION

CONSTRUCTION

AND STATE REGULATIONS

ION.

ND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS.

NT AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.

NT AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.

IT CAN BE WORKED AND STABILIZED WITHIN 45 DAYS OF REMOVAL.

IT CAN BE WORKED AND STABILIZED WITHIN 45 DAYS OF REMOVAL.

ICT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RECORD TO INVASIVE SPECIES.

IDISTURBANCE DEPICTED ON THESE PLANS IS 13,600 S.F.

TO VEGETATION AND EROSION CONTROL NOTES ON THIS PLAN DURING CONSTRUCTION. CONSTRUCTION MEETING WITH CITY OFFICIALS, OWNER, AND CONTRACTORS IF FROVAL PRIOR TO BEGINNING CONSTRUCTION.

INDIVIDUAL UTILITIES, AND CITY DEPARTMENTS TO GET ALL UTILITIES MARKED

TO START OF

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

EXISTING BUILDING

CO

VARIES 2' TO 6" MIN. COMPACT 6" LIFTS MAX.

FINISHED GRADE AT CENTER OF TRENCH SHALL BE MOUNDED TO 6"

" COMPACTED — OAM & SEEDED

COVERED

BIKE

RACK

3/4" CRUSHED STONE BEDDING FROM A MIN. 6" BELOW PIPE -TO SPRING LINE UNDIST

S

TANDARD DRAINAGE PIPE

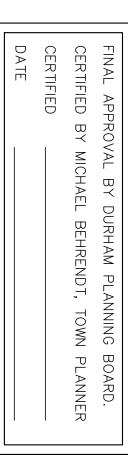
TRENCH

DRAINAGE PIPE . (SEE PLAN FOR LOCATION & SIZES)

OR D+2'
(WHICHEVER IS GREATER)

MIN. 12" OF 3/4" CRUSHED STONE BEDDING WHERE LEDGE ENCOUNTERED

BIKE RACK (SEE DETAIL)



TER MEDIA OPTION

SEDIMENT FOREBAY TYPICAL CROSS SECTION DETAIL

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. THE SEDIMENT FOREBAY SHALL BE MOWED WITH THE REST OF THE SITES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY VEGETATION.

4 INSTALL STAFF GAGE TO MEASURE SEDIMENT ACCUMULATION. SEDIMENT SHALL BE REMOVED AFTER SEDIMENT ACCUMULATES TO A DEPTH OF 1 FOOT.

INSTALL STAFF GAGE TO MEASURE SEDIMENT ACCUMULATION (WOOD STAKE WITH MARKINGS IN 6" INCREMENTS)

NORTH AMERICAN GREEN SC150BN TURF REINFORCEMENT MATTING

VARIES

2' MIN.

20 TO 30

200

10 20 60 200

85 TO 100 70 TO 100 15 TO 40 8 TO 15

ALL PIPE TO PIPE CONNECTIONS SHALL BE WATER-TIGHT. ALL DISTURBED AREAS NOT OTHERWISE LANDSCAPED SHALL RECEIVE FOUR INCHES OF LOAM AND SEED. APPROVAL BY DURHAM PLANNING BOARD.

LL DISTURBED AREAS NOT OTHERWISE LANDSCAPED SHALL

<u>SIEVE SIZE:</u> #4 #40 #100 #200	MODIFIED PROCIOR DENSITY. ORGANIC MATTER OR FROZEN THAN 2/3 OF THE MAXIMUM AROUND ANY STRUCTURES A EXCEED 3 INCHES. EMBANKM FOLLOWING GRADATION:	THE FOUNDATION AREA SHELL. ALL UNSUITABLE MAREMOVED AND REPLACED AND REPLACED. THE BERM SHALL BE CONSELL OF THE BERM SHALL BE CONSELL OF THE BERM STATE TO SELL OF THE BERM S
% PASSING: 80-90 50-80 30-45 15-30	MODIFIED PROCIOR DENSITY. EMBANKMENT SOIL SHALL HAVE NO ORGANIC MATTER OR FROZEN MATERIAL AND NO STONES LARGER THAN 2/3 OF THE MAXIMUM LOOSE LIFT THICKNESS. STONES AROUND ANY STRUCTURES AND/OR CONDUITS SHALL NOT EXCEED 3 INCHES. EMBANKMENT FILL MATERIAL SHALL HAVE THE FOLLOWING GRADATION:	
	BIORE	PLANI 1. TH SII CC EN

ASTM C-33 CONCRETE SAND		COMPONENT MATERIAL		
NCRETE SAND		MATERIAL		BIORETENTIO
50 TO 55	FILTER MEDIA OPTION A	PERCENT OF MIXTURE BY VOLUME		BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS
	Α	SIEVE NO.	GRAD/	SPECIFICA
		% BY WEIGHT PASSING STANDARD SIEVE	GRADATION OF MATERIAL	TIONS

	COMPONENT MATERIAL		BIORETENTIO	
FILTER MEDIA OPTION A	PERCENT OF MIXTURE BY VOLUME		BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS	
A	SIEVE NO.	GRADA	SPECIFICA	
	% BY WEIGHT PASSING STANDARD SIEVE	GRADATION OF MATERIAL	TIONS	

< 5	200	20 TO 30	MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED
15 TO 25	200	20 TO 30	LOAMY SAND TOPSOIL, WITH FINES AS INDICATED
		50 TO 55	ASTM C-33 CONCRETE SAND
	Α	FILTER MEDIA OPTION A	
% BY WEIGHT PASSING STANDARD SIEVE	SIEVE NO.	PERCENT OF MIXTURE BY VOLUME	COMPONENT MATERIAL
GRADATION OF MATERIAL	GRADA		
TIONS	SPECIFICA	BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS	BIORETENTIC

COMPONENT MATERIAL BY VOLUME SIEVE NO. STANDARD SIEVE

MEET THE FOLLOWING REQUIREMENT	BIORETENTION SYSTEM FILTER SOIL MIX SHALL MEET THE FOLLOWING REQUIREMENTS FILTER MEDIA OPTION A OR OPTION B. BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS

OMPONENT MATERIAL		BIORETENTION	TER MEDIA OPTION A OR OPTION B.
PERCENT OF MIXTURE BY VOLUME		BIORETENTION SYSTEM SOIL MIX SPECIFICATIONS	OPTION B.
SIEVE NO.	GRADA	SPECIFICA	
% BY WEIGHT PASSIN	GRADATION OF MATERIAL	TIONS	

	TENTION SYSTEM FILTER SOIL MIX MEDIA OPTION A OR OPTION B.	TION SYSTEM GENERAL NOTES:
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į	A FIL	NER
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)	SOIL	OTES
1	B.	ļ.,
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	MEET	
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	TENTION SYSTEM FILTER SOIL MIX SHALL MEET THE FOLLOWING REQUIREMENT MEDIA OPTION A OR OPTION B.	
)	REQUIR	
	EME	

BIORFTENTION SYSTEM SOIL MIX SPECIFICATIONS	<u>ITION SYSTEM GENERAL NOTES:</u> ETENTION SYSTEM FILTER SOIL MIX SHALL MEET THE FOLLOWING REQUIRI R MEDIA OPTION A OR OPTION B.
<u>ح</u>	SHAL
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FCIFICATIO	FOLLOWING
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20 WEST AMHERST STREET

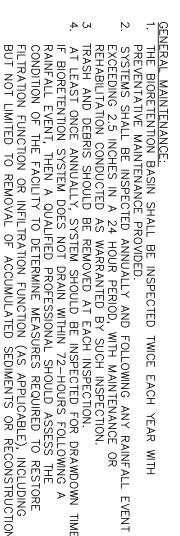
ENGLAND CONSERVATION/WILDLIFE MIX AT 1,500 SF/LB AVAILABLE FROM:
CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES AND NEW
SIDE SLOPES SHALL BE PLANTED WITH A 50:50 MIX OF NEW ENGLAND EROSION
1. THE BIORETENTION BASIN AND SEDIMENT FOREBAY BERM, BOTTOM AND INTERIOR
PLANTING REQUIREMENTS
OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD
5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN
OF THE FILTER MEDIA.
BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION
TELLY TOW TOWOUT ON THE FELLY TOW TOW (AG STREET), INCEDENCE

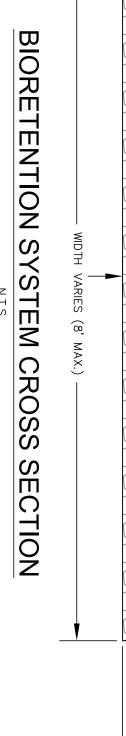
REFER TO SPILLWAY DETAIL

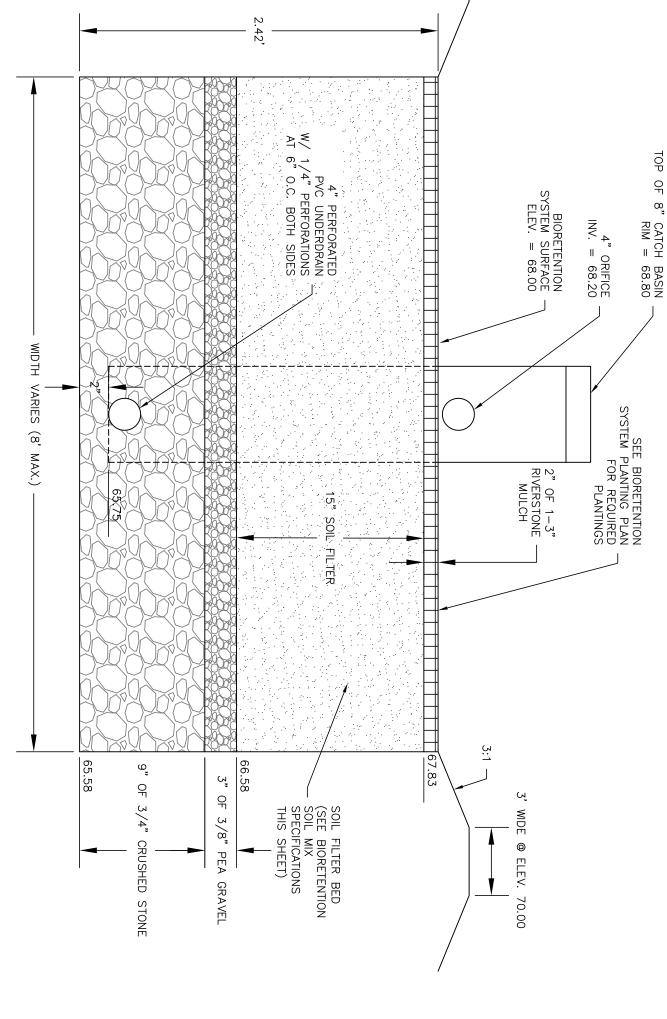
CLEAR AND GRUB THE AREA WHERE THE BIORETENTION SYSTEM IS TO BE LOCATED. STOCKPILE LOAM FOR REUSE LATER.

TO PREVENT DEGRADATION OF INFILTRATION FUNCTION: DO NOT DISCHARGE SEDIMENT—LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION SYSTEM DURING ANY STAGE OF CONSTRUCTION. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

DO NOT PLACE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.





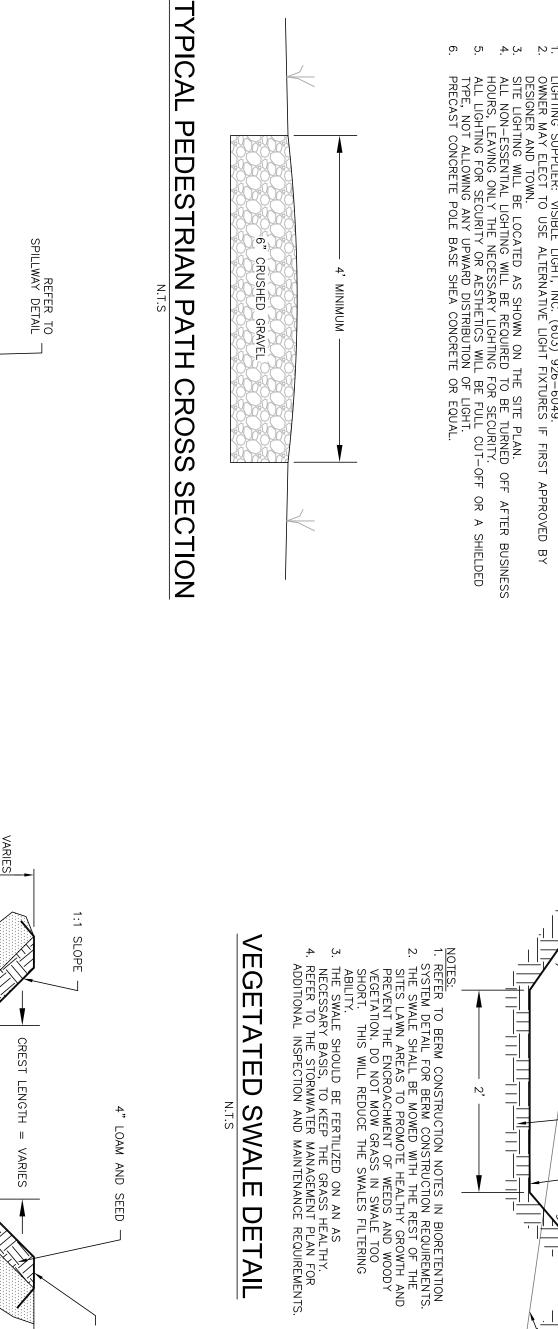


DSXW1 LED WALL MOUNTED LIGHT FIXTURE

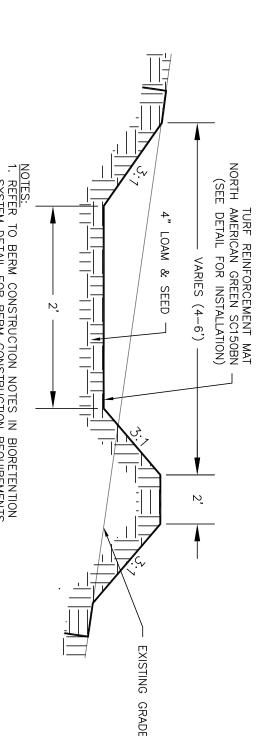




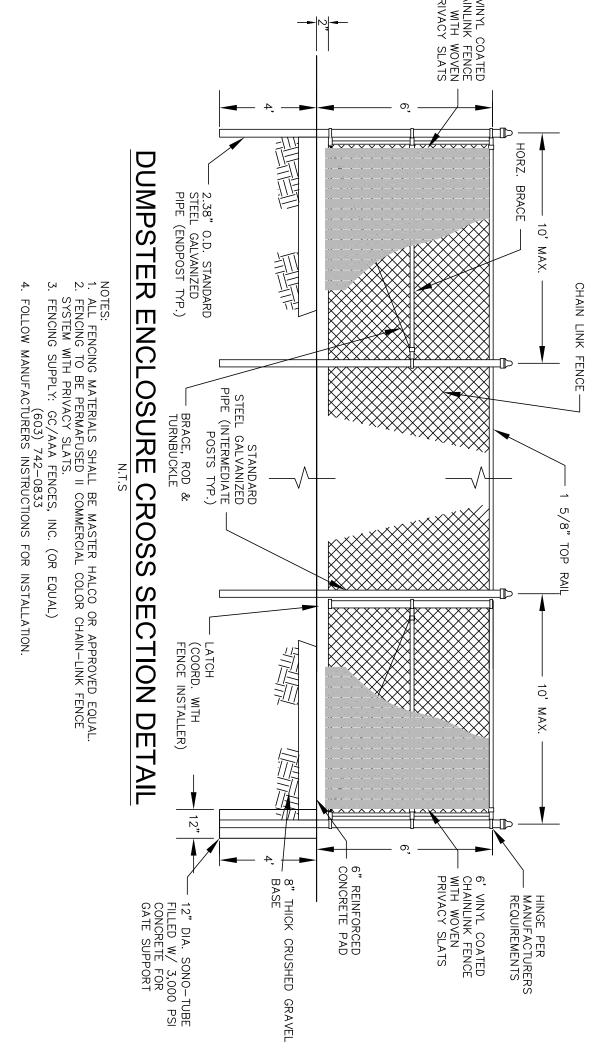




CRUSHED



. VISIBLE LIGHT, INC. (603) 926—6049. O USE ALTERNATIVE LIGHT FIXTURES IF FIRST APPROVED BY



NOT TO SCALE	THICK SYSIEM STILLWAY CACSS SECTO
	VAY CROSS SECTION

width*	TENGIH*	MENSIONS AND SPECIFICATIONS SHOWN. CREST ELEV. BERM ELEV. LENGTH* WIDTH* 69.15 70.00 6' 9'	CREST ELEV.	SPILLWAY TO BE CONSTRUCTED TO THE DIMENSIONS AND SPECIFICATIONS SHOWN SPILLWAY #1 - SEDIMENT FOREBAY 69.15 70.00 6'
				NOT TO SCALE

CREST LENGTH = VARIES INLET ELEVEVATION EXISTING SOIL	NOTES: CREST BREADTH IS WIDTH OF BERM AT SPILLWAY.	ENTION SYSTEM SPILLWAY CROSS SECTION	NOT TO SCALE NOTE: SPILLWAY TO BE CONSTRUCTED TO THE DIMENSIONS AND SPECIFICATIONS SHOWN.	ILLWAY DIMENSION TABLE	VAY #1 — SEDIMENT FOREBAY CREST ELEV. BERM ELEV. LENGTH* WIDTH*	WAY #2 - BIORETENTION SYSTEM 69.60 70.00 5' 11'
---	--	--------------------------------------	--	------------------------	---	---

MS	ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL
	5 RAILROAD ST., P.O. BOX 359 NEWMARKET, NH 03857 PHONE: (603) 659-4627

JOB:

18-

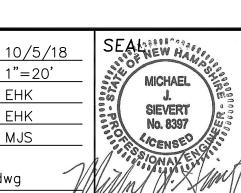
040

CONSTRUCTION	DETAILS
prepared fo	r
TOOMERFS,	LLC

CONSTRUCTION DETAILS	SCALE:	1 = 2
prepared for	DESIGNED BY:	EHK
· ·	DRAWN BY:	EHK
TOOMERFS, LLC	APPROVED BY:	MJS
TAX MAP 4, LOTS 38-5 AND 55	DWG FILE:	
18 MAIN ST AND 12 COWELL DR. DURHAM, NH	18-040 CivilM.c	dwg

DATE:

1"=20'



DESIGN REVISIONS PER PUBLIC HEARING ON 1/9/19	2/5/19	EHK
DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK
REVISIONS	DATE	INT.
	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING INITIAL SUBMISSION TO DURHAM PLANNING BOARD	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING INITIAL SUBMISSION TO DURHAM PLANNING BOARD 1/3/19 10/5/18

EXPANSION RESTRAINT

CATCHBASIN

SILTSACK® SPECIFICATIONS

egthinspace =
egt

GEOSYNTHETIC INLET PROTECTION

CATCH BASIN FRAME HOLDS SILT SACK IN PLACE

CATCHBASIN - GRATE

CONFORM TO THE LATEST FIC CONTROL DEVICES", THE AND PAVEMENT MARKINGS", AND IREMENTS.
GONAL LINES SPACED N, INCLUDING PARKING SPACES,
ALL TRAFFIC PAINT SHALL MEET
DEPARTMENT OF TRANSPORTATION
AN ISLANDS AND CENTERLINES TO
NT

SPILLWAYS TO BE LINED WITH NORTH AMERICAN ON CONTROL BLANKET OR APPROVED EQUAL.

JOB:

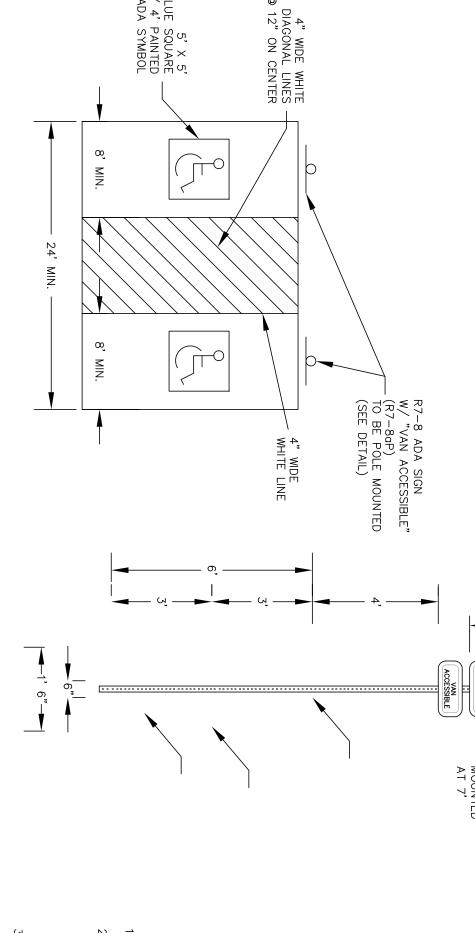
18-040

NFORCEMENT MATTING DETAIL

HE RECPS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS IN THE STAPLE PATTERN GUIDE. JES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5-12.5CM) OVERLAP DEPENDING ON THE RECPS TYPE. UTIVE RECPS SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3"(7.5CM) OVERLAP. THROUGH OVERLAPPED AREA, APPROXIMATELY 12"(30CM) APART ACROSS ENTIRE RECPS WIDTH. TYPICAL TURF RE

ADA STRIPING AND SIGN DETAIL

TYP.



FLOW

(TYP.)

(TYP.)

MAINTENANCE NOTES:

1. TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.

2. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.

3. WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED.

4. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM

4' SOLID WOOD FENCE

= THE DISTANCE SUCH THAT POINTS A AND ARE OF EQUAL ELEVATION.

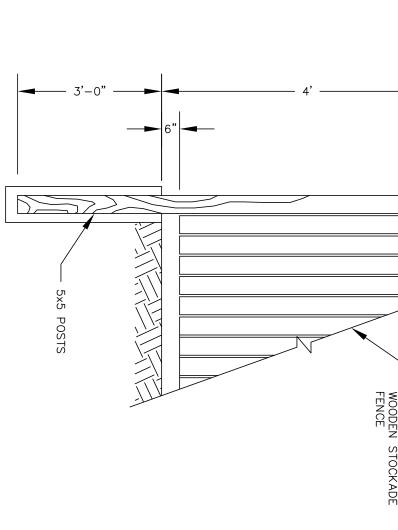
CONSTRUCTION SPECIFICATIONS:

1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.

2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.

5. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

PROFILE VIEW



CATCH

GRAB TENSILE STRENGTH
GRAB TENSILE ELONGATION
PUNCTURE
MULLEN BURST
TRAPEZOID TEAR
UV RESISTANCE
APPARENT OPENING SIZE
FLOW RATE
PERMITTIVITY

ASTM D-4632 ASTM D-4632 ASTM D-4833 ASTM D-3786 ASTM D-4533 ASTM D-4535 ASTM D-4751 ASTM D-4491 ASTM D-4491

300 LBS 20 % 120 LBS 800 PSI 120 LBS 80 % 40 US SIEVE 40 GAL/MIN/SQ FT 0.55 SEC -1

REGULAR FLOW SILTSACK ® (FOR AREAS OF LOW TO MODERATE PRECIP

TEST METHOD

BASIN GEOSYNTHETIC SEDIMENT TRAP

. FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF .25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN EDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF ONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE ILTER TRAP TO MITIGATE PONDING.

1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE 'REGULAR FLOW SILTSACK @' OR APPROVED EQUAL. SPECIFICATIONS FOR SILTSACK @ DETAILED.

- TYPICAL 4' TALL WOODEN STOCKADE FENCE

STABILIZED CONSTRUCTION ENIRANCE NUILLE.

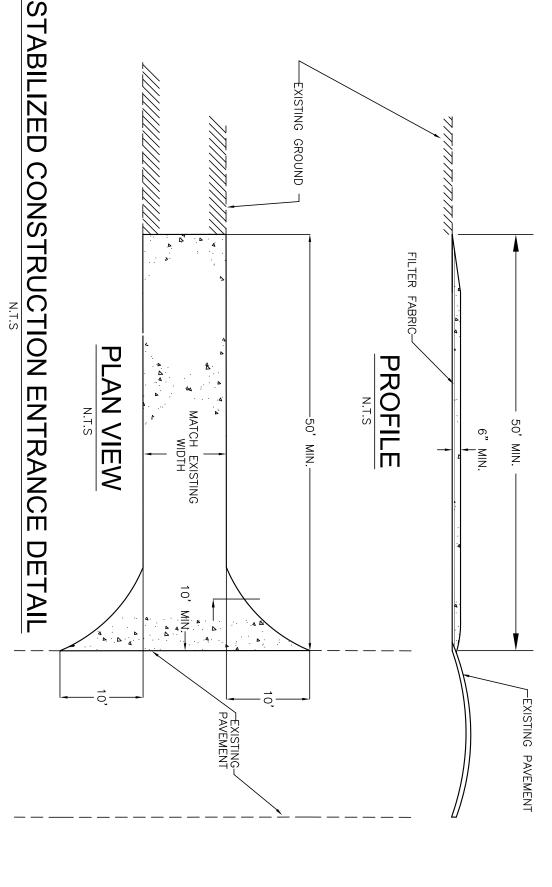
1. GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY.

1. GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY.

PLACE FILTER FABRIC (MIRAFI 140N OR EQUAL) AND PLACE 6"

OF 3" STONE TO MATCH SLOPE OF EXISTING ROAD.

2. PROVIDE NECESSARY SWALES OR DIVERSIONS TO MINIMIZE DIRECT FLOW OF WATER ONTO STONE AREA.



	VALL VOUNTED VT 7'	_ M.U.T.C.D. R7-8a		
		JD /	ac.	
3A			2"-5"	SLOPE INSTALLATION
			2	

CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR

NOTE: * HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE. ** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE

PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

NOTE: WHEN USING CELL—O—SEED DO NOT SEED PREPARED ARRA. CELL—O—SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP—SLOPE PORTION OF THE TRENCH. AND COMPACT HE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT HE RECP'S OVER COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) APART IN THE RECP'S.

ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) PORTION OF ACROSS THE WIDTH OF THE RECP'S.

ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE SIDE AGAINST THE SOIL SURFACE ALL RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE SIDE AGAINST THE SOIL SURFACE ALL RECP'S MUST BE ACCOMPACTED SOIL AND OVER SOIL AND FOUND IN THE STAPLE PATTERN GUIDE.

PLACE CONSECUTIVE RECP'S AND OVER END (STAPLES/STAKES SHOWN IN THE STAPLE PATTERN GUIDE.

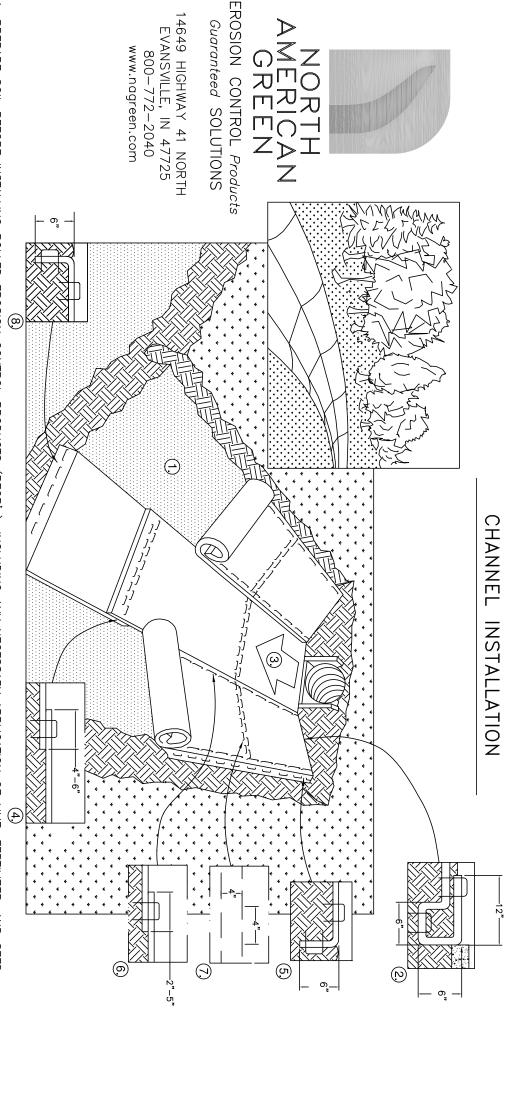
PLACE CONSECUTIVE RECP'S AND OVER END (SHINGLE STATLE) WITH A 4" — 6" (10 CM — 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) APART AND 4" — 6" (10 CM — 15 CM) OVERLAP.

BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" — 5" (5 CM — 12.5 CM) (DEPENDING ON RECP'S TYPE) AND STAPLED.

IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M — 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED A" (15 CM) DEEP X 6" (15 CM) DEEP X 6" (15 CM) D

2.



EROSION

CIVIL	STRUCTURAL • ENVIRONMENTAL 5 RAILROAD ST., P.O. BOX 359 NEWMARKET, NH 03857 (603) 659-4979, FAX: (603) 659-4627

RE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, ZER, AND SEED.

AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP—SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES (IMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED COMPACTED SOIL AND FOLD THE REMAINING 12"(30CM) PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12"(30CM) APART ACROSS THE WIDTH OF CPS.

CONSTRUCTION DETAILS prepared for

	10	OMERF	S, LLC		
18		4, LOTS 12 COWI		ND 55 DURHAM,	NH

DATE: SCALE:	10/5/1 1"=20'	8	SEA	MICHAEL	1000 1000
DESIGNED BY:	EHK		525	J.	Real
DRAWN BY:	EHK		P	SIEVERT No. 8397	6600
APPROVED BY:	MJS		-0/	CENSED!	430
DWG FILE:		1	1/0000	SIONALE	7.
18-040 CivilM.d	dwg	-11	Mn	11/2/2	//W/

2.	REVISION OF FENCE DETAIL	2/5/19	EHK
1.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
9	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK
10.	REVISIONS	DATE	INT.
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