

CLIENT
 TURBOCAM INTERNATIONAL
 607 CALEF HIGHWAY
 BARRINGTON, NH 03825

OWNER
 RRB5, LLC
 607 CALEF HIGHWAY, SUITE 200
 BARRINGTON, NH 03825

CIVIL ENGINEER
 EMANUEL ENGINEERING, INC.
 118 PORTSMOUTH AVENUE, SUITE A202
 STRATHAM, NH 03885

LAND SURVEYOR & WETLANDS SCIENTIST
 JONES & BEACH ENGINEERS, INC.
 85 PORTSMOUTH AVENUE
 STRATHAM, NH 03885

SOIL SCIENTIST
 GOVE ENVIRONMENTAL SERVICES, INC.
 8 CONTINENTAL DRIVE, BUILDING 2, UNIT H
 EXETER, NH 03833

STORMWATER CONSULTANT
 WATERSTONE ENGINEERING, PLLC
 9 GRETA'S WAY
 STRATHAM, NH 03885

SITE PLAN FOR TURBOCAM INTERNATIONAL

BARRINGTON TAX MAP 233 LOT 77

ROUTE 9 / REDEMPTION ROAD

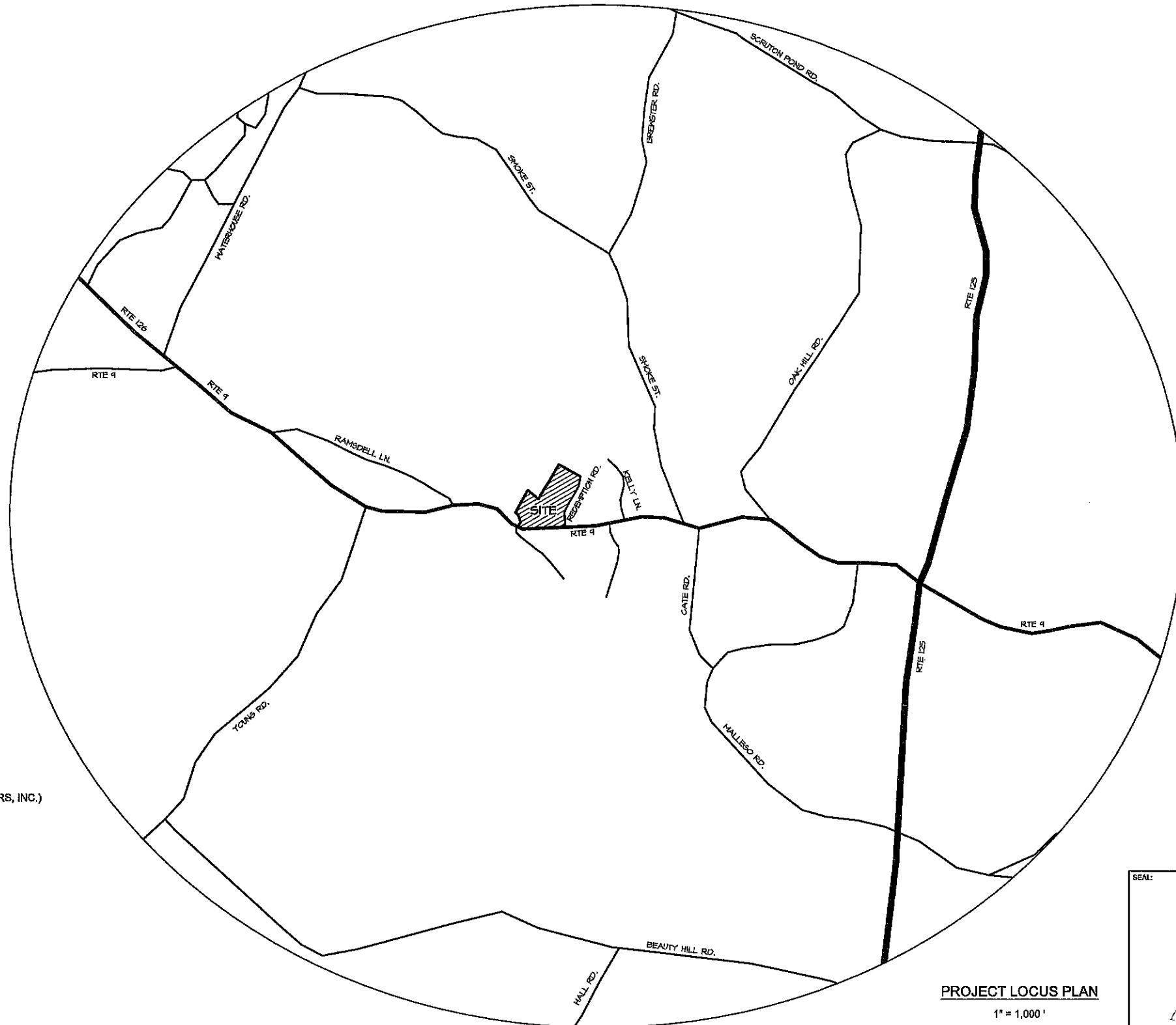
BARRINGTON, NH 03825

REQUIRED PERMITS/APPROVALS:

- NHDES ALTERATION OF TERRAIN PERMIT (PENDING)
- NHDES SUBSURFACE CONSTRUCTION PERMIT
- NHDES PUBLIC WATER SYSTEMS
- NHDOT DRIVEWAY PERMIT # 06-027-501 DATED JANUARY 8, 2013
- EPA NPDES GENERAL CONSTRUCTION PERMIT (FILED JANUARY 24, 2020)
- BARRINGTON CONDITIONAL USE PERMIT (APPROVED NOVEMBER 5, 2019)
- BARRINGTON SPECIAL PERMIT FOR CONSTRUCTION IN WETLAND BUFFER (APPROVED NOVEMBER 5, 2019)

WAIVERS GRANTED BY THE TOWN OF BARRINGTON PLANNING BOARD ON FEBRUARY 18, 2020:

1. SITE PLAN REVIEW REGULATION 4.7.7(1) - PIPE DIAMETER
2. SITE PLAN REVIEW REGULATION 4.7.7(2) - STORMWATER VELOCITY
3. SITE PLAN REVIEW REGULATION 4.7.7(3) - DEPTH OF PIPE COVER
4. SITE PLAN REVIEW REGULATION 4.7.7(4) - PIPE BEDDING AND BACKFILL



PLANNING BOARD
 BARRINGTON, NH
APPROVED
 File Number 233-77, 234-124.4
 Date 3/17/2020
 Chairman J-77

7	FEB 25, 2020	FOR APPROVAL	
6	JAN 27, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
ISS. DATE:	DESCRIPTION OF ISSUE:		CHK.
DRAWN: JJM	DESIGN: JJM		
CHECKED: BDS	CHECKED: BDS		

EMANUEL ENGINEERING
 civil & structural consultants, land planners
 118 PORTSMOUTH AVENUE, A202
 STRATHAM, NH 03885
 P: 603-772-4100 F: 603-772-4487
 WWW.EMANUELENGINEERING.COM

CLIENT:
 TURBOCAM INTERNATIONAL
 607 CALEF HIGHWAY
 BARRINGTON, NH 03825

SEAL:

 Bruce D. Scamman
 2/25/20

TITLE:
 COVER SHEET
 FOR
 TAX MAP 233 LOT 77
 RRB5, LLC &
 TURBOCAM INTERNATIONAL
 ROUTE 9 / REDEMPTION ROAD (SITE)
 BARRINGTON, NH 03825

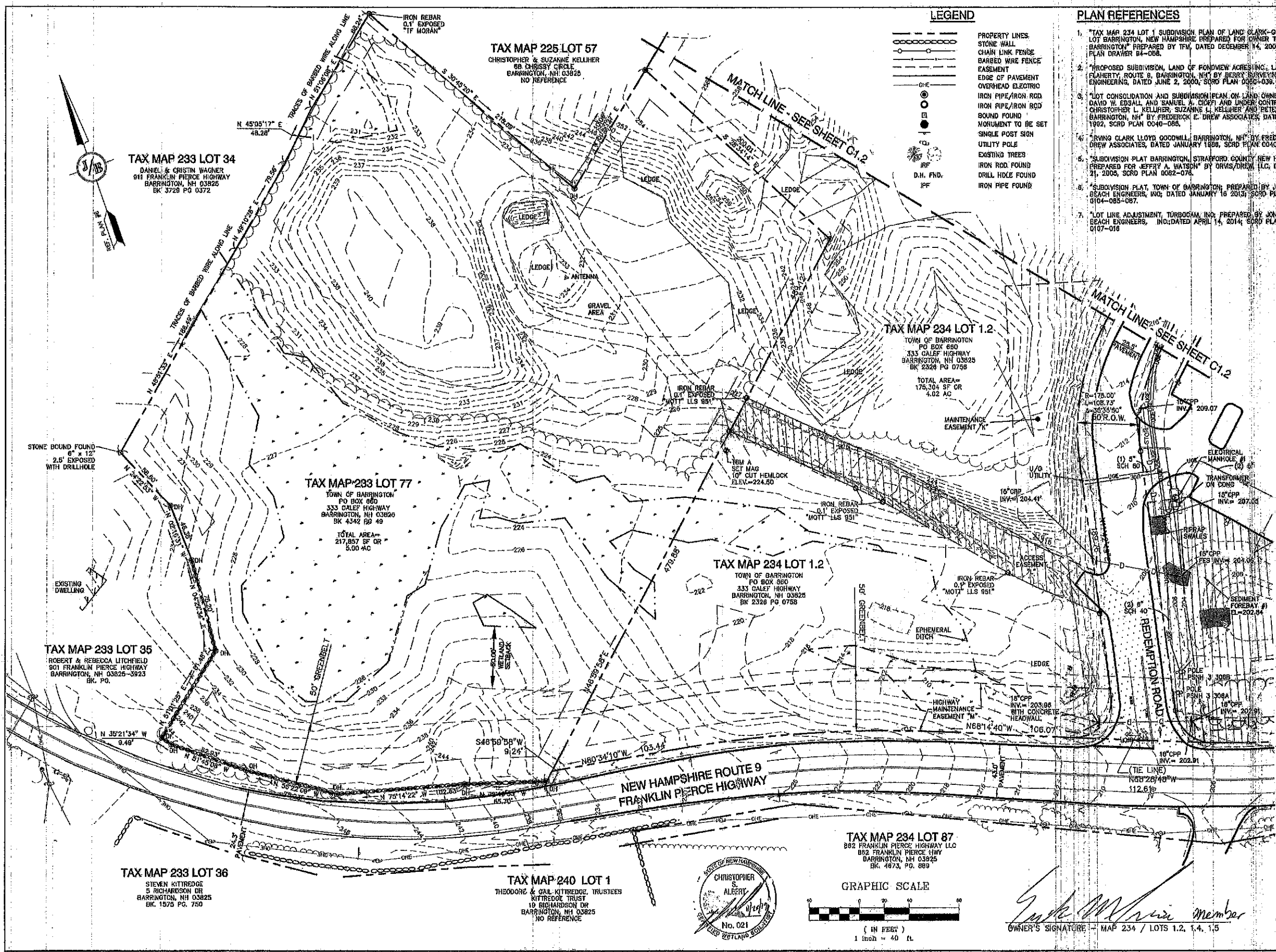
PROJECT:	SCALE:	SHEET:
19-020	AS SHOWN	COVER

PROJECT DRAWING SET:

- COVER SHEET
- C1.1 & C1.2 EXISTING CONDITIONS PLAN (BY JONES & BEACH ENGINEERS, INC.) (C1.1 INCLUDES REFERENCE PLANS)
- C2 SITE SPECIFIC SOILS & TOPOGRAPHY PLAN
- C3 SITE PLAN
- C4 GRADING & DRAINAGE PLAN
- C5 UTILITIES PLAN
- C6 PAVING PLAN
- C7 TURNING TEMPLATE (WB-65 ENTERING SITE)
- C8 TURNING TEMPLATE (WB-65 EXITING SITE)
- SD1 SUBSURFACE DISPOSAL SYSTEM
- D1 NOTES
- D2- D5 DETAILS
- D6 & D7 PRETX DETAILS

PROJECT LOCUS PLAN

1" = 1,000'

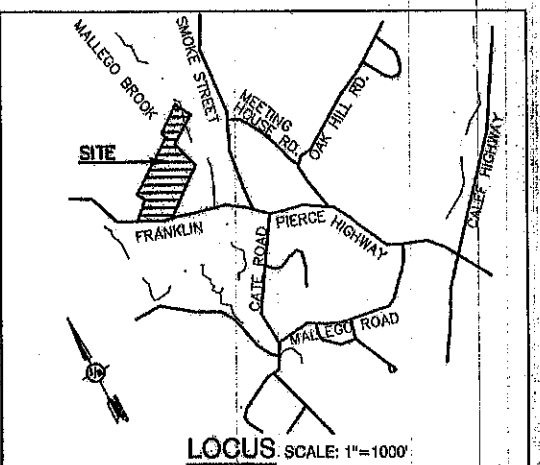


LEGEND

- PROPERTY LINES
- STONE WALL
- CHAIN LINK FENCE
- BARBED WIRE FENCE
- EASEMENT
- EDGE OF PAVEMENT
- OVERHEAD ELECTRIC
- IRON PIPE/IRON ROD
- IRON PIPE/IRON ROD FOUND
- MONUMENT TO BE SET
- SINGLE POST SIGN
- UTILITY POLE
- EXISTING TREES
- IRON ROD FOUND
- DRILL HOLE FOUND
- IRON PIPE FOUND

PLAN REFERENCES

1. TAX MAP 234 LOT 1 SUBDIVISION PLAN OF LAND CLARK-GOODWILL LOT BARRINGTON, NEW HAMPSHIRE PREPARED FOR OWNER TOWN OF BARRINGTON BY IFW, DATED DECEMBER 14, 2007, SCD PLAN DRAWER 84-068.
2. PROPOSED SUBDIVISION, LAND OF PONDWEV ACRES, INC., LAURETTE PLAZA, ROUTE 8, BARRINGTON, NH BY BERRY SURVEYING & ENGINEERING, DATED JUNE 2, 2000, SCD PLAN 0080-036.
3. LOT CONSOLIDATION AND SUBDIVISION PLAN ON LAND OWNED BY DAVID W. EDGALL AND SARIEL A. COFFY AND UNDER CONTRACT TO CHRISTOPHER L. KELLNER, SUZANNE L. KELLNER AND PETER DEJAS BARRINGTON, NH BY FREDERICK E. DREW ASSOCIATES, DATED FEB. 1992, SCD PLAN 0040-088.
4. RINGO CLARK LLOYD GOODWILL, BARRINGTON, NH BY FREDERICK E. DREW ASSOCIATES, DATED JANUARY 1988, SCD PLAN 0040-084.
5. SUBDIVISION PLAT BARRINGTON, STRAFFORD COUNTY NEW HAMPSHIRE PREPARED FOR JEFFREY A. WATSON BY ORVIS/DREW, L.C., DATED JULY 31, 2005, SCD PLAN 0082-078.
6. SUBDIVISION PLAT, TOWN OF BARRINGTON, PREPARED BY JONES & BEACH ENGINEERS, INC.; DATED JANUARY 16 2013; SCD PLAN 0104-085-087.
7. LOT LINE ADJUSTMENT, TURBOCAM, INC. PREPARED BY JONES & BEACH ENGINEERS, INC.; DATED APRIL 14, 2014; SCD PLAN 0107-018.



NOTES:

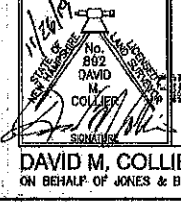
1. THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF LOT 77 AS SHOWN ON TAX MAP 233 AND LOTS 1.2, 1.4 AND 1.5 AS SHOWN ON TAX MAP 234.
2. ZONING DISTRICT: VILLAGE DISTRICT W/ STRATIFIED DRIFT AQUIFER OVERLAY
LOT AREA MINIMUM = 30,000 SF
LOT FRONTAGE MINIMUM = 75'
BUILDING SETBACKS (MINIMUM):
FRONT SETBACK = 20'
SIDE SETBACK = 15'
REAR SETBACK = 15'
WETLAND BUFFER = 50'
3. HORIZONTAL DATUM IS MAGNETIC. VERTICAL DATUM IS NAVD 83.
4. RESEARCH WAS PERFORMED AT THE TOWN OF BARRINGTON ASSESSORS OFFICE, THE STRAFFORD COUNTY REGISTRY OF DEEDS AND NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
5. THE TAX MAP AND LOT NUMBERS ARE BASED ON THE TOWN OF BARRINGTON TAX RECORDS AND ARE SUBJECT TO CHANGE.
6. ALL BOOK AND PAGE NUMBERS REFER TO THE STRAFFORD COUNTY REGISTRY OF DEEDS.
7. CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT.
8. THIS SURVEY IS NOT A CERTIFICATION TO OWNERSHIP OR TITLE OF LANDS SHOWN. OWNERSHIP AND ENCUMBRANCES ARE MATTERS OF TITLE EXAMINATION NOT OF A BOUNDARY SURVEY. THE INTENT OF THIS PLAT IS TO RETRACE THE BOUNDARY LINES OF DEEDS REFERENCED HEREON.
9. OWNERSHIP OF ADJOINING PROPERTIES IS ACCORDING TO ASSESSOR'S RECORDS. THIS PLAT MAY OR MAY NOT INDICATE ALL ENCUMBRANCES EXPRESSED, IMPLIED OR PRESUMPTIVE. ANY USE OF THIS PLAT AND OF ACCOMPANYING DESCRIPTIONS SHOULD BE DONE WITH LEGAL COUNSEL, TO BE CERTAIN THAT TITLES ARE CLEAR, THAT INFORMATION IS CURRENT, AND THAT ANY NECESSARY CERTIFICATES ARE IN PLACE FOR A PARTICULAR CONVEYANCE, OR OTHER USES.
10. THE SURVEY LINES SHOWN ON THIS PLAT ARE NOT BOUNDARY LINES. THEY ONLY SHOULD BE USED TO LOCATE THE PARCEL SURVEYED FROM THE FOUND MONUMENTS SHOWN AND LOCATED BY SURVEY.
11. LOCATION, DEPTH, SIZE, TYPE, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR UNDERGROUND STORAGE TANKS WAS NOT VERIFIED BY THIS SURVEY.
12. ALL SURFACE EVIDENCE OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN (CG, SMH, ELEC. RAN, ETC.) WERE LOCATED BY THIS SURVEY. UNDERGROUND PORTIONS OF FACILITIES & UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.
13. ORIGINAL FIELD SURVEY PERFORMED WITH A TOPCON GPT-260 AND HAS A CONTROL TRAVERSE ERROR OF 1:48,123.
14. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY CHRISTOPHER S. ALBERT OF JONES AND BEACH ENGINEERS, INC. DURING SPRING 2019 IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
A. THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
B. THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
C. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS AS APPROPRIATE.
D. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.

CERTIFICATION:

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

I CERTIFY THAT THIS SURVEY PLAT IS NOT A BOUNDARY SURVEY. THE BOUNDARY LINES OF SURVEYED AREAS AND WAYS SHOWN ARE THOSE OF RECORDS AND TITLES OF RECORDS ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.



APPROVED
Drawing Number **233-77, 234-1.2+1.4**
Date **11/26/19**
DATE: **3/17/2020**
OWNER'S SIGNATURE: *David M. Collier*
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

Design: BWG | Draft: CWV | Date: 04/04/19
Checked: DMC | Scale: AS NOTED | Project No.: 19036
Drawing Name: 19036-EXISTING CONDITIONS.dwg
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
2	11/26/19	REVISED PER REVIEW COMMENTS	MJS
1	11/6/19	REVISED PER REVIEW COMMENTS	MJS
0	9/10/19	ISSUED FOR REVIEW	DMC

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave. PO Box 219 Srafton, NH 03865
603-772-4746 FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **EXISTING CONDITIONS PLAN**
Project: **TAX MAP 233, LOT 77 & TAX MAP 234, LOTS 1.2, 1.4 & 1.5 ROUTE 9 & REDEMPTION ROAD, BARRINGTON, NH**
Owner of Record: **TOWN OF BARRINGTON PO BOX 660 333 CALEF HIGHWAY BARRINGTON, NH 03825 BK 2328 PG 0755 & BK 4342 PG 49**

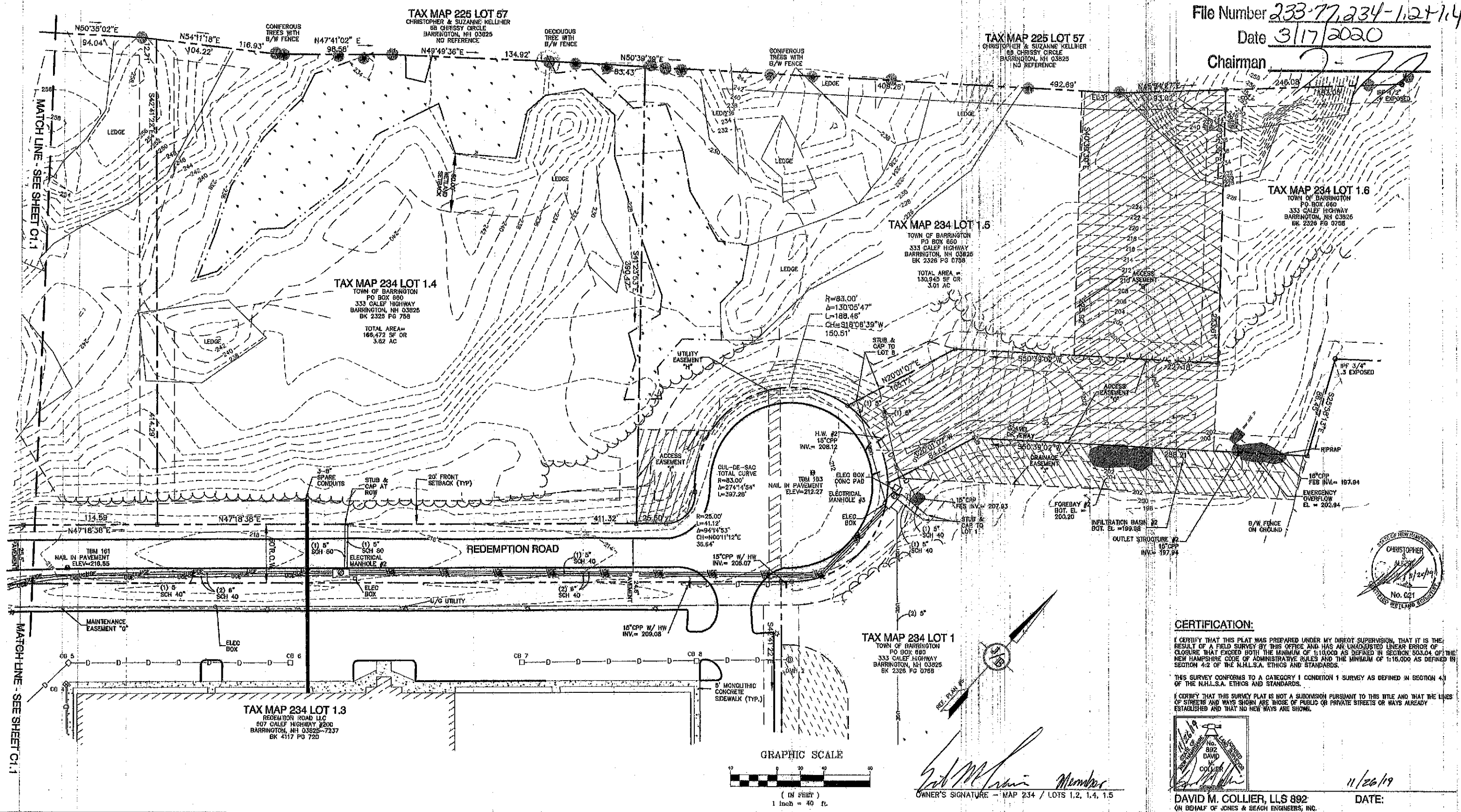
DRAWING No. **C1.1**
SHEET 1 OF 2
JBE PROJECT NO. 19036

- APPROVED -

File Number 233-77,234-1,2+1,4

Date 3/17/2020

Chairman [Signature]

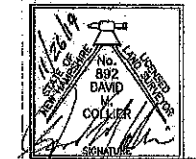


CERTIFICATION:
I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEEDS BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.S.A. ETHICS AND STANDARDS.

I CERTIFY THAT THIS SURVEY PLAN IS NOT A SUBMISSION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

[Signature]
OWNER'S SIGNATURE - MAP 234 / LOTS 1.2, 1.4, 1.5



DAVID M. COLLIER, LLS 892
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

DATE: 11/26/19

Design: B/WG Draft: C/WW Date: 04/04/19
Checked: D/MC Scale: AS NOTED Project No.: 19038
Drawing Name: 19038-EXISTING-CONDITIONS.dwg

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
2	11/28/18	REVISED PER REVIEW COMMENTS	MJS
1	11/16/18	REVISED PER REVIEW COMMENTS	MJS
0	9/10/19	ISSUED FOR REVIEW	DMC

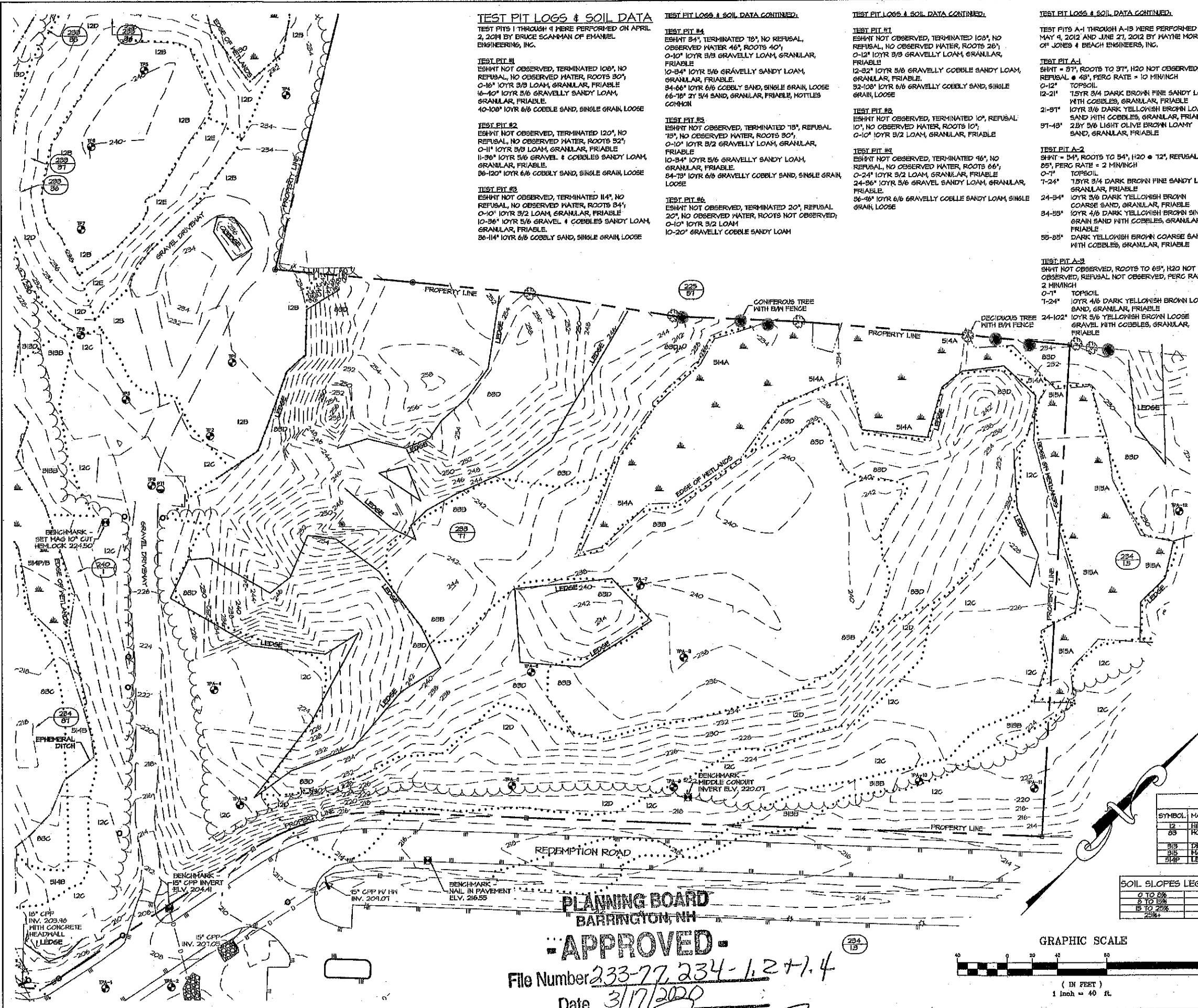
Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.
Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratford, NH 03886
603-772-4748 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	EXISTING CONDITIONS PLAN
Project:	TAX MAP 233, LOT 77 & TAX MAP 234, LOTS 1.2, 1.4 & 1.5 ROUTE 9 & REDEMPTION ROAD, BARRINGTON, NH
Owner of Record:	TOWN OF BARRINGTON PO BOX 660 333 CALEF HIGHWAY BARRINGTON, NH 03826 BK 2326 PG 0758 & BK 4342 PG 49

DRAWING No.
C1.2
SHEET 2 OF 2
JBE PROJECT NO. 19038



TEST PIT LOGS & SOIL DATA

TEST PITS 1 THROUGH 4 WERE PERFORMED ON APRIL 2, 2014 BY BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC.

TEST PIT #1
 SHNT NOT OBSERVED, TERMINATED 100", NO REFUSAL, NO OBSERVED WATER, ROOTS 30", 0-16" 1OYR 3/8 LOAM, GRANULAR, FRIABLE
 16-40" 1OYR 5/8 GRAVELLY SANDY LOAM, GRANULAR, FRIABLE
 40-100" 1OYR 5/8 COBBLE SAND, SINGLE GRAIN, LOOSE

TEST PIT #2
 SHNT NOT OBSERVED, TERMINATED 120", NO REFUSAL, NO OBSERVED WATER, ROOTS 52", 0-11" 1OYR 5/8 LOAM, GRANULAR, FRIABLE
 11-36" 1OYR 5/8 GRAVELLY SANDY LOAM, GRANULAR, FRIABLE
 36-120" 1OYR 5/8 COBBLE SAND, SINGLE GRAIN, LOOSE

TEST PIT #3
 SHNT NOT OBSERVED, TERMINATED 114", NO REFUSAL, NO OBSERVED WATER, ROOTS 34", 0-10" 1OYR 5/2 LOAM, GRANULAR, FRIABLE
 10-36" 1OYR 5/6 GRAVEL & COBBLES SANDY LOAM, GRANULAR, FRIABLE
 36-114" 1OYR 5/6 COBBLE SAND, SINGLE GRAIN, LOOSE

TEST PIT LOGS & SOIL DATA CONTINUED

TEST PIT #4
 SHNT NOT OBSERVED, TERMINATED 10", NO REFUSAL, NO OBSERVED WATER, ROOTS 20", 0-10" 1OYR 5/8 GRAVELLY LOAM, GRANULAR, FRIABLE
 10-34" 1OYR 5/6 GRAVELLY SANDY LOAM, GRANULAR, FRIABLE
 34-66" 1OYR 6/6 COBBLE SAND, SINGLE GRAIN, LOOSE
 66-10" 2Y 5/4 SAND, GRANULAR, FRIABLE, MOTTLES COMMON

TEST PIT #5
 SHNT NOT OBSERVED, TERMINATED 19", REFUSAL 19", NO OBSERVED WATER, ROOTS 30", 0-10" 1OYR 5/2 GRAVELLY LOAM, GRANULAR, FRIABLE
 10-34" 1OYR 5/6 GRAVELLY SANDY LOAM, GRANULAR, FRIABLE
 34-78" 1OYR 6/6 GRAVELLY COBBLE SAND, SINGLE GRAIN, LOOSE

TEST PIT #6
 SHNT NOT OBSERVED, TERMINATED 20", REFUSAL 20", NO OBSERVED WATER, ROOTS NOT OBSERVED, 0-10" 1OYR 5/2 LOAM
 10-20" GRAVELLY COBBLE SANDY LOAM

TEST PIT LOGS & SOIL DATA CONTINUED

TEST PIT #7
 SHNT NOT OBSERVED, TERMINATED 100", NO REFUSAL, NO OBSERVED WATER, ROOTS 20", 0-12" 1OYR 3/8 GRAVELLY LOAM, GRANULAR, FRIABLE
 12-32" 1OYR 5/8 GRAVELLY COBBLE SANDY LOAM, GRANULAR, FRIABLE
 32-100" 1OYR 6/6 GRAVELLY COBBLE SAND, SINGLE GRAIN, LOOSE

TEST PIT #8
 SHNT NOT OBSERVED, TERMINATED 10", REFUSAL 10", NO OBSERVED WATER, ROOTS 10", 0-10" 1OYR 5/2 LOAM, GRANULAR, FRIABLE

TEST PIT #9
 SHNT NOT OBSERVED, TERMINATED 46", NO REFUSAL, NO OBSERVED WATER, ROOTS 66", 0-24" 1OYR 5/2 LOAM, GRANULAR, FRIABLE
 24-36" 1OYR 5/6 GRAVEL SANDY LOAM, GRANULAR, FRIABLE
 36-48" 1OYR 6/6 GRAVELLY COBBLE SANDY LOAM, SINGLE GRAIN, LOOSE

TEST PIT LOGS & SOIL DATA CONTINUED

TEST PITS A-1 THROUGH A-18 WERE PERFORMED ON MAY 9, 2012 AND JUNE 21, 2012 BY WAYNE MORRILL OF JONES & BEACH ENGINEERS, INC.

TEST PIT A-1
 SHNT = 37", ROOTS TO 37", H2O NOT OBSERVED, REFUSAL @ 48", PERC RATE = 10 MIN/INCH
 0-12" TOPSOIL
 12-21" 15YR 3/4 DARK BROWN FINE SANDY LOAM WITH COBBLES, GRANULAR, FRIABLE
 21-37" 1OYR 3/8 DARK YELLOWISH BROWN LOAMY SAND WITH COBBLES, GRANULAR, FRIABLE
 37-43" 2BY 5/8 LIGHT OLIVE BROWN LOAMY SAND, GRANULAR, FRIABLE

TEST PIT A-2
 SHNT = 54", ROOTS TO 54", H2O @ 12", REFUSAL @ 55", PERC RATE = 2 MIN/INCH
 0-7" TOPSOIL
 7-24" 15YR 3/4 DARK BROWN FINE SANDY LOAM, GRANULAR, FRIABLE
 24-34" 1OYR 3/8 DARK YELLOWISH BROWN COARSE SAND, GRANULAR, FRIABLE
 34-53" 1OYR 4/8 DARK YELLOWISH BROWN SINGLE GRAIN SAND WITH COBBLES, GRANULAR, FRIABLE
 53-55" DARK YELLOWISH BROWN COARSE SAND WITH COBBLES, GRANULAR, FRIABLE

TEST PIT A-3
 SHNT NOT OBSERVED, ROOTS TO 65", H2O NOT OBSERVED, REFUSAL NOT OBSERVED, PERC RATE = 2 MIN/INCH
 0-7" TOPSOIL
 7-24" 1OYR 4/8 DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 24-102" 1OYR 5/8 YELLOWISH BROWN LOOSE GRAVEL WITH COBBLES, GRANULAR, FRIABLE

TEST PIT LOGS & SOIL DATA CONTINUED

TEST PIT A-4
 DATA NOT AVAILABLE

TEST PIT A-5
 SHNT @ 40", ROOTS TO 40", H2O @ 50", REFUSAL @ 67", PERC RATE = 2 MIN/INCH
 0-4" TOPSOIL
 4-12" 1OYR 3/8 DARK YELLOWISH BROWN FINE SANDY LOAM, GRANULAR, FRIABLE
 12-14" 1OYR 4/8 DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 14-39" 1OYR 4/4 DARK YELLOWISH BROWN SINGLE GRAIN SAND, GRANULAR, FRIABLE
 39-46" 15YR 3/4 DARK BROWN COARSE SAND, GRANULAR, FRIABLE
 46-87" 2BY 5/8 LIGHT OLIVE BROWN FINE SAND, GRANULAR, FRIABLE

TEST PIT A-6
 REFUSAL @ 24"

TEST PIT A-7
 REFUSAL @ 30"

TEST PIT A-8
 SHNT @ 24", ROOTS TO 24", H2O NOT OBSERVED, REFUSAL @ 36", PERC RATE = 12 MIN/INCH
 0-7" TOPSOIL
 7-24" 1OYR 5/8 YELLOWISH BROWN FINE SANDY LOAM, GRANULAR, FRIABLE
 24-36" 2BY 5/8 LIGHT OLIVE BROWN LOAMY SAND, GRANULAR, FRIABLE

TEST PIT A-9
 SHNT @ 40", ROOTS TO 40", H2O @ 52", REFUSAL NOT OBSERVED, PERC RATE = 2 MIN/INCH
 0-7" TOPSOIL
 7-17" 2BY 5/4 LIGHT OLIVE BROWN FINE SANDY LOAM, GRANULAR, FRIABLE
 17-28" 1OYR 4/8 DARK YELLOWISH BROWN FINE SAND, GRANULAR, FRIABLE
 28-46" 1OYR 5/8 YELLOWISH BROWN COARSE SAND, GRANULAR, FRIABLE
 46-49" 2BY 5/8 LIGHT OLIVE BROWN COARSE SAND, GRANULAR, FRIABLE

TEST PIT A-10
 SHNT NOT OBSERVED, ROOTS TO 102", H2O NOT OBSERVED, REFUSAL NOT OBSERVED, PERC RATE = 2 MIN/INCH
 0-6" TOPSOIL
 6-20" 1OYR 5/8 YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 20-65" 1OYR 4/8 DARK YELLOWISH BROWN GRAVELLY SAND, GRANULAR, FRIABLE
 65-122" 1OYR 5/8 YELLOWISH BROWN LOOSE GRAVEL WITH COBBLES, GRANULAR, FRIABLE

TEST PIT A-11
 SHNT NOT OBSERVED, ROOTS TO 40", H2O @ 81", REFUSAL NOT OBSERVED, PERC RATE = 2 MIN/INCH
 0-1" TOPSOIL
 1-14" 1OYR 4/8 DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 14-68" 1OYR 5/8 YELLOWISH BROWN COARSE GRAVEL, GRANULAR, FRIABLE
 68-117" 1OYR 4/4 DARK YELLOWISH BROWN SINGLE GRAIN SAND, GRANULAR, FRIABLE
 117-136" 1OYR 5/8 YELLOWISH BROWN COARSE GRAVEL, GRANULAR, FRIABLE
 136-140" 1OYR 4/4 DARK YELLOWISH BROWN SINGLE GRAIN SAND, GRANULAR, FRIABLE

TEST PIT A-12
 SHNT @ 24", ROOTS TO 35", H2O @ 28", REFUSAL NOT OBSERVED, PERC RATE = 8 MIN/INCH
 0-6" TOPSOIL
 6-18" 1OYR 4/4 DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 18-24" 1OYR 5/8 YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 24-60" 2BY 6/1 GRAY LOAMY SAND, GRANULAR FIRM

TEST PIT A-13
 SHNT NOT OBSERVED, ROOTS TO 67", H2O NOT OBSERVED, REFUSAL NOT OBSERVED, PERC RATE = 2 MIN/INCH
 0-7" TOPSOIL
 7-19" 1OYR 4/8 DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
 19-117" 2BY 5/8 LIGHT OLIVE BROWN LOOSE GRAVEL WITH COBBLES, GRANULAR, FRIABLE

- NOTES:**
- OWNER OF RECORD: TAX MAP 233 LOT 77 RRB5, LLC 607 CALEF HIGHWAY, SUITE 200 BARRINGTON, NH 03825 SCRD BK4114 F60027
 - THE INTENT OF THIS PLAN IS TO DELINEATE SOIL TYPES AND SHOW TOPOGRAPHY OF THE SITE FOR HIDES AOT PERMIT APPLICATION.
 - PARCEL IS ZONED VILLAGE DISTRICT (VD) PER THE TOWN OF BARRINGTON, NH ZONING MAP AMENDED JUNE 8, 2014.
 - PARCEL IS NOT IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 3301C0285D, DATED MAY 17, 2005.
 - FIELDWORK CONDUCTED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2014.
 - WETLANDS WERE DELINEATED BY JONES & BEACH ENGINEERS INC. IN SPRING 2014
 - SOILS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. IN SPRING 2014.

LEGEND:

□	GRANITE BOUND FOUND
○	IRON PIPE FOUND
○	DRILL HOLE FOUND
(TYP)	TYPICAL
(TR)	TO BE REMOVED
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
PPF	PROPOSED POROUS PAVEMENT
FRP	PROPOSED TRADITIONAL PAVEMENT
---	PROPERTY LINE
---	EDGE OF PAVEMENT (EOP)
---	SUBSURFACE INFILTRATION
---	TRAFFIC DIRECTION (NOT TO BE PAINTED)
---	SOIL DELINEATION
---	OVERHEAD UTILITIES
---	UNDERGROUND UTILITIES
---	UTILITY POLE
---	GUY WIRE
---	LIGHT FIXTURE
---	WATER LINE
---	DRAIN LINE
---	SEPTIC LINE
---	GAS LINE
---	STONEWALL
---	RAILROAD
---	CHAINLINK FENCE
---	WETLANDS
---	SILT SOAK
---	WETLAND TREE
---	NUMBER OF PARKING SPOTS IN AREA

SOIL MAPPING STANDARDS:
 SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT, SECOND SPECIAL PUBLICATION NO. 3, VERSION 3.0, DECEMBER 2011. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PRODUCT, INTENDED FOR THE SUBMISSION TO THE NH DES ALTERATION OF TERRAIN. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE.

8	FEB 20, 2020	FOR APPROVAL	
5	JAN 10, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK.
DRAWN:	JJM	DESIGN:	JJM
CHECKED:	BDS	CHECKED:	BDS



CLIENT:
TURBOCAM INTERNATIONAL
 607 CALEF HIGHWAY
 BARRINGTON, NH 03825

TITLE:
SITE SPECIFIC SOILS PLAN
 FOR
 TAX MAP 233 LOT 77
 RRB5, LLC &
 TURBOCAM INTERNATIONAL
 ROUTE 9 / REDEMPTION ROAD (SITE)
 BARRINGTON, NH 03825

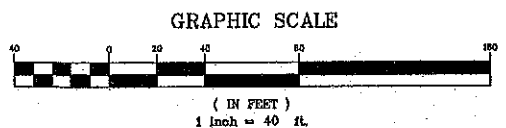
PROJECT:	SCALE:	SHEET:
19-020	1"=40'	C2

SOIL IDENTIFICATION LEGEND

SYMBOL	MAP UNIT	HYDROLOGIC SOIL GROUP
12	HINCKLEY FINE SANDY LOAM	A
83	HOLLIS-CANTON-ROCK OUTCROP	HOLLIS - C/D
3/3	DEERFIELD LOAMY SAND	B
3/5	MASKEPEE	D
5/4P	LEICESTER FINE SANDY LOAM	C

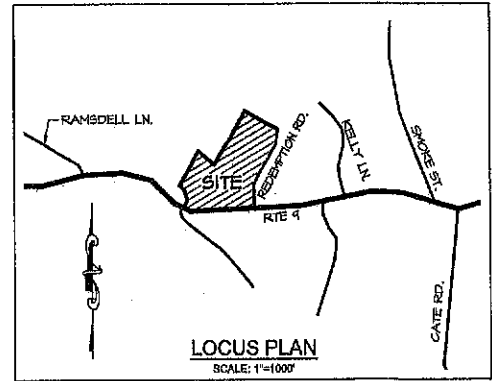
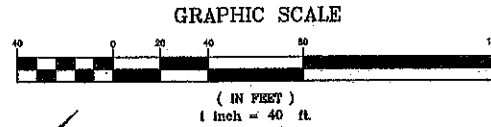
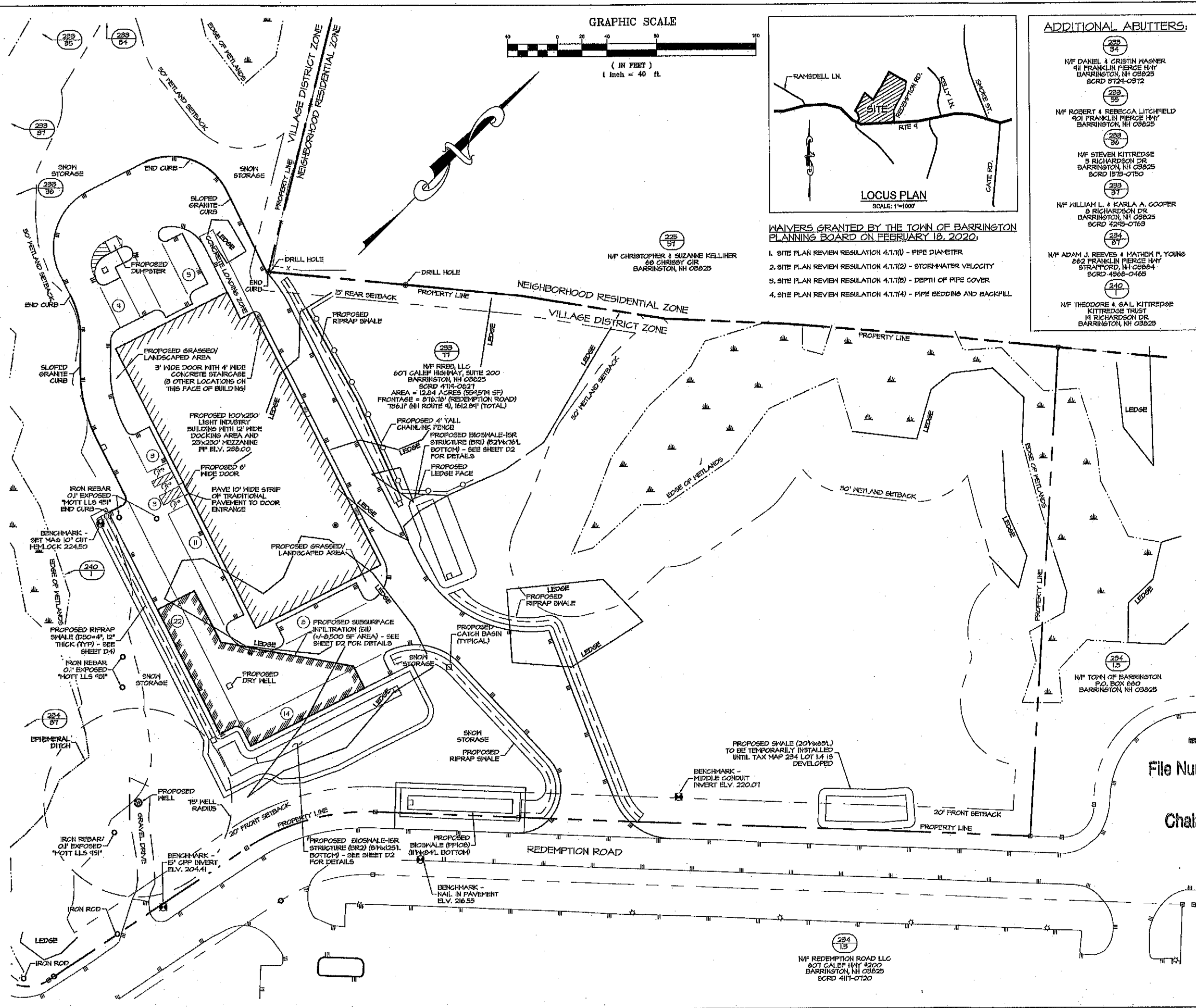
SOIL SLOPES LEGEND

0 TO 2%	B
3 TO 15%	C
16 TO 25%	D
26%	E



PLANNING BOARD
BARRINGTON, NH
APPROVED

File Number 233-77, 234-1.2 + 1.4
 Date 3/17/2020
 Chairman [Signature]



WAIVERS GRANTED BY THE TOWN OF BARRINGTON PLANNING BOARD ON FEBRUARY 18, 2020:

1. SITE PLAN REVIEW REGULATION 4.1.7(I) - PIPE DIAMETER
2. SITE PLAN REVIEW REGULATION 4.1.7(2) - STORM-WATER VELOCITY
3. SITE PLAN REVIEW REGULATION 4.1.7(B) - DEPTH OF PIPE COVER
4. SITE PLAN REVIEW REGULATION 4.1.7(A) - PIPE BEDDING AND BACKFILL

ADDITIONAL ABUTTERS:

- 233 84 N/F DANIEL & CRISTIN WAGNER 411 FRANKLIN PIERCE HWY BARRINGTON, NH 03825 SCRD 8724-0872
- 233 95 N/F ROBERT & REBECCA LITCHFIELD 401 FRANKLIN PIERCE HWY BARRINGTON, NH 03825
- 233 96 N/F STEVEN KITTRIDGE 5 RICHARDSON DR BARRINGTON, NH 03825 SCRD 1878-0750
- 233 97 N/F WILLIAM L. & KARLA A. COOPER 8 RICHARDSON DR BARRINGTON, NH 03825 SCRD 4245-0783
- 234 87 N/F ADAM J. REEVES & MATHEW F. YOUNG 862 FRANKLIN PIERCE HWY STRAFFORD, NH 03884 SCRD 4968-0465
- 242 N/F THEODORE & GAIL KITTRIDGE KITTRIDGE TRUST 14 RICHARDSON DR BARRINGTON, NH 03825

NOTES:

1. OWNER OF RECORD: TAX MAP 233 LOT 77 RRBS, LLC 607 CALEF HIGHWAY, SUITE 200 BARRINGTON, NH 03825 SCRD BK4TH P60821
2. THE INTENT OF THIS PLAN IS TO SHOW THE CONSTRUCTION OF A 100FT X 250FT BUILDING WITH A 12FT WIDE DOCKING AREA (21,715 SF TOTAL FOOTPRINT) AND 6,250 SF MEZZANINE, AND ASSOCIATED IMPROVEMENTS.
3. PARCEL IS ZONED VILLAGE DISTRICT (VD) PER THE TOWN OF BARRINGTON, NH ZONING MAP AMENDED JUNE 6, 2014.
4. PARCEL IS NOT IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 3801CG0282B, DATED MAY 11, 2005.
5. FIELDWORK CONDUCTED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2014.
6. WETLANDS WERE DELINEATED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2014.
7. PROPERTY TO BE SERVICED BY ON-SITE WELL AND SEPTIC.
8. ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
9. THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERS, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
10. BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
11. ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
12. TOWN OF BARRINGTON, NEW HAMPSHIRE ZONING ORDINANCE AS AMENDED MARCH 13, 2018 DIMENSIONAL REQUIREMENTS FOR THE VILLAGE DISTRICT (NON-RESIDENTIAL):
 - MINIMUM LOT FRONTAGE = 75 FT
 - MINIMUM FRONT SETBACK = 20 FT
 - MINIMUM SIDE SETBACK = 15 FT
 - MINIMUM REAR SETBACK = 15 FT
 - MAXIMUM BUILDING HEIGHT = 35 FT
 - MAXIMUM BUILDING STORIES = 3
 - MAXIMUM LOT COVERAGE = 60%
 - MAXIMUM BUILDING SIZE = 50,000 SF
 - BUFFER FOR EXISTING RESIDENTIAL USES = 50 FT
 - GREENBELT BUFFER = 50 FT
 - WETLAND BUFFER = 50 FT
13. 2018 SITE PLAN OFF-STREET PARKING AND LOADING STANDARDS:
 - PARKING SPACE DIMENSIONS: MINIMUM 4 FT WIDE 16 FT LONG
 - MINIMUM AISLE WIDTHS SHALL BE 22 FT FOR ONE-WAY AND 24 FT FOR TWO-WAY AISLES.
 - SEE NOTE 14 FOR REQUIRED PARKING SPACES.
14. PARKING REQUIRED/PROPOSED:
 - PROPOSED BUILDING (LIGHT INDUSTRY) GROSS FLOOR AREA = 33,965 SF
 - REQUIREMENT = 15 SPACES / 1,000 SF = 33,965 SF x 15 SPACES/1,000 SF = 504 SPACES
 - TOTAL SPACES REQUIRED = 51 SPACES
 - TOTAL SPACES PROVIDED = 73 SPACES
15. ALL KNOX BOX, FIRE ALARM SYSTEM AND FIRE SPRINKLER INSTALLATION & INSPECTIONS TO BE COORDINATED WITH THE BARRINGTON FIRE DEPARTMENT.
16. IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT DEFICIENCIES EXIST IN THE APPROVED DESIGN DRAWINGS, THE CONTRACTOR SHALL BE REQUIRED TO CORRECT THE DEFICIENCIES TO MEET THE REQUIREMENTS OF THE REGULATIONS AT NO EXPENSE TO THE TOWN.
17. REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OF THE SITE'S SURFACE AREA AND SHALL BE MAINTAINED THROUGH THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES. IF, DURING CONSTRUCTION IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE TOWN.
18. IN ACCORDANCE WITH TOWN REGULATIONS AND RSA 676:15, ALL IMPROVEMENTS SPECIFIED ON THESE SITE PLANS SHALL BE CONSTRUCTED, COMPLETED, INSPECTED AND APPROVED BY THE TOWN OF BARRINGTON PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
19. THE PROPOSED WORK WILL RESULT IN 415,205 SF OF DISTURBANCE WITHIN THE 50' WETLAND BUFFER.
20. IF REQUIRED, SNOW MAY BE STORED ON BARRINGTON TAX MAP 234 LOT 14.
21. ANY FUTURE DEVELOPMENT ON THE LOTS WILL REQUIRE AN AMENDED OR SEPARATE ALTERATION OF TERRAIN PERMIT EVEN IF THE DISTURBANCE IS LESS THAN 100,000 SF.

LEGEND:

⊖	GRANITE BOUND FOUND
○	IRON PIPE FOUND
○	DRILL HOLE FOUND
(TYP)	TYPICAL
(TR)	TO BE REMOVED
VGC	VERTICAL GRANITE CURB
SSC	SLOPED GRANITE CURB
PPP	PROPOSED POROUS PAVEMENT
PTP	PROPOSED TRADITIONAL PAVEMENT
---	PROPERTY LINE
---	EDGE OF PAVEMENT (EOP)
---	SUBSURFACE INFILTRATION
---	TRAFFIC DIRECTION
---	(NOT TO BE PAINTED)
---	SOIL DELINEATION
---	OVERHEAD UTILITIES
---	UNDERGROUND UTILITIES
---	UTILITY POLE
---	SURF MISC.
---	LIGHT FIXTURE
---	MILL
---	WATER LINE
---	DRAIN LINE
---	SEPTIC LINE
---	GAS LINE
---	STONEWALL
---	GUARD RAIL
---	CHAINLINK FENCE
---	WETLANDS
---	BILT BOX
---	TREELINE
---	TREE
---	NUMBER OF PARKING SPOTS IN AREA

PLANNING BOARD
BARRINGTON, NH
APPROVED

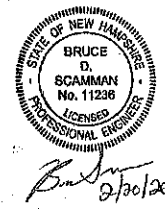
File Number 233-77, 234-121, 14
Date 3/17/2020

Chairman [Signature]

8	FEB 20, 2020	FOR APPROVAL	
7	FEB 13, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE	CHK.
DRAWN:	JJM	DESIGN:	JJM
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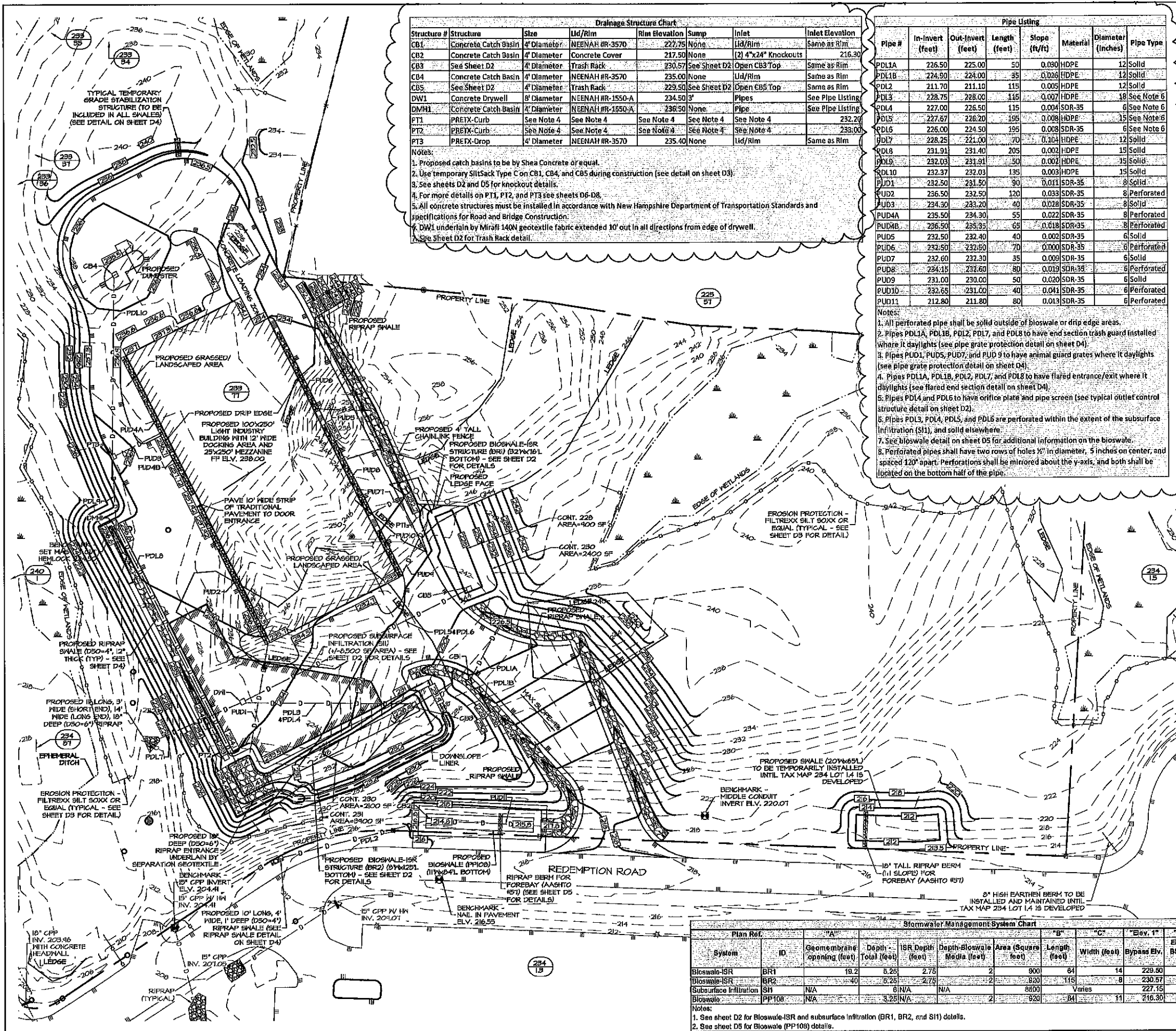


TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825



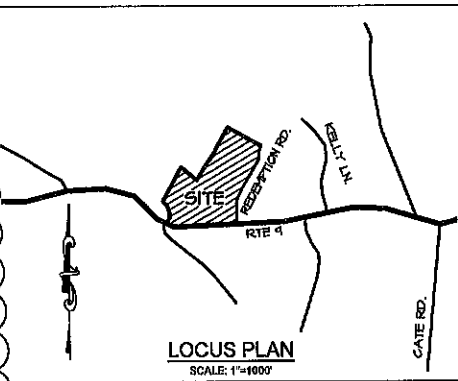
SITE PLAN
FOR
TAX MAP 233 LOT 77
RRBS, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825

PROJECT:	SCALE:	SHEET:
19-020	1"=40'	C3



Structure #	Structure	Size	Lid/Rim	Rim Elevation	Sump	Inlet	Inlet Elevation
CB1	Concrete Catch Basin	4' Diameter	NEENAH RR-3570	227.75	None	Lid/Rim	Same as Rim
CB2	Concrete Catch Basin	4' Diameter	Concrete Cover	217.50	None	(2) 4"x24" Knockouts	216.30
CB3	See Sheet D2	4' Diameter	Trash Rack	230.57	See Sheet D2	Open CB3 Top	Same as Rim
CB4	Concrete Catch Basin	4' Diameter	NEENAH RR-3570	235.00	None	Lid/Rim	Same as Rim
CB5	See Sheet D2	4' Diameter	Trash Rack	229.50	See Sheet D2	Open CB5 Top	Same as Rim
DW1	Concrete Drywell	8' Diameter	NEENAH RR-1550-A	234.50	3'	Pipes	See Pipe Listing
DMH1	Concrete Catch Basin	4' Diameter	NEENAH RR-1550-A	236.50	None	Pipe	See Pipe Listing
PT1	PRETX-Curb	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	232.26
PT2	PRETX-Curb	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	233.00
PT3	PRETX-Drop	4' Diameter	NEENAH RR-3570	235.40	None	Lid/Rim	Same as Rim

Pipe #	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	Material	Diameter (Inches)	Pipe Type
PDL1A	226.50	225.00	50	0.030	HDPE	12	Solid
PDL1B	224.90	224.00	35	0.026	HDPE	12	Solid
PDL2	211.70	211.10	115	0.005	HDPE	12	Solid
PDL3	223.75	228.00	115	0.007	HDPE	18	See Note 6
PDL4	227.00	226.50	115	0.004	SDR-35	6	See Note 6
PDL5	227.67	226.20	195	0.008	HDPE	15	See Note 6
PDL6	225.00	224.50	195	0.003	SDR-35	6	See Note 6
PDL7	228.25	221.00	70	0.104	HDPE	12	Solid
PDL8	231.91	231.40	205	0.002	HDPE	15	Solid
PDL9	232.03	231.91	50	0.002	HDPE	15	Solid
PDL10	232.37	232.03	135	0.003	HDPE	15	Solid
PUD1	232.50	231.50	90	0.011	SDR-35	8	Solid
PUD2	236.50	232.50	120	0.033	SDR-35	8	Perforated
PUD3	234.30	233.20	40	0.028	SDR-35	8	Solid
PUD4	235.50	234.30	55	0.022	SDR-35	8	Perforated
PUD5	236.50	235.35	65	0.018	SDR-35	8	Perforated
PUD6	232.50	232.40	40	0.002	SDR-35	6	Solid
PUD7	232.50	232.50	70	0.000	SDR-35	6	Perforated
PUD8	232.60	232.30	35	0.009	SDR-35	6	Solid
PUD9	231.00	230.00	50	0.020	SDR-35	6	Solid
PUD10	232.65	231.00	40	0.041	SDR-35	6	Perforated
PUD11	212.80	211.80	80	0.013	SDR-35	6	Perforated



LEGEND:

- GRANITE BOUND FOUND
- IRON PIPE FOUND
- DRILL HOLE FOUND
- TYPICAL
- TO BE REMOVED
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- PROPOSED FORD PAVEMENT
- PROPOSED TRADITIONAL PAVEMENT
- PROPERTY LINE
- EDGE OF PAVEMENT (EOP)
- SUBSURFACE INFILTRATION
- TRAFFIC DIRECTION (NOT TO BE PAINTED)
- SOIL DELINEATION
- OVERHEAD UTILITIES
- UNDERGROUND UTILITIES
- UTILITY POLE
- GUY WIRE
- LIGHT FIXTURE
- WELL
- WATER LINE
- DRAIN LINE
- SEPTIC LINE
- GAS LINE
- STONE WALL
- GUARD RAIL
- CHAINLINK FENCE
- SILT SOX
- TREELINE
- TREE
- NUMBER OF PARKING SPOTS IN AREA

- Notes:**
- All perforated pipe shall be solid outside of bioswale or drip edge areas.
 - Pipes PDL1A, PDL1B, PDL2, PDL7, and PDL8 to have end section trash guard installed where it daylight (see pipe grate protection detail on sheet D4).
 - Pipes PUD1, PUD5, PUD7, and PUD9 to have animal guard grates where it daylight (see pipe grate protection detail on sheet D4).
 - Pipes PDL1A, PDL1B, PDL2, PDL7, and PDL8 to have flared entrance/exit where it daylight (see flared end section detail on sheet D4).
 - Pipes PDL4 and PDL6 to have orifice plate and pipe screen (see typical outlet control structure detail on sheet D2).
 - Pipes PDL3, PDL4, PDL5, and PDL6 are perforated within the extent of the subsurface infiltration (S1), and solid elsewhere.
 - See bioswale detail on sheet D5 for additional information on the bioswale.
 - Perforated pipes shall have two rows of holes 1/2" in diameter, 5 inches on center, and spaced 120" apart. Perforations shall be mirrored about the y-axis, and both shall be located on the bottom half of the pipe.

PLANNING BOARD
BARRINGTON, NH
APPROVED
 File Number: 833-77,234-1,2,4,14
 Date: 3/17/2020
 Chairman

- NOTES:**
- OWNER OF RECORD: TAX MAP 233 LOT 71 RR85, LLC 607 CALEF HIGHWAY, SUITE 200 BARRINGTON, NH 03825 SCRD BK4719 PG0621
 - THE INTENT OF THIS PLAN IS TO SHOW THE DRAINAGE STRUCTURES AND PROPOSED GRADING ASSOCIATED WITH THE SITE IMPROVEMENTS.
 - PARCEL IS ZONED VILLAGE DISTRICT (VD) PER THE TOWN OF BARRINGTON, NH ZONING MAP AMENDED JUNE 6, 2014.
 - PARCEL IS NOT IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 580702C0285D, DATED MAY 11, 2005.
 - FIELDWORK CONDUCTED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2014.
 - WETLANDS WERE DELINEATED BY JONES & BEACH ENGINEERS INC. IN SPRING 2014.
 - PROPERTY TO BE SERVICED BY ON-SITE WELL AND SEPTIC.
 - ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
 - THIS PLAN HAS BEEN PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
 - BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 2 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
 - ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
 - IN THE EVENT OF A CUT INTO LEDGE, A VERTICAL FACE MAY BE USED. IF THIS IS DONE, A 4 FT TALL CHAINLINK FENCE MUST BE INSTALLED AT THE TOP OF THE SLOPE.
 - REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OF THE SITE'S SURFACE AREA AND SHALL BE MAINTAINED THROUGH THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES. IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE TOWN.
 - FILL BELOW BIOTENTATIONS SYSTEMS MUST HAVE AN INFILTRATION RATE GREATER THAN OR EQUAL TO 10"/HOUR. IF NATIVE SOIL IS USED AS THE SUBGRADE THEN TESTING IS REQUIRED TO CONFIRM THIS VALUE.
 - FOR EARTHEN SLOPES BETWEEN 3:1 AND 1:1, NORTH AMERICAN GREEN SCIOSOBN SHALL BE INSTALLED. SEE DETAIL ON SHEET D4. FOR ANY SLOPES STEEPER THAN 1:1, CONSULT ENGINEER.

9	FEB 26, 2020	FOR APPROVAL	
8	FEB 20, 2020	FOR APPROVAL	
1	SEPT 13, 2019	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK
DRAWN:	JJM	DESIGN:	RMR
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 118 Northworth Avenue, A202
 Barrington, NH 03815
 P: 603-772-4400 F: 603-772-4437
 www.emanuelengineering.com

CLIENT:
TURBOCAM INTERNATIONAL
 607 CALEF HIGHWAY
 BARRINGTON, NH 03825

TITLE:
GRADING & DRAINAGE PLAN
 FOR
 TAX MAP 233 LOT 77
 RR85, LLC &
 TURBOCAM INTERNATIONAL
 ROUTE 9 / REDEMPTION ROAD (SITE)
 BARRINGTON, NH 03825

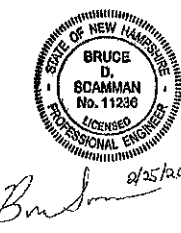
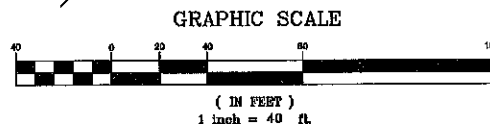
PROJECT:	SCALE:	SHEET:
19-020	1"=40'	C4

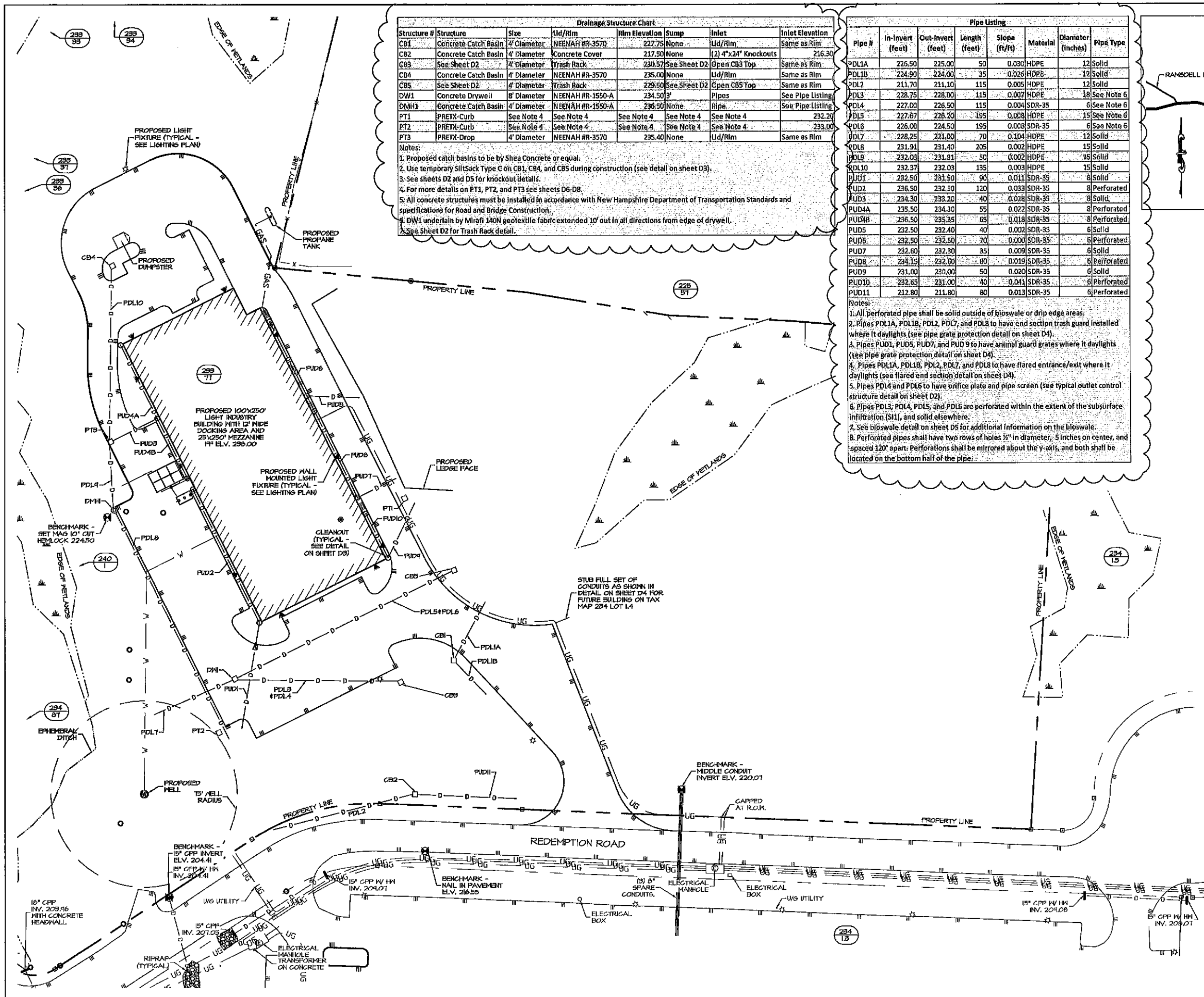
Stormwater Management System Chart

Plan Ref.	System	ID	Geomembrane opening (feet)	Depth - Total (feet)	ISR Depth (feet)	Depth-Bioswale Media (feet)	Area (Square feet)	Length (feet)	Width (feet)	"C"	"Elev. 1"	"Elev. 2"	"Elev. 3"
	Bioswale-ISR	BR1	19.2	5.25	2.75	2	900	64	14		229.50	228.00	222.75
	Bioswale-ISR	BR2	NA	4.0	5.25	2.75	820	115	8		230.57	229.00	223.75
	Subsurface Infiltration	S1	NA	NA	6	N/A	8500	Varies			227.15	230.08	224.17
	Bioswale	PP100	NA	NA	3.25	N/A	2	920	RA		216.30	214.80	211.85

Notes:

- See sheet D2 for Bioswale-ISR and subsurface infiltration (BR1, BR2, and S1) details.
- See sheet D5 for Bioswale (PP100) details.



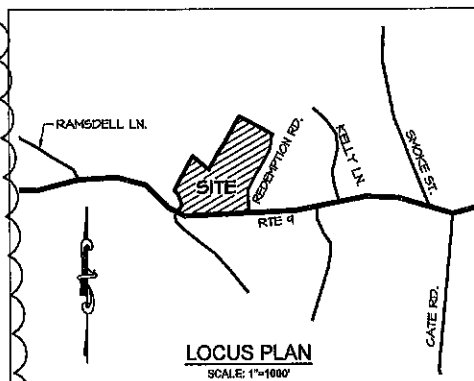


Structure #	Structure	Size	Lid/Rim	Rim Elevation	Sump	Inlet	Inlet Elevation
CB1	Concrete Catch Basin	4' Diameter	NEENAH #R-3570	227.75	None	Lid/Rim	Same as Rim
CB2	Concrete Catch Basin	4' Diameter	Concrete Cover	217.50	None	(2) 4"x24" Knockouts	216.30
CB3	See Sheet D2	4' Diameter	Trash Rack	230.57	See Sheet D2	Open CB3 Top	Same as Rim
CB4	Concrete Catch Basin	4' Diameter	NEENAH #R-3570	235.00	None	Lid/Rim	Same as Rim
CB5	See Sheet D2	4' Diameter	Trash Rack	229.50	See Sheet D2	Open CB5 Top	Same as Rim
DW1	Concrete Drywell	8' Diameter	NEENAH #R-1550-A	234.50	3'	Pipes	See Pipe Listing
DMH1	Concrete Catch Basin	4' Diameter	NEENAH #R-1550-A	236.50	None	Rim	See Pipe Listing
PT1	PRETX-Curb	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	232.20
PT2	PRETX-Curb	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	233.00
PT3	PRETX-Drop	4' Diameter	NEENAH #R-3570	235.40	None	Lid/Rim	Same as Rim

Notes:
 1. Proposed catch basins to be by Shea Concrete or equal.
 2. Use temporary SiltSack Type C on CB1, CB4, and CB5 during construction (see detail on sheet D3).
 3. See sheets D2 and D5 for knockout details.
 4. For more details on PT1, PT2, and PT3 see sheets D6-D8.
 5. All concrete structures must be installed in accordance with New Hampshire Department of Transportation Standards and specifications for Road and Bridge Construction.
 6. DW1 underlain by Mirafix 140N geotextile fabric extended 10' out in all directions from edge of drywell.
 7. See Sheet D2 for Trash Rack detail.

Pipe #	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	Material	Diameter (inches)	Pipe Type
PDL1A	226.50	225.00	50	0.030	HDPE	12	Solid
PDL1B	224.90	224.00	35	0.026	HDPE	12	Solid
PDL2	211.70	211.10	115	0.005	HDPE	12	Solid
PDL3	228.75	228.00	115	0.007	HDPE	18	See Note 6
PDL4	227.00	226.50	115	0.004	SDR-35	6	See Note 6
PDL5	227.67	226.30	195	0.008	HDPE	15	See Note 6
PDL6	226.00	224.50	195	0.008	SDR-35	6	See Note 6
PDL7	228.25	221.00	70	0.104	HDPE	12	Solid
PDL8	231.91	231.40	205	0.002	HDPE	15	Solid
PDL9	232.03	231.01	50	0.002	HDPE	15	Solid
PDL10	232.37	232.03	135	0.003	HDPE	15	Solid
PUD1	232.50	231.50	90	0.011	SDR-35	8	Solid
PUD2	236.50	232.50	120	0.033	SDR-35	8	Perforated
PUD3	234.30	233.20	40	0.028	SDR-35	8	Solid
PUD4A	235.50	234.30	55	0.022	SDR-35	8	Perforated
PUD4B	236.50	235.35	65	0.018	SDR-35	8	Perforated
PUD5	232.50	232.40	40	0.002	SDR-35	6	Solid
PUD6	232.50	232.50	70	0.000	SDR-35	6	Perforated
PUD7	232.60	232.30	35	0.009	SDR-35	6	Solid
PUD8	234.15	232.80	80	0.019	SDR-35	6	Perforated
PUD9	231.00	230.00	50	0.020	SDR-35	6	Solid
PUD10	232.63	231.00	80	0.041	SDR-35	6	Perforated
PUD11	212.80	211.80	80	0.013	SDR-35	6	Perforated

Notes:
 1. All perforated pipe shall be solid outside of bioswale or drip edge areas.
 2. Pipes PDL1A, PDL1B, PDL2, PDL7, and PDL8 to have end section trash guard installed where it daylight (see pipe grate protection detail on sheet D4).
 3. Pipes PUD1, PUD5, PUD7, and PUD9 to have animal guard grates where it daylight (see pipe grate protection detail on sheet D4).
 4. Pipes PDL1A, PDL1B, PDL2, PDL7, and PDL8 to have flared entrance/exit where it daylight (see flared end section detail on sheet D4).
 5. Pipes PDL4 and PDL6 to have orifice plate and pipe screen (see typical outlet control structure detail on sheet D2).
 6. Pipes PDL3, PDL4, PDL5, and PDL6 are perforated within the extent of the subsurface infiltration (S11), and solid elsewhere.
 7. See bioswale detail on sheet D5 for additional information on the bioswale.
 8. Perforated pipes shall have two rows of holes 1/2" in diameter, 5 inches on center, and spaced 120" apart. Perforations shall be mirrored about the y-axis, and both shall be located on the bottom half of the pipe.



LEGEND:

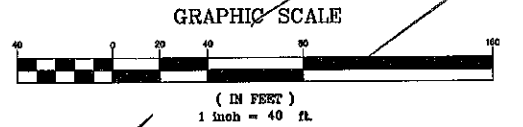
- GRANITE BOUND FOUND
- IRON PIPE FOUND
- DRILL HOLE FOUND
- TYPICAL
- TO BE REMOVED
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- PROPOSED POROUS PAVEMENT
- PROPOSED TRADITIONAL PAVEMENT
- PROPERTY LINE
- EDGE OF PAVEMENT (EOP)
- SUBSURFACE INFILTRATION
- TRAFFIC DIRECTION
- (NOT TO BE PAINTED)
- SOIL DELINEATION
- OVERHEAD UTILITIES
- UNDERGROUND UTILITIES
- UTILITY POLE
- GUY WIRE
- LIGHT FIXTURE
- WELL
- WATER LINE
- DRAIN LINE
- SEPTIC LINE
- GAS LINE
- STONEWALL
- GUARD RAIL
- CHAINLINK FENCE
- METLANDS
- SILT SOX
- TREELINE
- TREE
- NUMBER OF PARKING SPOTS IN AREA

- NOTES:**
- OWNER OF RECORD: TAX MAP 233 LOT 77 RRB5, LLC 607 CALEF HIGHWAY, SUITE 200 BARRINGTON, NH 03825 SCRD BK-4111 PG0027
 - THE INTENT OF THIS PLAN IS TO SHOW THE ASSOCIATED UTILITIES REQUIRED FOR THE PROPOSED LIGHT INDUSTRIAL BUILDING.
 - PARCEL IS ZONED VILLAGE DISTRICT (VD) PER THE TOWN OF BARRINGTON, NH ZONING MAP AMENDED JUNE 6, 2014.
 - PARCEL IS NOT IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 3801C0285D, DATED MAY 11, 2005.
 - FIELDWORK CONDUCTED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2019.
 - METLANDS WERE DELINEATED BY JONES & BEACH ENGINEERS INC. IN SPRING 2014.
 - PROPERTY TO BE SERVICED BY ON-SITE WELL AND SEPTIC.
 - ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
 - THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
 - BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-800-DIG-SAFE.
 - ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.

**PLANNING BOARD
BARRINGTON, NH
APPROVED**

File Number 233-77, 234-1, 2, 4, 14
 Date 3/17/2020

Chairman [Signature]



9	FEB 25, 2020	FOR APPROVAL	
8	FEB 20, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
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 P: 603-773-4400 F: 603-773-4487
 WWW.EMANUELENGINEERING.COM

CLIENT:
TURBOCAM INTERNATIONAL
 607 CALEF HIGHWAY
 BARRINGTON, NH 03825

SEAL:

Burdson 2/25/20

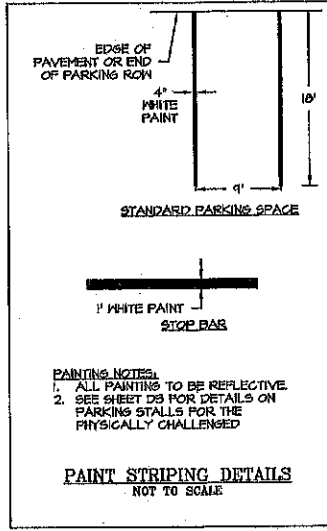
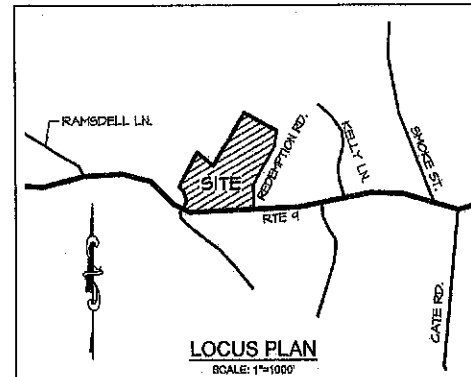
TITLE:
UTILITIES PLAN
 FOR
 TAX MAP 233 LOT 77
 RRB5, LLC &
 TURBOCAM INTERNATIONAL
 ROUTE 9 / REDEMPTION ROAD (SITE)
 BARRINGTON, NH 03825

PROJECT: 19-020 SCALE: 1"=40' SHEET: C5

SIGN SCHEDULE

MANUFACTURE	SIGN NUMBER	SIGN (N.T.S.)	SIZE OF SIGN WIDTH HEIGHT	DESCRIP.	MOUNT TYPE	MOUNT HEIGHT	REMARKS
WORKSAFE TCI OR EQUAL	R1-1 (ONE LOCATION)		36" 36"	WHITE ON RED	ULI-MATE OR EQUAL	7'-0"	REFLECTORIZED

NOTES: 1. ALL SIGNS AND SIGN POSTS IN THE MIDDLE RIGHT OF WAY TO MEET 2004 MUTCD STANDARDS WITH REVISION NUMBERS 1 AND 2 INCORPORATED, DATED MAY 2012.
2. ALL MOUNTING HEIGHTS ARE MEASURED FROM THE GROUND TO THE BOTTOM OF THE SIGN.

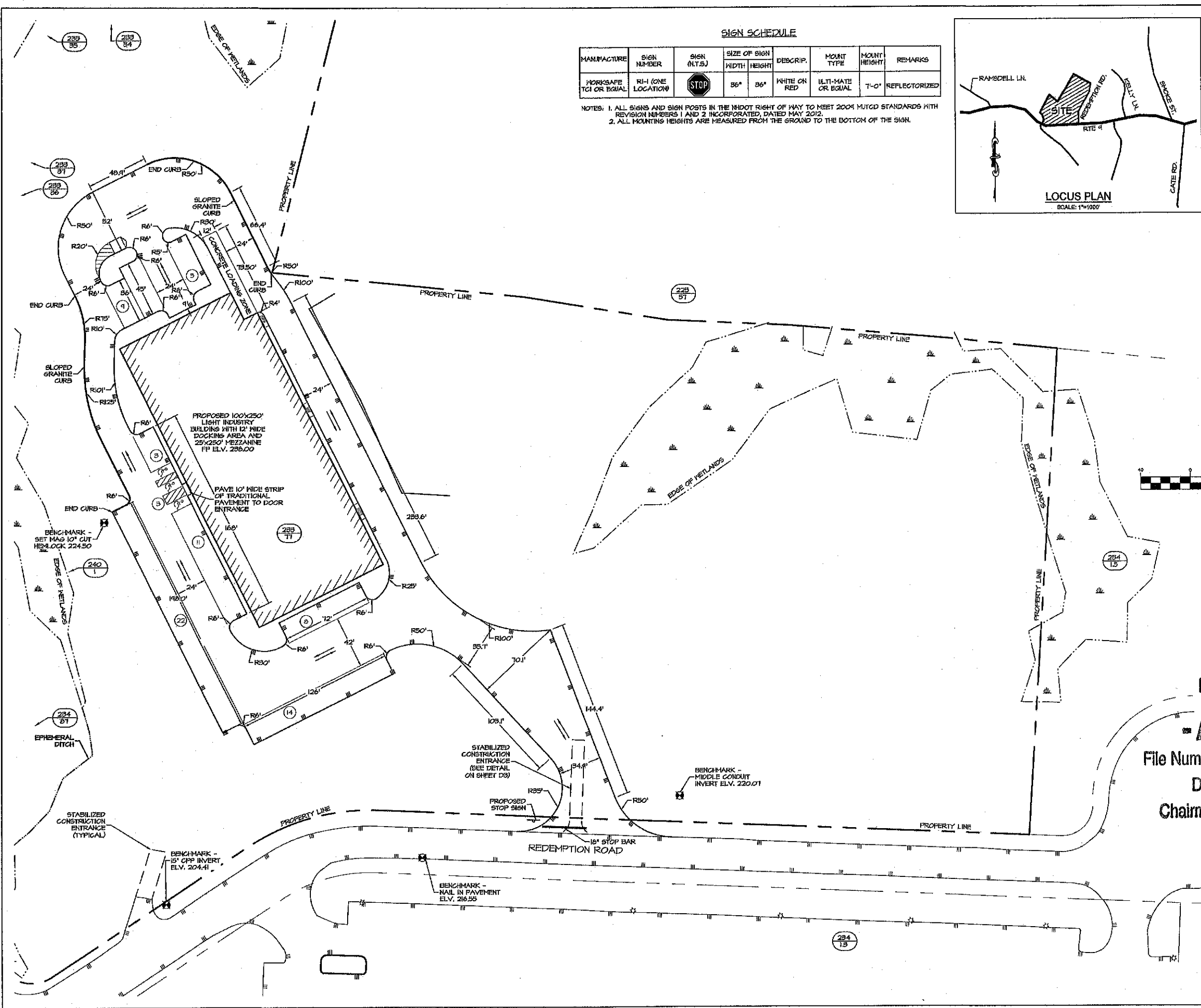
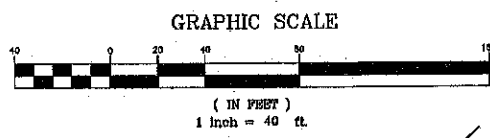


NOTES:

- OWNER OF RECORD, TAX MAP 233 LOT 77 RRB5, LLC 607 CALEF HIGHWAY, SUITE 200 BARRINGTON, NH 03825 SCRD BK4714 PG0827
- THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION, SIZE, PAVING, AND RADIUS OF DRIVEWAY AND PARKING LOT WITHIN THE SITE.
- PARCEL IS ZONED VILLAGE DISTRICT (VD) PER THE TOWN OF BARRINGTON, NH ZONING MAP AMENDED JUNE 6, 2014.
- PARCEL IS NOT IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 5301C0282D, DATED MAY 17, 2003.
- FIELDWORK CONDUCTED BY JONES & BEACH ENGINEERS, INC. IN SPRING 2014.
- WETLANDS WERE DELINEATED BY JONES & BEACH ENGINEERS INC. IN SPRING 2014.
- PROPERTY TO BE SERVICED BY ON-SITE WELL AND SEPTIC.
- ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
- THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERS, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
- BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-800-DIG-SAFE.
- ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.

LEGEND:

- GRANITE BOUND FOUND
- IRON PIPE FOUND
- DRILL HOLE FOUND
- (TYPE)
- (TER)
- TO BE REMOVED
- VGC VERTICAL GRANITE CURB
- SGC SLOPED GRANITE CURB
- PPP PROPOSED POROUS PAVEMENT
- PTP PROPOSED TRADITIONAL PAVEMENT
- PROPERTY LINE
- EDGE OF PAVEMENT (EOP)
- SUBSURFACE INFILTRATION
- TRAFFIC DIRECTION
- (NOT TO BE PAINTED)
- SOIL DELINEATION
- OHE OVERHEAD UTILITIES
- UG UNDERGROUND UTILITIES
- UTILITY POLE
- SUY WIRE
- LIGHT FIXTURE
- WELL
- WATER LINE
- DRAIN LINE
- SEPTIC LINE
- GAS
- GAS LINE
- STONEWALL
- GUARD RAIL
- CHAINLINK FENCE
- WETLANDS
- SILT SOCK
- TREE LINE
- TREE
- NUMBER OF PARKING SPOTS IN AREA



**PLANNING BOARD
BARRINGTON, NH**

- APPROVED -
File Number 233-77, 234-1, 2, 1, 4
Date 3/17/2020
Chairman [Signature]

6	FEB 20, 2020	FOR APPROVAL	
5	JAN 10, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
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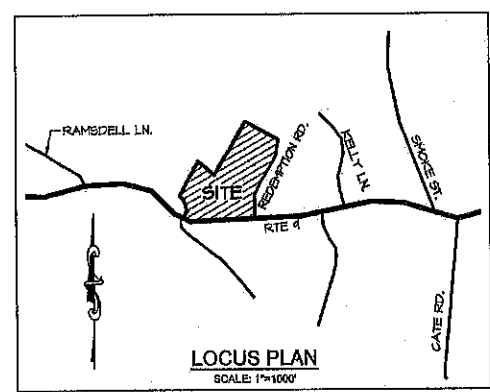
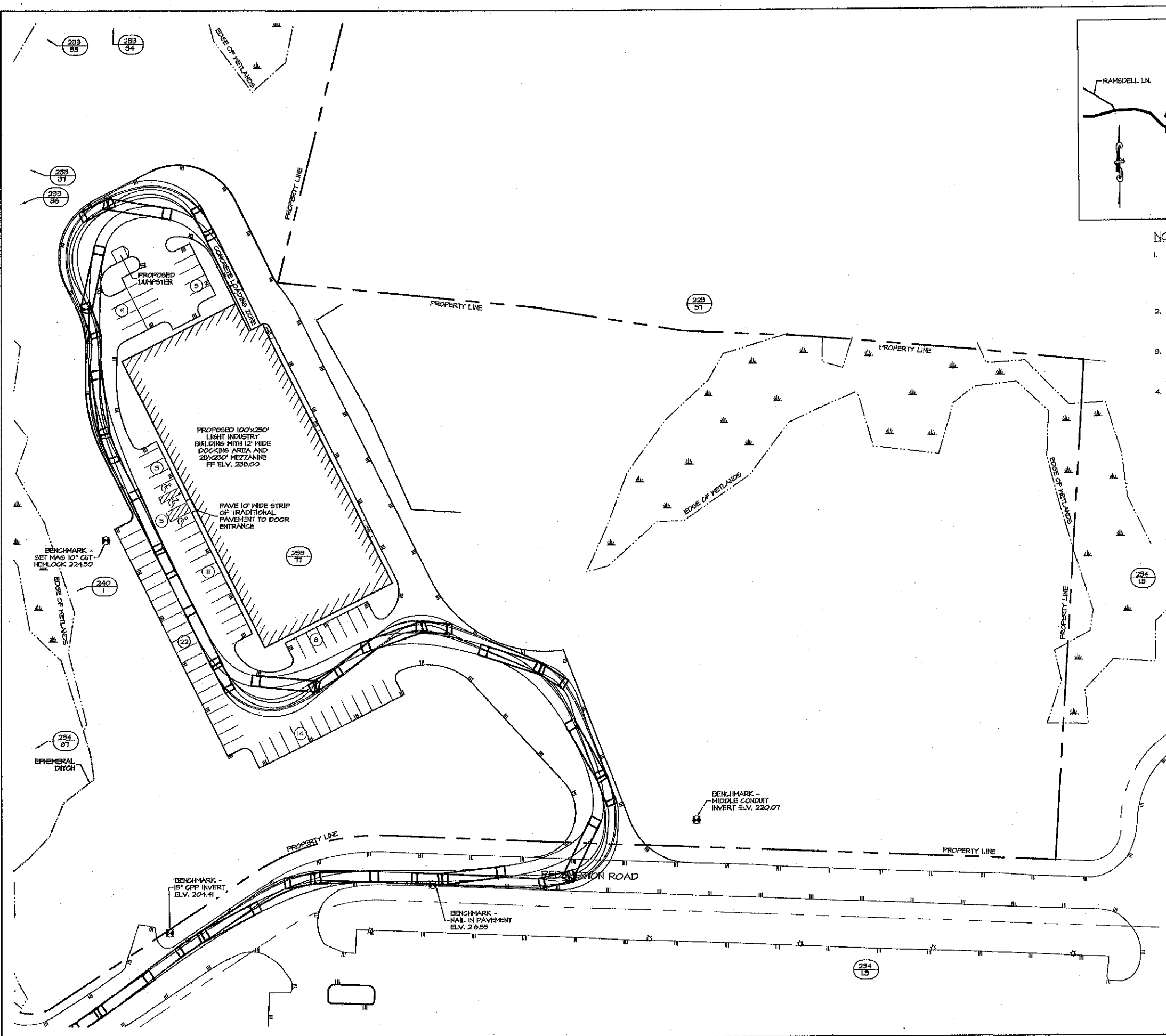
CLIENT:
TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

SEAL:

Bruce D. Scamman

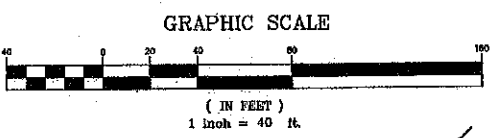
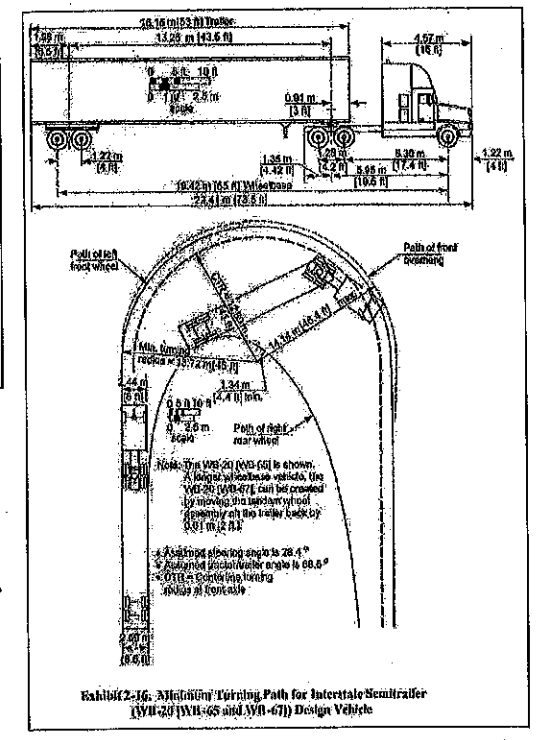
TITLE:
PAVING PLAN
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825

PROJECT: 19-020 SCALE: 1"=40' SHEET: C6



NOTES:

- OWNER OF RECORD:
TAX MAP 233 LOT 77
RRB5, LLC
607 CALEF HIGHWAY, SUITE 200
BARRINGTON, NH 03825
SCRD BK-474 PG0827
- THE INTENT OF THIS PLAN IS TO SHOW VERIFY THAT A WB-65 INTERSTATE SEMI-TRAILER CAN EXIT THE PROPOSED SITE FROM THE PROPOSED LOADING DOCK.
- THE VEHICLE PATH TRACKING FEATURE FROM CARLSON CIVIL 2014 WAS USED TO DEMONSTRATE THE APPROXIMATE VEHICLE PATH.
- FIELDWORK CONDUCTED BY JONES 4 BEACH ENGINEERS, INC. IN SPRING 2014.



LEGEND:

⊠	GRANITE BOUND FOUND
○	IRON PIPE FOUND
⊙	DRILL HOLE FOUND
(TYP)	TYPICAL
(REF)	TO BE REMOVED
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
PPP	PROPOSED POROUS PAVEMENT
PTP	PROPOSED TRADITIONAL PAVEMENT
---	PROPERTY LINE
---	EDGE OF PAVEMENT (EOP)
---	SUBSURFACE INFILTRATION
---	TRAFFIC DIRECTION
---	(NOT TO BE PAINTED)
.....	SOIL DELINEATION
---	OVERHEAD UTILITIES
---	UNDERGROUND UTILITIES
---	UTILITY POLE
---	GUY WIRE
---	LIGHT FIXTURE
---	WELL
---	WATER LINE
---	DRAIN LINE
---	SEPTIC LINE
---	GAS LINE
---	STONEWALL
---	GUARD RAIL
---	CHAINLINK FENCE
---	WETLANDS
---	SILT BOX
---	TREELINE
---	TREE
---	NUMBER OF PARKING SPOTS IN AREA

**PLANNING BOARD
BARRINGTON, NH
- APPROVED -**

File Number 233-77, 234-1, 2+1.4
Date 3/17/2020
Chairman [Signature]

8	FEB 20, 2020	FOR APPROVAL	
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CLIENT:
TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

SEAL:

BDS 2/20/20

TITLE:
**TURNING TEMPLATE
(WB-65 EXITING SITE)
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825**

PROJECT:	SCALE:	SHEET:
19-020	1"=40'	C8

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION PHASING AND SEQUENCING:

- SEE 'EROSION AND SEDIMENTATION CONTROL GENERAL NOTES' WHICH ARE TO BE AN INTEGRAL PART OF THIS PROCESS.
- INSTALL SILT FENCING AND/OR HAY BALE BARRIERS AS PER DETAILS AND AT SEDIMENT MIGRATION.
- CONSTRUCT TREATMENT SWALES, LEVEL SPREADERS AND DETENTION STRUCTURES AS DEPICTED ON DRAWINGS.
- INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES) AS PER DETAIL AND AT LOCATIONS SHOWN ON THE DRAWINGS. MAINTAIN (TOP DRESS) REGULARLY TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS.
- STRIP AND STOCKPILE TOPSOIL. STABILIZE PILES OF SOIL CONSTRUCTION MATERIAL.
- ROUGH GRADE SITE. INSTALL CULVERTS AND ROAD DITCHES.
- FINISH GRADE AND COMPACT SITE.
- RE-SPREAD AND ADD TOPSOIL TO ALL ROADSIDE SLOPES. TOTAL TOPSOIL THICKNESS TO BE A MINIMUM OF FOUR TO SIX INCHES.
- STABILIZE ALL AREAS OF BARE SOIL WITH MULCH AND SEEDING.
- RE-SEED PER EROSION AND SEDIMENTATION CONTROL GENERAL NOTES.
- SILT FENCING AND HAY BALES TO REMAIN AND BE MAINTAINED FOR TWENTY FOUR MONTHS AFTER CONSTRUCTION TO INSURE ESTABLISHMENT OF ADEQUATE SOIL STABILIZATION AND VEGETATIVE COVER. ALL SILT FENCING, HAY BALES AND TRAPPED SILT ARE THEN TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
- PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
- PONDS AND SWALES SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE - BEFORE ROUGH GRADING THE SITE.
- ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 12 HOURS OF ACHIEVING FINISHED GRADE.
- ALL CUT AND FILL SLOPES SHALL BE SEEDDED/LOAMED WITHIN 12 HOURS OF ACHIEVING FINISH GRADE.
- ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.

WINTER CONSTRUCTION NOTES (OCTOBER 15 TO MAY 1):

- ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE 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 5:1 AND GRADING AND PLACING 5 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE, THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAN OR SPRING MELT EVENT.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH OR WHICH ARE DISTURBED AFTER OCTOBER 15TH SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER WIDTH ITEM 304.3.

GRASS SWALE MAINTENANCE:

- TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VISIBLY GOOD CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION. HOWEVER, IT SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE FILTERING EFFECT. FERTILIZE ON AN 'AS NEEDED' BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.
- THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES:

- CONDUCT ALL CONSTRUCTION IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE PHYSICAL ENVIRONMENT, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN THE PLAN SHALL MEET THE DESIGN BASED ON NEW HAMPSHIRE STORED-WATER MANUAL, VOLUMES 1-5 DATED DECEMBER 2009, PREPARED BY NDES.
- 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 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED.
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- SEE MINOR CONSTRUCTION NOTES IF SCHEDULE AND DATES ARE APPLICABLE.
- ALL DITCHES, SWALES AND PONDS MUST BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- ALL GROUND AREAS OPENED UP FOR CONSTRUCTION WILL BE STABILIZED IN THE SHORTEST PRACTICAL TIME. ALL SOILS FINISH GRADED MUST BE STABILIZED WITHIN SEVENTY TWO HOURS OF DISTURBANCE.
- EMPLOY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS DETAILED ON THIS PLAN AS NECESSARY UNTIL ADEQUATE STABILIZATION HAS BEEN ASSURED.
- TEMPORARY & LONG TERM SEEDING, USE SEED MIXTURES, FERTILIZER, LIME AND MULCHING AS RECOMMENDED (SEE SEEDING AND STABILIZATION NOTES).
- STRAW OR HAY BALE BARRIERS AND SILTATION FENCING TO BE SECURELY EMBEDDED AND STAKED AS DETAILED. WHEREVER POSSIBLE A VEGETATED STRIP OF AT LEAST TWENTY FIVE FEET IS TO BE KEPT BETWEEN SILT FENCE AND ANY EDGE OF NET AREA.
- SEEDDED AREAS WILL BE FERTILIZED AND RE-SEEDDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.
- SEDIMENT BASINS, IF REQUIRED, TO BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN DESIGN CAPACITY.
- STRAW BALE AND/OR SILT FENCE BARRIERS WILL BE CHECKED REGULARLY AND AFTER EACH SIGNIFICANT RAINFALL. NECESSARY REPAIRS WILL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIER AS WELL AS CLEANING, REMOVAL AND PROPER DISPOSAL OF TRAPPED SEDIMENT.
- TREATMENT SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED.
- THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:68 AND CHAPTER ASR 3000 RELATIVE TO INVASIVE SPECIES.
- TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL AREAS ARE STABILIZED.

SEEDING AND STABILIZATION FOR LOAMED SITE:

- FOR TEMPORARY & LONG TERM SEEDINGS (BY SEPTEMBER 15 OF THE SAME YEAR OF DISTURBANCE) USE ALWAYS SOIL CONSERVATION GRASS SEED OR EQUAL.
- COMPONENTS: ANNUAL RYE GRASS, PERENNIAL RYE GRASS, WHITE CLOVER, 2 FESCUES, SEED AT A RATE OF 100 POUNDS PER ACRE.
- FERTILIZER & LIME: NITROGEN (N) 50 LBS/ACRE, PHOSPHATE (P2O5) 100 LBS/ACRE, POTASH (K2O) 100 LBS/ACRE, LIME 2000 LBS/ACRE.
- MULCH: HAY OR STRAW 15-2 TONS/ACRE.
- GRADING AND SHAPING: SLOPES SHALL NOT BE STEEPER THAN 3:1, 5:1 SLOPES OR FLATTER ARE PREFERRED, WHERE MOWING WILL BE DONE, 5:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEED BED PREPARATION - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS. - STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

STABILIZATION CONSTRUCTION ENTRANCE SPECIFICATIONS:

- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE (MINIMUM), RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 15 FEET (OR 50 FEET WITH A 3 TO 6 INCH MOUNTABLE BERM).
- THE THICKNESS OF THE STONE FOR THE STABILIZATION ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
- GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BEHIND THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSINGS OF ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.
- WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEEL WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

FILTREXX LAND IMPROVEMENT SYSTEMS INSPECTION & MAINTENANCE:

- CONSULT FILTREXX SWPP CUT SHEETS FOR ALL FILTREXX PRODUCTS PRIOR TO INSTALLATION AND FOR MAINTENANCE GUIDELINES. [HTTP://WWW.FILTREXX.COM/DESIGN/CUT_SHEETS.HTM](http://www.filtrexx.com/design/cut_sheets.htm)
- ROUTINE INSPECTION SHOULD BE CONDUCTED WITHIN 24 HRS OF A RUNOFF EVENT OR AS DESIGNATED BY THE REGULATING AUTHORITY. UNITS SHOULD BE REGULARLY INSPECTED TO MAKE SURE THEY MAINTAIN THEIR SHAPE AND ARE PRODUKING ADEQUATE HYDRAULIC FLOW-THROUGH DITCH/CHANNEL EROSION CONTROL, AND SEDIMENT REMOVAL.
- IF PONDS BECOMES EXCESSIVE, ADDITIONAL CHECK DAMS, LEVEL SPREADERS, OR SEDIMENT CONTROL UNITS FOR SEDIMENT REMOVAL MAY BE REQUIRED.
- SEDIMENT ACCUMULATION SHOULD BE REMOVED ONCE IT REACHES THE HEIGHT OF THE CHECK DAM OR UNIT. ALTERNATIVELY, ANOTHER UNIT MAY BE INSTALLED SLIGHTLY UP-SLOPE, ON TOP OF THE EXISTING ONE. THIS PROCESS IS NOT CONSIDERED A SOIL DISTURBING ACTIVITY.
- STORM DEBRIS ACCUMULATION BEHIND CHECK DAMS, LEVEL SPREADER, SEDIMENT CONTROL UNIT, ETC. SHOULD NEVER BE HIGHER THAN THE SIDES OF THE CHECK DAM/UNIT. STORM RUNOFF OVERFLOW SHALL MAINTAIN THE UNITS IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
- IF A UNIT HAS BEEN DAMAGED, IT SHALL BE REPAIRED, OR REPLACED IF BEYOND REPAIR.

- THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF UNITS WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE SOXX, OR AS DIRECTED BY THE ENGINEER.
- AS AN ALTERNATIVE, ANOTHER SOXX UNIT MAY BE INSTALLED ADJACENT AND PARALLEL TO THE UPSLOPE SIDE OF THE ORIGINAL TO INCREASE SEDIMENT STORAGE CAPACITY. SOXX BEDDING BACKUP IN CENTER OF THE DITCH/CHANNEL SHALL REMAIN LOWER THAN THE SIDES.
- IF SOXX UNIT BECOMES CLOGGED WITH DEBRIS AND SEDIMENT, IMMEDIATE REMOVAL OF DEBRIS AND SEDIMENT SHOULD BE CONDUCTED TO ASSURE PROPER DRAINAGE AND WATER FLOW THROUGH THE DITCH OR CHANNEL. STORM RUNOFF OVERFLOW OF THE SOXX UNIT IS ACCEPTABLE.
- SOXX UNITS SHALL BE MAINTAINED UNTIL DISTURBED AREA AROUND THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.
- THE FILTER-MEDIUM MAY BE DISPERSED ON SITE ONCE DISTURBED AREA HAS PERMANENTLY STABILIZED, CONSTRUCTION ACTIVITY CEASED, OR DETERMINED BY THE ENGINEER.
- PERMANENT VEGETATED FILTER STRIPS WILL BE LEFT INTACT.

BLASTING NOTES - BEST MANAGEMENT PRACTICES (BMP) (1910) (1002) (LOADING PRACTICES):

- THE DRILLER SHALL MAINTAIN DRILLING LOGS TO DOCUMENT:
 - THE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER NEAR ZONES ENCOUNTERED; AND
 - GROUNDWATER CONDITIONS.
- THE DRILLER SHALL COMMUNICATE THE CONTENTS OF THE DRILLING LOGS DIRECTLY TO THE BLASTER.
- EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE THAT THEY ARE:
 - USED IN BOREHOLE,
 - RETURNED TO THE DELIVERY VEHICLE, OR
 - PLACED IN SECURE CONTAINERS FOR OFF-SITE DISPOSAL.
- SPILLAGE AROUND THE BOREHOLE SHALL BE:
 - PLACED IN BOREHOLE OR
 - CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL.
- LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND NOT LEFT IN THE BLAST HOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED.
- LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT.
- EXPLOSIVES SHALL BE LOADED IN ACCORDANCE WITH INDUSTRY STANDARD PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION.

10.04 EXPLOSIVE SELECTION:

- APPROPRIATE FOR SITE SITE CONDITIONS AND SAFE BLAST OPERATION AND
- HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT.

10.05 PREVENTION OF MISFIRE:

- INDUSTRY-STANDARD PRACTICES SHALL BE IMPLEMENTED TO PREVENT MISFIRES.

10.06 MUCK AND ROCK MANAGEMENT:

- FOR PURPOSES OF THIS PART, THE FOLLOWING DEFINITIONS APPLY:
 - 'BLASTED MATERIAL' MEANS ALL OF THE EARTH MATERIAL LOOSENED AS A RESULT OF THE BLASTING.
 - 'MUCK' MEANS THE BLASTED MATERIAL REMAINING AFTER THE ROCKS HAVE BEEN REMOVED, AND
 - 'ROCKS' MEANS THE LARGER PIECES OF BLASTED MATERIAL THAT ARE SEPARATED FROM THE MUCK FOR USE ELSEWHERE, INCLUDING FOR FEEDSTOCK OF A ROCK CRUSHING OPERATION.
- MUCK SHALL BE REMOVED FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.
- ROCKS SHALL BE MANAGED SO AS TO PREVENT WATER SUPPLY WELLS OR SURFACE WATERS FROM BEING CONTAMINATED BY RUNOFF.

10.07 SPILL PREVENTION MEASURES & MITIGATION:

- FUEL AND OTHER REGULATED SUBSTANCES SHALL BE MANAGED AS REQUIRED BY 616-MR 401.04.
- PERSONNEL WORKING AT THE BLAST SITE SHALL BE TRAINED IN HOW TO RESPOND TO A SPILL OF THE REGULATED SUBSTANCES BEING USED AT THE SITE.

10.08 FUELING & MAINTENANCE OF CONSTRUCTION EQUIPMENT:

- IF ANY CONSTRUCTION EQUIPMENT, INCLUDING BUT NOT LIMITED TO EARTHMOVING, EXCAVATION, AND BORING EQUIPMENT, WILL BE FUELED FROM A TANK TRUCK OR OTHER CONTAINER THAT IS MOVED AROUND THE SITE, THE FOLLOWING SHALL APPLY:
 - PORTABLE CONTAINMENT EQUIPMENT THAT IS SIZED TO CONTAIN THE MOST LIKELY VOLUME OF FUEL TO BE SPILLED DURING A FUEL TRANSFER SHALL BE POSITIONED WHERE THE MOST LIKELY VOLUME TO BE SPILLED IS DETERMINED BASED ON THE FUEL TRANSFER RATE, THE AMOUNT OF FUEL BEING TRANSFERRED, THE DISTANCE BETWEEN THE HOSE NOZZLE AND PUMP SHUT OFF SWITCH, AND THE RESPONSE TIME OR PERSONNEL AND EQUIPMENT AVAILABLE AT THE FACILITY.
 - THE CONTAINMENT EQUIPMENT SHALL BE POSITIONED TO CATCH ANY FUEL SPILLS DUE TO OVERFILLING THE EQUIPMENT AND ANY OTHER SPILLS THAT MIGHT OCCUR AT OR NEAR THE FUEL FILLER PORT TO THAT EQUIPMENT.
 - THE TYPE OF CONTAINMENT EQUIPMENT USED AND ITS POSITIONING AND USE SHALL ACCOUNT FOR ALL OF THE DRIP POINTS ASSOCIATED WITH THE FUEL FILLING PORT AND THE HOSE FROM THE DELIVERY TRUCK, AND
 - PERSONNEL SHALL NOT LEAVE THE IMMEDIATE AREA WHILE FUEL IS BEING TRANSFERRED, TO ENSURE THAT ANY SPILLS WILL BE OF LIMITED VOLUME.
- IF THE SITE WILL HAVE A FIXED LOCATION FOR FUELING CONSTRUCTION EQUIPMENT, THE FOLLOWING SHALL APPLY:
 - ALL FUEL CONTAINERS, INCLUDING BUT NOT LIMITED TO SKID-MOUNTED TANKS, DRUMS, AND FIVE GALLON CANS, SHALL HAVE SECONDARY CONTAINMENT THAT:
 - IS CAPABLE OF CONTAINING 100% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER, AND
 - HAS AN IMPERVIOUS FLOOR.
 - SECONDARY CONTAINMENT FOR TANKS MAY COMPRISE A METAL, PLASTIC, POLYMER OR PRECAST CONCRETE VAULT PROVIDED 100% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER.

BLASTING NOTES (CONTINUED)

- FOR FUEL CONTAINERS, SECONDARY CONTAINMENT MAY COMPRISE CONTAINMENT PALLETES.
 - THE AREA WHERE FUEL IS TRANSFERRED SHALL BE A FLAT, IMPERVIOUS AREA THAT:
 - IS ADJACENT TO THE FUEL CONTAINER(S);
 - EXTENDS BEYOND THE FULL REACH, OR LENGTH, OF THE FUEL HOSE.
- SECONDARY CONTAINMENT AREAS MAY BE IN THE FORM OF A BASIN THAT IS:
 - SLOPED DOWN TO A CENTRAL LOW POINT OR BERMED ALONG THE PERIMETER.
 - LINED WITH A CONTINUOUS SHEET OF 20 MIL OR THICKER POLYMER MATERIAL OR APPROPRIATE GEOMEMBRANE LINER, AND
 - BACKFILLED WITH AT LEAST 6" OF SAND.

BIORETENTION SOIL MEDIA (BSM):

- BSM COMPONENTS SHALL BE MIXED THOROUGHLY AND UNIFORMLY IN BATCHES NOT TO EXCEED 20 CUBIC YARDS OR AT THE DISCRETION OF THE SUPERVISING ENGINEER. SOIL FILTER MEDIA SHALL BE PERMEABLE ENOUGH TO INSURE DRAINAGE OF THE STORAGE WATER PLANTER WITHIN 24 TO 48 HOURS MAXIMUM. NO OTHER MATERIALS OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS CAN BE MIXED WITHIN THE FILTER.
- THE BSM SHALL MEET THE SOIL COMPOSITION CRITERIA LISTED BELOW AND SUBMITTED TO REVIEW ENGINEER FOR APPROVAL.
 - 65% MEDIUM SAND.
 - 30% LOAM.
 - 5% WATER TREATMENT RESIDUALS.
 - 8-12% ORGANIC MATTER.
- LOAM SHALL BE LANDSCAPE GRADE SOIL, DARK & RICH, WITH HIGH ORGANIC MATTER CONTENT, OFTEN REFERRED TO AS 'SUPER LOAM'. NOT TO BE CONFUSED WITH SCREENED TOPSOIL.
- PROVIDE A SOIL TEST OF THE BIORETENTION SOIL FOR CONFORMANCE TO THE FOLLOWING CRITERIA:


A) PH RANGE:	6.0-7.0.
B) MAGNESIUM:	MINIMUM 32 PPM.
C) PHOSPHORUS (P2O5):	NOT TO EXCEED 40 PPM.
D) POTASSIUM (K2O):	MINIMUM 18 PPM.
E) SOLUBLE SALTS:	NOT TO EXCEED 500 PPM.

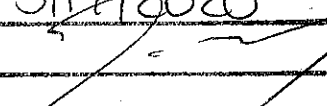
BIORETENTION/ISR CONSTRUCTION SEQUENCE:

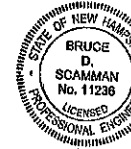
- IF THE SOIL PH IS NOT WITHIN THE ACCEPTABLE RANGE, AMEND WITH LIME TO RAISE THE PH OR WITH IRON SULFATE TO LOWER THE PH AS NECESSARY. ALL TESTING SHOULD BE PERFORMED BY THE SAME TESTING FACILITY TO MAINTAIN CONSISTENT RESULTS. SUBMIT THE SOIL SAMPLE RESULTS TO THE ENGINEER REVIEW AND APPROVAL PRIOR TO DELIVERY TO THE PROJECT SITE.
- DO NOT MIX, DUMP OR STORE ANY OTHER MATERIALS OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVE A HINDRANCE TO THE PLANTING MAINTENANCE OR OPERATIONS WITHIN THE BIORETENTION AREA.
 - CONNECTIONS TO STORM DRAIN SYSTEM.
 - UNDERDRAIN CLEANOUTS
- THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. COORDINATE WITH THE OWNER, ENGINEERS, AND LANDSCAPE ARCHITECTS AND SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- CONDUCT A PRE-CONSTRUCTION MEETING.
- CHECK FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION.
- CLEAR AND GRUB THE PROPOSED BIORETENTION AREA.
- ROUGH GRADE THE BIORETENTION AREA DURING GENERAL CONSTRUCTION.
- EXCAVATE PRETREATMENT CELLS AND/OR SEDIMENT FOREBAYS PRIOR TO BIORETENTION CONSTRUCTION.
- DO NOT CONSTRUCT THE BIORETENTION AREA UNTIL ALL DISTURBED AREAS WITHIN THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN GRADED AND STABILIZED.
- INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS TO DIVERT STORMWATER AWAY FROM THE BIORETENTION AREA.
- EXCAVATE THE BIORETENTION FACILITY TO THE BOTTOM INVERT OF THE SYSTEM.
- INSTALL THE FILTER FABRIC AND GEOMEMBRANE ALONG THE EXCAVATION SIDE WALLS.
- ENGINEER FIELD VISIT AND REPORT REQUIRED SEE NOTE (8) BELOW.
- IF THE SITE WILL HAVE A FIXED LOCATION FOR FUELING CONSTRUCTION EQUIPMENT, THE FOLLOWING SHALL APPLY:
 - ALL FUEL CONTAINERS, INCLUDING BUT NOT LIMITED TO SKID-MOUNTED TANKS, DRUMS, AND FIVE GALLON CANS, SHALL HAVE SECONDARY CONTAINMENT THAT:
 - IS CAPABLE OF CONTAINING 100% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER, AND
 - HAS AN IMPERVIOUS FLOOR.
 - SECONDARY CONTAINMENT FOR TANKS MAY COMPRISE A METAL, PLASTIC, POLYMER OR PRECAST CONCRETE VAULT PROVIDED 100% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER.

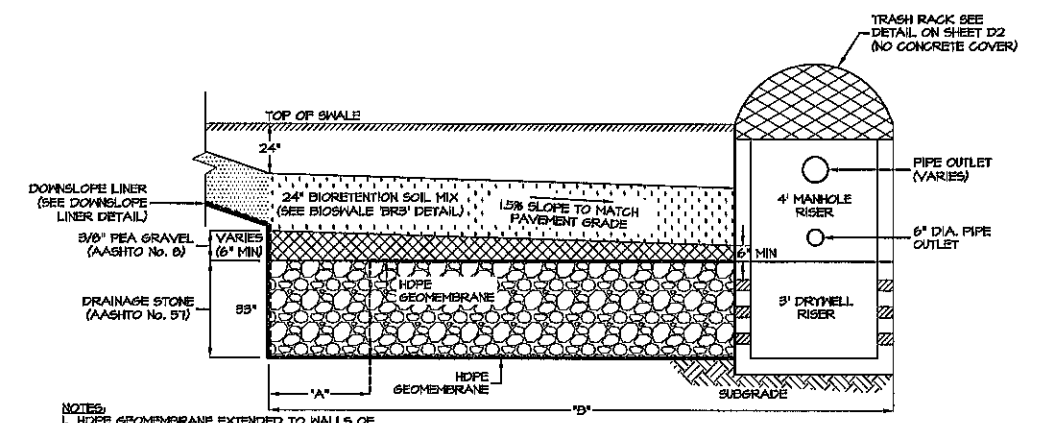
CONSTRUCTION SEQUENCE NOTES (CONTINUED):

- BACKFILL WITH APPROVED BIORETENTION SOIL TO THE DESIGN GRADE (UN-COMPACTED) AS INDICATED ON DRAWINGS. THE CONTRACTOR MUST SUBMIT A SOIL SAMPLE (1 GALLON) TO THE ENGINEER PRIOR TO SOIL DELIVERY TO THE SITE.
- STABILIZE ALL REMAINING DISTURBED AREAS AND SIDE SLOPES WITH SEEDING, HYDROSEEDING, AND/OR EROSION CONTROL BLANKETS AS INDICATED ON DRAWINGS.
- INSTALL BIORETENTION PLANTINGS AS INDICATED ON DRAWINGS. DO NOT PLANT BEFORE THE REMAINING DISTURBED AREAS SURROUNDING THE FACILITY ARE STABILIZED.
- CONDUCT FINAL CONSTRUCTION INSPECTION WITH ENGINEER, ENGINEER FIELD VISIT AND REPORT REQUIRED SEE NOTE (23) BELOW.
- REMOVE REMAINING EROSION AND SEDIMENT CONTROLS ONLY AFTER SURROUNDING DISTURBED AREAS HAVE BEEN PROPERLY STABILIZED.
- SEE GENERAL CONSTRUCTION NOTES FOR OVERALL CONSTRUCTION SEQUENCE.
- SEE GENERAL NOTES/SPECIFICATIONS/CONSTRUCTION DETAILS FOR DETAILED CONSTRUCTION REQUIREMENTS.
- MANDATORY NOTIFICATION/APPROVAL OF THE PROJECT ENGINEER IS REQUIRED PRIOR TO PROCEEDING WITH NEXT STAGE. CALL THE ENGINEER (MASTERSTONE ENGINEERING) AT 609-666-2400.

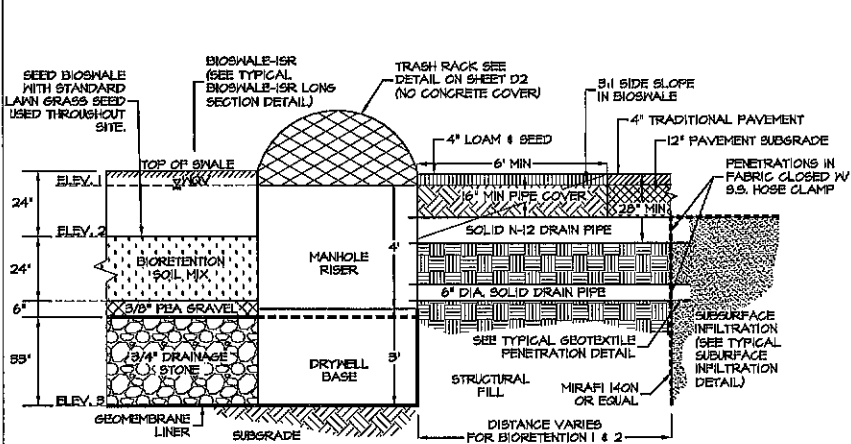
6	FEB 20, 2020	FOR APPROVAL	
4	JAN 10, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
ISS. DATE:	DESCRIPTION OF ISSUE:	CHK:	
DRAWN: JIM	DESIGN: RMR		
CHECKED: RMR	CHECKED: BDS		
 <p>EMANUEL ENGINEERING Civil & structural consultants, land planners 118 Portsmouth Avenue, A301 Barrington, NH 03825 Ph: 603-732-4100 Fax: 603-732-4157 www.emanuelengineering.com</p>			
CLIENT:			
TURBOCAM INTERNATIONAL 607 CALEF HIGHWAY BARRINGTON, NH 03825			
TITLE:			
NOTES FOR TAX MAP 233 LOT 77 RRB5, LLC & TURBOCAM INTERNATIONAL ROUTE 9 / REDEMPTION ROAD (SITE) BARRINGTON, NH 03825			
PROJECT:	SCALE:	SHEET:	
19-020	AS SHOWN	D1	

PLANNING BOARD
BARRINGTON, NH
APPROVED
 File Number 233-77-234-1.2H.4
 Date 3/17/2020
 Chairman 

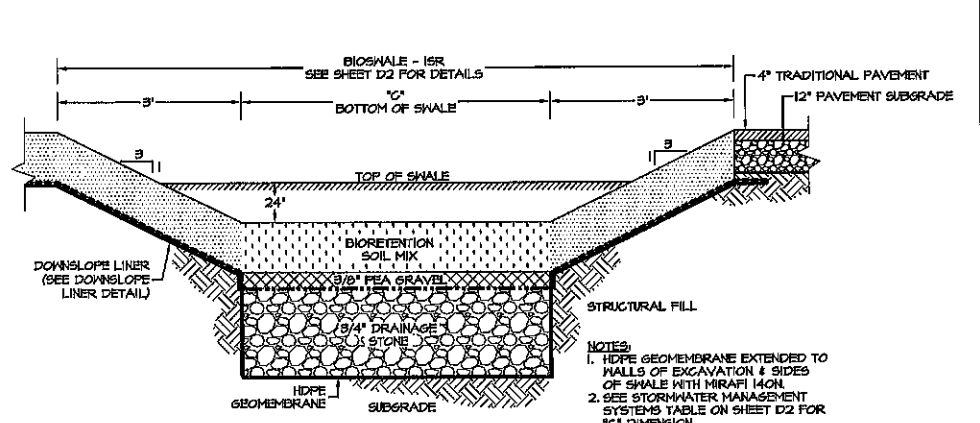




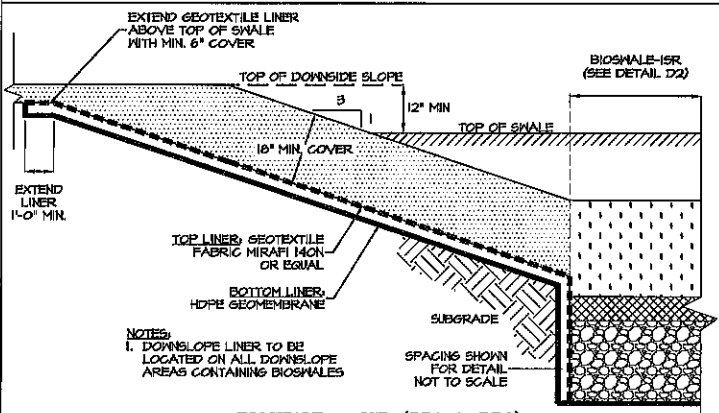
**BIOSWALE-ISR (BR1 & BR2)
LONG-SECTION TYPICAL DETAIL
N.T.S.**



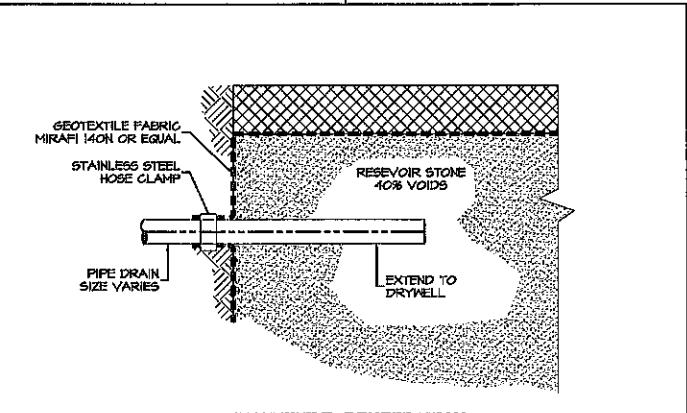
**BIOSWALE-ISR (BR1 & BR2)
OUTLET STRUCTURE (CB3 & CB5)
TYPICAL DETAIL
N.T.S.**



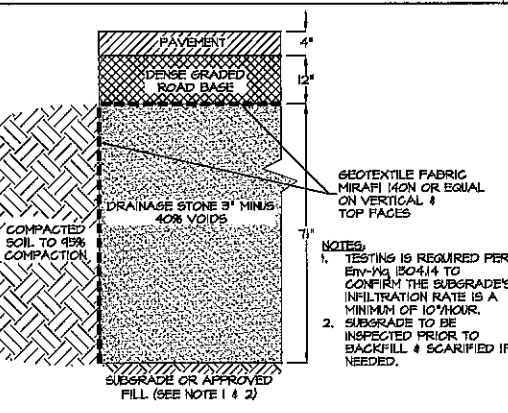
**BIOSWALE-ISR (BR1, BR2)
CROSS-SECTION TYPICAL DETAIL
N.T.S.**



**BIOSWALE - ISR (BR1 & BR2)
DOWNSLOPE LINER TYPICAL DETAIL
N.T.S.**



**GEOTEXTILE PENETRATION
TYPICAL DETAIL
N.T.S.**

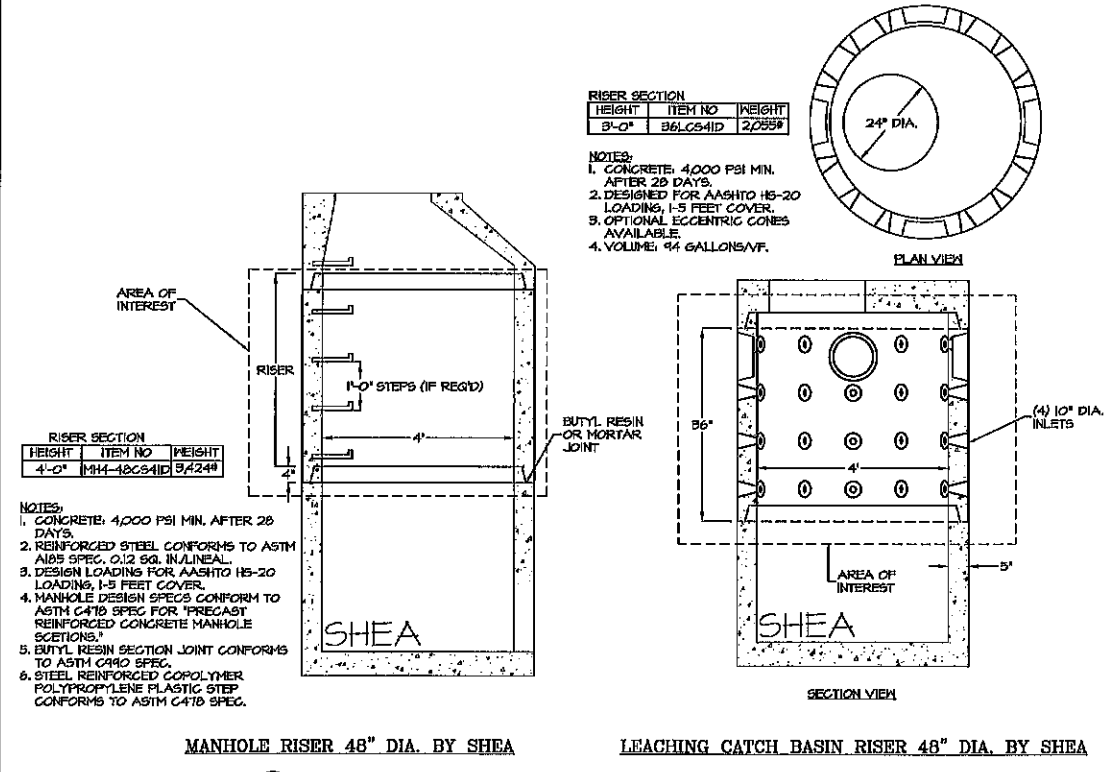


**SUBSURFACE INFILTRATION
TYPICAL DETAIL
N.T.S.**

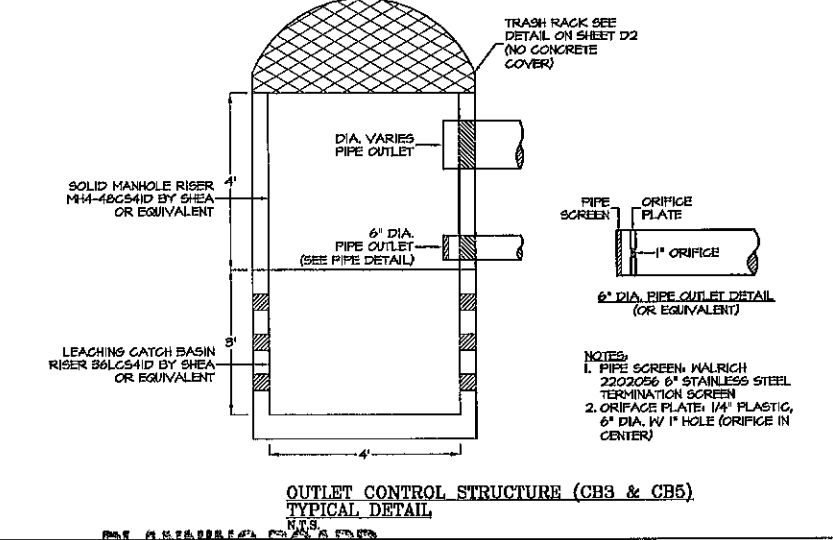
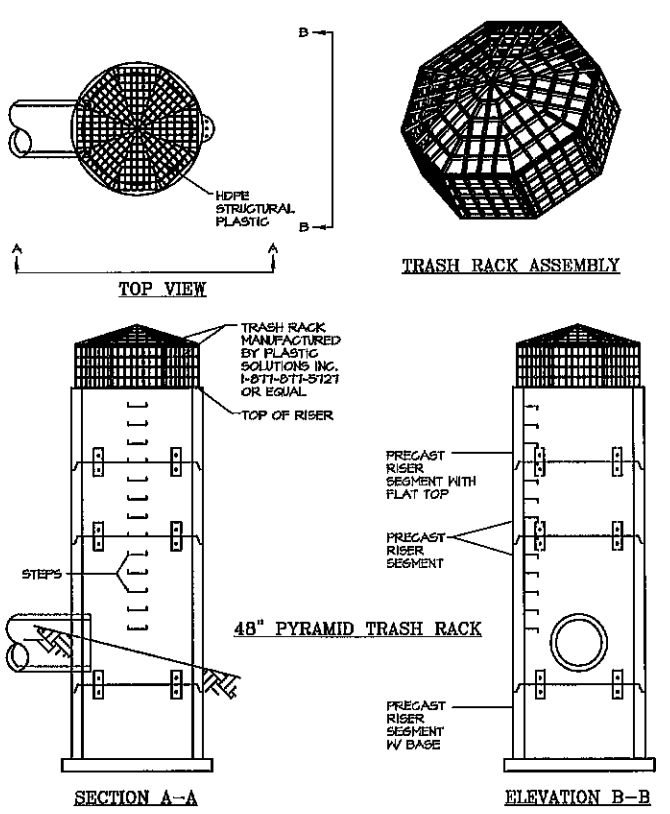
Stormwater Management System Chart

Plan Ref.	"A"	"B"	"C"	"Elev. 1"	"Elev. 2"	"Elev. 3"					
System	ID	Geomembrane opening (feet)	Depth - Total (feet)	ISR Depth (feet)	Depth-Bioswale Media (feet)	Area (Square feet)	Length (feet)	Width (feet)	Bypass Elev.	Elev. Top of BSM/Stone (feet)	Bottom Elev.
Bioswale-ISR	BR1	19.2	5.25	2.75	2	900	64	14	229.60	228.00	222.76
Bioswale-ISR	BR2	40	5.25	2.75	2	920	115	8	230.57	229.00	223.75
Subsurface Infiltration	SI1	N/A	6	N/A	N/A	8500	Varies	8	227.15	230.00	224.17
Bioswale	PP100	N/A	3.25	N/A	2	920	84	11	216.30	214.80	211.55

Notes:
1. See sheet D2 for Bioswale-ISR and subsurface infiltration (BR1, BR2, and SI1) details.
2. See sheet D5 for Bioswale (PP100) details.



**OUTLET CONTROL STRUCTURE COMPONENTS FOR BR1 & BR2 BY SHEA
N.T.S.**



**PLANNING BOARD
BARRINGTON, NH**

APPROVED

File Number 233-17,234-12+14
Date 3/17/2020
Chairman [Signature]



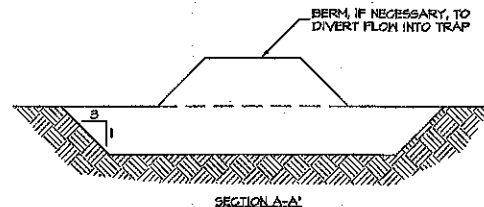
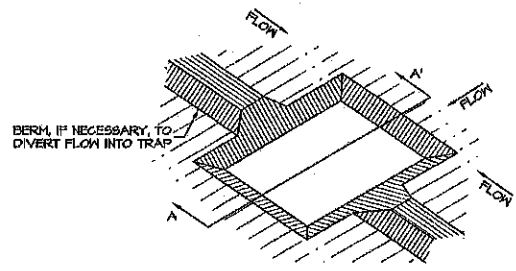
9	FEB 25, 2020	FOR APPROVAL	
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www.emanuelengineering.com

CLIENT:
**TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825**

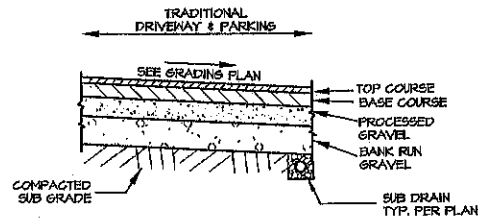
TITLE:
**DETAILS
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825**

PROJECT:	SCALE:	SHEET:
19-020	AS SHOWN	D2



- NOTES:
1. SEDIMENT TRAP DETAIL IS IN ACCORDANCE WITH Env-Hq 1506.10.
 2. SEDIMENT TRAPS SHOULD BE LOCATED SO THAT THEY CAN BE INSTALLED PRIOR TO DISTURBING THE AREA THEY ARE TO PROTECT.
 3. THE TRAP SHOULD BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
 4. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHOULD BE LESS THAN 5 ACRES.
 5. THE MINIMUM VOLUME OF THE TRAP SHOULD BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
 6. THE SIDE SLOPES OF THE TRAP SHOULD BE 5:1 OR FLATTER, AND SHOULD BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
 7. AN EARTH OUTLET SEDIMENT TRAP HAS A DISCHARGE POINT THAT IS EITHER OVER NATURAL GROUND OR CUT INTO NATURAL GROUND.
 8. THE OUTLET WIDTH SHOULD BE EQUAL TO 6 TIMES THE DRAINAGE AREA IN ACRES.
 9. THE EMBANKMENT AND OUTLET SHOULD BE VEGETATED WITHIN 3 DAYS OF CONSTRUCTION.

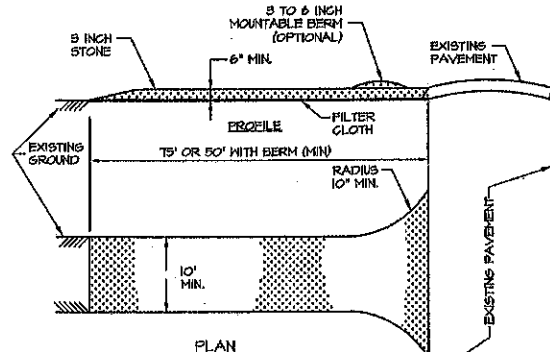
EARTH OUTLET SEDIMENT TRAP DETAIL
NOT TO SCALE



PAVEMENT COMPONENTS, MATERIALS AND PLACEMENT METHODS SHOULD MEET CURRENT NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) REQUIREMENTS.

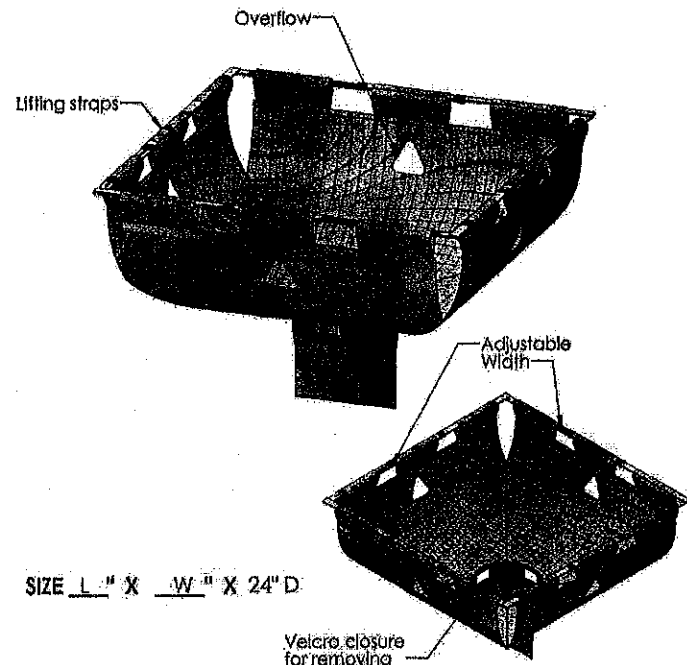
- DRIVEWAY:
- 2" ASPHALT WEARING SURFACE, NHDOT 1" NOMINAL MAXIMUM AGGREGATE SIZE
 - 3" ASPHALT BASE, NHDOT 3" NOMINAL MAXIMUM AGGREGATE SIZE
 - 6" CRUSHED GRAVEL BASE, NHDOT TYPE 30-4.9
 - 12" GRAVEL SUB BASE, NHDOT TYPE 30-4.2

TRADITIONAL DRIVEWAY & PARKING LOT SECTION
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

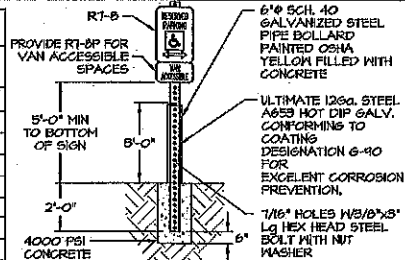
Slit Sack - Type C



AGF
2831 Cardwell Road
Richmond, VA 23234
WWW.AGFENVIRONMENTAL.COM

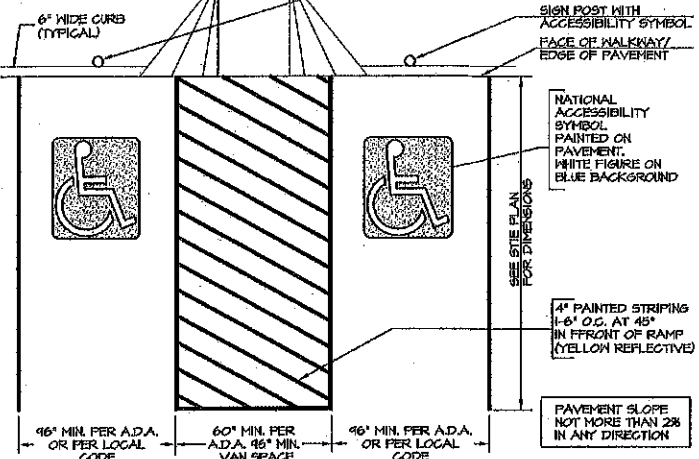
PARKING & PASSENGER LOADING ZONES

TOTAL # PARKING SPACES	STAND.	VAN	MINIMUM ACCESSIBLE SPACES	TOTAL
1 - 25	0	1	1	1
26 - 50	1	1	2	2
51 - 75	2	1	3	3
76 - 100	3	1	4	4
101 - 150	4	1	5	5
151 - 200	5	1	6	6
201 - 300	6	1	7	7
301 - 400	7	1	8	8
401 - 500	8	2	10	10
501 - 550	9	2	11	11
551 - 600	10	2	12	12
601 - 650	11	2	13	13

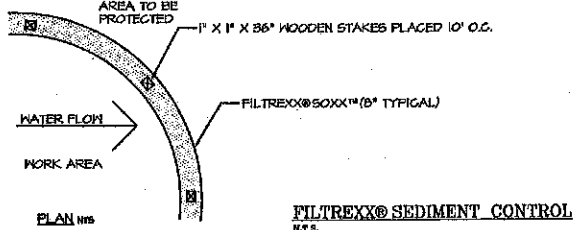
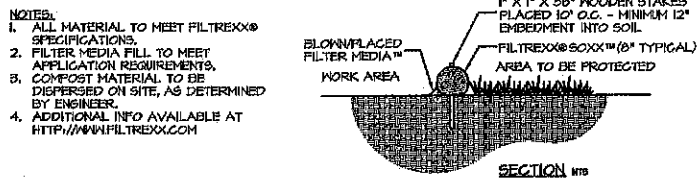


SIGN POST WITH ACCESSIBILITY SYMBOL & "VAN ACCESSIBLE" SIGN MOUNTED BELOW

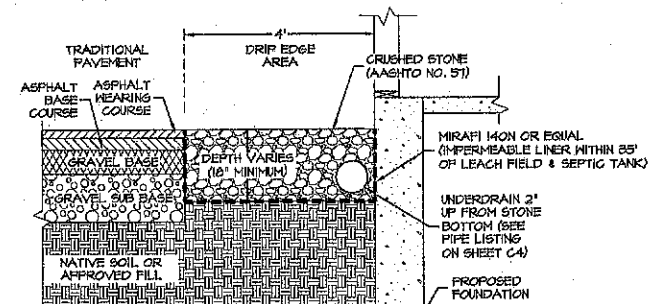
SIGN POST WITH ACCESSIBILITY SYMBOL FACE OF WALKWAY/ EDGE OF PAVEMENT



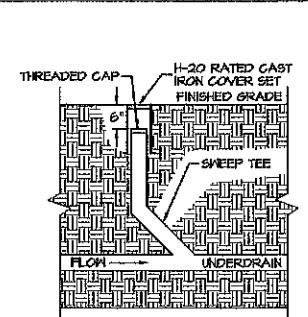
SEE PARKING & PASSENGER LOADING ZONES FOR SPACES REQUIRED.
PARKING STALL FOR THE PHYSICALLY CHALLENGED
N.T.S.



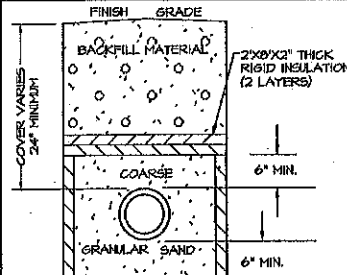
FILTREXX® SEDIMENT CONTROL
N.T.S.



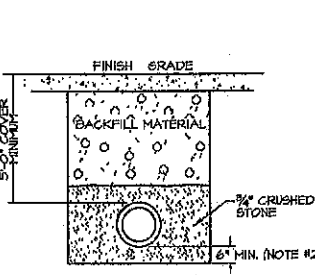
DRIP EDGE DETAIL
N.T.S.



UNDERDRAIN CLEANOUT DETAIL
NOT TO SCALE



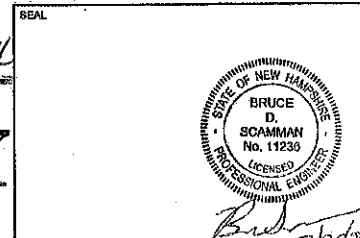
- NOTES:
- 1) INSULATE SEWER OR FORCE MAIN WHERE PIPE WILL BE LESS THAN 6" BELOW FLOWED AREAS OR LESS THAN 4" BELOW AREAS RAINING CROSS COUNTRY.
 - 2) GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2"X2"X2" PIECE OF INSULATION CENTERED OVER GAP.
- PIPE INSTALLATION DETAIL
N.T.S.



- NOTE:
1. SEE SITE PLAN FOR PIPE SIZES AND SERVICES.
 2. WHERE OVER BLASTED LEDGE, 12" OF STONE REQ'D.
 3. UNDERDRAINS OR WATER IMPOUNDMENT OUTLETS DO NOT APPLY.

DRAIN PIPE BEDDING DETAIL
N.T.S.

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BARRINGTON, NH
- APPROVED -
File Number 233-77,234-1244
Date 3/17/2020
Chairman



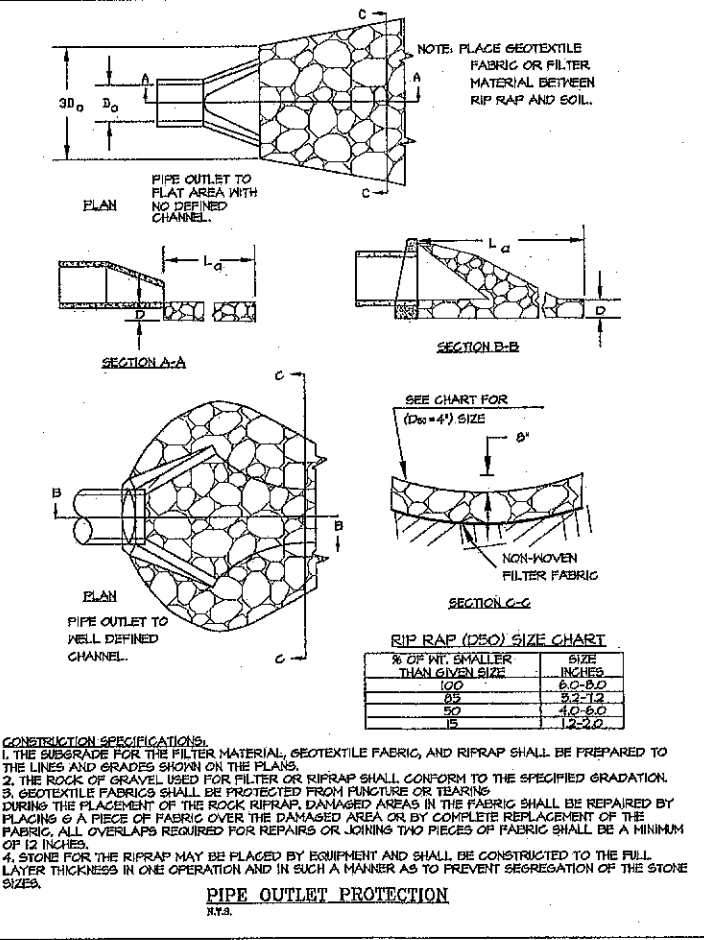
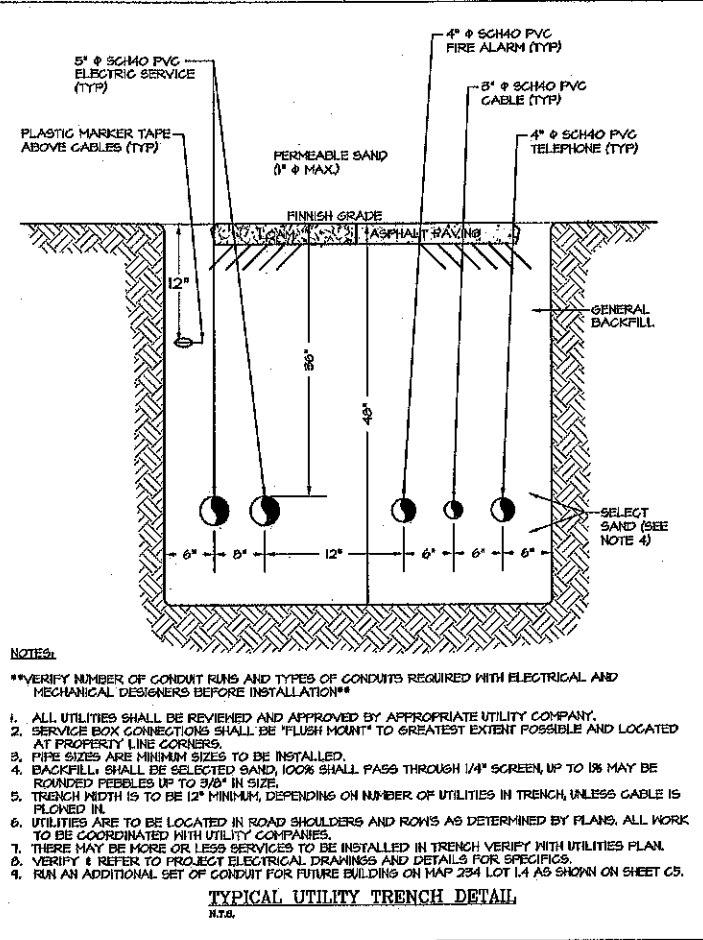
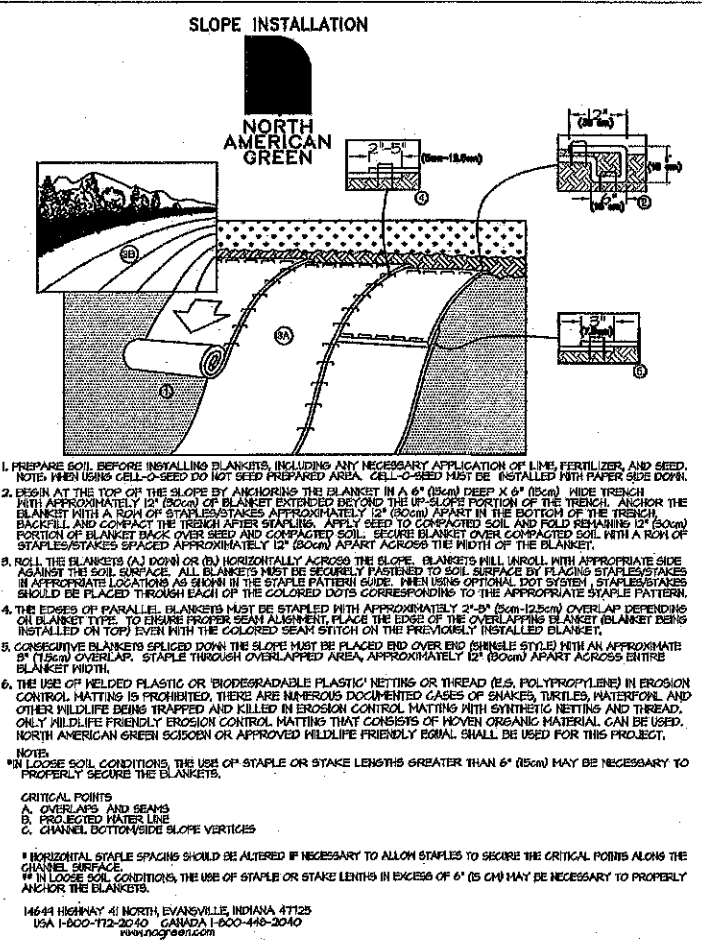
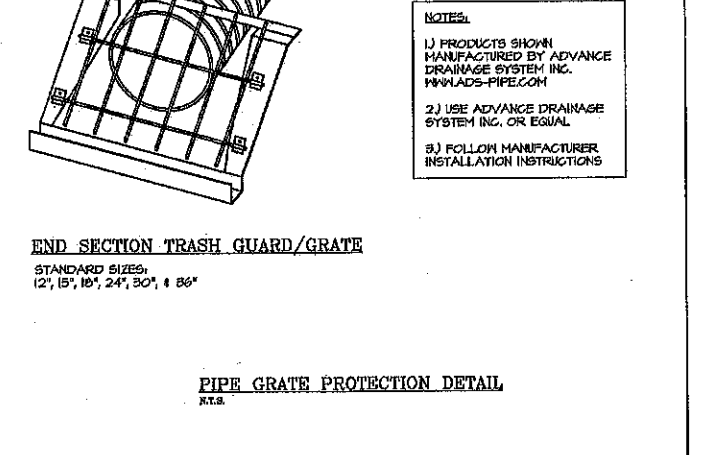
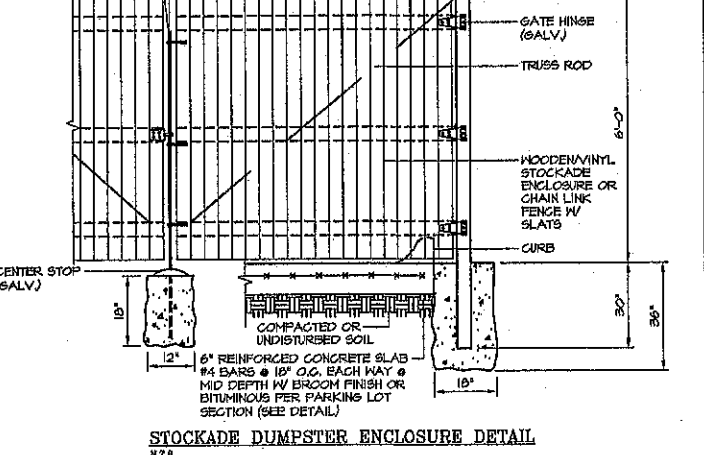
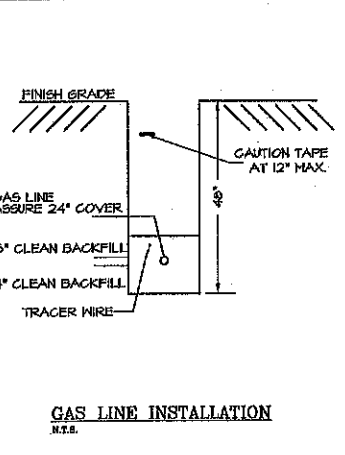
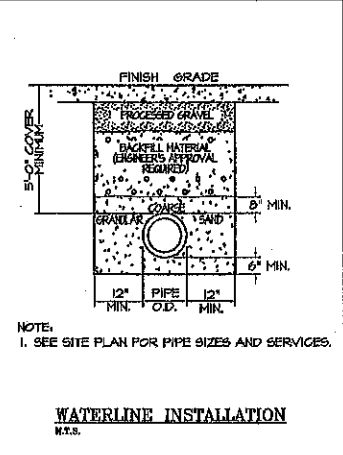
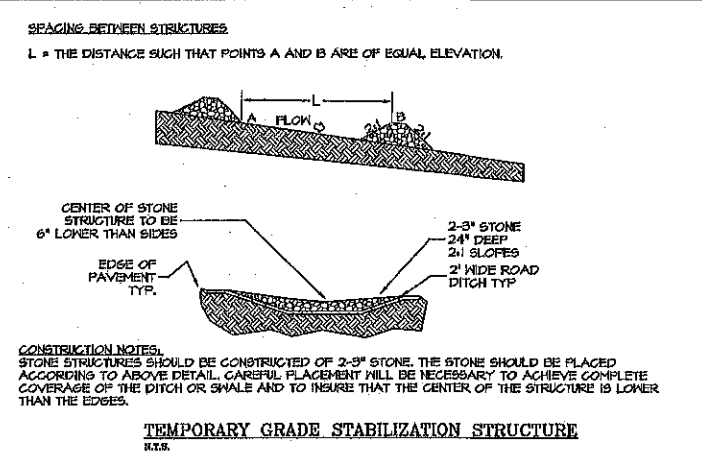
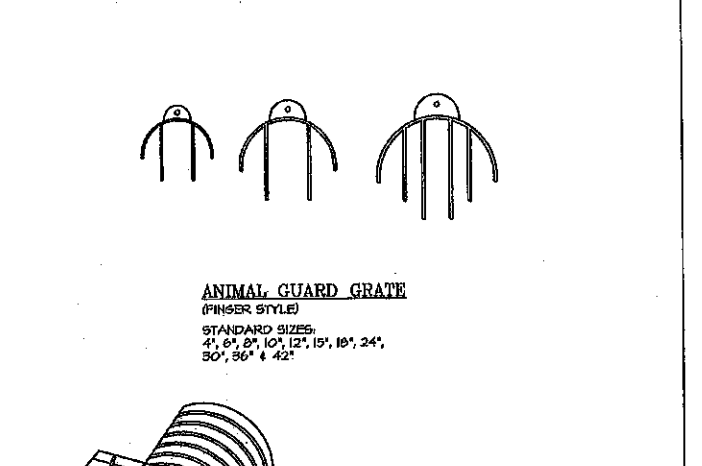
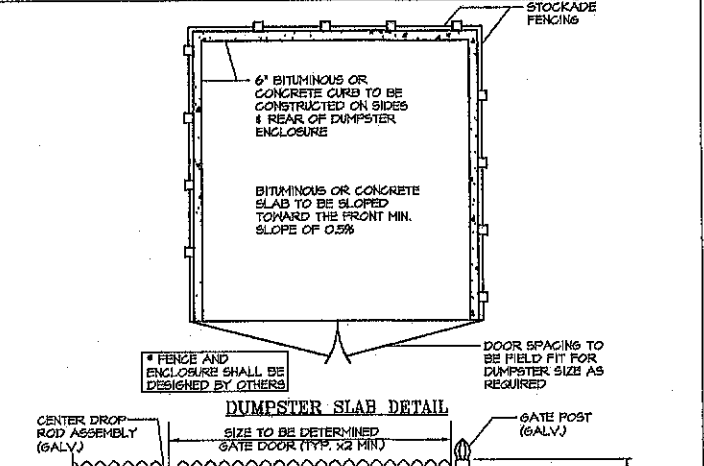
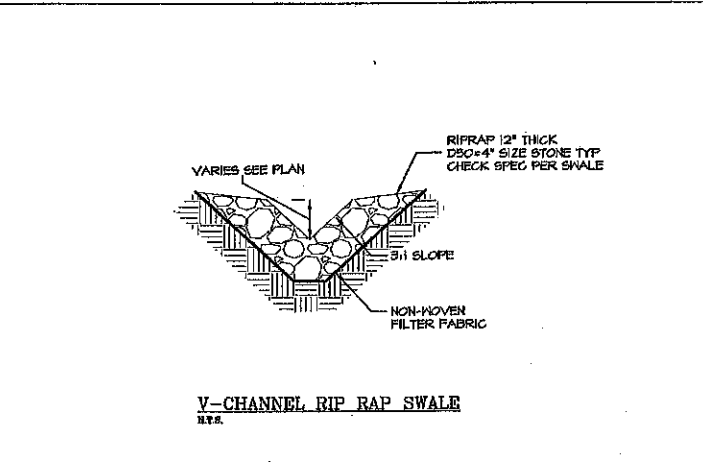
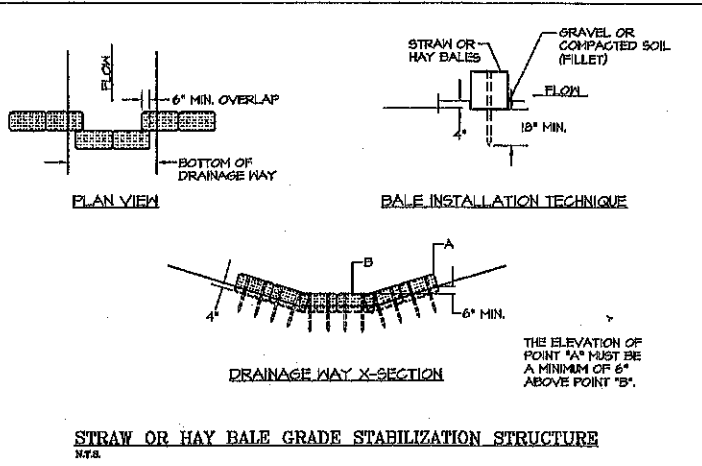
6	FEB 20, 2020	FOR APPROVAL	
5	FEB 7, 2020	FOR APPROVAL	
1	SEPT 13, 2019	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK.
DRAWN:	JJM	DESIGN:	JJM
CHECKED:	BDS	CHECKED:	BDS

EMANUEL ENGINEERING
118 FORESHOUL AVENUE, #202
STRATTON, NH 03885
P: 603-775-4400 F: 603-772-1857
WWW.EMANUEL-ENGINEERING.COM

CLIENT:
TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

TITLE:
DETAILS
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825

PROJECT:	SCALE:	SHEET:
19-020	AS SHOWN	D3



FLARED END SECTIONS

SIZE	PRODUCT CODE
10" (250mm)	1015NP
12" (300mm) / 18" (450mm)	1215NP
18" (450mm)	1810NP
24" (600mm)	2410NP
30" (750mm)	3015NP
36" (900mm)	3615NP

TOP VIEW
SIDE VIEW
FRONT VIEW
FLARED END SECTION

PLANNING BOARD BARRINGTON, NH

APPROVED

File Number: 233-77-234-121.4
Date: 3/17/2020
Chairman: [Signature]

EMANUEL ENGINEERING
Full Structural Consultants, Inc. Plans
118 Portsmouth Avenue, A201
Scamman, NH 03883
P: 603-272-4488 F: 603-272-4487
www.emanuelengineering.com

CLIENT: TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

TITLE: DETAILS FOR TAX MAP 233 LOT 77 RRB5, LLC & TURBOCAM INTERNATIONAL ROUTE 9 / REDEMPTION ROAD (SITE) BARRINGTON, NH 03825

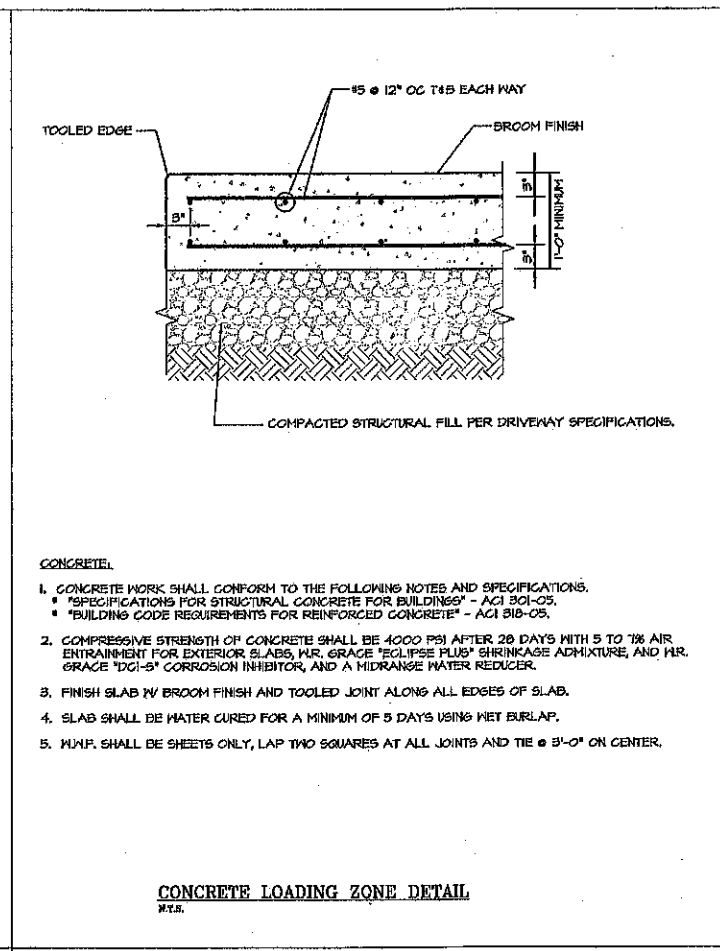
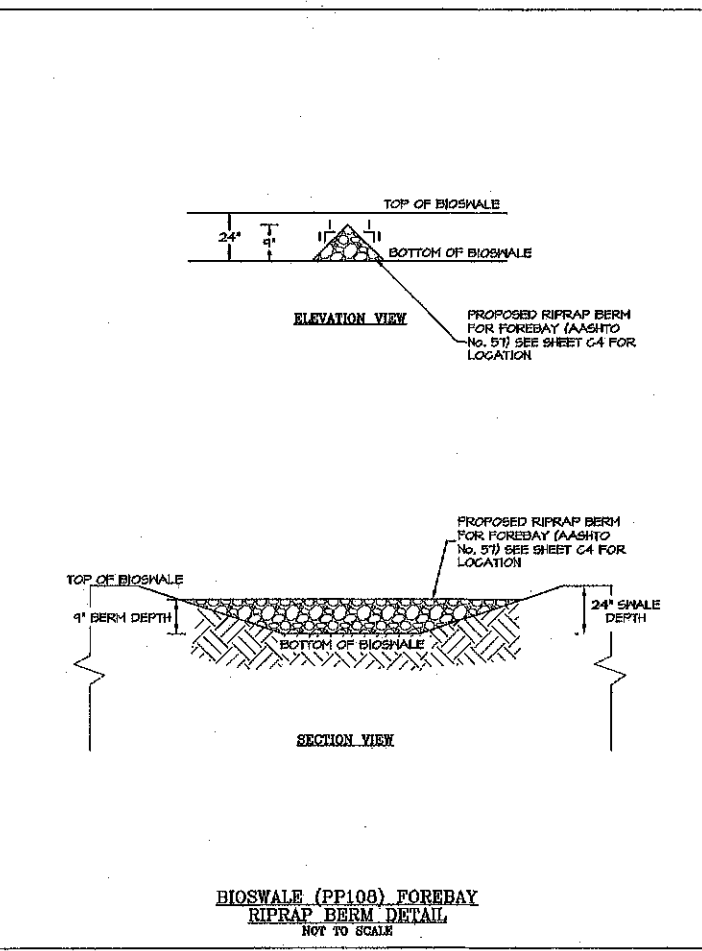
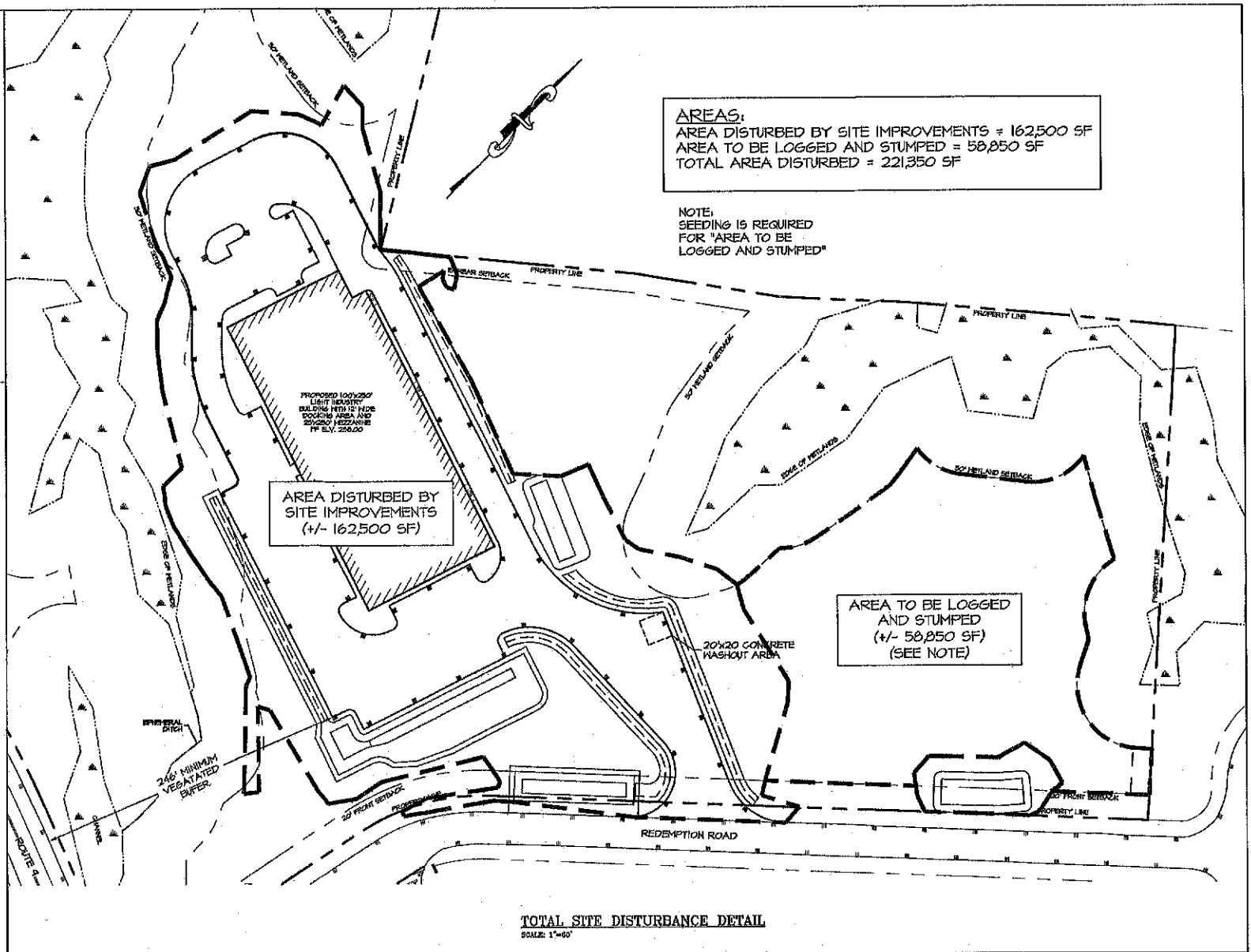
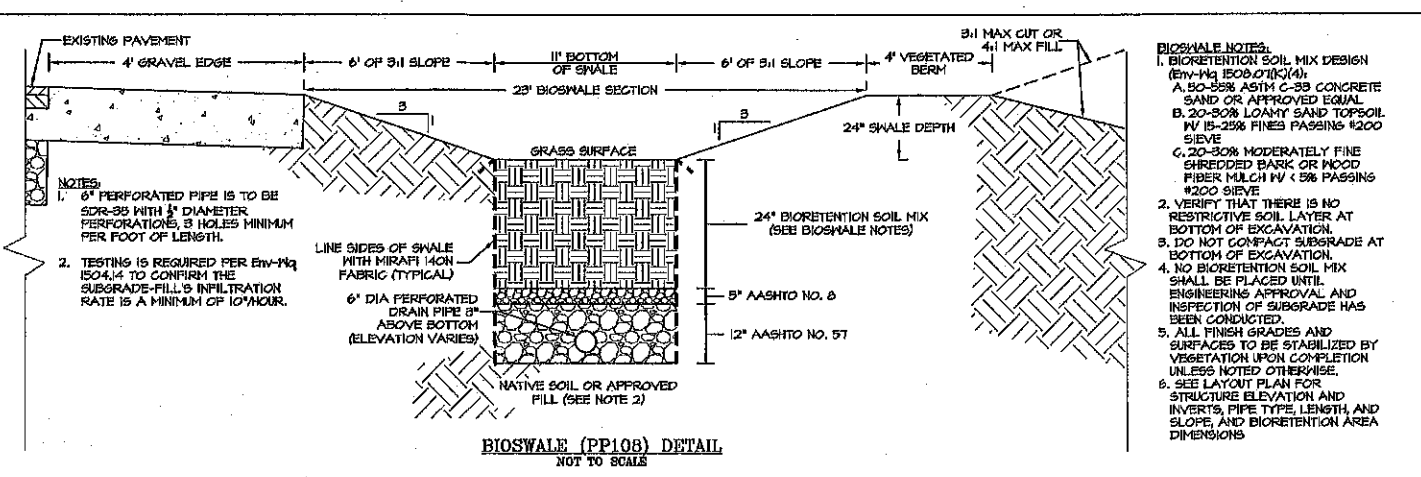
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6 FEB 20, 2020 FOR APPROVAL
4 FEB 7, 2020 FOR APPROVAL
1 SEP 13, 2019 FOR APPROVAL

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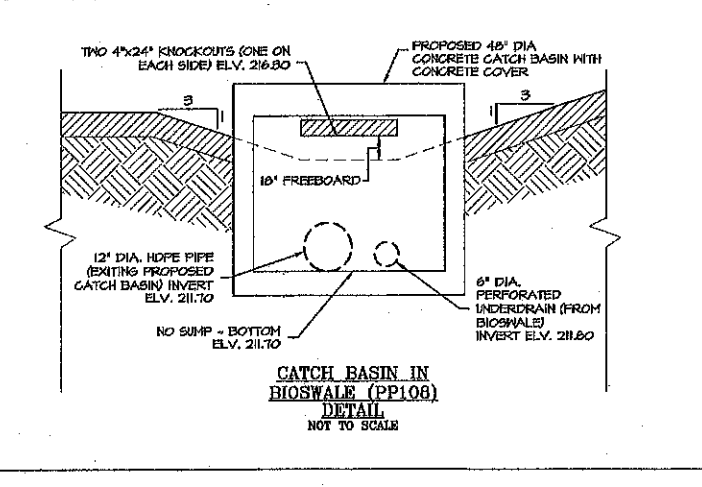
STATE OF NEW HAMPSHIRE
BRUCE D. SCAMMAN
No. 11233
LICENSED PROFESSIONAL ENGINEER

2/20/20



System	ID	Geometric Depth (ft)	Depth (ft)	ISR Depth (ft)	Depth-Bioswale Media (ft)	Area (sq. ft)	Flow (cfs)	Flow (gpm)	Flow (MGD)
Bioswale-ISR	BR1	18.2	5.25	2.75	2	800	64	14	228.00
Bioswale-ISR	BR2	24.0	5.25	2.75	2	800	64	14	228.00
Subsurface Infiltration	SI1	N/A	N/A	N/A	N/A	8500	Varies	227.15	230.05
Bioswale	PP108	N/A	3.25	N/A	2	500	64	14	216.30

Notes:
1. See sheet D2 for Bioswale-ISR and subsurface infiltration (BR1, BR2, and SI1) details.
2. See sheet D8 for Bioswale (PP108) details.



7	FEB 20, 2020	FOR APPROVAL	
8	FEB 13, 2020	FOR APPROVAL	
1	SEP 13, 2019	FOR APPROVAL	
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EMANUEL ENGINEERING
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118 FORTSMOUTH AVENUE, A302
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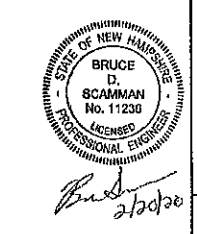
CLIENT:
TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

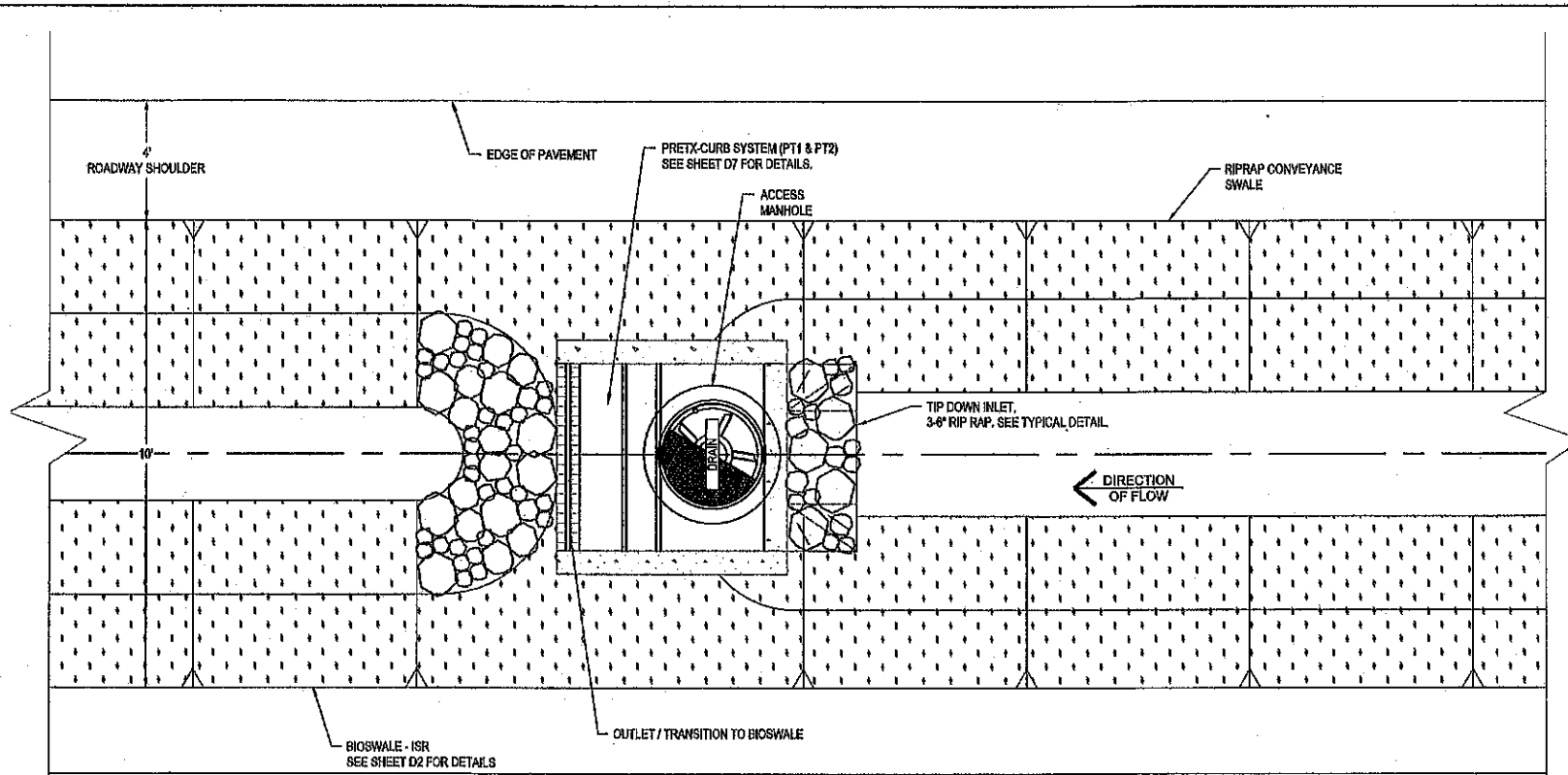
TITLE:
DETAILS
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825

PROJECT: 19-020 SCALE: AS SHOWN SHEET: D5

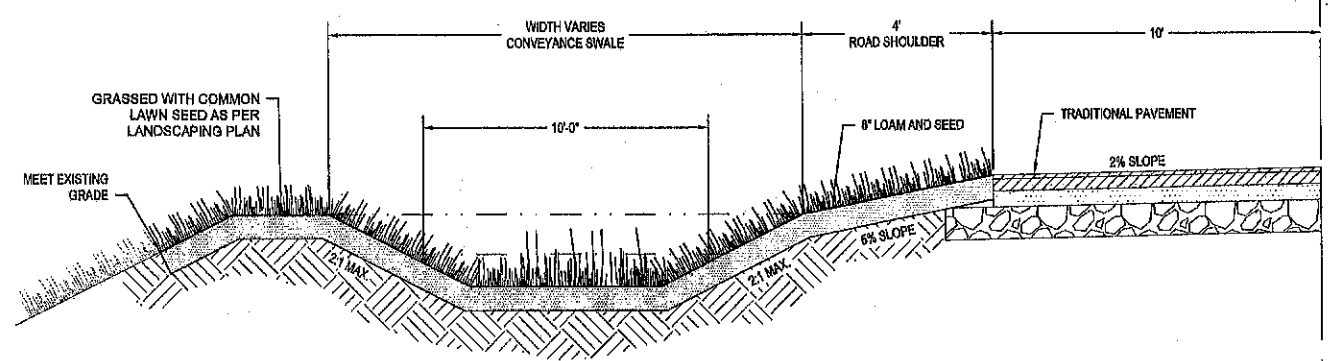
PLANNING BOARD
BARRINGTON, NH
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File Number: 233-77, 234-1.2, 1.4
Date: 3/17/2020
Chairman: *[Signature]*



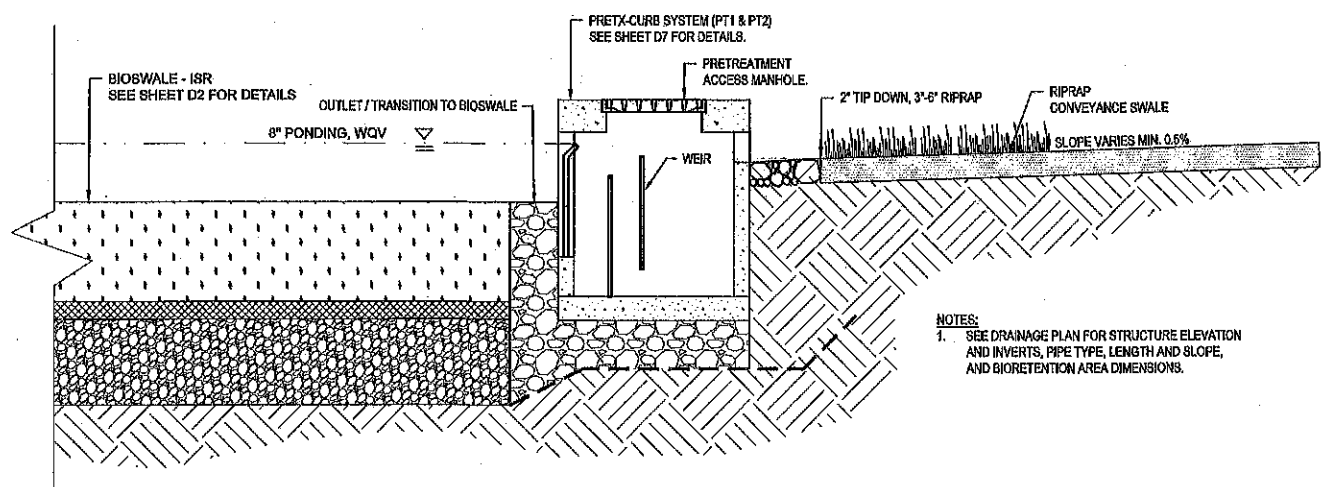


**BIOSWALE (BR1 & BR2)
PRETREATMENT (PT1 & PT2) LAYOUT
TYPICAL PLAN
N.T.S.**



NOTES:
1. SEE DRAINAGE PLAN FOR STRUCTURE ELEVATION AND INVERTS, PIPE TYPE, LENGTH AND SLOPE, AND BIORETENTION AREA DIMENSIONS.

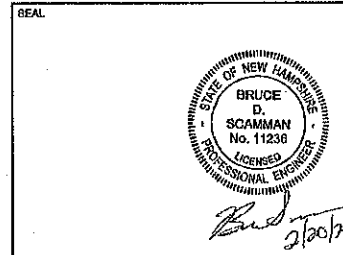
**CONVEYANCE SWALE
TYPICAL CROSS-SECTION
N.T.S.**



NOTES:
1. SEE DRAINAGE PLAN FOR STRUCTURE ELEVATION AND INVERTS, PIPE TYPE, LENGTH AND SLOPE, AND BIORETENTION AREA DIMENSIONS.

**BIOSWALE (BR1 & BR2)
PRETREATMENT (PT1 & PT2) LAYOUT
TYPICAL LONG-SECTION
N.T.S.**

**PLANNING BOARD
BARRINGTON, NH
- APPROVED -**
File Number 233-72, 234-1.2 H.4
Date 3/17/2020
Chairman [Signature]



3	FEB 20, 2020	FOR APPROVAL	
2	JAN 10, 2020	FOR APPROVAL	
1	JAN 8, 2020	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK:
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CHECKED: RMR		CHECKED: BOS	

EMANUEL ENGINEERING
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WWW.EMANUELENGINEERING.COM

CLIENT:
**TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825**

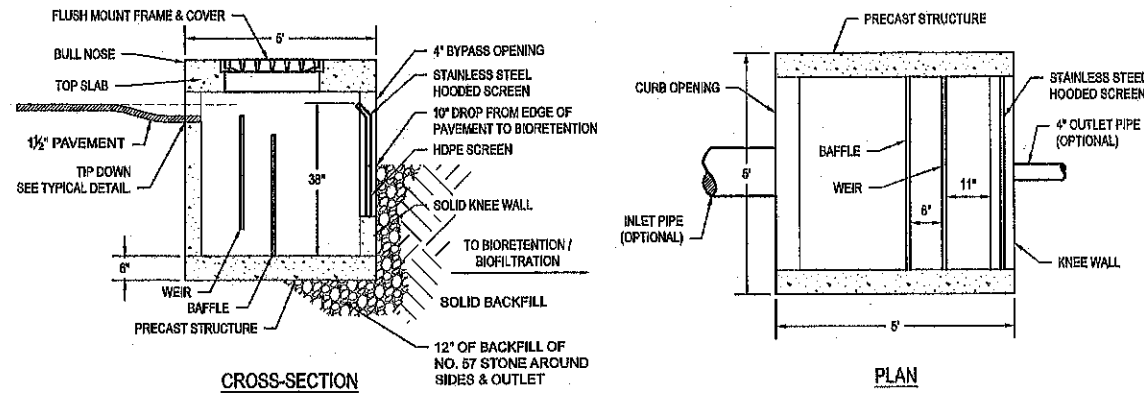
TITLE:
**DETAILS
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825**

PROJECT:	SCALE:	SHEET:
19-020	AS SHOWN	D6

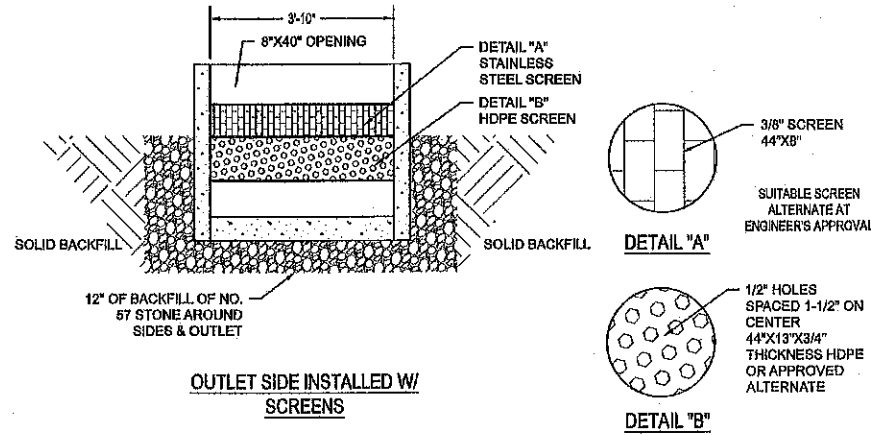
PRETX SPECIFICATIONS

- A. GENERAL**
- PRETX SYSTEMS ARE A PRE-FILTER AND CRITICAL MAINTENANCE DEVICE THAT EXTENDS THE OPERATING LIFE AND REDUCES THE MAINTENANCE BURDEN OF BIORETENTION SYSTEMS, RAIN GARDENS, BIOWALLS AND OTHER TYPES OF SURFACE BEST MANAGEMENT PRACTICES BY FILTERING OUT SEDIMENT, TRASH AND DEBRIS AT THE INLET.
- B. PRODUCTS**
- PRETX IS AVAILABLE IN 3 MODELS THAT MANAGE MOST BIORETENTION INLET CONFIGURATIONS: CURB, DROP, AND IN-LINE.
 - PRETX-CURB IS FOR EDGE OF PAVEMENT RUNOFF AT A CURB CUT IN LIEU OF A STONE SPREADER.
 - PRETX-DROP IS FOR USE AS A DROP INLET CONFIGURATION ALONG A CURB LINE AND WOULD BE INSTALLED WITH A STANDARD DROP INLET GRATE.
 - PRETX-IN-LINE IS FOR USE WITH SUBSURFACE INLET AND OUTLET PIPE.
 - PRETX IS SIZED TO PRETREAT WATER QUALITY FLOWS AND BYPASS LARGER FLOWS THAT HAVE MINIMAL TRASH AND DEBRIS. PRETX CAN BE USED BOTH IN RETROFIT OR NEW INSTALLATIONS.
 - ACCEPTABLE SYSTEM SUPPLIER: CONVERGENT WATER TECHNOLOGIES, INC. OR ITS AUTHORIZED VALUE-ADDED RESALER (BOC) 781-5428 WWW.CONVERGENTWATER.COM
- C. SUBMITTALS**
- SUBMIT PROPOSED LAYOUT DRAWINGS. DRAWINGS SHALL INCLUDE TYPICAL SECTION DETAILS ANNOTED WITH SYSTEM ELEVATIONS (E.G. RIM, PIPE INVERTS, OUTSIDE BOTTOM OF STRUCTURE, ETC.).
 - SUBMIT MATERIAL CERTIFICATES FOR FRAMES AND COVERS.
 - ANY PROPOSED EQUAL ALTERNATE PRODUCT SUBSTITUTION TO THIS SPECIFICATION MUST BE SUBMITTED FOR REVIEW AND APPROVED PRIOR TO BID OPENING.
- D. EXECUTION**
- ALL PUBLIC STORM DRAINAGE SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS AND ACCORDING TO LOCAL MUNICIPAL REQUIREMENTS.
 - ALL STORM DRAINAGE SYSTEM CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE PROJECT ENGINEER.
 - THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF TWO FULL BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND OBTAINING APPROVAL FROM DIS-SAFE AND DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION EXCAVATION AND SHALL NOTIFY THE PROJECT ENGINEER OF ANY POTENTIAL CONFLICTS.
 - TO PROTECT STORMWATER FLOW CONTROL AND QUALITY TREATMENT FACILITIES FROM SEDIMENTATION THEY SHALL BE CONNECTED TO THE STORM CONVEYANCE SYSTEM ONLY AFTER ALL SITE WORK, ROAD CONSTRUCTION UTILITY WORK AND LANDSCAPING ARE IN PLACE IN ALL AREAS ABOVE AND UPSTREAM OF THE FACILITY. THE EXISTING STORM SEWER SYSTEM SHALL STAY ISOLATED FROM THE NEW SYSTEM UNTIL THE NEW SYSTEM IS CLEANED, AND APPROVED FOR USE. THERE SHALL BE NO DEBRIS IN THE LINES OR FURTHER CLEANING WILL BE REQUIRED PRIOR TO ACCEPTANCE.
 - PROVIDE A 1/2" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR.
 - THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
 - ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BAGS HAVE BEEN PLACED.
 - STANDARD CURB INLETS AND TIPDOWNS SHALL BE PRECAST CONCRETE OR ASPHALT.
 - PIPE ENDS SHALL BE FLUSH WITH THE INNER WALL OR 1" MAXIMUM INTRUSION.
 - PIPE ENDS SHALL BE FLUSH WITH THE INNER WALL OR 1" MAXIMUM INTRUSION. MASONRY, GUNDER BLOCKS, OR SIMILAR MATERIALS MAY BE USED TO ADJUST THE RISERS TO GRADE PRIOR TO GROUTING.
 - GROUTING SHALL BE SUFFICIENT TO PREVENT LEAKS BETWEEN THE PRECAST COMPONENTS OF THE COMPLETED STRUCTURE & SHALL BE PERFORMED INSIDE, BETWEEN & OUTSIDE OF ALL RISERS, JOINTS & PIPE PENETRATIONS.
 - MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M-194 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
 - ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
 - PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
 - MATING SURFACES OF MANHOLE RINGS AND COVERS SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITIONS.
- E. CONSTRUCTION AND SEQUENCING**
- 1. EXCAVATION**
- VERIFY LAYOUT AND ORIENTATION OF PRE-TX SYSTEM AREA INCLUDING EDGE OF PAVEMENT, TIP DOWN, CURBS AND SIDEWALK, BIOPILTRATION SYSTEM, AND CONNECTIONS.
 - VERIFY EXCAVATION BASE IS READY TO RECEIVE WORK AND EXCAVATIONS, DIMENSIONS, AND ELEVATIONS ARE AS INDICATED ON DRAWINGS.
- 2. PREPARATION**
- CALL DIS-SAFE AND RECEIVE APPROVAL BEFORE PERFORMING WORK.
 - REQUEST UNDERGROUND UTILITIES TO BE LOCATED AND MARKED WITHIN AND SURROUNDING CONSTRUCTION AREAS.
 - IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM.
 - CLEAR AND GRUB THE PROPOSED PRE-TX SYSTEM AREA.
- 3. EXCAVATION AND INSTALLATION**
- THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. COORDINATE WITH THE OWNER, AND ENGINEERS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
 - INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS TO DIVERT STORM WATER AWAY FROM THE PRE-TX SYSTEM AREA.
 - EXCAVATE TO THE BOTTOM INVERT OF THE SYSTEM.
 - TO MINIMIZE CONVECTION OF ADJACENT BIOPILTRATION SYSTEMS, WORK EXCAVATORS OR BACKHOES FROM THE SIDES TO EXCAVATE THE PRE-TX SYSTEM AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS.
 - ROUGH GRADE THE PRE-TX SYSTEM AREA DURING GENERAL CONSTRUCTION. EXCAVATE THE PRE-TX SYSTEM FACILITIES TO WITHIN 1 FOOT OF STRUCTURE BOTTOM.
 - PLACE 1 FOOT BED OF COARSE STONE TO ELEVATION OF BASE OF STRUCTURE.
 - ESTABLISH ELEVATIONS FOR ADJACENT CURBS, EDGE OF PAVEMENT AND TIP DOWN, SIDEWALK, PIPE INVERTS FOR INLETS AND OUTLETS AS INDICATED ON DRAWINGS.
- 4. INSTALLATION**
- PLACE THE PRECAST SYSTEM TO NECESSARY ELEVATION.
 - VERIFY ELEVATIONS FOR ADJACENT CURBS, EDGE OF PAVEMENT, PAVEMENT GRADING FOR INLET GRATE FOR PRETX-DROP, SIDEWALK, PIPE INVERTS FOR INLETS AND OUTLETS, OUTLET INVERT FOR KNEE WALL.
 - FOR PRETX-SURFACE:
 - VERIFY ELEVATIONS FOR ADJACENT CURBS.
 - VERIFY EDGE OF PAVEMENT TIP DOWN PAVEMENT GRADING FOR INLET GRATE.
 - VERIFY CURB ELEVATION IN RELATION TO PAVEMENT AND TIP DOWN.
 - VERIFY OUTLET INVERT FOR KNEE WALL IN RELATION TO FILTER MEDIA.
 - FOR PRETX-DROP:
 - VERIFY ALL INLET PIPES ENTER THE STRUCTURE UPSTREAM OF BAFFLE.
 - VERIFY FRAME AND GRATE OFFSET ON INLET SIDE AND UPSTREAM OF BAFFLE.
 - VERIFY CURB LOCATION WITH RESPECT TO FRAME AND GRATE ORIENTATION.
 - INSTALL BAFFLES, WEIR, AND SCREENS AS INDICATED ON DRAWINGS.
 - VERIFY MAINTENANCE ACCESS THROUGH GRATE OR COVER AND CLEARANCE FOR VEHICLE.
 - INSTALL TOP OF STRUCTURE LEVEL WITH ADJACENT CURB OR SIDEWALK AS PER MANUFACTURERS SPECIFICATIONS. ENGINEER FIELD VISIT REQUIRED PRIOR TO BACKFILLING.
- 5. BACKFILLING**
- BACKFILL WITH APPROVED SOIL AND STONE TO THE DESIGN GRADE AS SPECIFIED IN THE DRAWINGS.
 - BACKFILL WITH 12" OF NO. 57 STONE AROUND REAR, LEFT, AND RIGHT SIDES TO LEVEL WITH TOP OF HOPE SCREEN.
 - BACKFILL WITH BIORETENTION SOIL MIX BEYOND STONE BACKFILL TO EQUAL ELEVATION OF THE TOP OF HOPE SCREEN.
 - DO NOT BACKFILL SOIL OR STONE AGAINST STAINLESS SCREEN.
 - DO NOT COMPACT ADJACENT FILTRATION SYSTEM SOIL WITH MECHANICAL EQUIPMENT.
 - STABILIZE ALL REMAINING DISTURBED AREAS AND SIDE SLOPES WITH SEEDING, HYDROSEEDING, AND EROSION CONTROL BLANKETS AS INDICATED ON DRAWINGS.
- 6. CLEAN UP**
- AFTER COMPLETION OF THE WORK, REMOVE AND PROPERLY DISPOSE ALL DEBRIS, CONSTRUCTION MATERIALS, RUBBISH, EXCESS SOIL, ETC., FROM THE PROJECT SITE. REPAIR PROMPTLY ANY IDENTIFIED DEFICIENCIES AND LEAVE THE PROJECT SITE IN A CLEAN AND SATISFACTORY CONDITION.

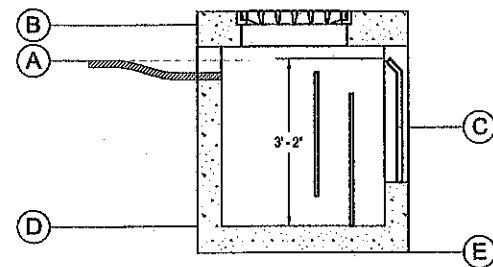
PRETX-CURB (PT1 & PT2) DETAILS



PRETX-CURB (PT1 & PT2) CATCH BASIN DETAIL - BY ACF
N.T.S.



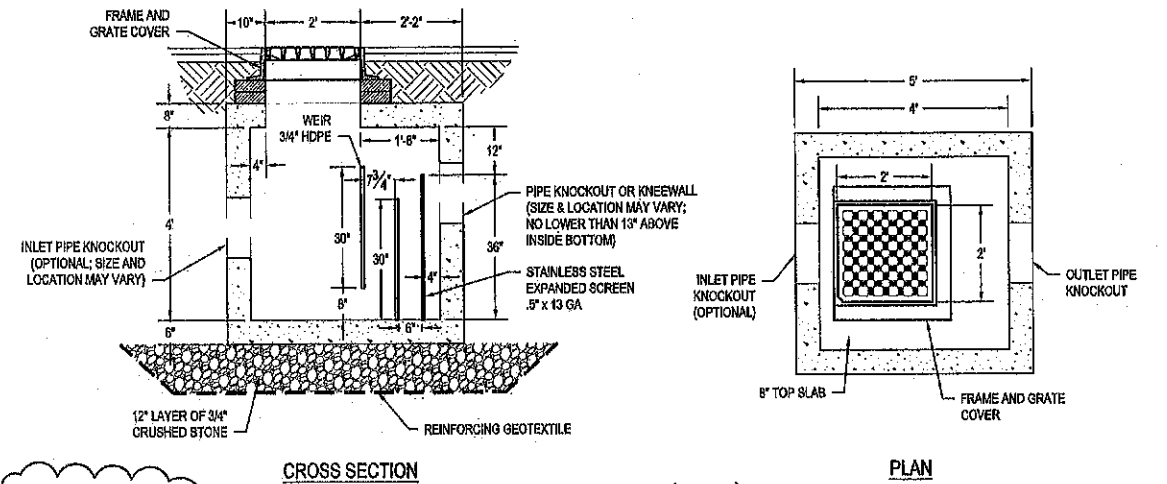
PRETX-CURB (PT1 & PT2) DETAIL
N.T.S.



PRETX-CURB ELEVATION GUIDE
N.T.S.

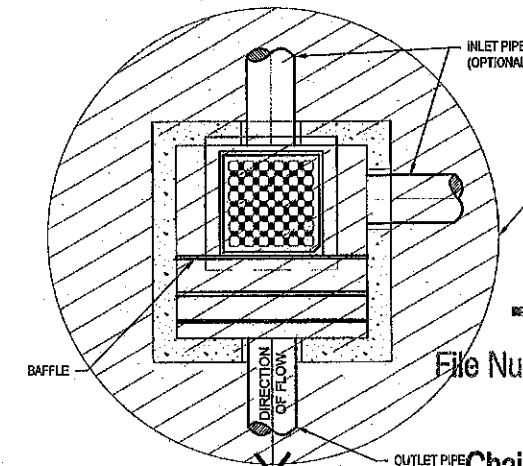
POINT	DESCRIPTION	HEIGHT IN REFERENCE TO PT. A
A	EDGE OF PAVEMENT	0 INCHES
B	OUTSIDE TOP SLAB	5 INCHES
C	TOP OF BIORETENTION	12 INCHES
D	SUMP INVERT	36 INCHES
E	OUTSIDE BOTTOM	42 INCHES

PRETX-DROP (PT3) DETAILS

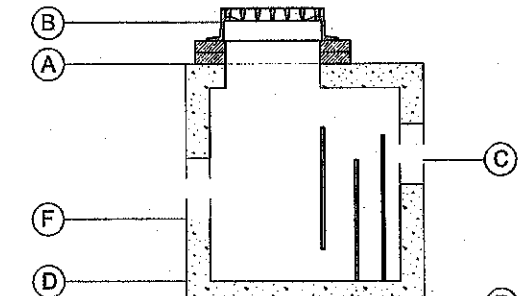


PRETX-DROP (PT3) CATCH BASIN DETAIL - BY ACF
N.T.S.

NOTE: PRETX-DROP STRUCTURE MUST MEET H-20 LOADING.



PRETX DROP (PT3) OUTLET CONFIG. DETAIL
N.T.S.



PRETX-DROP ELEVATION GUIDE
N.T.S.

POINT	DESCRIPTION	HEIGHT IN REFERENCE TO PT. A
A	OUTSIDE TOP SLAB	0"
B	EDGE OF PAVEMENT	5" MIN.
C	PIPE INVERT	14" FOR 6" PIPE 21" FOR 8" PIPE 25.5" FOR 12" PIPE
D	SUMP INVERT	36"
E	OUTSIDE BOTTOM	42"
F	OPTIONAL INLET PIPE KNOCKOUT	42"

4	FEB 20, 2020	FOR APPROVAL	
3	JAN 27, 2020	FOR APPROVAL	
1	JAN 6, 2020	FOR APPROVAL	
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TURBOCAM INTERNATIONAL
607 CALEF HIGHWAY
BARRINGTON, NH 03825

TITLE:
PRETX DETAILS
FOR
TAX MAP 233 LOT 77
RRB5, LLC &
TURBOCAM INTERNATIONAL
ROUTE 9 / REDEMPTION ROAD (SITE)
BARRINGTON, NH 03825

PROJECT:	SCALE:	SHEET:
19-020	AS SHOWN	D7

BRUCE D. SCAMMAN
No. 11233
LICENSED PROFESSIONAL ENGINEER
2/20/20