ATTACHMENT A
Limitations

This report has been prepared for the exclusive use of Sebago Technics, Inc. for specific application to the proposed Public Works Facility in Orono, Maine. S.W.COLE has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

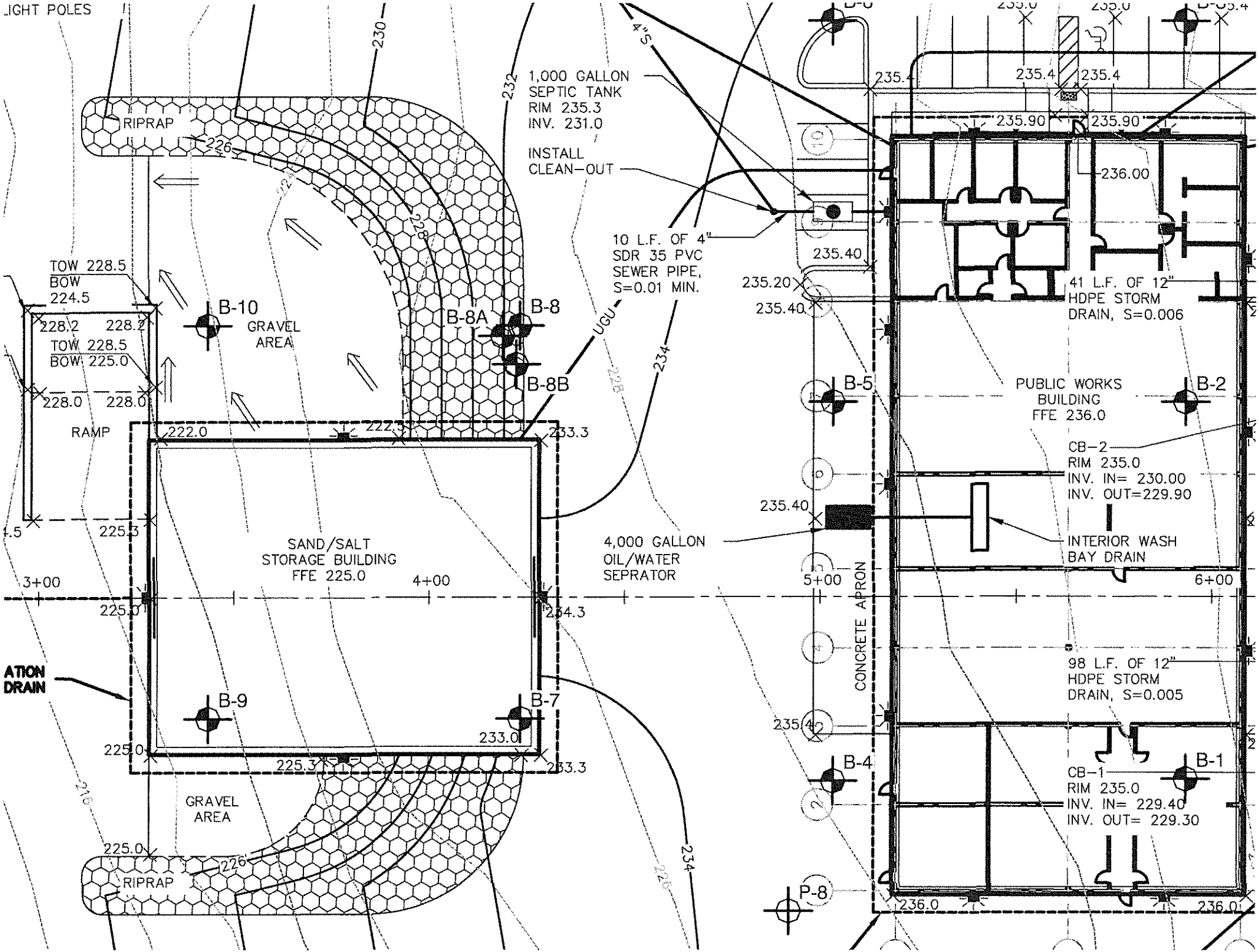
The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this assessment and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of work has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.


LIGHT POLES
RIPRAP
226
230
232
1,000 GALLON
SEPTIC TANK
RIM 235.3
INV. 231.0
INSTALL
CLEAN-OUT
10 L.F. OF 4"
SDR 35 PVC
SEWER PIPE,
S=0.01 MIN.
4"S
UGU
TOW 228.5
BOW
224.5
228.2
228.2
TOW 228.5
BOW 225.0
228.0
228.0
B-10
GRAVEL
AREA
B-8A
B-8
B-8B
RAMP
222.0
222.3
233.3
225.3
SAND/SALT
STORAGE BUILDING
FFE 225.0
3+00
4+00
225.0
234.3
4,000 GALLON
OIL/WATER
SEPRATOR
5+00
6+00
CONCRETE APRON
ATION
DRAIN
B-9
B-7
225.0
233.0
225.3
233.3
GRAVEL
AREA
225.0
226
RIPRAP
234
235.4
235.4
235.4
235.90
235.90
236.00
235.40
235.20
235.40
41 L.F. OF 12"
HDPE STORM
DRAIN, S=0.006
B-5
B-2
PUBLIC WORKS
BUILDING
FFE 236.0
CB-2
RIM 235.0
INV. IN= 230.00
INV. OUT=229.90
235.40
INTERIOR WASH
BAY DRAIN
98 L.F. OF 12"
HDPE STORM
DRAIN, S=0.005
235.40
B-4
B-1
CB-1
RIM 235.0
INV. IN= 229.40
INV. OUT= 229.30
P-8
236.0
236.0

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-1
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/15/2013
DATE FINISH: 10/15/2013
ELEVATION: 233' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.8'	TOPSOIL / DUFF
	1D	24"		4.0'	18	33	30	24		BROWN GRAVELLY SANDY SILT W/COBBLES (GLACIAL TILL)
	D	20"		6.7'	16	25	26	50/0.2'		~ DENSE ~
	2D	24"		12.0'	18	25	34	44		
	3D	17"		16.4'	37	37	50/0.4'		16.4'	ENCOUNTERED COBBLE AT 4.5' MOVED APPROX. 4 FT WESTERLY AND CONTINUED BORING TO SAMPLER REFUSAL AT 16.4'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED 13'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-1

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-2
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/16/2013
DATE FINISH: 10/16/2013
ELEVATION: 234' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: BRAD ENOS

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.9'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	6	6	11	16		BROWN SANDY SILT, SOME GRAVEL (GLACIAL TILL) w = 13.8% ~ MEDIUM DENSE TO DENSE ~
	2D	24"		7.0'	10	20	20	26	7.0'	w = 13.0%
	3D	23"		11.9'	36	27	45	50/0.4'		BROWN GRAVELLY SANDY SILT W/COBBLES (GLACIAL TILL) ~ DENSE ~ w = 8.4%
	4D	14"		16.2'	20	41	50/0.4'		16.2'	SAMPLER REFUSAL AT 16.2'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: CAVED 11.5'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-2

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-3
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/16/2013
DATE FINISH: 10/16/2013
ELEVATION: 236' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: BRAD ENOS

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	4	16	15	12	5.0'	BROWN SANDY SILT, TRACE TO SOME GRAVEL (GLACIAL TILL) ~ MEDIUM DENSE ~ w = 12.5%
	2D	16"		6.3'	29	15	50/0.3'			w = 13.5% BROWN GRAVELLY SANDY SILT W/ COBBLES (GLACIAL TILL) ~ DENSE ~
	3D	22"		11.8'	25	35	41	50/0.3'		
	4D	24"		17.0'	24	27	33	44	17.0'	
										BOTTOM OF EXPLORATION AT 17.0'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: CAVED 11'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-3

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-4
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/15/2013
DATE FINISH: 10/15/2013
ELEVATION: 228' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.7'	TOPSOIL / FOREST DUFF
	1D	24"		4.5'	1	7	10	17		BROWN GRAVELLY SANDY SILT W/ COBBLES (GLACIAL TILL)
	2D	24"		7.0'	7	16	22	22		~ MEDIUM DENSE TO DENSE ~
	3D	24"		12.0'	19	25	26	35		
	D	5"		15.4'					15.4'	SAMPLER REFUSAL AT 15.4'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED 12.3'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-4

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-5
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/15/2013
DATE FINISH: 10/15/2013
ELEVATION: 230' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	5	13	8	8	5.0'	BROWN SANDY SILT, TRACE TO SOME GRAVEL (GLACIAL TILL) w = 13.7% ~ MEDIUM DENSE ~
	2D	24"		7.0'	10	15	26	36		w = 10.6% BROWN GRAVELLY SANDY SILT W/COBBLES (GLACIAL TILL) ~ DENSE ~
	3D	5"		10.4'	50/0.4'					
	4D	20"		16.7'	27	38	40	50/0.2'	16.7'	SAMPLER REFUSAL AT 16.7'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: CAVED 12.4'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-5

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-6
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/15/2013
DATE FINISH: 10/15/2013
ELEVATION: 231' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SAMPLE 1D MOIST
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.6'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	3	10	16	16		BROWN GRAVELLY SANDY SILT W/ COBBLES (GLACIAL TILL)
	2D	24"		7.0'	11	14	22	38		~ MEDIUM DENSE TO DENSE ~
	3D	17"		11.4'	20	33	50/0.4'			
									13.1'	AUGER REFUSAL AT 13.1'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED 10.6'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-6

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-7
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/14/2013
DATE FINISH: 10/14/2013
ELEVATION: 225' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SAMPLE 2D MOIST
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	5	12	25	55		BROWN GRAVELLY SAND AND SILT W/COBBLES (GLACIAL TILL) w = 10.2% ~ DENSE ~
	2D	24"		7.0'	8	16	17	20		w = 12.1%
									10.0'	
	3D	22"		11.8'	30	53	50	50/0.3'		BROWN GRAVELLY SANDY SILT W/COBBLES (GLACIAL TILL) ~ DENSE ~
	4D	7"		15.6'	50	50/0.1'			15.6'	SAMPLER REFUSAL AT 15.6'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[X] LABORATORY TEST

REMARKS: CAVED 12.3'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-7

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-8
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/14/2103
DATE FINISH: 10/14/2013
ELEVATION: 227" +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SAMPLE 1D MOIST
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.5'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	8	9	25	30	4.9'	BROWN GRAVELLY SAND AND SILT W/COBBLES (GLACIAL TILL) ` MEDIUM DENSE TO DENSE ~
										AUGER REFUSAL 4.9' - PROBABLE COBBLE OR BOULDER MOVED APPROX. 4' SOUTHERLY OF B-8 - ADVANCED AUGER PROBE B-8A TO REFUSAL AT 3.6' - PROBABLE COBBLE OR BOULDER MOVED APPROX. 12' SOUTHEASTERLY OF B-8 - ADVANCED AUGER PROBE B-8B TO 10.0' - NO REFUSAL

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS:
STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-8

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-9
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/15/2013
DATE FINISH: 10/15/2013
ELEVATION: 219' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
WATER AT 5.1' AFTER REMOVING AUGERS

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									1.0'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	6	8	30	37		BROWN GRAVELLY SAND AND SILT W/COBBLES (GLACIAL TILL) ~ MEDIUM DENSE TO DENSE ~
	2D	8"		5,7	40	50/0.2'			6.0'	
	3D	11"		10.9'	40	50/0.4'				BROWN GRAVELLY SANDY SILT W/ COBBLES (GLACIAL TILL) ~ DENSE ~
									11.6'	ENCOUNTERED COBBLE AT 7.2' MOVED APPROX. 4 FT.SOUTHERLY AND CONTINUED BORING TO AUGER REFUSAL AT 11.6'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED 9.2'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-9

S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-10
SHEET: 1 OF 1
PROJECT NO.: 13-0625 S
DATE START: 10/14/2013
DATE FINISH: 10/14/2013
ELEVATION: 222' +/-
SWC REP.: AJH

PROJECT / CLIENT: PROPOSED PUBLIC WORKS FACILITY / SEBAGO TECHNICS, INC.
LOCATION: ORONO, MAINE
DRILLING CO. : MAINE TEST BORINGS
DRILLER: TOM SCHAEFFER

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2 1/4"		
SAMPLER:	SS	1 3/8"	140 lbs	30"
CORE BARREL:				

WATER LEVEL INFORMATION
SAMPLE 2D MOIST AT APPROX. 6 FT
NO FREE WATER OBSERVED

CASING BLOWS PER FOOT	SAMPLE NO.	SAMPLE PEN.	SAMPLE REC.	SAMPLE DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.8'	TOPSOIL / FOREST DUFF
	1D	24"		4.0'	5	11	11	23		BROWN GRAVELLY SAND AND SILT W/COBBLES (GLACIAL TILL)
	2D	24"		7.0'	32	35	39	38		~ MEDIUM DENSE TO DENSE ~
									7.9'	AUGER REFUSAL AT 7.9'

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

REMARKS: CAVED 6.5'

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-10

KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - based on laboratory unconfined compressive test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. based on pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass. RQD is computed from recovered core samples.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

0 to 5% TRACE
5 to 12% SOME
12 to 35% "Y"
35+% AND

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

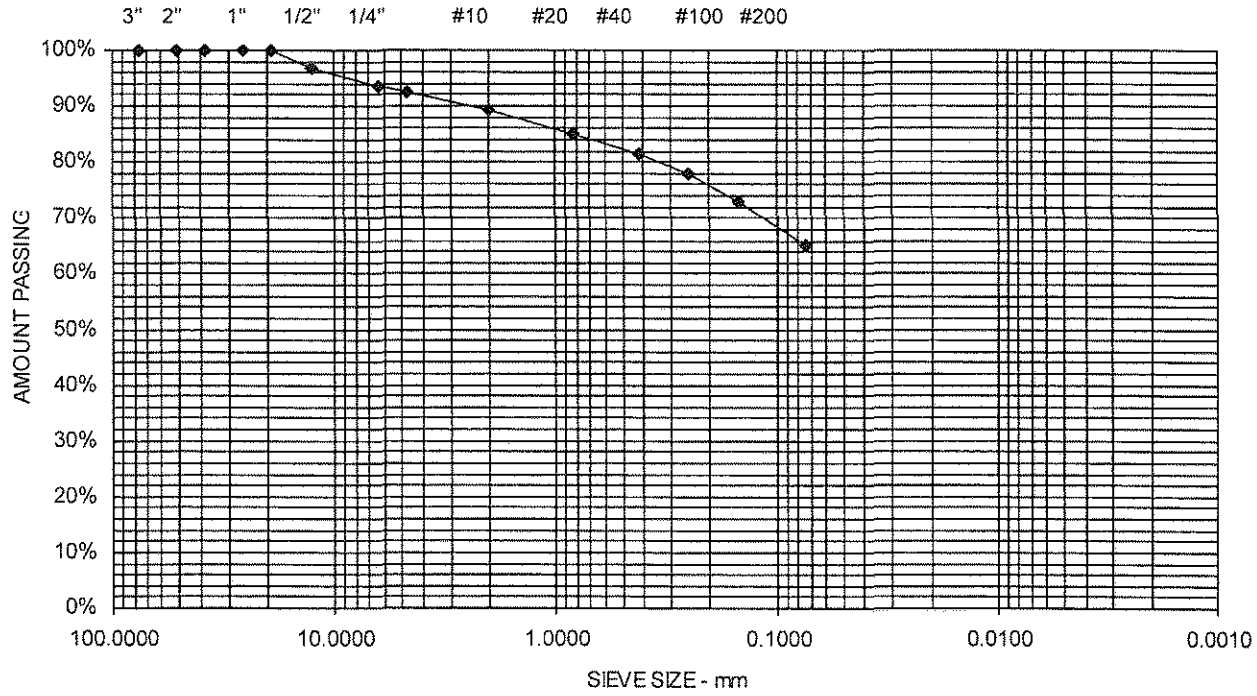
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	ORONO ME - PROPOSED PUBLIC WORKS FACILITY - GEOTECHNICAL ENGINEERING SERVICES	Project Number	13-0625
Client	SEBAGO TECHNICS, INC.	Lab ID	16770B
Exploration	B2	Date Received	10/21/2013
Material Source	1D	Date Completed	10/22/2013
		Tested By	LAMONT DUTRA

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150	6"	100	
125	5"	100	
100	4"	100	
75	3"	100	
50	2"	100	
38.1	1-1/2"	100	
25.0	1"	100	
19.0	3/4"	100	
12.5	1/2"	97	
6.3	1/4"	93	
4.75	No. 4	93	7.4% Gravel
2.00	No. 10	89	
850	No. 20	85	
425	No. 40	81	27.4% Sand
250	No. 60	78	
150	No. 100	73	
75	No. 200	65.2	65.2% Fines



Comments:

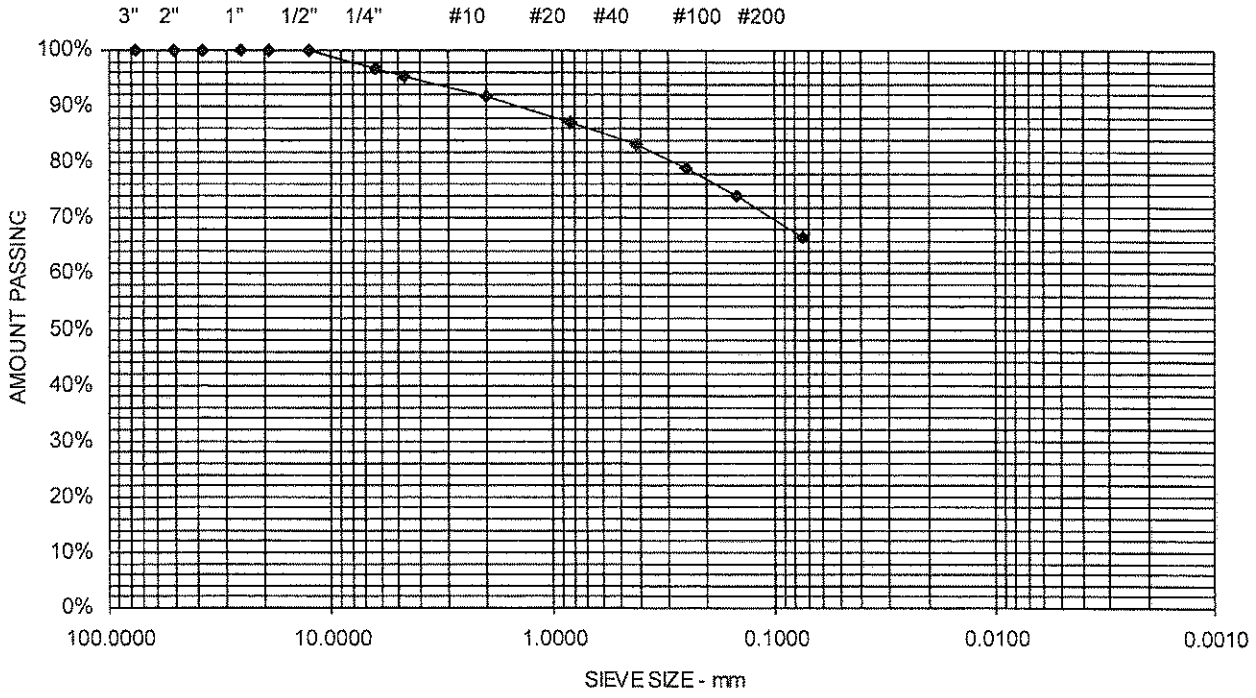
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	ORONO ME - PROPOSED PUBLIC WORKS FACILITY - GEOTECHNICAL ENGINEERING SERVICES	Project Number	13-0625
Client	SEBAGO TECHNICS, INC.	Lab ID	16775B
Exploration	B5	Date Received	10/21/2013
Material Source	1D	Date Completed	10/22/2013
		Tested By	LAMONT DUTRA

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150	6"	100	
125	5"	100	
100	4"	100	
75	3"	100	
50	2"	100	
38.1	1-1/2"	100	
25.0	1"	100	
19.0	3/4"	100	
12.5	1/2"	100	
6.3	1/4"	97	
4.75	No. 4	95	4.7% Gravel
2.00	No. 10	92	
850	No. 20	87	
425	No. 40	83	28.8% Sand
250	No. 60	79	
150	No. 100	74	
75	No. 200	66.5	66.5% Fines



Comments:

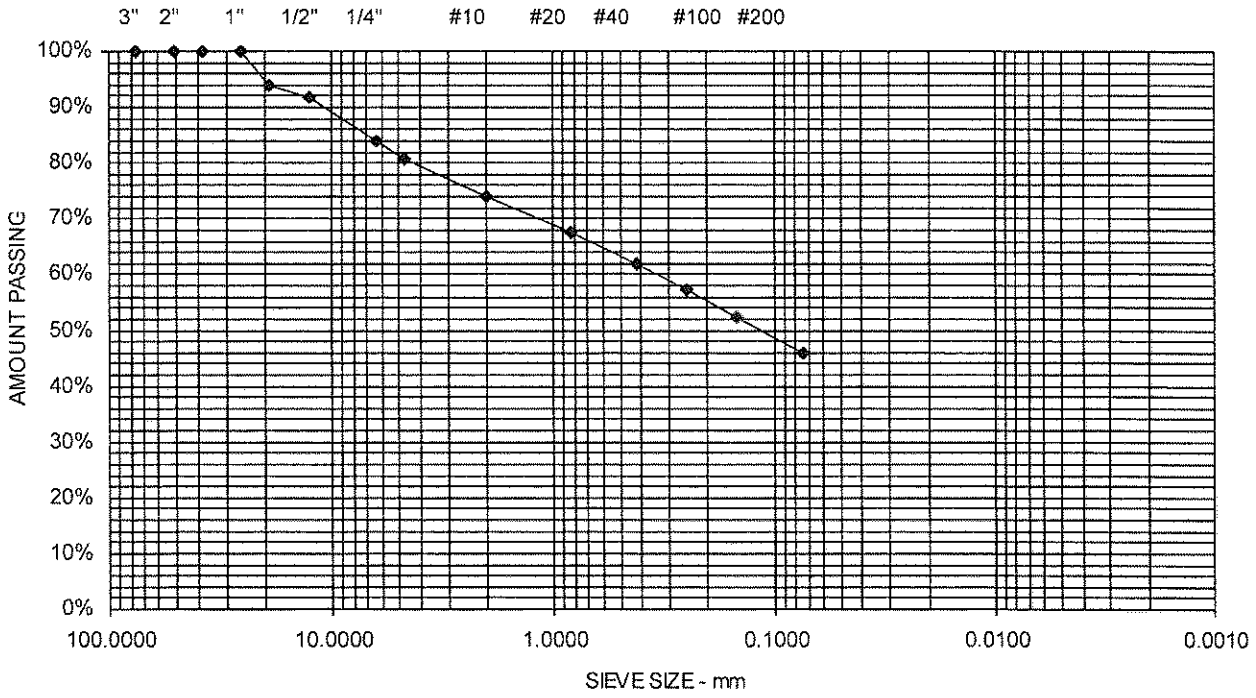
S.W.COLE ENGINEERING, INC.

Report of Gradation

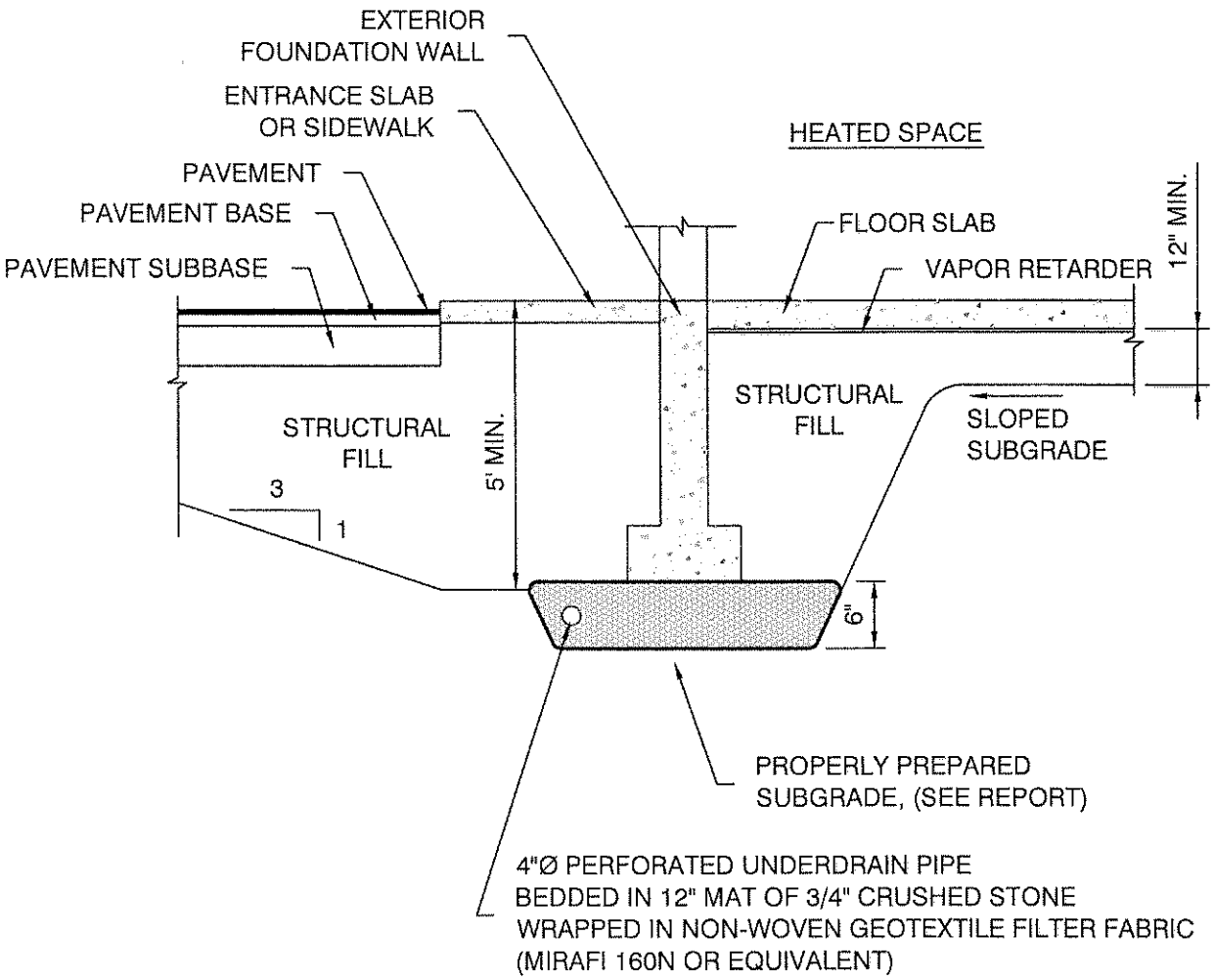
ASTM C-117 & C-136

Project Name	ORONO ME - PROPOSED PUBLIC WORKS FACILITY - GEOTECHNICAL ENGINEERING SERVICES	Project Number	13-0625
Client	SEBAGO TECHNICS, INC.	Lab ID	16777B
Exploration	B7	Date Received	10/21/2013
Material Source	1D	Date Completed	10/22/2013
		Tested By	LAMONT DUTRA

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	
150	6"	100	
125	5"	100	
100	4"	100	
75	3"	100	
50	2"	100	
38.1	1-1/2"	100	
25.0	1"	100	
19.0	3/4"	94	
12.5	1/2"	92	
6.3	1/4"	84	
4.75	No. 4	81	19.2% Gravel
2.00	No. 10	74	
850	No. 20	67	
425	No. 40	62	35% Sand
250	No. 60	57	
150	No. 100	52	
75	No. 200	45.9	45.9% Fines



Comments:



NOTE:

1. UNDERDRAIN INSTALLATION AND MATERIAL GRADATION RECOMMENDATIONS ARE CONTAINED WITHIN THIS REPORT.

2. DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY, NOT FOR CONSTRUCTION.

S.W.COLE ENGINEERING, INC.

SEBAGO TECHNICS, INC.

UNDERDRAIN DETAIL

PROPOSED PUBLIC WORKS FACILITY
ORONO, MAINE

Job No.:	13-0625	Scale:	Not to Scale
Date :	1/02/2014	Sheet:	16

APPENDIX A

Probe Depths and Elevations

APPENDIX A

Probe Depths and Elevations

Probe	Approximate Ground Surface Elev. (ft.)	Probe Depth (ft.)	Approximate Bottom of Probe Elev. (ft.)
P-1	242	10.0 NR	232
P-2	240	10.0 NR	230
P-3	239	10.0 NR	229
P-4	228	10.0 NR	218
P-5	209	10.0 NR	199
P-6	205	10.0 NR	195
P-7	214	10.0 NR	204
P-8	227	10.0 NR	217
NOTE: 10.0 NR = 10.0 feet No Refusal			

Exhibit 4

Subsurface Wastewater Disposal System Application

11238

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. of Health & Human Services
Division of Environmental Health, 11 SHS
(207) 287-5672 Fax: (207) 287-4172

PROPERTY LOCATION

City, Town, or Plantation	Orono
Street or Road	135 Kelley Road
Subdivision, Lot #	

>> CAUTION: LPI APPROVAL REQUIRED <<

Town/City _____ Permit # _____

Date Permit Issued ___/___/___ Fee: $_____ Double Fee Charged [ ]

_____ L.P.I. # _____

Local Plumbing Inspector Signature

☐ Owner ☐ Town ☐ State

OWNER/APPLICANT INFORMATION

Name (last, first, MI) Town of Orono ■ Owner ☐ Applicant

Mailing Address of Owner/Applicant	59 Main Street
	Orono, ME 04473
Daytime Tel. #	(207) 866-2556

The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # _____ Lot # _____

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

_____ _____
Signature of Owner or Applicant Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application. _____ (1st) date approved

_____ _____
Local Plumbing Inspector Signature (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

■ 1. First Time System
☐ 2. Replacement System
Type replaced: _____
Year installed: _____
☐ 3. Expanded System
☐ a. <25% Expansion
☐ b. >25% Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

■ 1. No Rule Variance
☐ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

■ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: _____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: _____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY

28.55 ☐ SQ. FT. ■ ACRES

SHORELAND ZONING

☐ Yes ■ No

DISPOSAL SYSTEM TO SERVE

☐ 1. Single Family Dwelling Unit, No. of Bedrooms: ____
☐ 2. Multiple Family Dwelling, No. of Units: ____
■ 3. Other: Public Works Facility (specify)
Current Use ☐ Seasonal ☐ Year Round ■ Undeveloped

TYPE OF WATER SUPPLY

■ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

■ 1. Concrete
■ a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: _____
CAPACITY: 1000 GAL.

DISPOSAL FIELD TYPE & SIZE

■ 1. Stone Bed ☐ 2. Stone Trench
☐ 3. Proprietary Device
☐ a. Cluster array ☐ c. Linear
☐ b. Regular load ☐ d. H-20 load
☐ 4. Other: _____
SIZE: 1250 ■ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT

■ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW

300 gallons per day
BASED ON:
☐ 1. Table 4A (dwelling unit(s))
■ 2. Table 4C (other facilities)
SHOW CALCULATIONS for other facilites

15 employees @ 20 gpd = 300 gpd with showers

☐ 3. Section 4G (meter readings)
ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS

PROFILE 1 CONDITION C
at Observation Hole # TP-1
Depth 18 "
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING

☐ 1. Medium---2.6 sq. ft. / gpd
☐ 2. Medium---Large 3.3 sq. f.t / gpd
■ 3. Large---4.1 sq. ft. / gpd
☐ 4. Extra Large---5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP

■ 1. Not Required
☐ 2. May Be Required
☐ 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

LATITUDE AND LONGITUDE
at center of disposal area
Lat. 44 d 52 m 28 s
Lon. -68 d 42 m 30 s

SITE EVALUATOR STATEMENT

I certify that on 12/10/13 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Site Evaluator Signature	SE #	Date
	355	1-14-14

SEBAGO TECHNICS WWW.SEBAGOTECHNICS.COM

Site Evaluator Name Printed	Telephone Number	E-mail Address
Gary M. Fullerton	(207) 200-2063	gfullerton@sebagotechnics.com

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

11238

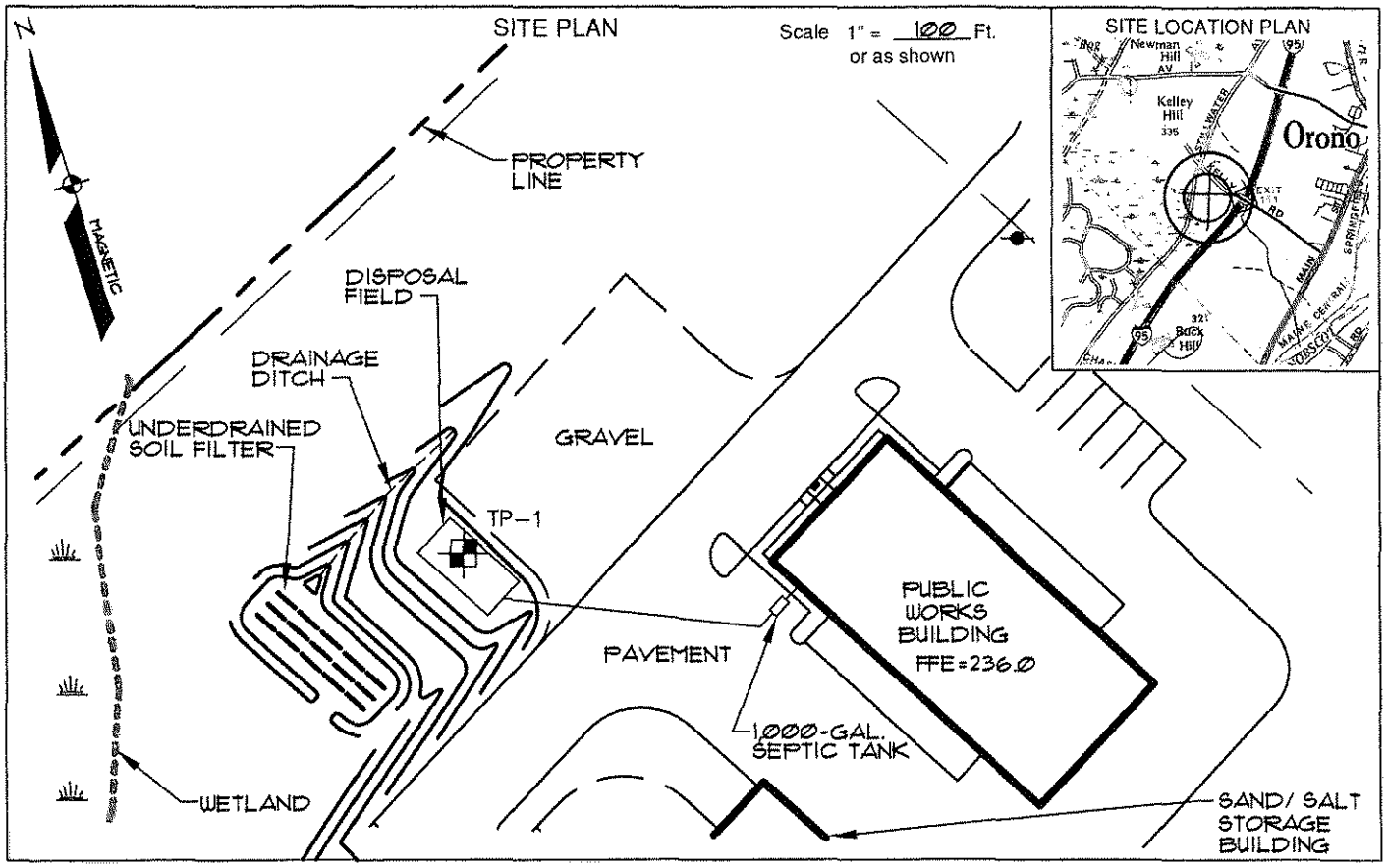
SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. of Health & Human Services
Division of Environmental Health, 11 SHS
(207) 287-5672 Fax: (207) 287-4172

Town, City ,Plantation	Street, Road, Subdivision	Owner or Applicant Name
Orono	135 Kelley Road	Town of Orono

SITE PLAN

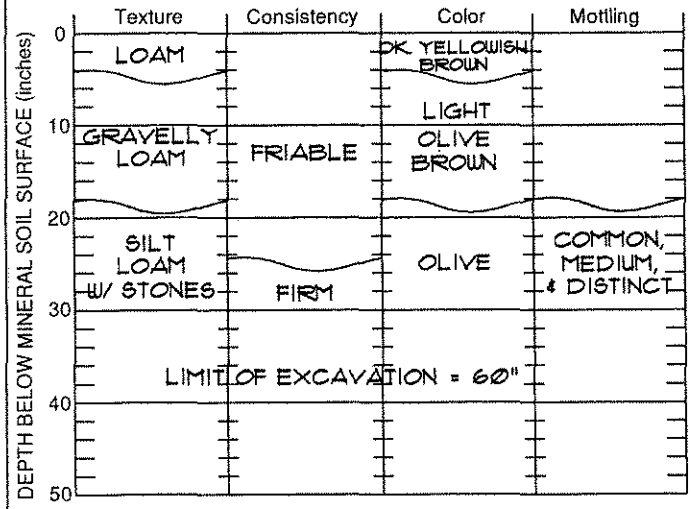
Scale 1" = 100 Ft. or as shown



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP-1 ■ Test pit ☐ Boring

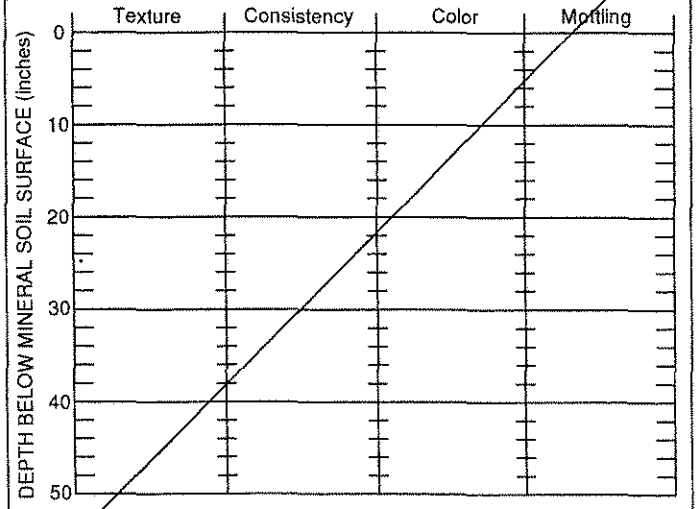
1-2 " Depth of Organic Horizon Above Mineral Soil



Soil Classification		Slope	Limiting Factor	
1 (Profile)	C (Condition)	3-8 %	18 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole _____ ☐ Test pit ☐ Boring

_____ " Depth of Organic Horizon Above Mineral Soil



Soil Classification		Slope	Limiting Factor	
(Profile)	(Condition)	%	"	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Site Evaluator Signature | 355 SE # | 1-14-14 Date

SEBAGO TECHNICS, INC.

11238

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

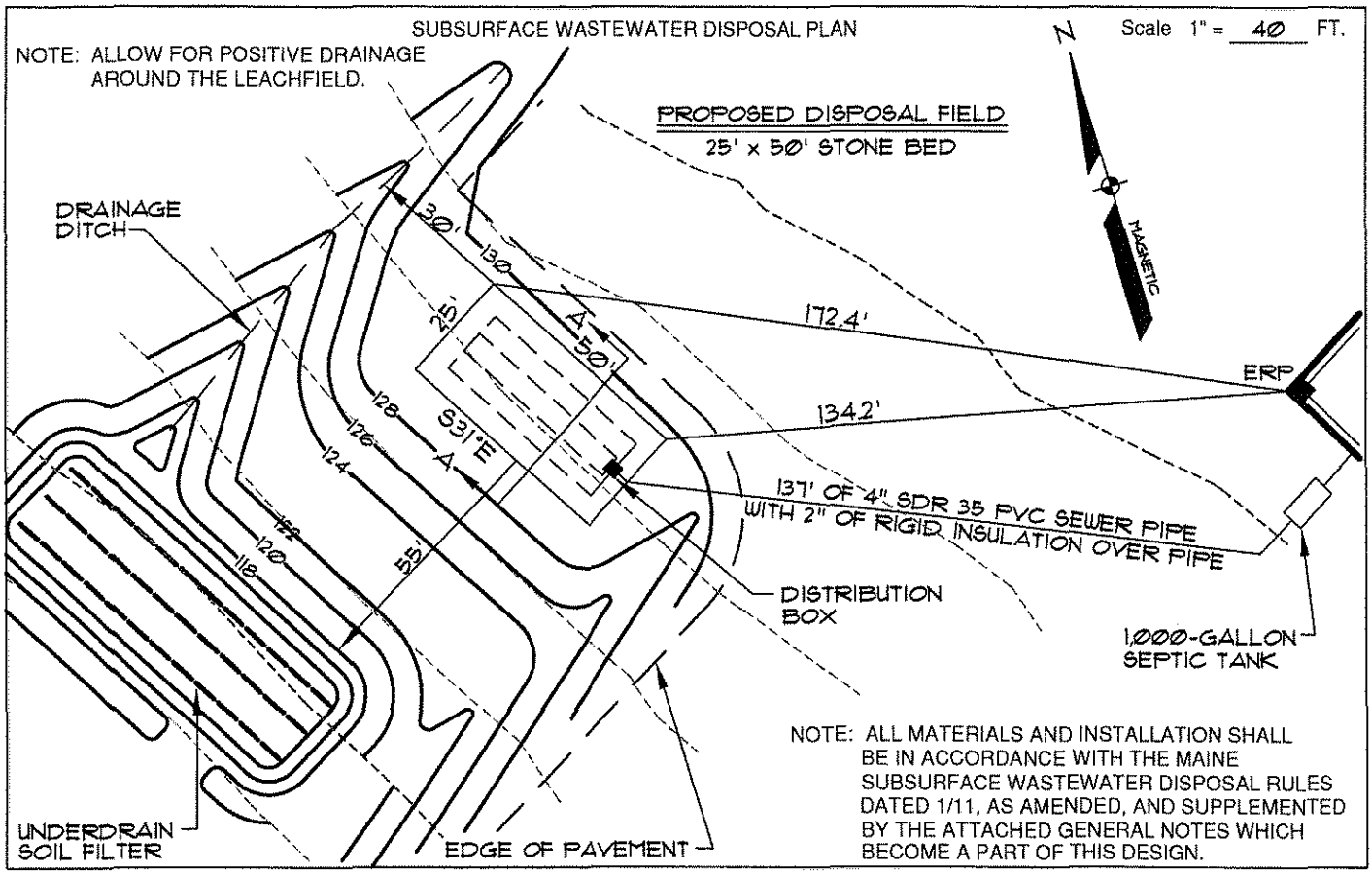
Maine Dept. of Health & Human Services
Division of Environmental Health, 11 SHS
(207) 287-5672 Fax: (207) 287-4172

Town, City ,Plantation	Street, Road, Subdivision	Owner or Applicant Name
Orono	135 Kelley Road	Town of Orono

SUBSURFACE WASTEWATER DISPOSAL PLAN

Scale 1" = 40 FT.

NOTE: ALLOW FOR POSITIVE DRAINAGE AROUND THE LEACHFIELD.



NOTE: ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MAINE SUBSURFACE WASTEWATER DISPOSAL RULES DATED 1/11, AS AMENDED, AND SUPPLEMENTED BY THE ATTACHED GENERAL NOTES WHICH BECOME A PART OF THIS DESIGN.

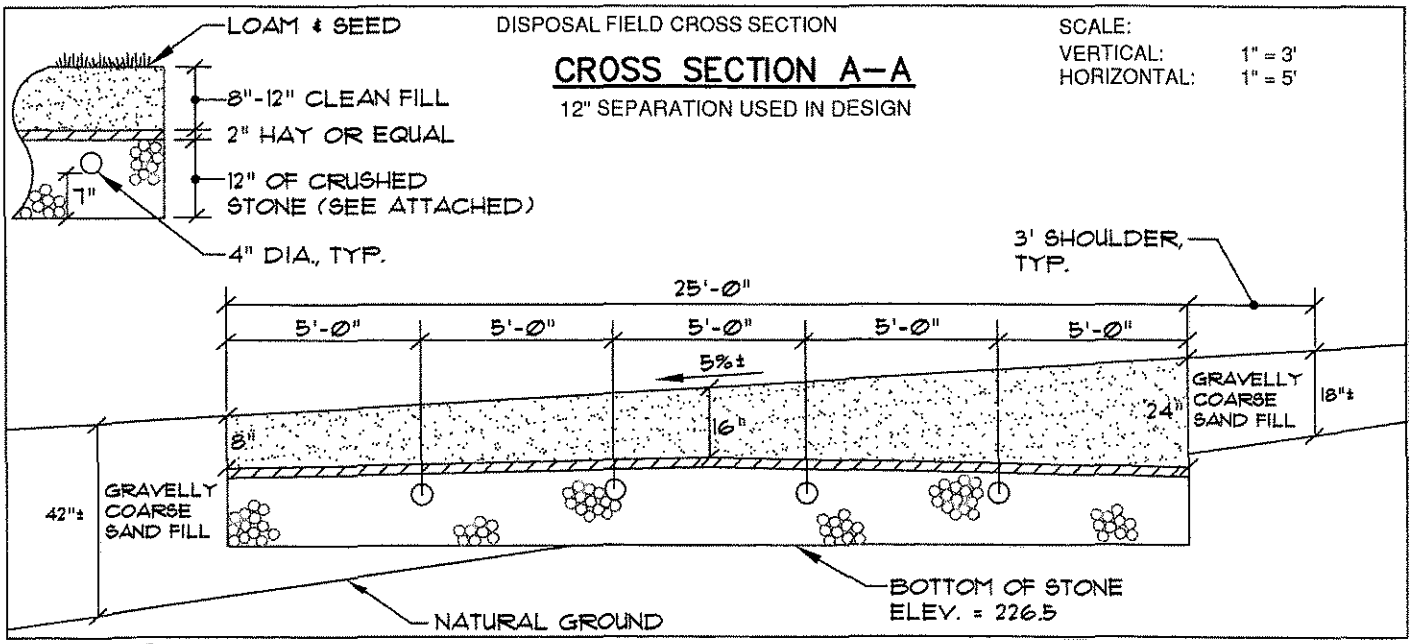
BACKFILL REQUIREMENTS		CONSTRUCTION ELEVATIONS		ELEVATION REFERENCE POINT
Depth of Fill (Upslope)	18"±	Finished Grade Elevation	228.5	Location & Description West corner of building, FFE
Depth of Fill (Downslope)	42"±	Top of Distribution Pipe or Proprietary Device	227.4	Reference Elevation 236.0
		Bottom of Disposal Area (Bottom of Stone)	226.5	

DISPOSAL FIELD CROSS SECTION

CROSS SECTION A–A

12" SEPARATION USED IN DESIGN

SCALE:
VERTICAL: 1" = 3'
HORIZONTAL: 1" = 5'



Site Evaluator Signature | 355 SE # | 1-14-14 Date

SEBAGO TECHNICS, INC.

General Notes
(attachment to form HHE-200)
<1,000 gpd Septic System

1. The nature of the site evaluation profession is one of interpretation of soil and site conditions. We, in the field, attempt to both provide a satisfactory service to the client, and comply by the rules by which we are bound - The Maine Subsurface Wastewater Disposal Rules. If at any time you, the client, are not satisfied with the service provided or the results found, it is your right to hire another site evaluator for a second opinion.

2. Property information is supplied by the owner, applicant or representative. Such information presented herein shall be verified as correct by the owner or applicant prior to signing this application.

3. All work shall be in accordance with the Maine Subsurface Wastewater Disposal Rules dated 1/18/11, as amended.

4. All work on the disposal field should be performed under dry conditions.

5. No vehicular or equipment traffic to be allowed on disposal area unless H-20 load is specified. Disposal field shall be constructed from outside the corner stakes located in the field. The downslope area is also to be protected in the same manner.

6. Backfill, if required, is to be gravelly coarse sand texture and to be free of foreign debris. If backfill is coarser than original soil, then mix a minimum of 4" of backfill material into original soil.

7. No neighboring wells are apparent (unless so indicated) within 100' of disposal area. Owner or applicant shall verify this prior to signing the application.

8. The disposal field stone shall be clean, uniform in size and free of fines, dust, ashes, or clay. It shall have a nominal size of ¾" or 1½" (per Table 11B of the Maine Subsurface Wastewater Disposal Rules).

9. Minimum separation distances required (unless reduced by variance or special circumstance).

a)	wells with water usage of 2000 or more gpd or public water supply wells:	
	Disposal Fields:	300'
	Septic Tanks and Holding Tanks:	150'
b)	potable water supply to disposal field:	100'
c)	potable water supply to septic tank:	50'
d)	septic tank or disposal field to lake, river, stream or brook:	100' for major watercourse, 50' for minor watercourse
e)	house to treatment tank:	8'
f)	house to disposal field:	20'

- For all other separation distances, use separations for less than 1,000 gpd per Maine Subsurface Wastewater Disposal Rules Table 7B for first-time systems and Table 8A for replacement systems.

10. Location of septic system near a wetland may require a separate permit. As such, the owner, prior to construction of the septic system, shall hire a professional to evaluate proximity of adjacent wetlands and prepare necessary permit applications.

11. Garbage disposals are not recommended and, if installed, are done so at the owner's risk. The additional waste load requires increased maintenance frequency and may cause premature failure of disposal field.

12. Pump stations, when required, shall be installed watertight to prevent infiltration of ground and/or surface water.

13. Force mains and pressure lines shall be flushed of any foreign material and pumps shall be checked for proper on/off cycle before being put into service.

14. Force mains, pump stations, and/or gravity piping subject to freezing shall be installed below frost line or adequately insulated.

Exhibit 5

Sand and Salt Shed Registration Form and Approval Email

Sand and Salt Storage Area
Registration Form and Request for Variance
(pursuant to 06 CMR Ch. 574)

Sand and Salt Pile Program
Dept. of Environmental Protection
17 State House Station
Augusta, ME 04333-0017
Telephone: (207)287-3901

Instructions: Please complete Sections 1 through 3 for each sand and salt storage area that you are now registering. Use a separate form for each storage area. If you are applying for a variance from either the siting or operational requirements of DEP Rules Chapter 574, "Siting and Operation of Road Salt and Sand-Salt Storage Areas," you must complete Sections 1 through 3 and provide additional information in Section 4 and/or Section 5.

Purpose Please check one.

☒ This registration form is for a proposed sand and salt storage area. No material is stored on the site at this time.

☐ This registration form is for an existing sand and salt storage area not previously registered with the DEP. Material has been stored on this site since (year).

☐ This registration form is for an existing site registered with the DEP. I am now applying for a variance from the siting and/or operations requirements.

Section 1: Sand and Salt Storage Area Location and Contact Information

Town: Orono County: Penobscot

Provide or describe the physical location of the sand and salt storage area (i.e., Emergency 911 address)
167 Kelly Roas, Orono, ME
Please provide a map (hand-drawn, DeLorme, USGS Topo or DEP-provided) indicating the storage location. Latitude and Longitude coordinates or UTM coordinates if available

Contact Person for Sand and Salt Storage Area

Contact Name: Rob Yerxa Title: Public Works Director
Business Name: Town of Orono
Mailing Address: 59 Main Street, Orono, ME
Contact's Daytime Telephone: (207) 856-5062 E-mail: ryerxa@orono.org

Please indicate(X, √ or name) who owns each of the following elements of the sand and salt storage location:

	Who owns the **sand**?	Who owns the **salt**?	Who owns the **land** on which the storage is located?
Person or Company, listed above	X	X	X – Purchase & Sale for property
Town or County Government			
Other (please specify)			

Did you register a sand and salt pile storage area with the Department of Environmental Protection in 1986 or

1999? ☐ Yes, different site ☐ Yes, same site ☐ No ☒ Don't know

***If Yes**, different site:* Please provide the location of the previous storage site:

Are you still storing sand/salt material at the previously registered site: ☐ Yes ☐ No

Section 2: Siting Elements

☐ Check this box if you are applying for a variance from one or more of the siting requirements listed in DEP Rules, Chapter 574, Section 3(B) **and** provide the additional information in Section 4 of this form.

Is the area in which the sand and salt pile is located served by a public water supply: ☐ Yes ☐ No

If, No, how far (in feet) is the nearest drinking water well from the sand and salt pile? 470 +/- feet

***For existing sites only**:* Have you ever received complaints from nearby well owners about salty-tasting water? N/A ☐ Yes ☐ No

Is the sand and salt pile located on a significant sand and gravel aquifer (mapped by the Maine Geological Survey? ☐ Yes ☒ No

Is the sand and salt pile located in a source water protection area (SWPA) for a public water supply:
☐ Yes ☒ No

Section 3: Operational Elements

☐ Check this box if you are applying for a variance from one or more of the operational requirements Listed in DEP Rules, Chapter 574, Section 4 **and** provide the additional information in Section 5 of this form.

Please provide the amount of material to be stored on site:

Unmixed **Salt** (tons)	Mixed **Sand and Salt**(cubic yards)	**Liquid Chloride** Product (gallons)
0	4000	0

Salt and sand-salt materials are/will be stored: (check all that apply)

☒ **In a building** ☐ **On a pad**

Date (or anticipated date) of building construction:
May 2014 – December 2014
Dimensions of building:
100' x 80'
Type/style of building:
Laminated Arch w/ Galvanized Metal roof

Date (or anticipated date) of pad construction:
N/A
Dimensions of pad:
N/A
Covering material to be used:
N/A

Where (location) is the sand mixed with the salt? Inside or immediately outside

Do you have an operations and maintenance plan for your storage area? ☒ Yes ☐ No

For existing storage areas; Is there tree or other vegetation damage from salt apparent at this site?
☐ Yes ☐ No

If yes, please describe the extent of damage:

Notes/Comments:

Completed by: Craig Burgess Date October 3, 2013

Section 4: Application for Variance from Siting Requirements NOT APPLICABLE

Instructions: Please answer the following questions to the best of your ability. Attach additional pages, if needed. **You may be contacted for additional information once your application is received.**

Application for variance from siting requirements in DEP Rules, Chapter 574 to allow siting of a sand and salt storage area: (check all that apply)

- ☐ On a significant sand and gravel aquifer
- ☐ In a source water protection area of a public water supply
- ☐ Within 300 feet of a private well

Is the sand and salt pile located in an are legally zoned by the municipality for commercial, industrial or similar use? ☐ Yes ☐ No ☐ Town does not have zoning.

Is it likely that new houses (with wells) will be built within the next five years? ☐ Yes ☐ No

Is the ground water in the area used for purposes other than drinking water (such as for industrial purposes, livestock management, agricultural irrigation)? ☐ Yes ☐ No

If Yes: Please list other uses of ground water:

What is the name of the nearest surface water body (stream, river, lake, ocean)? Penobscot River
Distance to nearest surface water body Feet

Are there feasible alternative sites to the proposed/current sand and salt storage area? ☐ Yes ☐ No
If No: What constraints (economic, operational, environmental, etc.) are there preventing the use of an alternative location? **Attach additional sheets, as needed.**

If your are requesting a variance to allow siting within 300 feet of a private well, please provide the names and addresses of all well owners within 300 feet of the proposed/current storage location and the distance to their wellheads from the sand and salt pile/building.
N/A

If you are requesting a variance to allow siting within a source water protection area, please provide the name and address of the public water supplier in whose source water protection area the proposed/current sand/salt storage area lies.
N/A

Section 5: Application for Variance from Operational Requirements NOT APPLICABLE

Instructions: Please answer the following questions to the best of your ability. Attach additional sheets, as needed. **You may be contacted for additional information once your application is received.**

Application for variance from operational requirements in DEP Rules, Chapter 574 to allow sand and salt storage: (check all that apply)

☐ Without a pad or ☐ with a pad other than specified in 06 CMR Chapter 574, Section 4(A)
☐ Without a cover or ☐ with a cover other than specified in 06 CMR Chapter 574, Section 4 (C)
☐ Other variance request: *please be specific*

Is the sand and salt pile located in an area legally zoned by the municipality for commercial, industrial or similar use? ☒ Yes ☐ No ☐ Town does not have zoning

Is it likely that new houses (with wells) will be built in the area within the next 5 years? ☐ Yes ☐ No

Is the ground water in the area used for purposes other than drinking water (such as for industrial purposes, Livestock management, agricultural irrigation)? ☐ Yes ☐ No

If Yes: Please list other uses of ground water:

What is the name of the nearest surface water body (stream, river, lake, ocean)?

Distance to the nearest surface water body Feet

Will this be a temporary site? ☐ Yes ☐ No

If Yes: How long do you expect storage on site?

Why is a temporary site needed?

Where does stormwater or runoff from the storage area go? *(be specific)*

Is there a means or system to collect or treat stormwater from the sand and salt storage location?
☐ Yes ☐ No:
If Yes: Please describe. Attach a diagram, if needed

Is there an existing Storm Water Pollution Prevention Plan for this site? ☐ Yes ☐ No

If Yes: Attach plan

Is there an existing MEPDES/NPDES Stormwater Permit for the site?
☐ Yes ☐ No *If Yes:* What is the Permit ID#

On a separate sheet of paper: Please explain what special characteristics of your site or operation (including best management practices) exist that support your request for a variance.

Craig Burgess

From: Kluck, Erich <Erich.D.Kluck@maine.gov>
Sent: Friday, October 04, 2013 8:09 AM
To: Craig Burgess
Subject: RE: Proposed Orono Public Works Facility with Sand & Salt Shed Storage Area

I have received and reviewed the application and the proposed location meets the siting criteria of Chapter 574. Please let me know when construction is completed and the old location is cleaned up and abandoned.

Thanks

Erich Kluck
207-592-2068

From: Craig Burgess [mailto:cburgess@sebagotechnics.com]
Sent: Thursday, October 03, 2013 3:13 PM
To: Kluck, Erich
Cc: Owens McCullough
Subject: Proposed Orono Public Works Facility with Sand & Salt Shed Storage Area

Hello Erich,

The Town of Orono plans to construct a new public works facility with a sand/salt shed to replace an existing facility that has exceeded its useful design life and is not meeting the Town's needs. The existing facility that includes a sand/salt shed is located at 98 Penobscot St, Orono, ME 04473. The new facility will be constructed on a parcel located west of Interstate 95 and accessed from the south side of Kelly Road (167 Kelly Road). Proposed improvements will include approximately 3.96 acres of new impervious areas and 2.26 acres of new landscaped areas. No wetland impacts are proposed. A Site Location of Development Act (Site Law) permit application will be submitted because the project will create more than 3 acres of new impervious areas.

Attached is a location map for your use in finding the site and a completed registration form for the sand and salt storage area. At your convenience, can you review the form and let me know if you have any questions.

Thanks,

Craig A. Burgess, P.E.
Project Engineer

SEBAGO
TECHNICS
www.sebagotechnics.com
An Employee Owned Company

75 John Roberts Road – Suite 1A
South Portland, ME 04106-6963

Office: 207.200.2100
Direct Line: 207.200.2081
Fax: 207.856.2206

Exhibit 6

Spill Prevention, Control and Countermeasures (SPCC) Plan

Town of Orono
Public Works Facility

Spill Prevention Control and Countermeasure (SPCC) Plan - Draft

Prepared for:
Town of Orono Public Works Department
135 Kelley Road
Orono, Maine 04473

Date of Plan: January 17, 2014

Table of Contents

Management Approval and Review [112.5 & 112.7(d)(2)]

Management Approval

The Town of Orono Public Works Department is committed to the prevention of discharges of oil to navigable waters or the environment, and maintains the highest standards for spill prevention control and countermeasures through periodic review, updating, and implementation of this Spill Prevention Control and Countermeasure (SPCC) Plan. The Town of Orono Public Works Department will provide the manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

Authorized Facility Representative: _____ Signature: _____

Title: _____

Management Review

A review and evaluation of this SPCC Plan is conducted at least once every five years. As a result of this review and evaluation, the Town of Orono Public Works Department will amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of review.

This SPCC Plan will also be amended within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.

Any technical amendment to the SPCC Plan shall be certified by a Professional Engineer or self certified by the facility.

Review Dates	Signature	Amendment Required? (Y/N)

Professional Engineer's Review [112.3(d)]

The undersigned Registered Professional Engineer is familiar with the requirements of Chapter 40 of the Code of Federal Regulations Part 112 (40 CFR 112) and has supervised examination of the facility. The undersigned Registered Professional Engineer attests that this Oil Spill Prevention Control and Countermeasure Plan has been prepared in accordance with good engineering practices including applicable industry standards, and in accordance with the requirements of Chapter 40 of the Code of Federal Regulations Part 112 (40 CFR 112); that procedures have been established for required inspections and testing; and that the Plan is adequate for the facility.

_____
Signature

_____
Name

_____
Title

_____
Company

_____
Date

_____
P.E. Registration Number

1.0 Introduction

1.1 Purpose

The purpose of this Spill Prevention Control and Countermeasure (SPCC) plan is to prevent oil/ fuel spills from occurring, and to perform safe, efficient and timely response in the event of a spill or leak (both referred to as "spills" herein). In accordance with United States Environmental Protection Agency (EPA) oil pollution prevention regulations (40 CFR 112), the Town of Orono Public Works Department must prepare and implement an SPCC plan for facilities that could reasonably be expected to discharge oil into or upon navigable waters or adjoining shorelines; and, meet one of the following conditions

- Aboveground oil storage capacity exceeds 1,320 gallons; or
- Underground oil storage capacity exceeds 42,000 gallons, unless the underground tanks are subject to all of the technical requirements of 40 CFR 280 or a state program approved under 40 CFR 281. (Maine's approved program is Department of Environmental Protection, Chapter 691 – Rules for Underground Storage Facilities.)

As defined by 40 CFR Part 112, oil includes all grades of motor oil, hydraulic oil, lube oil, fuel oil, gasoline and diesel, automatic transmission fluid (ATF), waste oil, and transformer mineral oil. The definition of oil also includes non-petroleum oils such as animal or vegetable oils and synthetic oils.

1.1.1 Using the Plan

In addition to satisfying a regulatory requirement, this SPCC plan should be working document at the facility. The plan should be used frequently in the following ways:

- As a reference for oil storage and containment system information.
- As a tool for informing new employees and refreshing existing employees on practices for preventing and responding to spills.
- As a guide to periodic training programs for employees.
- As a guide to facility inspections.
- As a resource during an emergency response.

1.1.2 SPCC Plan Revisions

The Town of Orono Public Works Department must revise this SPCC plan for any change in the facility design, construction, operation or maintenance that affects the facility's potential for discharging oil. Revisions must occur as soon as possible, but no later than six months after the change occurs. The Director of Public Works is responsible for initiating and coordinating such revisions.

Additionally, this SPCC plan must be reviewed at least once every five years. Revisions to the plan, if any, must be made within six months of the review. Facility information related to the SPCC plan must be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator whenever the facility discharges more than 1,000 gallons in a single event, or discharges more than 42 gallons of oil in each of two spill events within a 12-month period.

1.2 Facility Description [112.7(a)(3)]

1.2.1 Location and Use

The Town of Orono Public Works Department is located on the 18.55-acre parcel on the south side of Kelley Road and immediately west Exit 191. There are two buildings on the property: (1), a 17,390 square foot public works garage and; (2), a 8,000 square foot roofed sand and salt shed located on the southeast corner of the site, primarily functioning as storage for road sand and salt. The public works building contains offices, six warehouse storage areas, seven equipment bays, one wash bay and one service bay.

The Public Works Department operates with 11-12 employees, Monday through Friday between October 16 – March 30 and Monday through Thursday between April 1- October 15, or on an as-needed during storms or public works emergencies.

1.2.2 Waterways and Abutters

The nearest surface water body is an unnamed brook, which flows west to the Caribou Bog complex. The Caribou Bog is a large wetland bog complex that extends easterly and ultimately discharges to Pushaw Lake.

Abutting properties include several single family residences to the east and west of the site, Kelley Road Self Storage on the north of Kelley Road and Caribou Bog south of the site.

1.2.3 Site Drainage

Stormwater runoff from the site drains southwesterly toward wetland areas that are contiguous with the Caribou Bog in the southwestern corner of the parcel. Upper limits of the 100-year floodplain associated with the Caribou Bog do not extend into the subject parcel.

Flow from northern portions of the site, including possible discharges from the pump island, are directed toward a closed drainage system that discharges easterly to an underdrain soil filter (Underdrained Soil Filter 1). Runoff from other site areas are treated using two additional underdrained soil filters and two wooded buffers.

2.0 Potential Spill Sources and SPCC Features

2.1 SPCC Compliance [112.7(a)(1) & 112.7(a)(2) & 112.8]

The AST is a 3,000-gallon, double-walled tank with an interstitial monitoring and alarm system to indicate failure of inner shell. The tank will have an interior split to allow for a 2,000 gallon diesel fuel compartment and 1,000 gallon gasoline compartment. The double-walled tank and monitoring provides the secondary containment for the tank. The tank will be installed with the construction of the proposed site as designed. The AST and all associated outdoor piping is located on a concrete pad with overhead canopy outside the public works building in the northerly portion of the site (see site layout figure). The concrete pad is protected by bollards and a fence. Fuel is used for Town of Orono Public Works Department fleet of vehicles and equipment. Details regarding security, as required under 112.7(g) is discussed in section 3.1.4.

The liquid level of the tank is monitored by a visual gauge level indicator. Upgrades to the tank are proposed to install a high level audible liquid level alarm to the tank. Deliveries to the tank are arranged by personnel when sufficient storage space is available within the tank. Town personnel will monitor deliveries to the AST, however drivers make connections, monitor the delivery, and assume responsibility for the safe transfer of the material from the truck to the tank.

Other ASTs do exceed the regulated limits (40 CFR 112). All ASTs for the facility are listed on page 10.

Additional chemical containers are located within the Public Works building. These containers include products that are used in the manufacturing operations at the facility and are located on appropriately sized containment pallets within designated storage areas of the building, away from highly trafficked areas. Specific chemicals stored are listed on the Page 11. All other chemicals, including smaller containers of lubricants, cleaners, and motor repair fluids are kept at household level quantities.

A laminated arch type sand and salt storage building capable of storing up to 4,000 cubic yards of material is located south of the public works building. The sand and salt building dimensions are planned to be 80 feet by 100 feet. Dump trucks will unload salt and sand through an overhead door at the northerly building face which is 8-9 feet higher than the floor slab. Loaders will move sand and salt sand at southerly areas of the building. Sand and salt is accessible through an overhead door and loaders use a ramp to reach a height that allow easy unloading into dump trucks and plows. Large quantities of sand and salt spilled onto the gravel surfaces will be cleaned up immediately by the loaders. Small quantities will be cleaned by facility personnel.

2.2 Summary of Storage [112.7(a)(3)(i & iii) & 112.7(b) & 112.7(c)]

ABOVEGROUND EXTERIOR STORAGE TANKS

TANK NO.	CAPACITY (gallons)	PRODUCT	HI-LEVEL ALARM	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
1.	3,000	2,000 gallon – Diesel 1000 gallon - Gasoline	Liquid level gauge. Hi level alarm to be installed	To containment area. Overflow to facility paved area yard and ultimately to underdrained soil filter, designated Underdrained Soil Filter 1.	The tank is a double-walled tank with an interstitial monitoring alarm system. There are spill prevention kits and absorbent materials on-site to contain smaller spills.
2.	275	Waste oil	TBD	To containment area outside maintenance bay. Overflow to facility paved area yard and ultimately to underdrained soil filter, designated Underdrained Soil Filter 2.	Containment pallet a minimum 150% of chemical volume
3.	TBD	MgCl (26%)	TBD	To containment area outside sand and salt shed. Overflow to facility paved area yard and ultimately to underdrained soil filter, designated Underdrained Soil Filter 2.	Containment pallet a minimum 150% of chemical volume

Note: Heating fuel will be determined and will be either #2 fuel oil in an interior tank or propane stored in an exterior tank(s).

UNDERGROUND STORAGE TANKS

TANK NO.	CAPACITY (gallons)	PRODUCT	TANK MONITOR	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
No Underground storage tanks noted at the facility.					

ABOVEGROUND PIPING

TYPE	PRODUCT	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
Metal Above Ground	Diesel/ Gasoline	To containment area. Overflow to facility paved area yard and ultimately to underdrained soil filter, designated Underdrained Soil Filter 1.	The product piping is located within the concrete pad for the AST. Spills would be noticeable.

UNDERGROUND PIPING

TYPE	PRODUCT	LEAK DETECTION SYS.	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
No underground piping noted at the facility.				

MOTOR FUEL DISPENSERS

CONTAINMENT & SPILL CONTROL FEATURES
No motor fuel dispensers above household quantities noted at the facility.

LOADING/UNLOADING RACKS

LOCATION or NAME	PRODUCT	ISSUE or RECEIVE	NEAREST DRAIN or LOW POINT	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
No loading/unloading racks identified at the Facility.					

DRUM STORAGE

BLDG. or LOCATION	# OF DRUMS	PRODUCT & gal./drum	NEAREST DRAIN	ESTIMATED SPILL DIRECTION AND RATE	CONTAINMENT & SPILL CONTROL FEATURES
1	2	Antifreeze	Indoors	To containment pallet inside building	Containment pallet a minimum 150% of chemical volume
1	1	Waste Antifreeze	Indoors	To containment pallet inside building	Containment pallet a minimum 150% of chemical volume

PORTABLE TANK STORAGE

LOCATION	TANK TYPE & PRODUCT	MAX. COMPARTMENT SIZE (gallons)	ESTIMATED SPILL DIRECTION AND RATE (locate nearest drain)	CONTAINMENT & SPILL CONTROL FEATURES
No portable tank storage identified at Facility.				

Other chemicals include:

1. Motor Oil (15W-40): 175 gal stored in the bulk storage room.
2. Hydraulic Oil (Mobile 424): 100 gal stored in the bulk storage room.

3.0 SPILL PREVENTION AND RESPONSE

3.1 Discharge Prevention

3.1.1 SPCC Features and Operating procedures [112.7(a)(3) & 112.8]

The Town of Orono Public Works Department employees are trained to implement spill prevention practices for work with and around oil sources. The Town of Orono Public Works Department personnel shall use common sense and rely on spill prevention practices at all times to minimize the potential for a release of oil.

For example, the following "common sense" practices are recommended:

- do not leave portable sources unattended (outside);
- return portable sources to their storage location after use;
- use pads, drip pans, and funnels when transferring petroleum products from a portable container;
- protect oil sources from damage by moving equipment;
- do not store oil sources near catch basins or floor drains; and
- loading and unloading of petroleum products shall be attended at all times.

Spill prevention during oil deliveries (offloading) is the primary responsibility of the supplier until the product is safely in the tank or vessel.

Supplier Approval

All suppliers must meet the minimum requirements and regulations for tank truck unloading as established by the United States Department of Transportation. The Town of Orono Public Works Department will also ensure that all suppliers understand the site layout, know the protocols for entering the site and unloading product, and have the necessary spill equipment on board to respond to a spill from the vehicle or fuel delivery hose.

Observation of Deliveries

The Public Works Director or designee will supervise deliveries for all new suppliers and will periodically observe deliveries for existing, approved suppliers. Delivery observations include:

- vehicle inspection prior to delivery and departure (e.g., to make sure the driver does not drive away with the hose in the fill pipe);
- inquiry to ensure the truck contains the right product for the tank;

- assurance that the tank can hold what the supplier intends to deliver; and
- adequate spill response equipment is on board the vehicle.

3.1.2 Tests and Inspections [112.7(e) & 112.8(c)(6)]]

The Public Works Director shall perform testing, inspection, and maintenance of all petroleum equipment to keep it performing in an efficient and environmentally sound manner. The tests and inspections shall be performed as discussed in the following subsections.

3.1.2.1 Inspecting ASTs, Piping and Dispensing Systems

Facility personnel periodically observe the AST during operating hours. The Public Works Director inspects the AST and associated piping and dispensing systems and the records results on the *Monthly AST Inspection Report*, as included in Appendix E. Spill response kits kept on site shall also be checked during the monthly AST inspection, and restocked as necessary. The monthly inspection reports shall be kept for at least three years in a file maintained by the Public Works Director. Inspections of the tanks include observations of the exterior of the tank for signs of deterioration or spills (leaks), observations of the tank foundation and supports for signs of instability, and observations of the vent, fill and discharge pipes for signs of poor connection, that could cause a spill. In addition to these monthly inspections, the facility will periodically verify the integrity of each tank in accordance with an industry standard inspection procedure such as STI – SP001-03 or API 653. The frequency of such testing will be as specified by the selected industry standard procedure.

3.1.2.2 Tank and Equipment Maintenance

All petroleum tank and piping problems shall be immediately reported to the Public Works Director. Visible oil spills (leaks) that cause a loss of oil from tank walls, piping or other components shall be repaired or replaced as soon as possible to prevent the potential for a major spill from the source.

3.1.3 Training [112.7(f)]

We conduct training using modules from a purchased training program to cover generic information. We cover issues specific to Plasmine with reviews and revisions of Standard Operating Procedures, internal hazard assessments, and tabletop emergency drills, all done as a group.

3.1.3.1 Documentation for Training

Training is documented with completed quizzes documenting comprehension in the case of purchased training programs. It is documented with published minutes, and/or updated and signed SOPs in the case of training specific to

Plasmine. Documentation is maintained in the Administrative Manager's office files.

3.1.4 Security [112.7(g)]

The tank is fenced and the facility is well lit at all times. Fencing of the tank, which will include fencing of all valves, loading and unloading racks and above ground piping, will provide environmental equivalence. Exterior lighting illuminates the facility, specifically the AST, from dusk to dawn.

The tank sits in front (north) of the public works building, and is partially visible from the Kelley Road. Master flow and pump starter controls including interstitial monitoring equipment are located within the office areas of the building. This facility is securely locked when the facility is shut down. The tank fill line for the 3,000 gallons AST is located on the concrete pad, and is blank flanged when not in use. Upgrades to the facility will include locking this valve to prevent unauthorized operation of the fill port.

3.2 Emergency Response [112.7(a)(3)(iv), 112.7(a)(4) and 112.7(c)]

This section describes the cleanup response and protocols to follow in the event of an oil spill. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by State or Federal laws. It is imperative that action be taken to respond to a spill once it has occurred. Depending on the volume and characteristics of the material released, The Town of Orono Public Works Department has defined spill response as either a "Minor Spill Response" or "Major Spill Response" ("Spill Emergency"). A list of Emergency Contacts is included in Appendix A. A list of spill response materials kept at the facility is included in Appendix F.

3.2.1 Minor Spill Response [112.7(a)(3)(iv)]

A "Minor Spill Response" is defined as one that poses no significant harm to human health or the environment. These spills involve generally less than 1 gallon and can usually be cleaned up by The Town of Orono Public Works Department personnel. Other characteristics of a minor spill include the following:

- the spilled material is easily stopped or controlled at the time of the spill;
- the spill is localized;
- the spilled material is not likely to reach surface water or groundwater;
- there is little danger to human health; and
- there is little danger of fire or explosion.

In the event of a minor spill the following guidelines shall apply:

- Stop the source if the spill is on going.

- Immediately notify the Administrative Manager and the Director of Manufacturing.
- Call the Maine Department of Environmental Protection (1-800-482-0777) within two hours.
- Notify the local Fire Department.
- Contain the spill with spill response materials and equipment.
- Place spill debris in properly labeled waste containers.
- Complete the Spill Notification Form (Appendix B) and send to the Administrative Manager and Director of Manufacturing.

3.2.2 Major Spill Response (Spill Emergency) [112.7(a)(3)(iv)]

A "Spill Emergency" is defined as one involving a spill that cannot be safely controlled or cleaned up. Characteristics include the following:

- the spill is large enough to spread beyond the immediate spill area;
- the spilled material enters surface water or groundwater (regardless of spill size);
- the spill requires special training and equipment to cleanup;
- the spilled material is dangerous to human health; and/or
- there is a danger of fire or explosion.

In the event of a spill emergency, the following guidelines shall apply:

- Stop the source if the spill is on going only if safe to do so.
- All workers shall immediately evacuate the spill site and move to a safe distance away from the spill.
- The Town Manager or Public Works Director shall call for medical assistance if workers are injured (no worker shall engage in rescue operations unless they have been properly trained and equipped).
- The Town Manager or Public Works Director shall immediately contact the Maine Department of Environmental Protection (1-800-482-0777) and the National Response Center (1-800-424-8802). Document the telephone calls on the Spill Notification Form in Appendix B.
- Notify the local Fire Department or Police Department.
- A senior on-site person shall contact the Public Works Director and provide details regarding the spill.
- The Town Manager or Public Works Director will coordinate cleanup and seek assistance from a cleanup contractor as necessary.

If the Town Manager or Public Works Director are not available at the time of the spill, then another member of the Management Team shall assume responsibility.

3.2.3 Waste Disposal [112.7(a)(3)(v)]

Wastes resulting from a minor spill response will be containerized in impervious bags, drums or buckets. The waste will be removed from the site by a licensed waste hauler within two weeks.

Wastes resulting from a major spill response will be removed and disposed by a cleanup contractor.

3.2.4 Notification and Reporting [112.4 and 112.7(a)(4)]

3.2.4.1 Spill Notification Forms [112.7(a)(4)]

After making the appropriate phone calls and the spill is contained, a *Spill Notification Form*, included in Appendix B, shall be completed and submitted to the Town Manager or Public Works Director. The *Spill Notification Form* includes a checklist to document the proper notification of state and federal agencies. The form shall be filed by facility name and maintained as long as The Town of Orono Public Works Department owns and/or operates this facility.

3.2.4.2 Submittal of Additional Information to the EPA and Maine DEP [112.4]

If a single spill greater than 1,000 gallons occurs, or two spills each greater than 42 gallons occur within any 12 month period at this The Town of Orono Public Works Department facility, the Administrative Manager shall, in addition to the notification procedures above, provide written information to the EPA Regional Administrator as required by the federal SPCC rules. A copy of this information must be provided to the Maine Department of Environmental Protection.

3.2.5 Area Plans

The Environmental Protection Agency (EPA) and Coast Guard (USCG) administer Area Plans for spill contingency response by Region throughout the United States. The USCG covers coastal areas, and EPA covers inland areas. In a major spill event, contacting the National Response Center hotline will trigger assistance from the appropriate agency, if needed.

4.0 REQUIRED FACILITY IMPROVEMENTS

The Professional Engineer's certification of this plan is contingent on the following facility improvements being implemented for compliance with SPCC regulations 40 CFR 112:

1. Install independent high-level alarm in 3,000 gallons AST tank

   Date Scheduled: Prior to _____

   Signature Upon Completion: _____

2. Install chain and lock mechanism on tank fill line on the 3,000 gallons AST

   Date Scheduled: Prior to _____

   Signature Upon Completion: _____

5. Verify tank integrity testing. Schedule testing if required.

   Date Scheduled: Prior to _____

   Signature Upon Completion: _____

6. Design and construct absorbent pad or containment system at catch basins adjacent to bulk AST tanks.

   Date Scheduled: Prior to _____

   Signature Upon Completion: _____

Appendix A – Emergency Contacts

Emergency Contacts

The Town of Orono Public Works Department

Spill Reporting Hotlines

Agency	Telephone #
Maine Department of Environmental Protection Oil Spill Response	1-800-482-0777
National Response Center USCG/USEPA	1-800-424-8802

Local Emergency Agencies

Agency	Telephone #
Orono Fire Department	or 911
State Police	1-800-452-4664

Spill Response Contractors

Company/Location	Telephone #
ENPRO Services, Inc.	1-800-966-1102
Environmental Projects, Inc. (EPI)	207-786-7390
Clean Harbors Environmental Services	1-800-526-9191 (24 Hours)

Owner Operator (The Town of Orono Public Works Department)

Name/Title	Telephone #
Town Manager, Sophie Wilson	207-866-2556
Public Works Director, Rob Yerxa	207-866-5062

Appendix B – Spill Notification Form and Spill Records

Spill Notification Form

The Town of Orono Public Works Department

Part A: Basic Spill Data	
Type of Spilled Substance:	**Notification Person:**
Quantity Released:	**Spill Date and Time:**
Location of Spill:	**Discovery Date and Time:**
	SPILL DURATION:
Facility Name & Location: The Town of Orono Public Works Department 135 Kelley Road Orono, Maine 04473	**Release to:** [ ]air [ ] water [ ] ocean [ ] well [ ] soil [ ] sewer [ ] containment [ ]other_____
Owner / Company Name: The Town of Orono Public Works Department 59 Main Street Orono, Maine 044473	**Telephone:** Facility: 207-866-5062
Nature of spill and any environmental or health effects: [ ]Injuries [ ] Fatalities	

Part B: Notification Checklist		
Spill Type	**Notification Date and Time**	**Name of Person that Received Call**
Spill is any amount of petroleum product:		
The Town of Orono Public Works Department (Rob Yerxa)		
Maine Department of Environmental Protection 1-800-482-0777		
Spill reaches groundwater or surface water:		
The Town of Orono Public Works Department (Town Manager)		
Maine Department of Environmental Protection 1-800-482-0777		

National Response Center 1-800-424-8802		

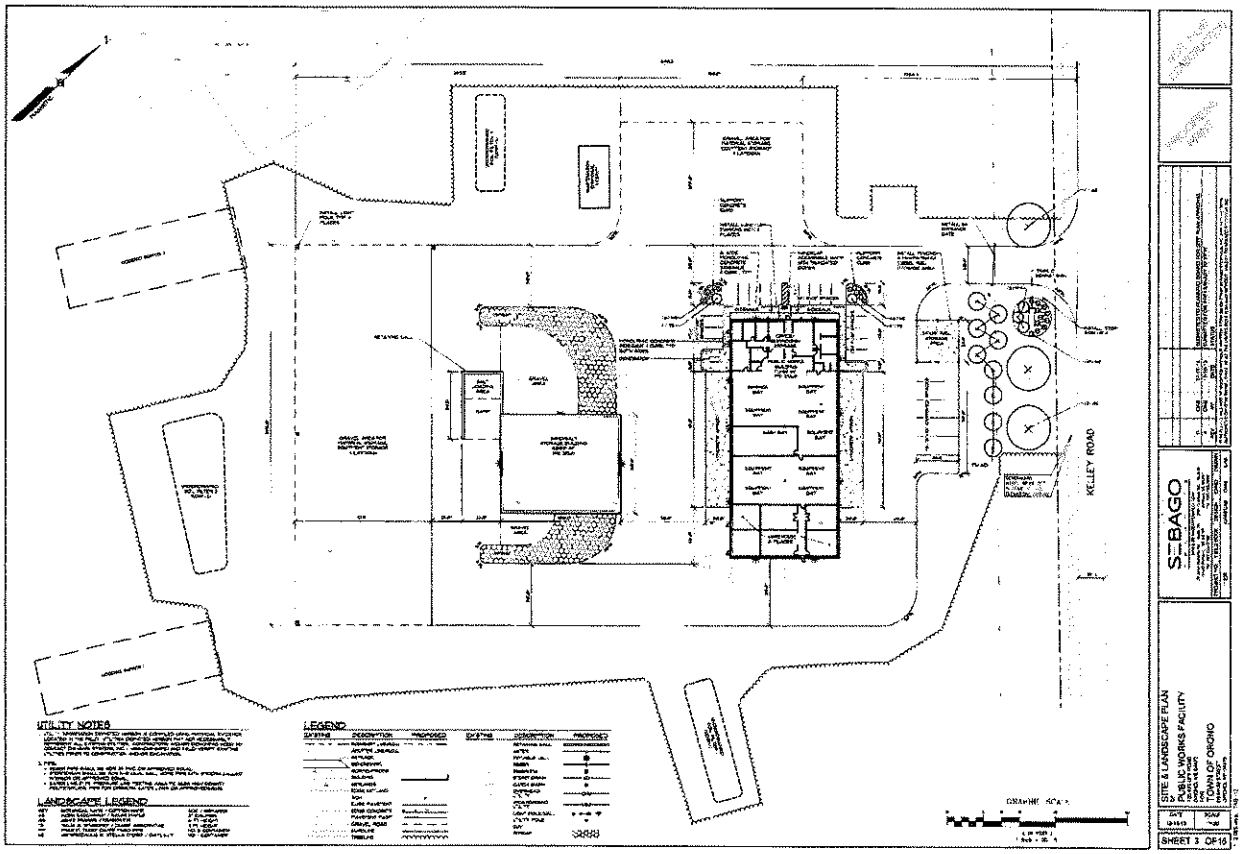
Send a copy of this form to the Town of Orono Public Works Department Administrative Manager. This form shall be filed by facility name and maintained as long as The Town of Orono Public Works Department owns and/or operates the facility.

Appendix C – Facility Site Plans

The Town of Orono Public Works Department

135 Kelley Road

Orono, ME 04473



Appendix D – Substantial Harm Criteria Checklist

Certification of the Applicability of the Substantial Harm Criteria Checklist

Facility Name: The Town of Orono Public Works Department
135 Kelley Road
Orono, ME 04473

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes: No:

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes: No:

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes: No:

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

Yes: No:

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes: No:

Certification
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Public Works Director, Town of Orono Public Works Department

Appendix E – Facility Inspection Checklist and Inspection Records

Aboveground Storage Tank (AST) - Monthly Inspection Report

The Town of Orono Public Works Department – Orono Maine

Tank/Product Capacity	AST#1 3,000 gallon Diesel/ Gas
Tank Status	
General Condition of Tank (note any deformations, corrosion, staining, etc.)	
Tank Level Gauge and High Level Alarm Functional?	
Foundation/Tank Base (note any staining, spills, water against base, etc.)	
Pumps and Piping	
Hose and Fittings	
Emergency Response Spill Kits	Location # Kit Complete: _____ Kit Restocked: _____

Name: _____

Title: _____

Signature: _____

Date: _____

THIS REPORT SHALL BE KEPT ON FILE FOR AT LEAST THREE YEARS.

Appendix F – Facility Spill Response Materials

The Facility currently contains the following on-site spill response kits.

1. Maintenance Garage:

Mobile Container Kit (absorbs up to 37 gallons)

4 - 3"x48" socks

1 - 3"x10' sock

2 - 21"x17" pillows

50 - 20"x16" universal mat pads

5 - Temporary disposal bags

1 - Shop dri floor sweep

2 - Lite-dri absorbent

3 - Labels

Appendix G – Employee Training Log

2013

MONTH	TRAINING	EMP	SOURCE	DOC

Appendix H – Results of Tank Integrity Training and Pressure Testing

Exhibit 7

Names and Address of Property Owners Within 300 Feet of Property, Engineer's Cost Estimate, Lighting and Pump Cut Sheets, Well Yield Statement

Names and Address of Property Owners Within 300 Feet of Property

ROBERT I. PERKINS
160 KELLEY ROAD
ORONO, ME 04473

DARYLE A. HILTON
10 TUTTLE DRIVE
NEW PORTLAND, ME 04961

APRIL FOOLS, INC.
P.O. BOX 908
BREWER, ME 04412

DERRICK R. SLOPEY
145 KELLEY ROAD
ORONO, ME 04473

PETER E. GOLDING
P.O. BOX 287
ORONO, ME 04473

GALEN COLE FOUNDATION
359 PERRY ROAD
BANGOR, ME 04401

CLYDE PHILBROOK
P.O. BOX 5
ORONO, ME 04473

RAE E. BROWN CATON & VICTORIA HANSEN
295 STILLWATER AVENUE
ORONO, ME 04473

SHAWN AND SCOTT CASET
14 LEMON STREET
VEAZIE, ME 04401

JAMES GARLAND
147 KELLEY ROAD
ORONO, ME 04473

JUDITH CYR
140 KELLEY ROAD
ORONO, ME 04473

Town of Orono Public Works Facility	
Major Project Component	*Building Costs $*
1 - Fleet Maintenance Building	$2,605,500.00
2 - Sand & Salt Building	$560,000.00
3 - Site Development Costs	$1,100,000.00
4 - Land Cost	$150,000.00
Subtotal	**$4,415,500.00**
5 - FF&E - Soft Costs (20%)	$883,100.00
Total Project Cost	**$5,298,600.00**

FF&E - Furniture, Fixtures & Equipment, Design

Building Type	Square Footage Square Footage
Fleet Maintenance	17,370
Sand & Salt Building	8,000
Total	**25,370**

BEACON
design . performance . technology

Ordering
rev 03.21.2013

Type: SL41

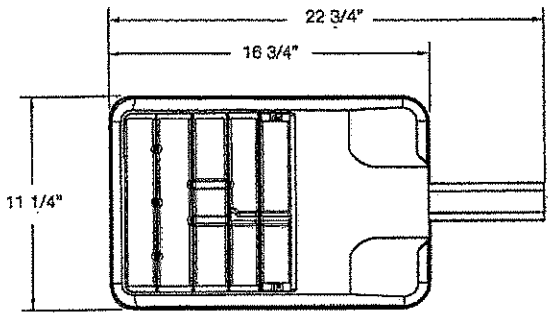
Ordering Code: VP-S-30NB-90-5K-T4BC-UNV-RA-BB-PC

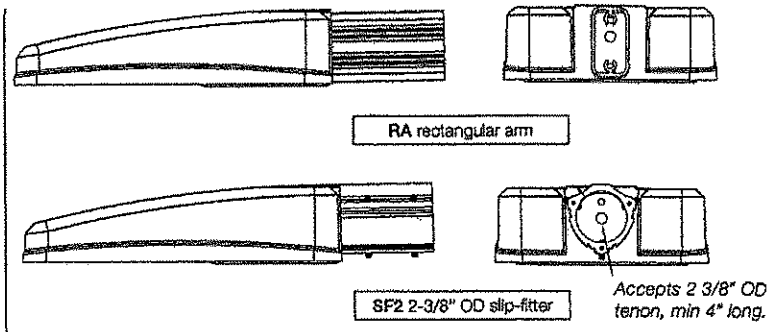
Job Name: Downeast Veterinary

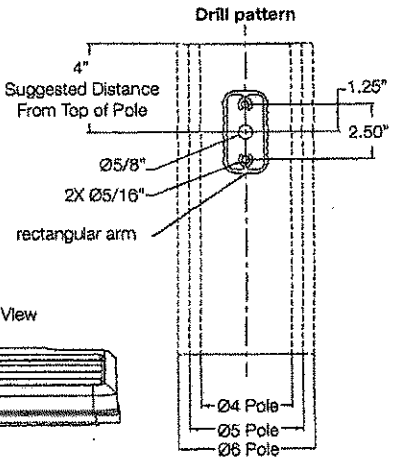
Notes: Includes back control optics.

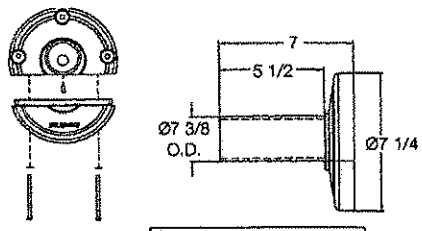
VIPER (SMALL)

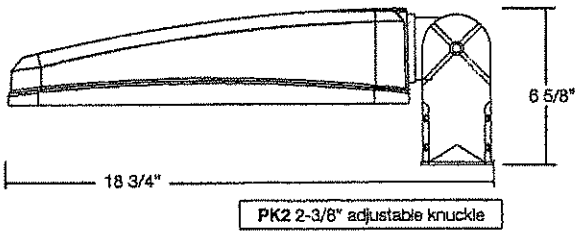
details











weight: 15lbs **epa:** 0.67 ft²

ORDERING EXAMPLE: VP-S / 30NB-90 / 5K / T5R / UNV / PCRU-TL / SF2 / BB

model	engine-watts	cct-color temp	optics	voltage	electrical options	mounting options	color
VP-S *(small)*	**22NB-50**	**5K** 5000K	**T2** type II	**UNV** 120-277	**PCRU** photocell (specify voltage)[1]	**RA** rectangular arm	**BB** black
	22NB-70	**4K** 4000K	**T3** type III	**347**	**PCR3** photocell receptacle [2]	**SF2** 2-3/8" OD slip-fitter	**BZ** bronze
	30NB-70	**3K** 3000K	**T4** type IV	**480**	**PCR4** photocell receptacle [3]	**PK2** 2-3/8" adjustable knuckle	**BW** white
	30NB-90		**T5R** rectangular	**12VDC** *(consult factory)*	**TL** twistlock photocontrol		**BG** green
		5k 5000K (standard)	**T5QM** sq medium		**SC** shorting cap	**WB** wall bracket	**BY** gray
			T5W round wide		**NP** no photocontrol		**MB** met. bronze
					2PF dual power feed [4, 5]		**MT** met. titanium
					std. electrical options		___ **RAL**
					lifeshield™ thermal protection		___ **OTHER**
					20k-surge protection [6]		
					dimming drivers		

[1] **120-277** only [2] **347V** only [3] **480V** only [4] not available on **30NB-90** [5] not available @ **347V/480V** input [6] not available @ **347V** input

VIPER (SMALL)

Specification
rev 03.21.2013

GENERAL: The Beacon Viper luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS and with 5 different mounting options for application in a wide variety of new and existing installations. Luminaires are suitable for wet locations.

BEZEL OPTICAL SYSTEM: Each Viper luminaire is supplied with an one piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and microcellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

The optical cartridge is secured to the die cast housing with fasteners. The optics are held in place without the use of adhesives. The cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

LIFESHIELD™ CIRCUIT: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). The thermal circuit will allow higher maximum wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure or lumen depreciation. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point. Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage. The device shall be located in an area of the luminaire that is protected from the elements. Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.
Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

PRINTED CIRCUIT BOARD (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer, thermally conductive dielectric layer, 0.0014" thick copper circuit layer circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board will be mounted to the heat sink using minimum 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

HOUSING AND LED THERMAL MANAGEMENT: The Viper' monolithic housing design creates over 4.5 square feet (small Viper) or 7.7 square feet (large Viper) of heat-sinking surface area. Vertical fins, combined with flow-thru openings prevent sediment and moisture buildup on critical heat sinking surfaces without the need for grates, screens or other debris control tactics. The Viper housing, electrical compartment and fitter are made from die cast aluminum that is pre-treated and powder-coated to meet the most rugged industry standards. The finish is corrosion resistant to meet ASTMB-117, resists cracking or loss of adhesion per ASTM D522, resists surface impacts of up to 160 inch-pound. All external hardware is corrosion resistant. The housing serves as a heat-sink for the LED bezel with a separate compartment for the drivers.

ELECTRICAL ASSEMBLY: The fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections. The housing is designed for an optional twist lock photo control receptacle.
ACCESSIBILITY: Although the Viper luminaire is designed to operate for many years without maintenance, accessibility is a key component in its design. The Drivers are mounted on a removable door that is secured with keyslotted screws and hinges down for convenient access. The drivers are field replaceable using quick disconnects.

DRIVERS: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2. Dimming drivers are standard, with connections for external dimming equipment available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

SURGE PROTECTOR: The onboard surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 925V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

FASTENERS: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

AGENCY CERTIFICATION: The luminaire shall bear a CSA label and be marked suitable for wet locations.

WARRANTY: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distrubutions

Engine	Wattage	Delivered Lumens	Efficacy LPW	TM21 Calculated L70 (hours) at 25°C Ambient
22NB	50	4700-5020	93-103	99.19%
22NB	70	5780-6200	82-103	85.79%
30NB	70	6300-6850	91-103	95.02%
30NB	90	7700-8260	85-97	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (color Temp) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

SSS SERIES POLES

SQUARE STRAIGHT STEEL

Cat. # SSS-15-40-1-AVS2-BL ← Black		Approvals
Job Downeast Veterinary	Type SL41	

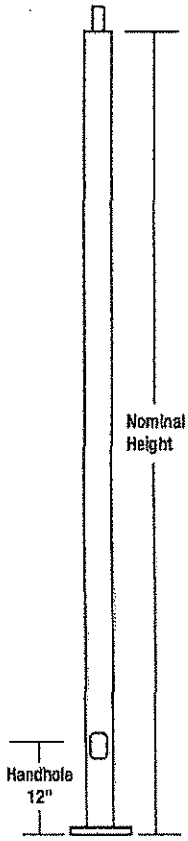
SPAULDING LIGHTING

APPLICATIONS

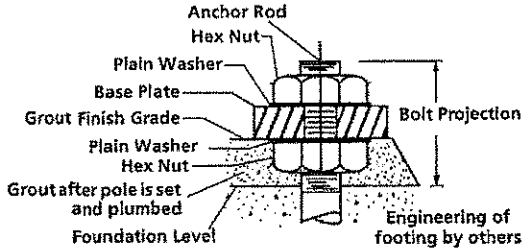
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location.

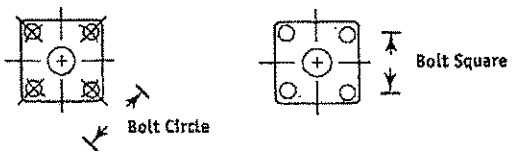
FEATURES

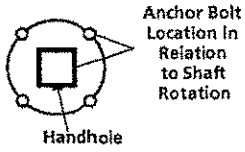
- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.36" radius on all corners. Minimum yield of 46,000 psi (ASTM-A500, Grade B). Longitudinal weld seam to appear flush with shaft side wall. Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ATM-A36).
- BASE COVER: Two-piece square aluminum base cover included standard.
- POLE CAP: Pole shaft covered with removable non-metallic cover when applicable. Tenon and post-top configurations also available.
- HAND HOLE: Rectangular steel-reinforced hand hole (2.5" x 4.5"). Pole grounding lug located behind gasketed cover.
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (modified ASTM-A36). Galvanized hardware with two washers/nuts per bolt for leveling meet or exceed bolt strength.
- FINISH: Durable Lektrocote® TGIC thermoset polyester powder coat paint finish with nominal 3.0 mil thickness. Zinc-rich powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method. Decorative finish coat available in seven standard colors. Custom colors available. RAL number preferable. Internal protective coating available.



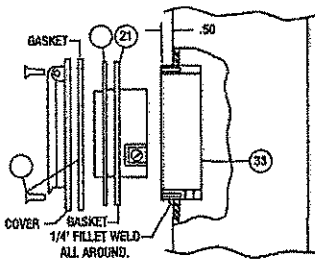
BASE DETAIL







15 AMP GFCI RECEPTACLE & COVER



Q18 OPTION

ORDERING INFORMATION

S	-	S	-	S	-	25	-	40	-	1	-	TA	-	DB
Cross Section		Style		Material		Nominal Length		Nominal Shaft Dia.		Shaft Thickness		Mounting Type		Finish

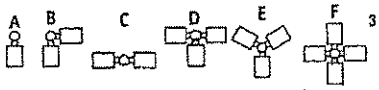
Catalog Number	Pole Ht. ft	Pole Ht. m	Nominal Shaft Dim.	Wind Load Rating[1] 70 MPH	80 MPH	90 MPH	100 MPH	120 MPH	Wall Thick.	Bolt Circle (Sug.)	Bolt Circle	Bolt Sq.	Base Plate (sq.)	Anchor Bolt Size	Bolt Proj.	Pole Wt (lbs)
SSS-10-40-1-XX-XX	10	3.0	4"	25	25	22	17	11.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	91
SSS-10-50-1-XX-XX	10	3.0	5"	25	25	25	23	15	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	105
SSS-12-40-1-XX-XX	12	3.7	4"	25	21	16	13.0	8.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	104
SSS-12-50-1-XX-XX	12	3.7	5"	25	25	23	18	11.8	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	122
SSS-14-40-1-XX-XX	14	4.3	4"	24	18	14.2	11.0	6.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	116
SSS-14-40-7-XX-XX	14	4.3	4"	25	25	23	18	12.2	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	158
SSS-14-50-1-XX-XX	14	4.3	5"	25	24	19	14.4	9.0	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	138
SSS-16-40-1-XX-XX	16	4.9	4"	16	12.2	9.0	6.8	3.8	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	128
SSS-16-40-7-XX-XX	16	4.9	4"	25	20	15	12.2	7.6	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	176
SSS-16-50-1-XX-XX	16	4.9	5"	22	16	12.2	9.2	5.2	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	153
SSS-16-50-7-XX-XX	16	4.9	5"	25	25	24	19	12.4	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	214
SSS-18-40-1-XX-XX	18	5.5	4"	13.8	10.0	7.2	5.2	3.4	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	147
SSS-18-40-7-XX-XX	18	5.5	4"	23	17	13.0	10.0	6.0	.179"	11"	10 - 13.5"	7.1 - 9.5"	11 x 1"	3/4 x 30 x 3"	4"	201
SSS-18-50-1-XX-XX	18	5.5	5"	18	13.2	9.6	7.0	3.4	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	175
SSS-18-50-7-XX-XX	18	5.5	5"	25	25	20	16	9.8	.179"	11"	8 1/2 - 12"	6 - 8.4"	12 x 1"	3/4 x 30 x 3"	4"	243
SSS-20-40-1-XX-XX	20	6.1	4"	11.4	8.0	5.6	3.8	1.4	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	160
SSS-20-40-7-XX-XX	20	6.1	4"	19	14.6	10.8	8.0	4.4	.179"	11"	8 1/2 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	225
SSS-20-50-1-XX-XX	20	6.1	5"	15	10.8	7.6	5.2	2.0	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	191
SSS-20-50-7-XX-XX	20	6.1	5"	25	23	17	13.2	7.6	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	3/4 x 30 x 3"	4"	266
SSS-20-60-7-XX-XX	20	6.1	6"	25	25	24	18	11.2	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	312
SSS-25-40-1-XX-XX	25	7.6	4"	7.0	4.2	2.2	NR	NR	.119"	11"	8 - 11"	5.6 - 7.8"	10.25 x 0.75"	3/4 x 30 x 3"	4"	190
SSS-25-40-7-XX-XX	25	7.6	4"	13.4	9.4	6.4	4.2	1.4	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	3/4 x 30 x 3"	4"	266
SSS-25-50-1-XX-XX	25	7.6	5"	9.6	6.0	3.4	1.4	NR	.119"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	231
SSS-25-50-7-XX-XX	25	7.6	5"	22	15	11.2	7.8	5.4	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	324
SSS-25-50-3-XX-XX	25	7.6	5"	25	22	16	12.4	6.6	.250"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	437
SSS-25-60-7-XX-XX	25	7.6	6"	25	22	16	11.6	5.6	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	404
SSS-27-40-7-XX-XX	27	8.2	4"	11.4	7.8	5.0	3.0	NR	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	1 x 36 x 4"	4"	290
SSS-30-40-7-XX-XX	30	9.1	4"	8.2	5.0	2.8	1.2	NR	.179"	11"	8.5 - 12"	6 - 8.4"	11 x 1"	1 x 36 x 4"	4"	313
SSS-30-50-7-XX-XX	30	9.1	5"	14.2	9.4	6.0	3.4	NR	.179"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	398
SSS-30-50-3-XX-XX	30	9.1	5"	20	14.6	10.2	6.8	2.4	.250"	11"	10 - 13.5"	7.1 - 9.5"	12 x 1"	1 x 36 x 4"	4"	537
SSS-30-60-7-XX-XX	30	9.1	6"	20	13.8	9.2	6.8	3.2	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	467
SSS-30-60-3-XX-XX	30	9.1	6"	25	24	17	12.8	6.2	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	630
SSS-35-60-7-XX-XX	35	10.7	6"	14.2	8.4	4.6	1.6	NR	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	538
SSS-35-60-3-XX-XX	35	10.7	6"	25	17	11.6	7.4	1.8	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	726
SSS-40-60-7-XX-XX	40	12.2	6"	9.0	4.0	NR	NR	NR	.179"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1 x 36 x 4"	4"	614
SSS-40-60-3-XX-XX	40	12.2	6"	18	11.8	6.8	3.2	NR	.250"	12"	11 - 13.5"	7.8 - 9.5"	12 x 1"	1.25 x 42 x 6"	4"	802

1 Allowable EPA with 1.3 gust factor. To determine max. pole loading weight, multiply allowable EPA by 30 lbs.
NOTE Factory supplied template must be used when setting anchor bolts. Hubbell Lighting will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

COMPLETE PART NUMBER REQUIRES SHAFT ABOVE PLUS MOUNTING TYPE, FINISH & APPROPRIATE OPTIONS BELOW

MOUNTING TYPE

AX[1]	Side - Single
BX[1]	Side - Double at 90°
CX[1]	Side - Double at 180°
DX[1]	Side - Triple at 90°
FX[1]	Side - Quad at 90°
P1	Pad Mount - Spider Type
P2	Pad Mount - Yoke Type
P3	Pad Mount - Yoke Type (Proformer XL only)
TA	Tenon (2.375" OD)
TB	Tenon (2.875" OD)
TR[2]	Removable Tenon (2.375 x 4.25)
CB	Concord Luminaire
OT	No drilling (includes pole cap)



FINISH

DB	Dark Bronze
BL	Black
WH	White
GR	Gray
PS	Platinum Silver
RD	Red (Premium Color)
FG	Forest Green (Premium Color)
CC	Custom Color (Consult Factory)
PR	Primer Only

1 DRILL PATTERNS: Replace **X** with
1 = Spaulding luminaires with a straight pole (4-bolt),
2 = Cimarron CR1, MSV and Raven Series luminaires,
4 = MSS & DS luminaires,
5 = Spaulding Detroit III luminaires,
6 = DM luminaires
2 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "TR" notation. Example: **SSS-25-40-7-C6-TR-DB**
3 Specify option location using logic found on cover.

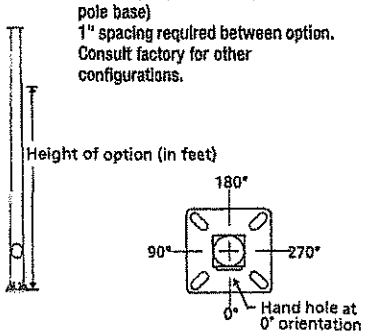
Denotes handhole location

OPTIONS

Q55	Internal Coating (Hubbell Seal)
Q18[3]	15 Amp GFCI Receptacle and Cover
Q22[3]	Extra Handhole
Q26[3]	.5" Coupling
Q27[3]	.75" Coupling
Q30[3]	2" Coupling
Q32[3]	Mid-pole Luminaire Bracket
Q40	Vibration Damper
LAB	Less Anchor Bolts
CSA	CSA Certified (consult factory)

OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option Q26 should be ordered as:
SSS-20-40-1-TA-DB-Q26-0-15
(.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base)
1" spacing required between option. Consult factory for other configurations.

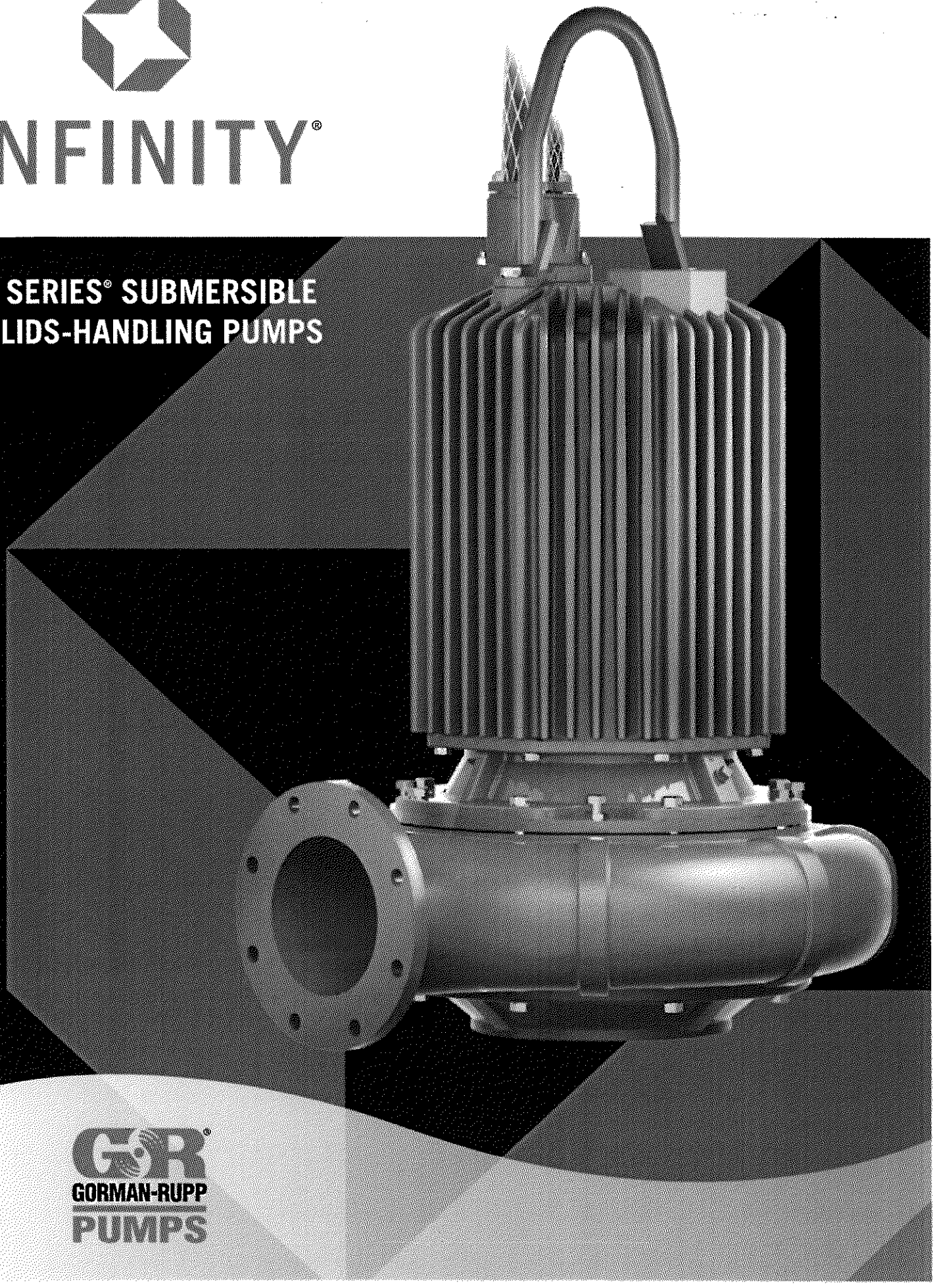


Due to our continued efforts to improve our products, product specifications are subject to change without notice.

SPAULDING LIGHTING
Spaulding Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • PHONE: 864-678-1000
For more information visit our web site: **www.spauldinglighting.com**

INFINITY®

SF SERIES® SUBMERSIBLE SOLIDS-HANDLING PUMPS



GORMAN-RUPP PUMPS

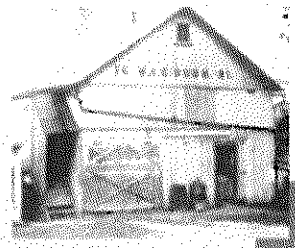
A HISTORY OF INNOVATION

Gorman-Rupp has been revolutionizing the pumping industry since 1933. Many of the innovations introduced by Gorman-Rupp over the years have become industry standards. More than ever, we continue to update our factories, processes, research and development, and engineering to ensure that our pumps and systems are among the most reliable and efficient in the world.

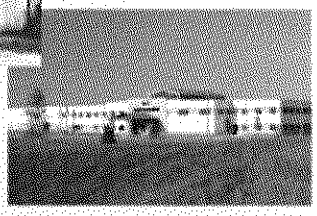
While much of Gorman-Rupp's reputation has been built on the success of our self-priming pumps, we have been producing high-quality, long-lasting submersible pumps since 1960.

The Infinity® line of submersible solids-handling pumps has been developed with NEMA Premium Efficiency motors and passes a minimum of 3" spherical solids with optimized pumping efficiency.

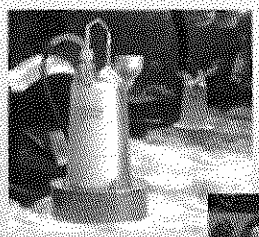
With over 75 years of manufacturing experience, you'll find a wealth of knowledge and expertise behind every Gorman-Rupp pump. With hundreds of thousands of pump installations worldwide and one of the leading distribution networks in the world, Gorman-Rupp serves a broad range of pump applications with the ***"Right Pump for the Job."***



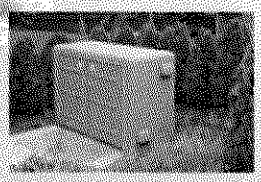
The barn where J.C. Gorman and H.E. Rupp made their first pumps on the outskirts of Mansfield, Ohio.



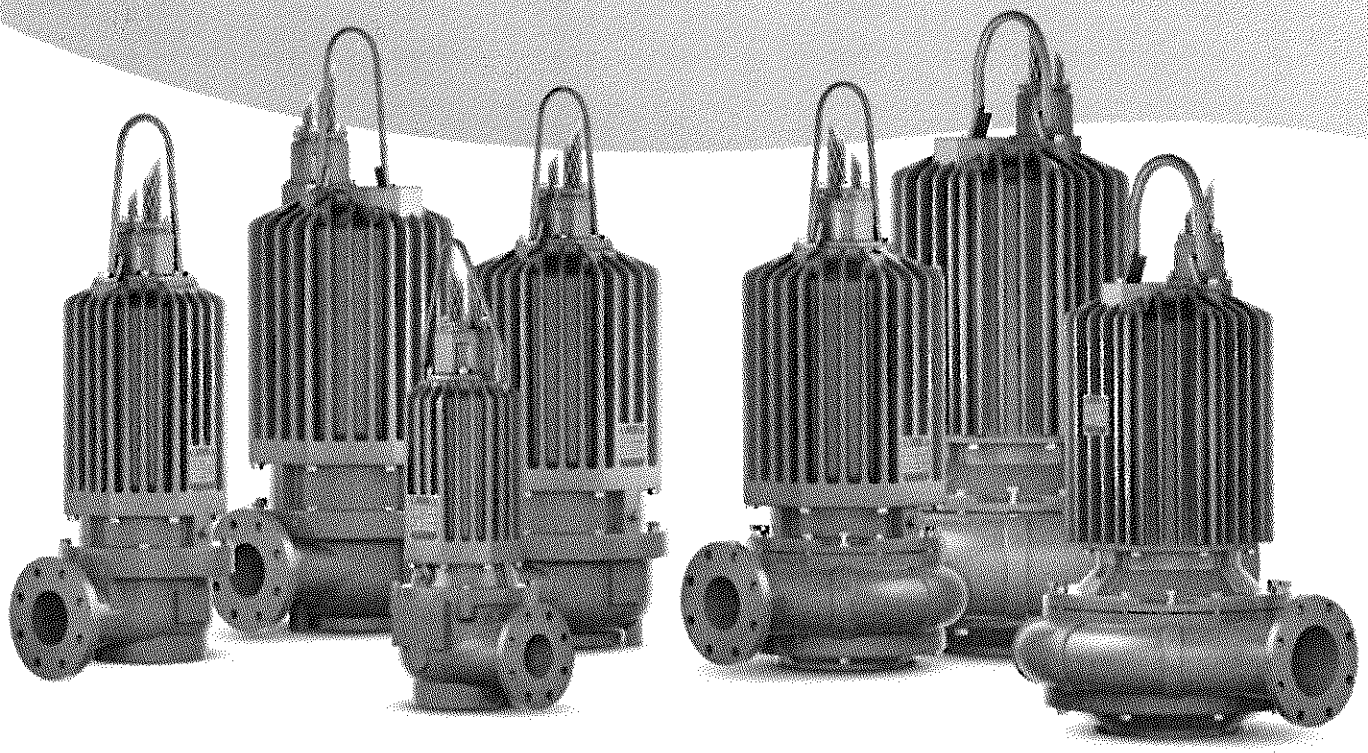
The new state-of-the-art manufacturing facility, completed in 2010, features the Mansfield Division, Corporate Headquarters and Gorman-Rupp International.



Since the 1960s, Gorman-Rupp has provided innovative submersible pump solutions throughout the world.



A packaged submersible pumping system is used to transfer sewage to a treatment facility.



Gorman-Rupp SF Series® submersible solids-handling pumps are designed to provide you with the ultimate in pumping performance. All SF Series pumps use NEMA Premium Efficiency motors and pass a minimum 3" spherical solid. Vortex pumps use the patent-pending Staggerwing® impeller technology.

SF Series submersible solids-handling pumps are available in slide rail and construction / trash versions for use in most liquid removal applications.

The SF Series comes with 3", 4", 6", and 8" flanged discharge and power ranging from 3 – 75 HP (1.5 to 56 kW). These combinations will provide flows up to 3,100 gpm (195.6 lps) and heads to 190 feet (57.9 meters).

Built to the same exacting standards you've come to expect from our industry-leading self-priming pumps, SF Series pumps are designed for easy maintenance and constructed for long life.

Terminal housing and cable connections designed for easy in-the-field cable replacements

- Press-fit motor with our patent-pending finned motor housing provides superior motor cooling resulting in increased motor life
- Moisture detection in both the seal and motor chambers is standard
- All pumps pass a minimum 3" spherical solid
- NEMA Premium Efficiency motors with Class H insulation standard on all models
- Externally adjustable face clearances, on channel impeller pumps, to improve pumping efficiency without time-consuming wear ring replacement

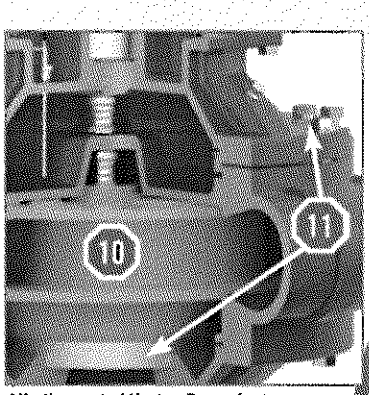
GORMAN-RUPP INFINITY® SUBMERSIBLE PUMP

SF SERIES® VORTEX PUMPS

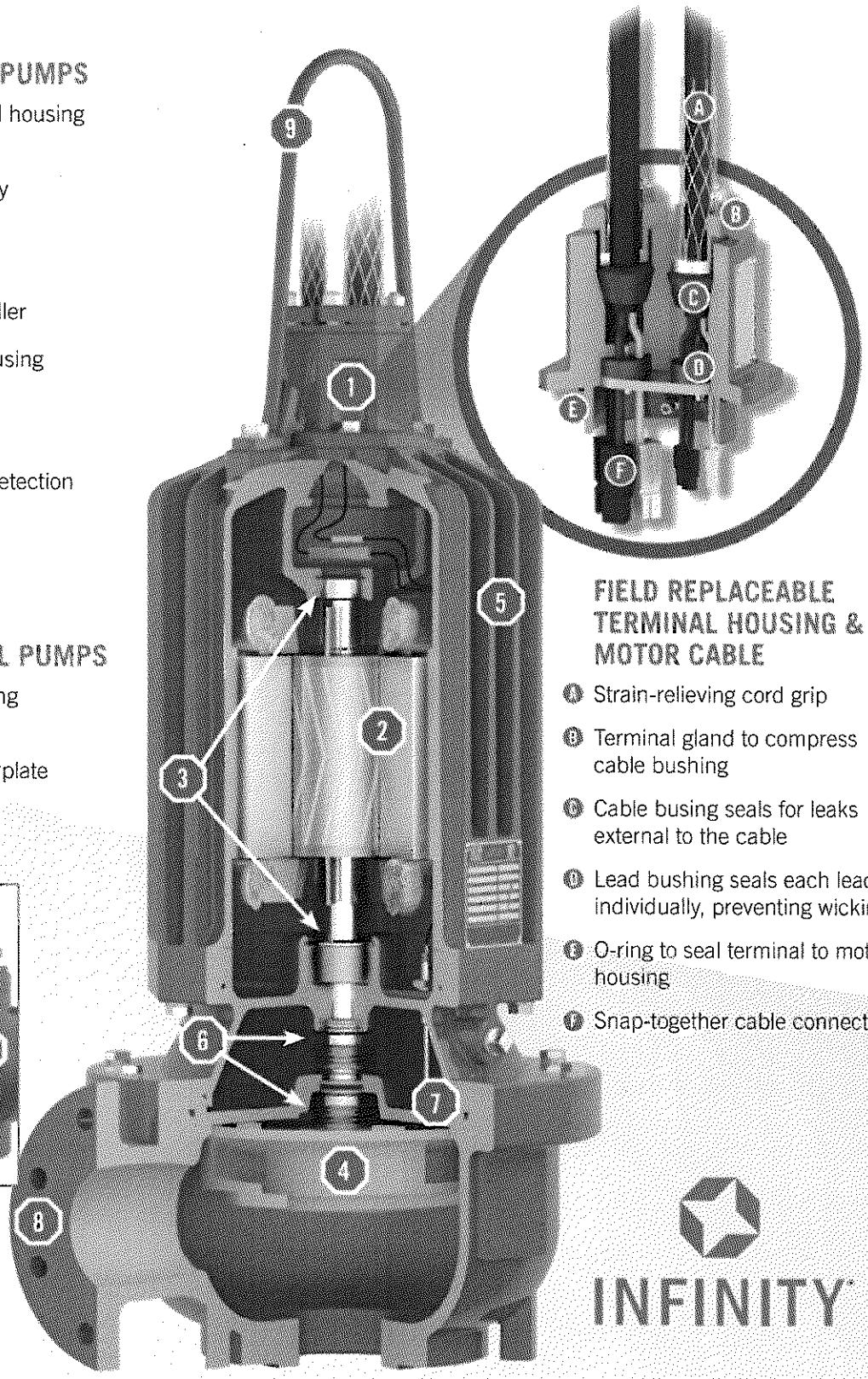
1. Field replaceable terminal housing and motor cable
2. NEMA Premium Efficiency (IEC IE3) motor
3. Heavy duty ball bearings
4. Staggerwing® vortex impeller
5. Heat-extracting motor housing (patent pending)
6. Mechanical seals
7. Dual chamber moisture detection
8. ANSI 125# flange
9. Stainless steel lifting bail

SF SERIES® CHANNEL PUMPS

10. 3" spherical solids-handling enclosed impeller
11. Externally adjustable wearplate



All other noted Vortex Pump features are also included in the Channel Pump

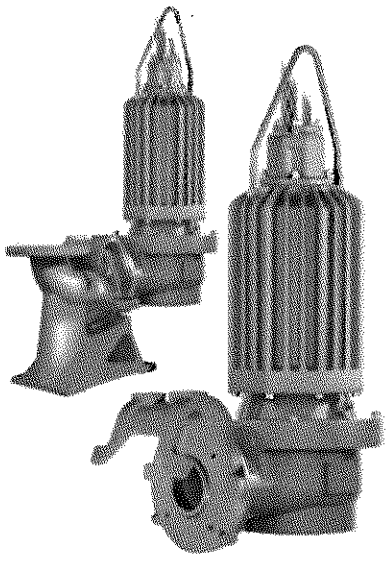


FIELD REPLACEABLE TERMINAL HOUSING & MOTOR CABLE

- A. Strain-relieving cord grip
- B. Terminal gland to compress cable bushing
- C. Cable busing seals for leaks external to the cable
- D. Lead bushing seals each lead individually, preventing wicking
- E. O-ring to seal terminal to motor housing
- F. Snap-together cable connectors

INFINITY®

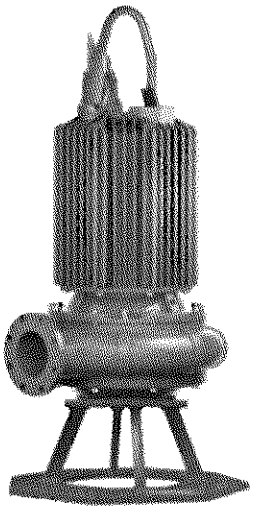
FEATURES AND INSTALLATION OPTIONS



WET PIT

SF and SFV versions

- Standard 2" rail on all slide rail versions
- Guide shoes include rubber seal for more efficient fluid passage through discharge pipe

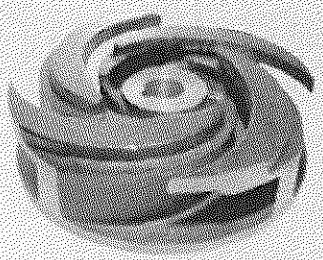


CONSTRUCTION /TRASH

SF and SFV versions

- Rugged stand with clearance for solids passage
- Flanged discharge elbow available

Staggerwing IMPELLER

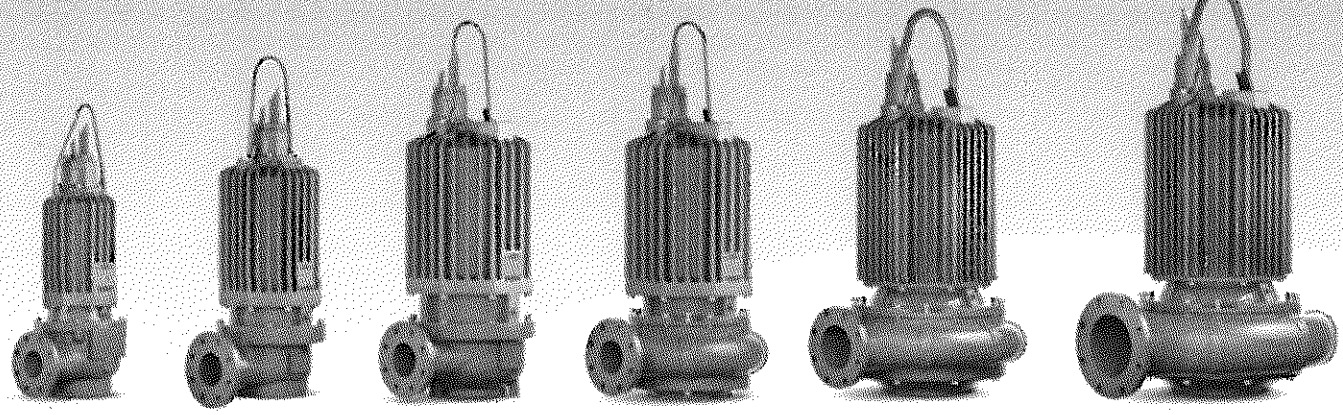


STAGGERWING® TECHNOLOGY

SFV vortex pump models feature the patent-pending Staggerwing impeller. The impeller enables higher pump efficiency and the ability to pass 3" spherical solids. Pump models are available up to 30 HP.

SF SERIES® SUBMERSIBLE PUMPS

SIZES	MATERIALS OF CONSTRUCTION	MAX. CAPACITY	MAX. HEAD	MAX. SOLIDS
3", 4", 6", 8" (76.2 mm, 101.6 mm, 152.4 mm, 254.0 mm)	Cast Iron Ductile Iron	3100 gpm (195.6 lps)	190' (57.9 m)	3" (76.2 mm)



SFV3A/SFV3B
SFV3A Shown

SFV4A/SFV4B
SFV4B Shown

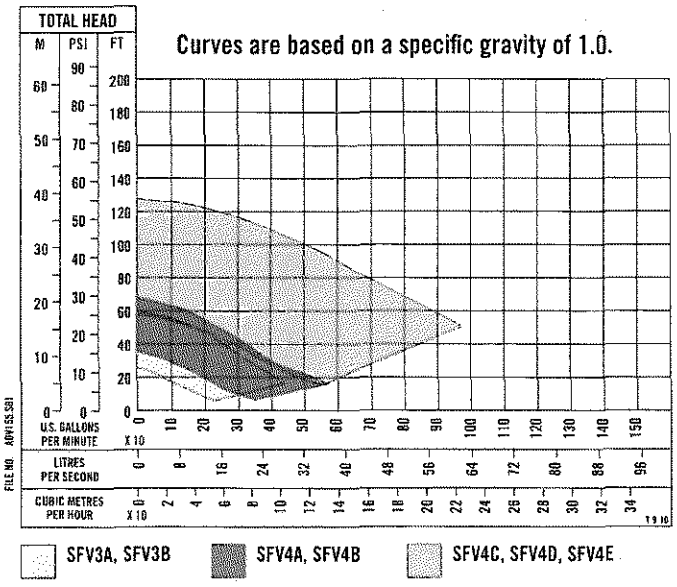
SFV4C/SFV4D/ SFV4E
SFV4E Shown

SF4A/SF4B/ SF4C/SF4D
SF4B Shown

SF6B

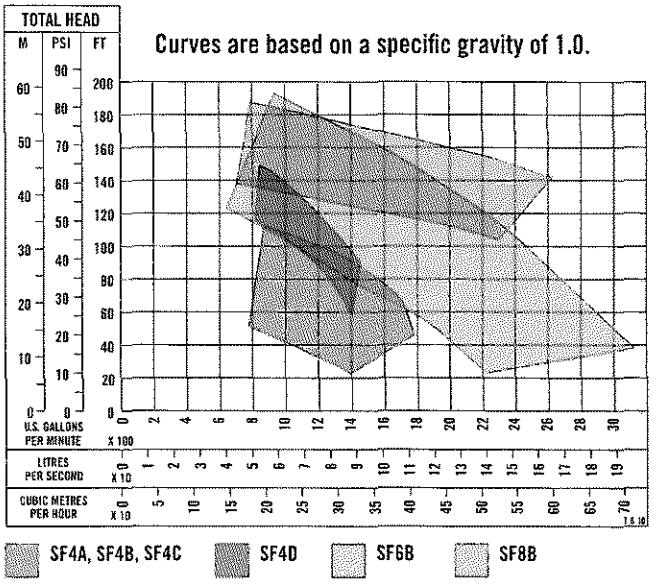
SF8B

SF SERIES VORTEX



SFV3A, SFV3B | SFV4A, SFV4B | SFV4C, SFV4D, SFV4E

SF SERIES CHANNEL



SF4A, SF4B, SF4C | SF4D | SF6B | SF8B

Product information is subject to change; consult factory for details.

The Gorman-Rupp Company
Mansfield Division
P.O. Box 1217
Mansfield, Ohio 44901-1217, USA
Tel: 419-755-1011
Fax: 419-755-1251
E-mail: grsales@gormanrupp.com

Gorman-Rupp International
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Tel: 419-755-1011
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Gorman-Rupp of Canada, Ltd.
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Tel: 519-631-2870
Fax: 519-631-4624
E-mail: grcanada@grcanada.com

GRpumps.com

ACDE

Solids Handling Vortex Electric Motor Driven Submersible Pumps

Models SFV3A SFV3A-X Size 3"

INFINITY

VARIOUS PATENTS APPLY

C US

FM APPROVED

X-PROOF MOTORS FOR CLASS I, DIV. 1, GROUPS C&D LOCATIONS

(X-Proof Version Only)

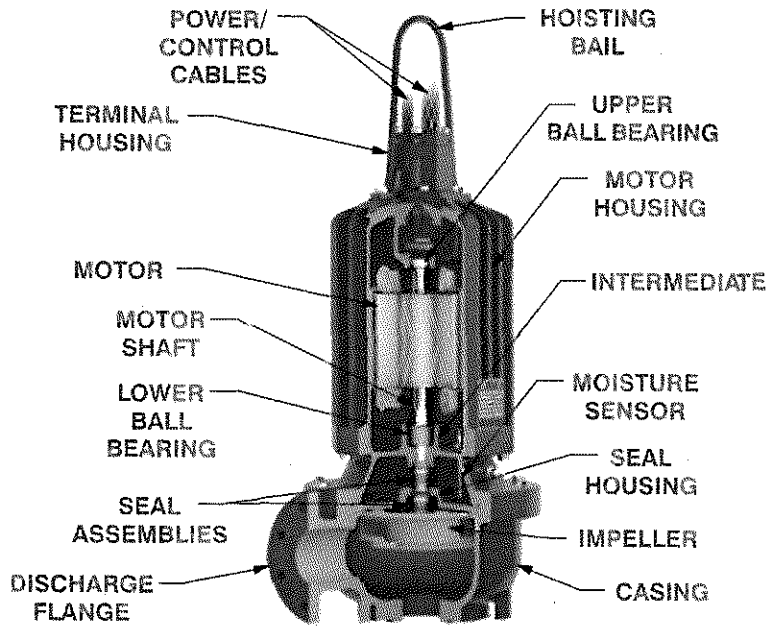
The Gorman-Rupp Infinity® brand of SF Series® vortex pumps provide superior pumping efficiency while maintaining a 3-inch (76,2 mm) spherical solids passage.

Key Features:

- NEMA premium efficiency motors (3 Phase)
- Staggerwing® vortex pump technology
- Press-fit motor with finned motor housing provides superior motor cooling, even in a submersed state, resulting in increased motor life
- NEMA Class H motor insulation
- Easy, in-the-field cable changes
- Standard moisture detection in both the seal and motor chambers
- CSA-C/US and Factory Mutual (FM) Approved for Class I, Division I, Group C and D Haz Loc Applications (X-Proof Model)

Optional Accessories:

- G-R Hard Iron Impeller
- Control Panel
- Submersible Transducer or Ball Type Float Switches
- Slide Rail Installation Components
  - Guide Shoe W/Rubber Seal
  - Base Elbow and Rail Brackets
- Trash Stand Installation Components
  - Trash Stand
  - Discharge Elbow



TYPICAL VORTEX CROSS-SECTION

PUMP DETAILS

Pump Models		SFV3A/SFV3A–X
Agency Approvals		FM/CSA-C/US
Discharge Flange		3" ANSI W/ Flat Face
Impeller Type		Staggerwing® Vortex
Impeller Material		Ductile Iron
Spherical Solids Handling		3" (76 mm) Non-Deformable Diameter
Motor Housing (Including Seal Plate and Intermediate)		Gray Iron 30
Pump Casing		Gray Iron 30
Motor Shaft		17–4 PH Stainless Steel
O-Rings		Buna-N and Fluorocarbon (DuPont Viton® or Equivalent)
Bearings: Type/Lubrication	Upper	Single Row Ball/Permanent Lubrication
	Lower	Single Row Ball/Permanent Lubrication
External Hardware		303/304 Stainless Steel
External Surface Protection		Epoxy Paint
Seal Type		Tandem, Mechanical, Oil Lubricated Upper, Self-Lubricated Lower
Sealing Faces: Rotating/Stationary	Upper	Carbon/Ceramic
	Lower	Silicon Carbide/Silicon Carbide
Seal Elastomers		Buna-N Upper, Fluorocarbon (DuPont Viton® or Equivalent) Lower
Max. Liquid Temperature		104°F (40°C)

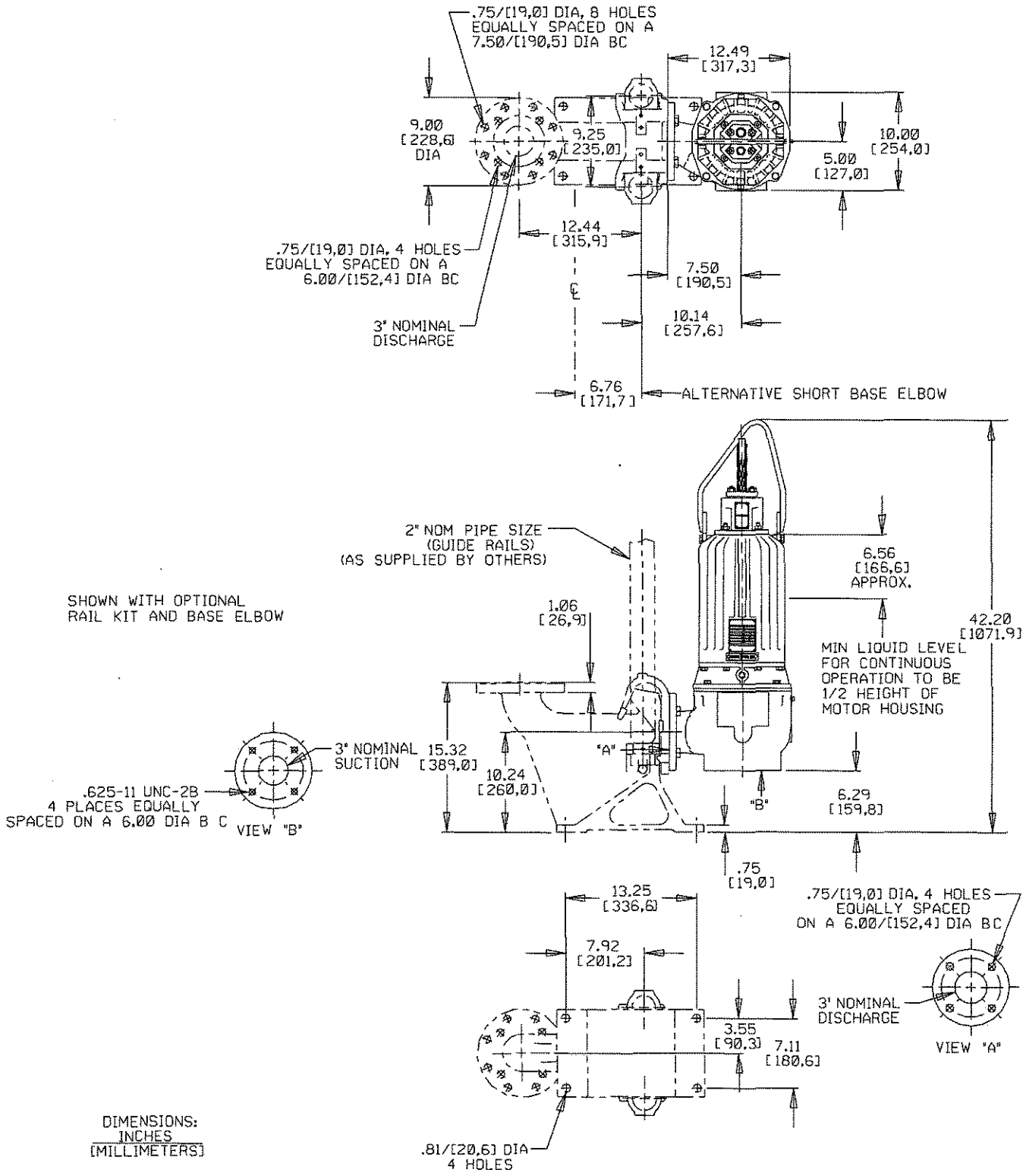
MOTOR DETAILS

Speed		60 Hz, 1750 RPM		
Motor Design		Inverter-Duty Rated, Air-Filled Enclosure, Squirrel Cage, Induction Start		
Motor Efficiency Rating		NEMA Premium Efficiency (IEC IE3)		
Insulation		Class H, Rated 356°F (180°C)		
Max. Submergence		65 Feet (20 Meters)		
Min. Submergence		1/2 Motor Covered		
Max. Starts per Hour		10		
Max. Rated Output Power		3.0 HP (2,2 kW)	3.0 HP (2,2 kW)	3.0 HP (2,2 kW)
Amp Draw @ Max. Rated Power: Full Load/ Locked Rotor	230V/1P	13.3/19.3		
	208V/3P		8.62/55.3	
	230V/3P			7.80/50.0
	460V/3P			3.90/25.0
	575V/3P			3.12/20.0
NEMA Motor Code		A	H	H
Service Factor		1.15	1.0	1.15
Efficency: 100%/75%/50% Load		74%/74%/70%	86%/84%/83%	86%/84%/83%
Power Factor: 100%/75%/50% Load		0.98/0.99/0.99	0.83/0.79/0.67	0.83/0.79/0.67
Field Connection		Across-the-Line		
Moisture Sensor		Single Probe Monitoring Both Seal and Motor Chambers		
Thermal Overload		One Thermostat per Phase, Self-Resetting		

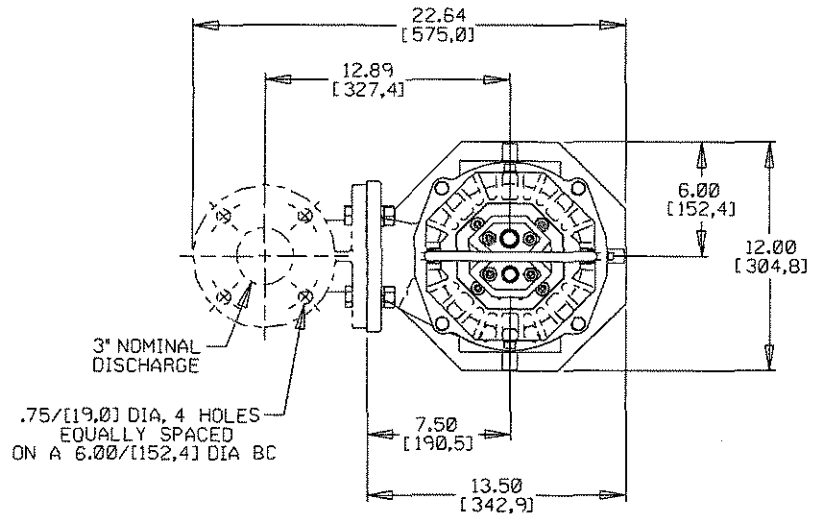
CABLE DETAILS

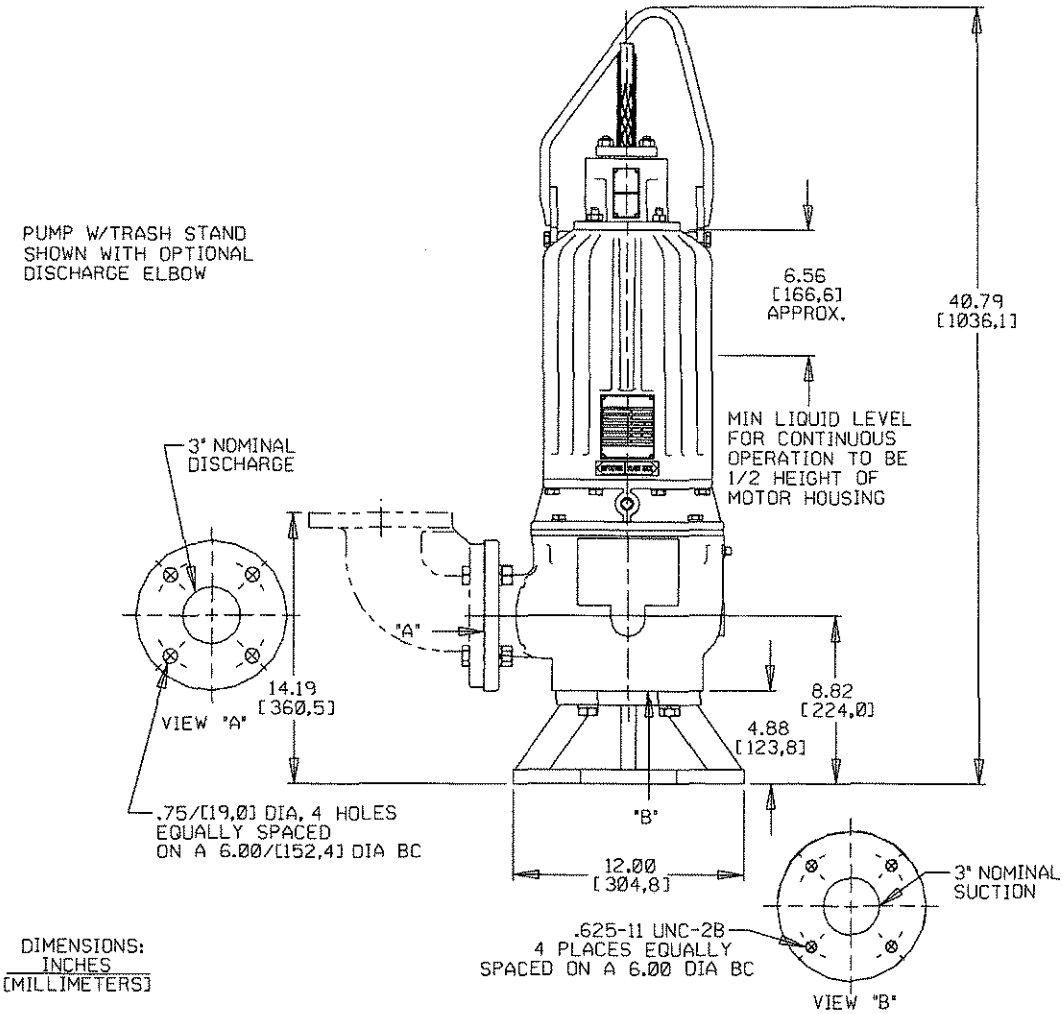
Voltage		All
Power Cable	No. Cables/Conductors per	1/4
	Gauge	10 AWG
	Type/Material	SOOW/EPDM
	Nominal Cable O.D.	0.75" (19,0 mm)
Control Cable	No. Cables/Conductors per	1/4
	Gauge	14 AWG
	Type/Material	CPE
	Nominal Cable O.D.	0.61" (15,5 mm)
Length		32 Feet (10 Meters) Standard, 164 Feet (50 Meters) Maximum

Specification Data	MODELS SFV3A/SFV3A–X SLIDE RAIL VERSION APPROXIMATE DIMENSIONS and WEIGHTS	NET WT: (pump only)	227 LBS. [103 KG.]
SECTION 133, PAGE 100.2		(comb. cable wt. per meter [3.2 ft.])	1.97 LBS. [0,89 KG.]
		SHIPPING WT: (pump only)	257 LBS. [116.5 KG.]
		CRATE SIZE:	7.2 CU. FT. [0,20 CU. M.]



Specification Data	MODELS SFV3A/SFV3A–X TRASH VERSION APPROXIMATE DIMENSIONS and WEIGHTS	NET WT: (pump only)	237 LBS.	[107,5 KG.]
		(comb. cable wt. per meter [3.2 ft.])	1.97 LBS.	[0,89 KG.]
SECTION 133, PAGE 100.3		SHIPPING WT: (pump only)	267 LBS.	[121 KG.]
		CRATE SIZE:	8.3 CU. FT.	[0,23 CU. M.]

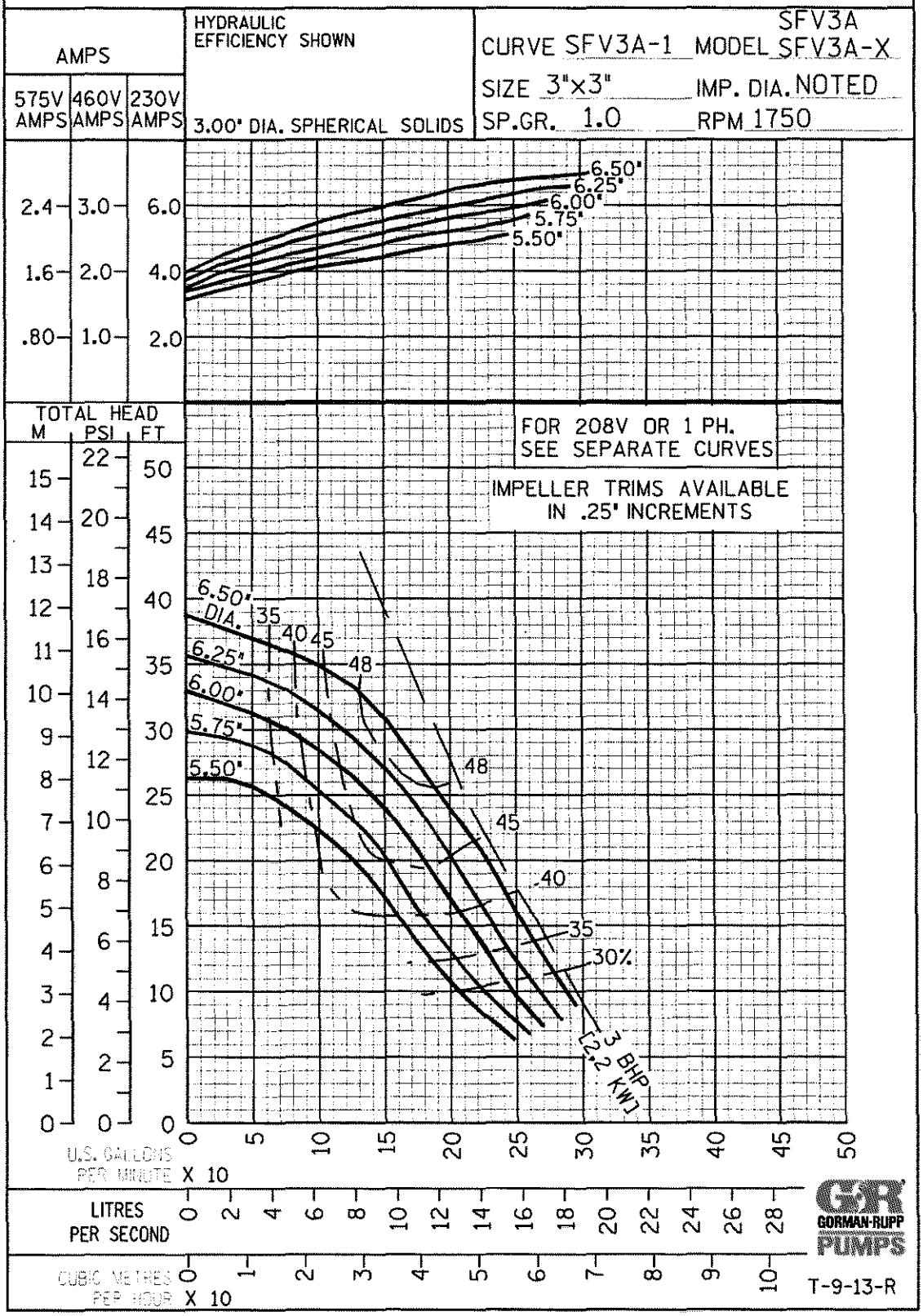




DIMENSIONS:
INCHES
[MILLIMETERS]

THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO
GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA
www.grpumps.com
Specifications Subject to Change Without Notice
Printed in U.S.A.

PERFORMANCE CURVE



PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

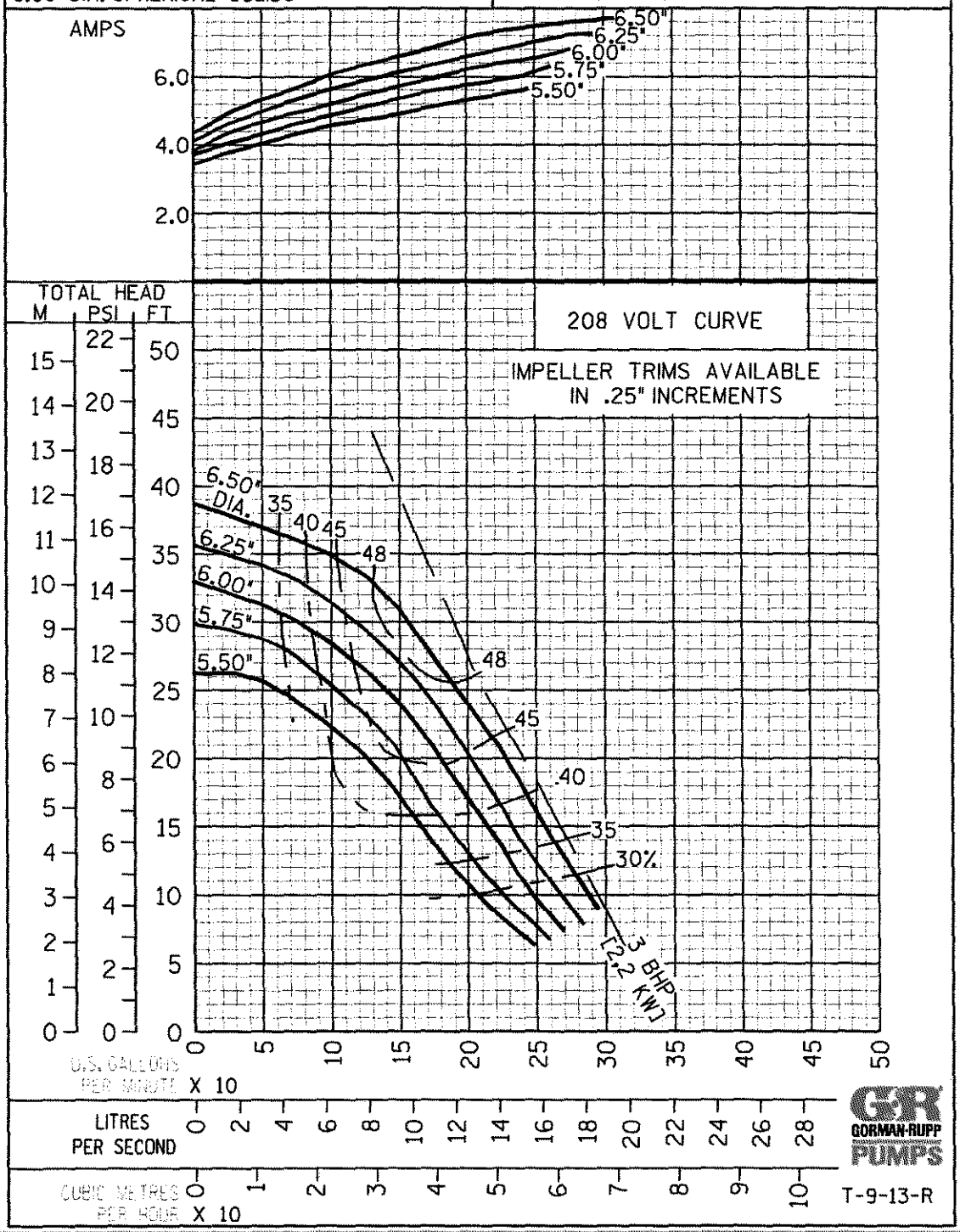
208 VOLT CURVE

3.00" DIA. SPHERICAL SOLIDS

SFV3A
CURVE SFV3A-2 MODEL SFV3A-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



GORMAN-RUPP PUMPS

T-9-13-R

PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

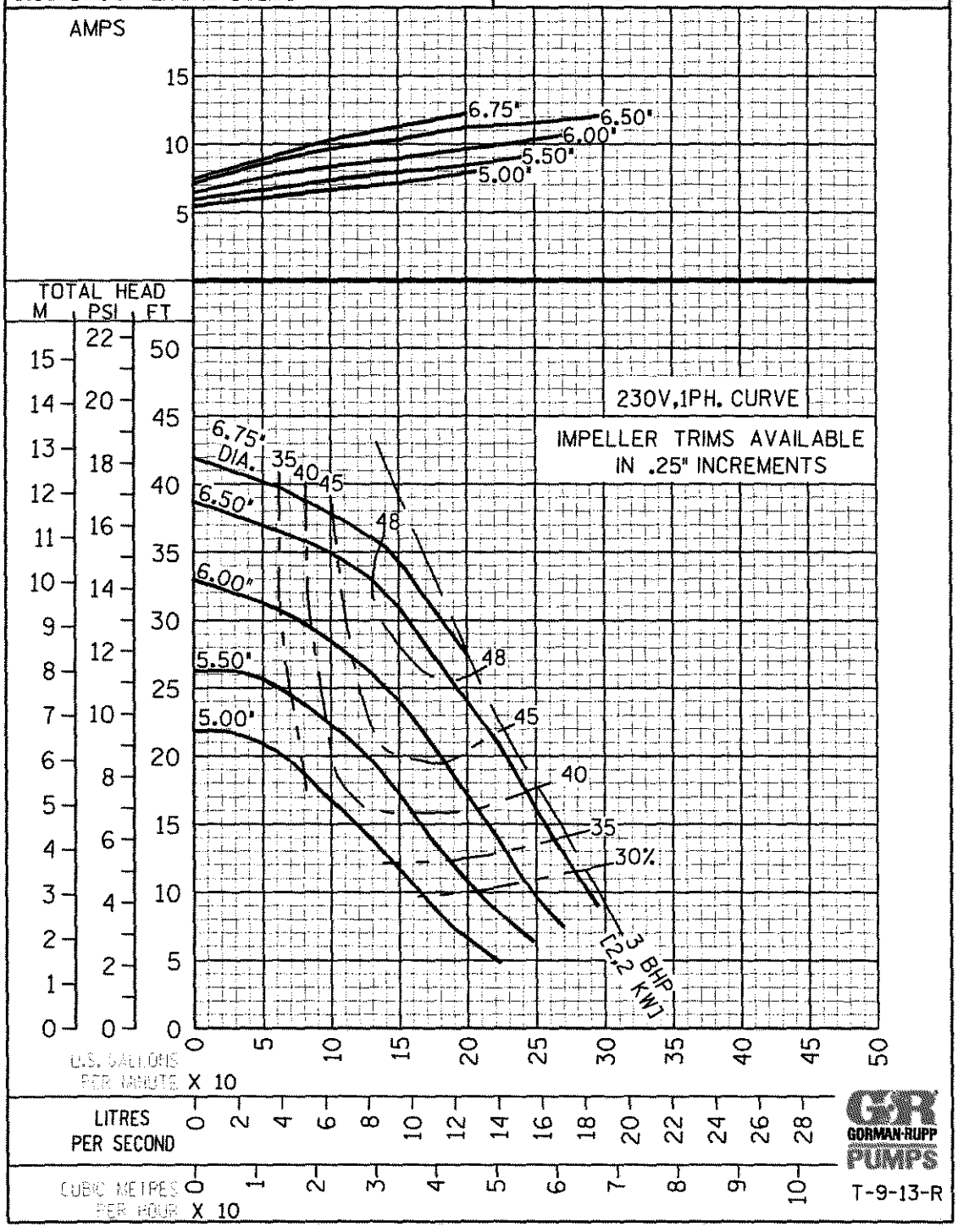
230V,1PH. CURVE

3.00" DIA. SPHERICAL SOLIDS

CURVE SFV3A-3 MODEL SFV3A SFV3A-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



GORMAN-RUPP PUMPS

T-9-13-R

Pump Data Sheet - Gorman-Rupp IND 60Hz

Company: Sebago Technics
Name: Craig Burgess
Date: 1/15/2014

From Atlantic Pump and Engineering

GORMAN-RUPP PUMPS

Pump:

Size: SFV3A-3

Type: SF-SERIES_230V_1PH
Synch speed: 1800 rpm

Speed: 1750 rpm
Dia: 6.25 in

Curve: SFV3A-3

Impeller:

Specific Speeds:

Ns: ---
Nss: ---

Dimensions:

Suction: 3 in
Discharge: 3 in

Pump Limits:

Temperature: ---
Pressure: ---
Sphere size: 3 in

Power: ---
Eye area: ---

Search Criteria:

Flow: 200 US gpm

Head: 15 ft

Fluid:

Water
SG: 1
Viscosity: 1.105 cP

Temperature: 60 °F
Vapor pressure: 0.2563 psi a
Atm pressure: 14.7 psi a

NPSHa: ---

Motor:

Standard: NEMA
Enclosure: TEFC

Size: 3 hp
Speed: 1800
Frame: 182T

Sizing criteria: Max Power on Design Curve

--- Data Point ---

Flow:	200 US gpm
Head:	15.5 ft
Eff:	39%
Power:	1.98 hp
NPSHr:	---

--- Design Curve ---

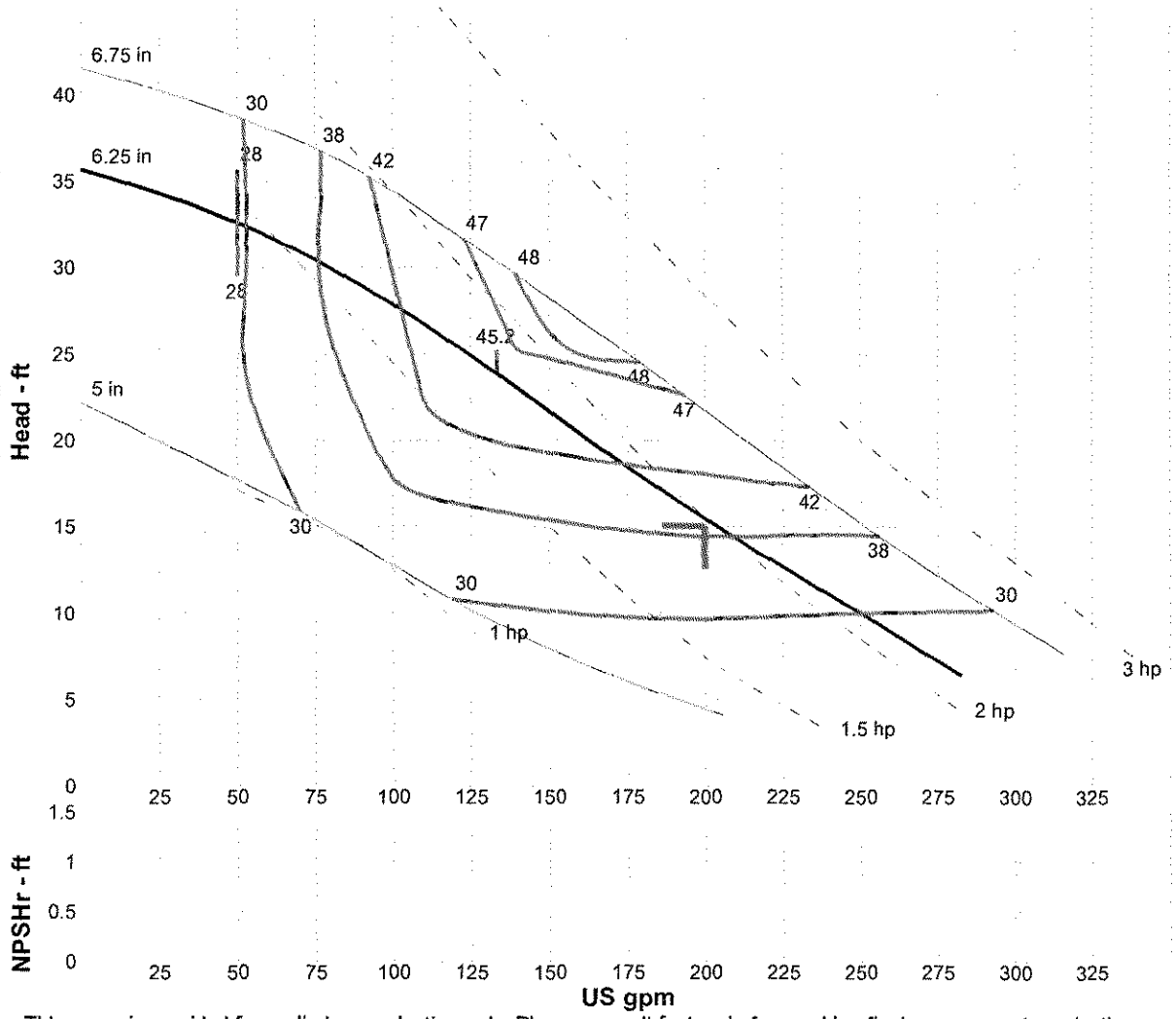
Shutoff head:	35.6 ft
Shutoff dP:	15.4 psi
Min flow:	---

BEP: 45% @ 133 US gpm

NOL power:
2.19 hp @ 282 US gpm

-- Max Curve --

Max power:
2.59 hp @ 316 US gpm



This curve is provided for preliminary selection only. Please consult factory before making final pump or motor selections.

Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
240	1750	11.1	32	2.08	---
200	1750	15.5	39	1.98	---
160	1750	20.4	43	1.88	---
120	1750	25.5	44	1.74	---
80	1750	29.9	39	1.56	---

Selected from catalog: Gorman-Rupp Industrial Pumps.60 Vers: 4.79

Exhibit 8

Letters from Maine Historic Preservation Commission, Maine Inland Fisheries and Wildlife and Maine Natural Areas Program

SEBAGO
TECHNICS

RECEIVED
OCT 25 2013
SEBAGO TECHNICS

October 2, 2013
11238

RECEIVED
OCT 04 2013
By 1492-13

Mr. Earle G. Shettleworth, Jr.
Maine Historic Preservation Commission
55 Capitol Street
State House Station 65
Augusta, ME 04333

Historic Preservation Commission Review
Orono Public Works Facility

Dear Mr. Shettleworth:

I am writing to request your review of the Historic Preservation Commission database for any historic significance in the vicinity of a proposed public works facility in Orono, ME.

The Town of Orono plans to construct a new public works facility to replace an existing facility that is outdated and not meeting the Town's needs. The new facility will be constructed on a parcel located west of Interstate 95 and accessed from the south side of Kelly Road. Proposed improvements will include approximately 3.96 acres of new impervious areas and 2.26 acres of new landscaped areas. No wetland impacts are proposed. A Site Location of Development Act (Site Law) permit application will be submitted because the project will create more than 3 acres of new impervious area.

Enclosed is a copy of a USGS Location Map that shows the project's extent and the surrounding areas. At your earliest convenience, can you please review the material and let me know of your findings so that I can include them as part of the permit application? If you have any questions on this project, please do not hesitate to contact me. I look forward to hearing from you.

Sincerely,

Craig Burgess

Craig A. Burgess, P.E.
Project Engineer

Enc.

cc: Rob Yerxa – Town of Orono

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney,
Deputy State Historic Preservation Officer
Maine Historic Preservation Commission

10/23/13
Date

75 John Roberts Road – Suite 1A South Portland, ME 04106-5963 • 207-200-2100 • Fax: 207-856-2206

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

October 25, 2013

Craig Burgess
75 John Roberts Road, Suite 1A
South Portland, ME 04106

RE: Information Request - Orono Public Works, Orono

Dear Craig:

Per your request received October 02, 2013, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Orono Public Works Project* in Orono.

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats that would be directly affected by your project. A comprehensive statewide inventory for Significant Vernal Pools has not been completed at this time, however. Vernal pool surveys will need to be conducted prior to project design to verify the presence or absence of Significant Vernal Pools. Once surveys are completed, our Department will need to verify vernal pool data sheets prior to final determination of significance.

A small stream located on the southeastern boundary of this property supports wild brook trout. We recommend that a 100-foot undisturbed vegetated buffer be maintained along this stream and associated wetlands. Maintaining buffers along cold water fisheries is critical to the protection of water temperatures, water quality, and inputs of coarse woody debris necessary to support conditions required by brook trout. Best Management Practices should be closely followed to avoid erosion, sedimentation, or other impacts to water quality of the wetlands and streams present on this property. Additionally, stream crossings should be avoided. If a stream crossing is necessary, it should be designed to provide adequate fish passage. Any necessary in stream work or work within 100 feet of streams should occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

John Perry
Environmental Review Coordinator

Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Orono Public Works (Version 1)

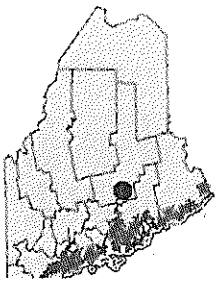
Maine Department of Inland Fisheries and Wildlife

0 0.125 0.25 0.5 0.75 1 Miles

Projection: UTM, NAD83, Zone 19N

Date: 10/9/2013

- ProjectPoints
- ProjectLines
- ProjectPolys
- ProjectSearchAreas
- Deer Winter Area
- LURC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl/Wading Bird
- Shoreland Zoning_lwwh
- Tidal Waterfowl/Wading Bird
- Significant Vernal Pools
- Roseate Tern
- Piping Plover/Least Tern
- Aquatic ETSc (2.5 mi review)
- Rare Mussels (5 mi review)
- A and B List Ponds
- Arctic Charr Habitat
- E. Brook Trout Joint Venture Subwatershed Classification
- Redfin Pickerel/Swamp Darter Habitats (buffer100ft)
- Special Concern-occupied habitats(100ft buffer)



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0093

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

October 7, 2013

Craig Burgess
Sebago Technics
75 John Roberts Road, Suite 1A
South Portland, ME 04106

Re: Rare and exemplary botanical features in proximity to: Orono Public Works Facility, Orono, Maine

Dear Mr. Burgess:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received October 2, 2013 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Orono, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, the southwestern portion of the parcel intersects with a Domed Bog Ecosystem at Caribou Bog (see table below and attached map). Provided that the 3.96 acres of new impervious areas are close to Kelley Road, we have no concerns with the project as outlined in your letter. If runoff or drainage from the project is anticipated to flow into Caribou Bog, or if the project footprint is within 500 feet of the bog, please contact our office for more specific recommendations.

Table of Significant Natural Features

Feature	Global Rank	State Rank	State Status	Occurrence Rank	Notes
Domed Bog Ecosystem	GNR	S3	N/A	A – Excellent	Caribou Bog (aka Orono Bog)

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MAINE NATURAL AREAS PROGRAM
MOLLY DOCHERTY, DIRECTOR

PHONE: (207) 287-8044
FAX: (207) 287-8040
TTY: (207) 287-2213

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

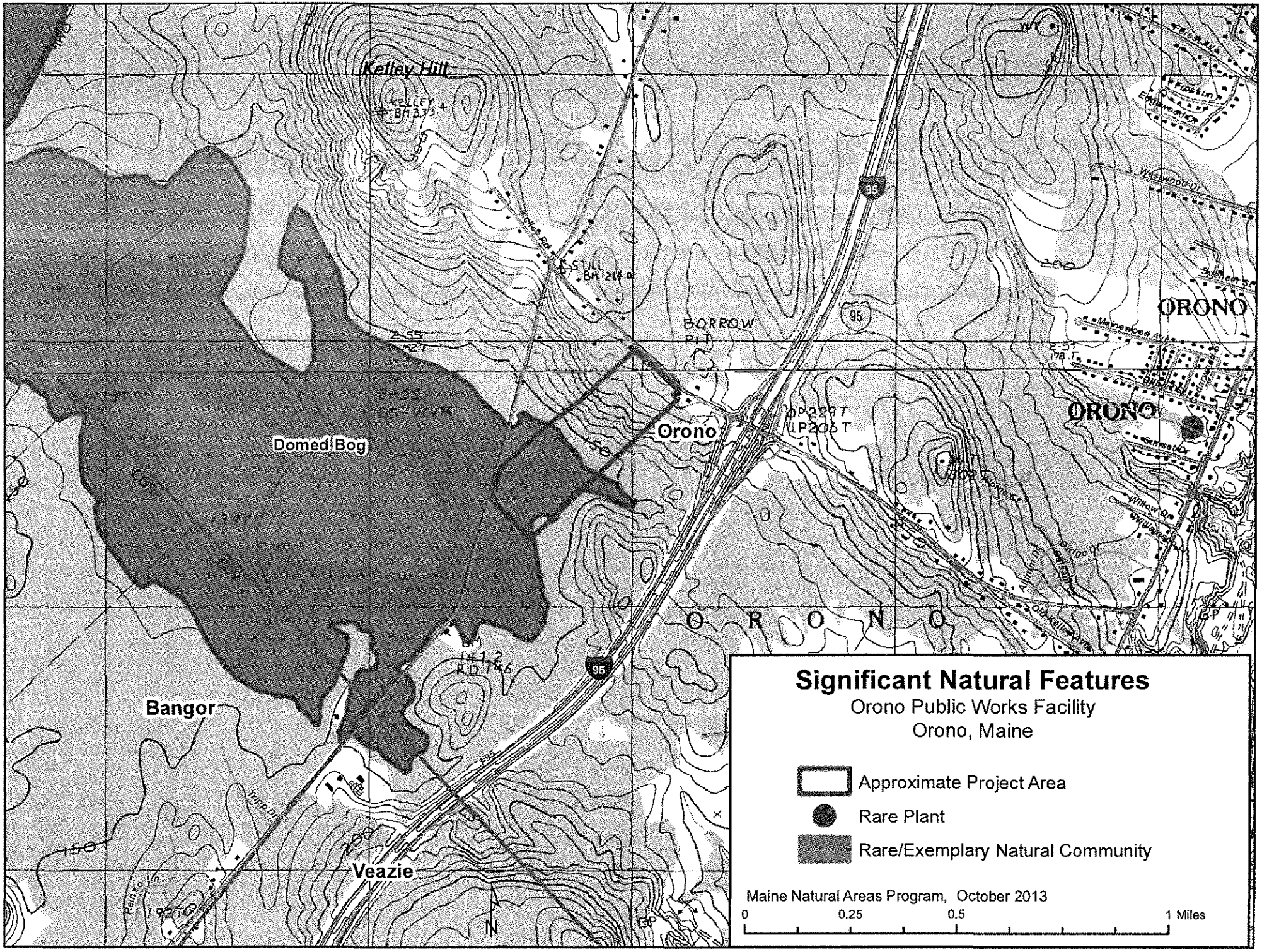
The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Don Cameron
Ecologist
Maine Natural Areas Program
207-287-8041
don.s.cameron@maine.gov

Enclosures


Kelley Hill
Domed Bog
Orono
ORONO
ORONO
O R O N O
Bangor
Veazie
BORROW PIT
95
Significant Natural Features
Orono Public Works Facility
Orono, Maine
Approximate Project Area
Rare Plant
Rare/Exemplary Natural Community
Maine Natural Areas Program, October 2013
0
0.25
0.5
1 Miles
N

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

S3 Rare in Maine (20-100 occurrences).

S4 Apparently secure in Maine.

S5 Demonstrably secure in Maine.

SU Under consideration for assigning rarity status; more information needed on threats or distribution.

SNR Not yet ranked.

SNA Rank not applicable.

S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.

G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

G3 Globally rare (20-100 occurrences).

G4 Apparently secure globally.

G5 Demonstrably secure globally.

GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.

T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/doc/nrimc/mnap

Craig Burgess

From: Cameron, Don S. <Don.S.Cameron@maine.gov>
Sent: Tuesday, October 08, 2013 11:00 AM
To: Craig Burgess
Cc: St.Hilaire, Lisa
Subject: RE: Orono Public Works Facility

Thanks Craig.

We have no additional recommendations. The underdrained soil filter approach should be adequate to minimize impacts from runoff into the bog.

Thanks, Don

Don Cameron, Botanist/Ecologist
Maine Natural Areas Program
#93 State House Station
Augusta, ME 04333-0093
(phone - 207-287-8041 / fax - 207-287-8040)

From: Craig Burgess [mailto:cburgess@sebagotechnics.com]
Sent: Tuesday, October 08, 2013 10:49 AM
To: Cameron, Don S.
Cc: St.Hilaire, Lisa
Subject: RE: Orono Public Works Facility

Hi Don,

At this stage in the project, we believe that underdrained soil filters will be used for treating stormwater runoff from the site. I have attached Maine DEP's description and design criteria for an underdrained soil filter. Please review at your convenience and let me know if you have any other recommendations for stormwater runoff treatment.

Craig A. Burgess, P.E.
Project Engineer

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Direct Line: 207.200.2081
Fax: 207.856.2206

From: Cameron, Don S. [mailto:Don.S.Cameron@maine.gov]
Sent: Tuesday, October 08, 2013 10:41 AM
To: Craig Burgess
Cc: St.Hilaire, Lisa
Subject: FW: Orono Public Works Facility

Hi Craig,

Before we answer your question can you clarify what is meant by "treated" in reference to the site runoff?

Thanks, Don

Don Cameron, Botanist/Ecologist
Maine Natural Areas Program
#93 State House Station
Augusta, ME 04333-0093
(phone - 207-287-8041 / fax - 207-287-8040)

From: Craig Burgess [mailto:cburgess@sebagotechnics.com]
Sent: Tuesday, October 08, 2013 10:16 AM
To: St.Hilaire, Lisa
Cc: Owens McCullough
Subject: RE: Orono Public Works Facility

Hi Lisa,

Thanks for the prompt review. The project disturbed area is relatively small (5.25 acres +/-) compared to the parcel size (50 acres). Development will be limited to the northeast corner of the parcel which is the furthest corner from the protected "Caribou" bog. The westerly edge of the conceptual layout measures approximately 800 feet from the bog. In its pre-development state, land surfaces from the entire site drain southwesterly toward the bog. Runoff from new disturbed surfaces will be treated in accordance with Maine DEP and local standards before discharging to downstream areas which drain to the bog. Maine DEP will require that 95% of new impervious surfaces are treated.

In your review letter, you asked that Maine Natural Areas Program be contacted if the project drains to the bog. Knowing that the treated runoff will be ultimately discharged to the bog area, would Maine Natural Areas Program recommend any additional measures to ensure that the proposed project adequately protects the bog? Any feedback is greatly appreciated so that we can discuss with the Town.

Thank-you,

Craig A. Burgess, P.E.
Project Engineer

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Fax: 207.856.2206

From: St.Hilaire, Lisa [mailto:Lisa.St.Hilaire@maine.gov]
Sent: Monday, October 07, 2013 3:37 PM
To: Craig Burgess
Subject: RE: Orono Public Works Facility

Hi Craig,

Attached is MNAP's response for the Orono Public Works project. Thanks,

Lisa St. Hilaire

Information Manager | Maine Natural Areas Program
Department of Agriculture, Conservation and Forestry
93 State House Station | Augusta, ME 04333
PHONE 207-287-8044 | FAX 207-287-8040

From: Craig Burgess [mailto:cburgess@sebagotechnics.com]
Sent: Wednesday, October 02, 2013 9:37 AM
To: NAP, Maine
Subject: Orono Public Works Facility

Good Morning Lisa,

Attached please find a letter requesting review and a location map for a proposed public works facility in Orono. Please let me know if you have any questions.

Thanks,

Craig A. Burgess, P.E.
Project Engineer

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