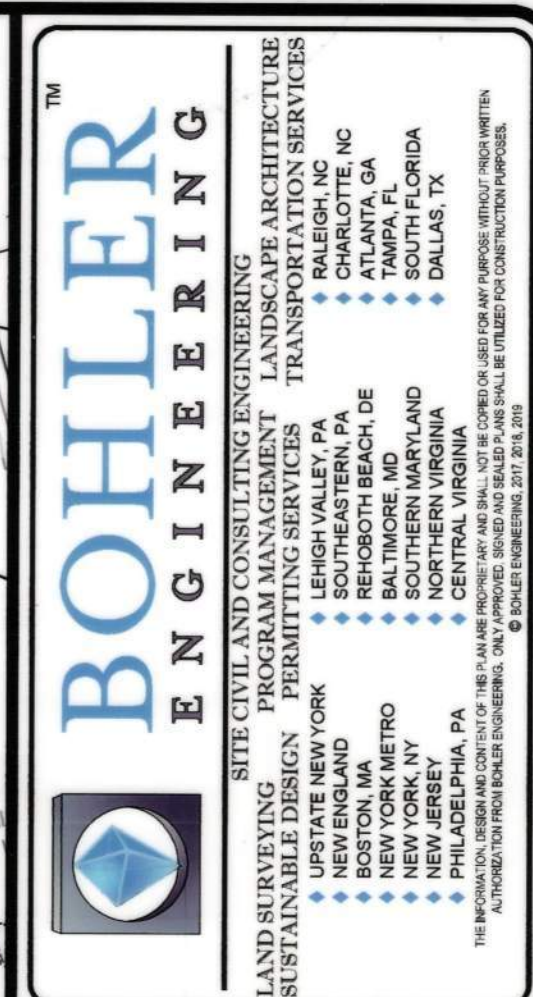




REVISIONS				
REV	DATE	COMMENT	BY	
1	03/21/17	REMOVE CARPORT BLDG. (SHEETS 8-12 ONLY.)	CFD	CFD
2	06/02/17	REV. PER TOWN COMMENTS	AWP	CFD
3	06/15/17	DRAINAGE REVISIONS (SHEETS 13-16 ONLY)	AWP	GAZ
4	06/28/17	DRAINAGE REVISIONS (FULL SET)	AWP	AWP
5	07/26/17	REV. PER TOWN COMMENTS	AWP	AWP
6	08/10/17	PEER REVIEW COMMENTS	AWP	CFD
7	09/18/17	CONSTRUCTION DOCUMENTS	AWP	AWP
8	11/06/18	REVISED R / R10 PAD	AWP	CFD
9	12/10/18	REV. PER TOWN COMMENTS	AWP	CFD
10	04/23/19	REVISED R / R10 PAD	AWP	CMC
10A	05/13/19	REVISED PER TOWN COMMENTS	AWP	CFD
10B	07/25/19	REVISED PER TOWN COMMENTS	AWP	CMC
13	10/04/19	REVISED R4-R8 PAD	AWP	BPB
13A	11/12/19	REVISED R9 BUILDING LOADING AREA	AWP	BPB
15				

PROJECT No.:	W161189
DRAWN BY:	AWP/CFD
CHECKED BY:	NEM/JAK
DATE:	02/15/2017
SCALE:	AS NOTED
CAD I.D.:	W161189SS13A

CAPITAL GROUP

LOCATION OF SITE
MAP #25 & LOTS #152 & 152-1
129 PARKER STREET (ROUTE 27)
TOWN OF MAYNARD
MIDDLESEX COUNTY
MASSACHUSETTS

352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
Fax: (508) 480-9080
www.BohlerEngineering.com

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 MAINE LICENSE No. 41530
 CONTRACT LICENSE No. 26177
 RHODE ISLAND LICENSE No. 9616
 MAINE LICENSE No. 12553

GRADING & DRAINAGE PLAN "D"

SHEET NUMBER:
15
OF 36

REV 13 - 08/22/2019

Know what's below.
Call before you dig.

FOR PIPE WITHIN 10 FT. OF BUILDING, PIPE MATERIAL SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES. CONTRACTOR TO VERIFY WITH LOCAL OFFICIALS.

GENERAL CONTRACTOR TO ENSURE ALL SIDEWALKS ARE ADA/AAB COMPLIANT WITH 2% MAXIMUM CROSS SLOPES AND 5% MAXIMUM RUNNING SLOPES. CONTRACTOR SHALL ALSO ENSURE ALL RAMPS ARE ADA/AAB COMPLIANT IN ACCORDANCE WITH RAMP DETAILS ON CONSTRUCTION DETAIL SHEETS. IF MORE INFORMATION IS NEEDED IN CERTAIN AREAS, CONTRACTOR SHALL SUBMIT AN RFI FOR CLARIFICATION.

CONTRACTOR SHALL INSTALL ADA
RAMPS SUCH THAT BOTTOM OF RAMP
LANDINGS PROVIDE POSITIVE
DRAINAGE AND NOT LOW POINTS
SUSCEPTIBLE TO PONDING

REFER TO SHEET 16 FOR STORM
DRAINAGE TABLE FOR ADDITIONAL
INFORMATION

THIS PLAN TO BE UTILIZED FOR SITE
GRADING PURPOSES ONLY

REFER TO GENERAL NOTES SHEET
FOR GRADING & UTILITY NOTES

TOWN OF MAYNARD
PLANNING BOARD APPROVAL

SIGNATURE	DATE
SIGNATURE	DATE
Approved plans - see cover sheet for Planning Board signatures.	
SIGNATURE	DATE
SIGNATURE	DATE
SIGNATURE	DATE

A diagram showing a horizontal line with a point in the middle. From this point, two rays extend outwards, forming a straight line. The angle between the left ray and the horizontal line is labeled 40. The angle between the right ray and the horizontal line is labeled 40. The angle between the two rays is labeled 10. Below the diagram, the text $1^{\circ} = 40'$ is written.

DRAINAGE TABLE						
STR	R/W GRT	INV. IN	INV. OUT	OUT PIPE SIZE	PIPE LENGTH	OUT PIPE SLOPE
B4*		194.50(CB-71)	8"	4"	0.00%	
B5*		194.50(CB-88)	8"	9"	0.00%	
B6*		194.50(CB-74)	8"	4"	0.00%	
B9*		194.50(CB-78)	8"	11"	0.00%	
B10*		194.50(CB-79)	8"	9"	0.00%	
B11A*		194.50(CB-80)	8"	7"	0.00%	
B11B*		194.50(BND-6)	8"	3"	0.00%	
B12A		195.50(CB-82)	8"	23"	0.00%	
B12B		195.50(CB-83)	8"	9"	0.00%	
BND-1*	194.50(CB-77)	194.50(BND-2)	8"	3"	0.00%	
BND-2*	194.50(BND-1)	194.50(TEE-1)	8"	51"	0.00%	
BND-3*	193.50(BND-4)	193.50(MH-49)	8"	17"	0.00%	
BND-4*	193.50(CB-78)	193.50(BND-3)	8"	11"	0.00%	
BND-5*	194.50(BND-6)	194.50(CB-81)	8"	18"	0.00%	
BND-6*	194.50(B11B)	194.50(BND-5)	8"	3"	0.00%	
BND-7*	195.78(F3A)	195.78(BND-8)	12"	12"	0.51%	
BND-8*	195.70(BND-7)	195.70(BND-6)	12"	238"	0.00%	
BND-9*	195.70(BND-8)	195.70(BND-10)	12"	14"	0.00%	
BND-10*	195.70(BND-9)	195.70(MH-13A)	12"	73"	0.00%	
BND-11*	195.70(BND-12)	195.70(MH-13A)	12"	49"	0.00%	
BND-12*	195.70(BND-13)	195.70(BND-11)	12"	21"	0.00%	
BND-13*	195.70(BND-14)	195.70(BND-12)	12"	71"	0.00%	
BND-14*	195.81(MH-12)	195.81(BND-13)	12"	21"	0.52%	
BND-15*	196.08(BND-10)	196.08(MH-12)	12"	143"	0.49%	
BND-16*	196.71(R3C)	196.71(BND-15)	12"	6"	0.45%	
BND-17*	196.05(R1H)	196.05(BND-18)	12"	5"	1.11%	
BND-18*	196.00(BND-17)	196.00(MH-3)	12"	142"	0.00%	
BND-19*	196.53(R1E)	196.53(BND-20)	12"	3"	0.91%	
BND-20*	196.50(BND-19)	196.50(MH-1A)	12"	134"	0.00%	
BND-21*	196.50(R1C)	196.50(BND-22)	8"	9"	0.93%	
BND-22*	196.50(BND-21)	196.50(MH-1A)	12"	52"	0.00%	
BND-23*	196.50(BND-24)	196.50(MH-1A)	12"	29"	0.00%	
BND-24*	196.60(R1B)	196.60(BND-23)	8"	10"	1.03%	
BND-25*	196.60(R1A)	196.60(BND-26)	8"	10"	1.03%	
BND-26*	196.60(BND-25)	196.60(MH-1A)	12"	33"	0.00%	
BND-27*	196.50(BND-28)	196.50(MH-1A)	12"	46"	0.00%	
BND-28*	196.59(R1L)	196.59(BND-27)	8"	9"	0.97%	
BND-29*	197.00(R6B-1)	197.00(MH-5)	12"	16"	0.00%	
BND-30	200.24(R1D)	200.24(MH-6)	12"	135"	0.50%	
BND-31	200.32(R2A)	200.32(MH-6A)	12"	459"	0.40%	
BND-32	199.75(BND-34)	199.75(MH-2)	12"	257"	0.40%	
BND-34	199.75(BND-35)	199.75(BND-32)	12"	8"	0.51%	
BND-35	200.50(R3C)	200.50(BND-34)	12"	178"	0.40%	
CB-1	201.60	199.10(MH-4A)	12"	123"	0.50%	
CB-1A	201.60	196.60(MH-4A)	12"	7"	1.96%	
CB-2	201.70	196.24(MH-4)	12"	7"	1.96%	
CB-2A	201.50	196.50(MH-81)	12"	7"	1.96%	
CB-3	201.65	197.05(MH-8)	12"	71"	0.99%	
CB-4	201.14	197.00(MH-22)	12"	9"	1.09%	
CB-5	201.80	198.00(MH-2)	12"	20"	1.08%	
CB-6	199.00	195.50(MH-2)	18"	11"	2.00%	
CB-7	199.15	195.38(MH-2)	18"	137"	0.50%	
CB-8	199.00	195.50(MH-2)	12"	11"	2.00%	
CB-9	199.00	195.22(MH-2)	18"	144"	0.50%	
CB-10	199.50	195.50(MH-2)	12"	14"	0.98%	
CB-11	201.20	197.16(MH-2)	15"	169"	0.50%	

DRAINAGE TABLE						
STR	R/W GRT	INV. IN	INV. OUT	OUT PIPE SIZE	PIPE LENGTH	OUT PIPE SLOPE
CB-12	201.60	198.00(MH-4)	12"	9"	2.01%	
CB-13	201.80	197.50(MH-4)	18"	15"	2.03%	
CB-14	201.00	197.00(MH-4)	12"	123"	1.00%	
CB-15	201.80	196.17(MH-4)	12"	16"	1.00%	
CB-16	201.00	197.00(MH-4)	12"	25"	2.02%	
CB-17	199.80	195.80(MH-4)	12"	36"	2.00%	
CB-18	200.05	194.45(MH-4A)	12"	11"	2.01%	
CB-19	200.50	197.10(MH-2)	12"	142"	1.00%	
CB-20	201.00	197.10(MH-2)	12"	19"	1.05%	
CB-21	201.25	197.50(MH-2)	12"	136"	0.50%	
CB-22	200.50	197.25(MH-2)	12"	25"	1.00%	
CB-22A	200.95	197.30(MH-2)	12"	8"	1.25%	
CB-22B	200.40	197.15(MH-2)	12"	14"	0.49%	
CB-23	200.95	197.38(MH-2)	12"	66"	1.00%	
CB-24	200.45	196.60(MH-2)	12"	14"	1.00%	
CB-25	200.60	196.50(MH-2)	12"	164"	0.50%	
CB-26	199.20	194.99(MH-2)	12"	24"	2.02%	
CB-27	201.25	196.00(MH-2)	12"	78"	1.03%	
CB-28	199.90	195.50(MH-2)	12"	7"	2.01%	
CB-29	200.25	196.66(MH-2)	12"	54"	0.50%	
CB-30	202.05	200.50(MH-2)	12"	20"	26.40%	
CB-31	199.50	195.44(MH-2)	12"	8"	2.00%	
CB-32	199.50	195.50(MH-2)	12"	27"	1.00%	
CB-33	200.00	194.86(TEE-2)	12"	33"	0.51%	
CB-34	199.75	194.75(MH-2)	12"	21"	1.03%	
CB-35	199.60	195.80(MH-2)	12"	16"	1.96%	
CB-36	199.10	195.90(MH-2)	12"	159"	1.00%	
CB-37	199.05	195.70(MH-2)	12"	15"	1.96%	
CB-38	199.50	196.50(MH-2)	12"	33"	2.00%	
CB-39	199.50	196.50(MH-2)	12"	8"	2.11%	
CB-40	200.75 (4)	197.75(MH-2)	12"	234"	1.00%	
CB-41	199.70	195.00(MH-2)	12"	18"	0.00%	
CB-42	199.70	196.33(MH-2)	12"	9"	0.73%	
CB-43	201.25	195.00(BASIN #14)	15"	25"	3.96%	
CB-45	201.55	197.12(MH-2)	12"	10"	0.98%	
CB-46	201.85	198.35(MH-2)	12"	131"	1.02%	
CB-48	199.70	195.00(MH-2)	15"	6"	0.00%	
CB-49	199.70	196.65(MH-2)	15"	6"	2.51%	
CB-50	199.85	196.43(MH-2)	15"	70"	0.50%	
CB-51*	199.00	196.00(MH-2)	15"	141"	0.50%	
CB-52*	199.00	195.43(MH-2)	15"	7"	2.08%	
CB-53*	198.00	195.04(MH-2)	15"	77"	1.04%	
CB-54*	198.00	194.25(MH-2)	12"	11"	1.00%	
CB-55*	198.00	194.50(MH-2)	15"	10"	2.00%	
CB-56*	198.40	194.50(MH-2)	12"	90"	1.26%	
CB-57*	199.10	195.00(MH-2)	12"	81"	1.00%	
CB-58	200.05	196.00(MH-2)	12"	15"	0.98%	
CB-59*	198.00	195.10(MH-2)	12"	96"	1.02%	
CB-60*	198.00	195.00(MH-2)	12"	7"	0.98%	
CB-61*	198.00	194.50(MH-2)	12"	10"	1.00%	
CB-62*	198.10	195.31(MH-2)	12"	13"	0.98%	
CB-63*	198.00	195.16(MH-2)	15"	129"	0.50%	
CB-64*	199.50	195.71(MH-2)	12"	103"	0.50%	
CB-66	199.35	196.83(FES-12B)	8"	55"	0.00%	
CB-68	198.91	196.83(FES-11)	8"	18"	0.00%	

ADDITIONAL DRAINAGE TABLE						
STR	R/W GRT	INV. IN	INV. OUT	OUT PIPE SIZE	PIPE LENGTH	OUT PIPE SLOPE
MH-B14C	199.95	195.00(CB-44)				
CB-44	199.70	196.33(MH-2)	12"	8"	1.64%	
CB-43A	201.50	194.50(MH-81B)	12"	23"	0.00%	
MH-B16	202.05	194.50(CB-43A)				
CB-45A	201.75	195.50(BASIN#14A)	12"	3"	0.00%	
MH-E1A	199.80	195.00(MH-1)	12"	15"	1.96%	
MH-H1	202.28	196.47(MH-1)	18"	134"	0.50%	
RSA		196.90(R9B)	8"	53"	1.00%	
R9B		196.37(R9A)	12"	58"	1.00%	
CB93	198.85	195.80(MH-2)	12"	11"	0.94%	
CB94	199.50	196.50(MH-2)	12"	61"	0.98%	
MH-27	200.98	195.90(CB-94)	15"	104"	0.96%	
MH-R10C	202.20	197.00(R10C)	15"	88"	0.51%	
MH-R10D	202.40	197.00(R10D)	15"	157"	0.00%	
MH-R10E	202.20	197.00(R10E)	15"	157"	0.00%	
MH-R10F	202.42	196.45(MH-2)	15"	15"	0.66%	
MH-WQJ4	201.40	193.33(MH-WQJ3)	15"	27"	1.21%	

DRAINAGE TABLE							
	STR	R/W GRT	INV. IN	INV. OUT	OUT PIPE SIZE	PIPE LENGTH	OUT PIPE SLOPE
(3)	CB-69	200.50		196.00(MH-A5)	18"	42'	1.50%
	CB-69A	201.00		197.50(MH-A5)	12"	54'	1.00%
	CB-70*	198.45		195.95(MH-C2) 194.50(MH-B4B)	12" 8"	6' 31"	0.98% 1.00%
	CB-71*	198.45	194.50(B4*)	195.95(MH-C2*)	12"	8'	1.01%
	CB-72*	198.45	194.50(TEE-1*)	195.95(MH-C2)	12"	7'	1.99%
	CB-73*	198.60		195.95(MH-C2*) 194.50(BND-1*)	12" 8"	59' 10'	2.49% 0.00%
	CB-74*	198.00	194.50(B8*)	195.50(MH-21*)	12"	10'	0.98%
	CB-75*	198.00		195.50(MH-11*) 194.50(MH-B8*)	12" 8"	11' 5'	1.00% 0.00%
	CB-76*	197.00		194.50(MH-C2) 193.50(BND-4)	12" 8"	14' 10'	1.00% 0.00%
	CB-77*	198.10		194.50(MH-C2) 193.50(MH-B8*)	12" 8"	11' 36"	1.00% 0.00%
	CB-78*	199.10	194.50(B8*)	195.22(MH-C2)	12"	113'	1.00%
	CB-79*	198.20	194.50(B10*)	195.70(MH-F2*)	12"	59'	1.00%
	CB-80*	198.20	194.50(B11A*)	195.70(MH-F2*)	12"	8'	1.08%
	CB-81*	198.20	194.50(BND-5)	195.70(MH-C2)	12"	9'	1.05%
	CB-82	200.75	195.50(B12A)	196.25(MH-E2)	12"	13'	2.02%
	CB-83	200.85	195.50(B12B)	196.25(MH-N3)	12"	14'	0.98%
	CB-84	201.00	197.20(YD-3)	195.69(MH-C2)	12"	81'	0.51%
	CB-85	201.00		196.66(MH-C2)	12"	10'	1.00%
	CB-86	198.75		194.93(MH-C2)	12"	22'	1.23%
	CB-87*	198.60		195.15(MH-C2)	12"	12'	1.00%
CB-88*	198.80	194.50(B5*)	196.30(MH-H2*)	12"	6'	0.95%	
CB-89	200.50		197.50(FES-8)	12"	149'	0.45%	
CB-90	202.24		198.00(MH-B3)	12"	20'	1.00%	
CB-91	201.00		197.00(MH-T3)	12"	7'	2.00%	
CB-92	201.01		196.10(MH-S5)	12"	9'	2.00%	
(2)	FES-1		191.70(WD(V)-2B)				
	FES-2		192.00(WD(V)-1B)				
	FES-3		192.91(MH-1*)				
	FES-4		192.40(MH-1-C1)				
	FES-5		189.51(MH-S1*)				
	FES-6		191.34(MH-1*)				
	FES-7			198.50(MH-H)	18"	105'	2.50%
	FES-8			197.00(MH-HRP*)			
	FES-9		196.83(CB-89)				
	FES-10		193.07(MH-A1)				
	FES-11		196.83(CB-88)				
	FES-12A		196.83(CB-88)				
FES-12B		196.83(CB-88-1))					
(2)	MH-A	201.90	198.11(CB-2) 198.11(MH-A4)	198.11(MH-B1)	18"	62'	0.50%
	MH-A1	199.60	195.43(CB-1) 194.32(CB-36)	194.32(FES-10)	15"	124'	1.00%
	MH-A2	201.65	196.55(MH-A3) 196.55(F1)	196.55(MH-H2)	18"	20'	1.01%
	MH-A3	202.10	197.60(R1G)	197.60(MH-A2)	12"	109'	0.99%
	MH-A4	201.60	198.45(CB-1) 198.45(CB-1A)	198.45(MH-A)	15"	75'	0.51%
	MH-A5	201.20	196.96(CB-69A) 195.97(CB-69) 196.35(MH-A2)	195.97(MH-H)	18"	36'	0.61%
	MH-A6	201.75	199.57(BND-3)	199.57(MH-B1B)	12"	207'	0.52%
	MH-B	202.85	196.35(CB-3) 196.35(MH-Y2) 196.65(MH-B1)	196.00(MH-B3)	24"	84'	0.50%
	MH-B1	201.65	198.37(CB-2A) 197.80(MH-A)	197.80(MH-B)	18"	190'	0.50%
	MH-B1A	203.60	198.50(BND-31)				
	MH-B1B	202.70	198.50(MH-B)				
	MH-B2*	198.65	195.69(CB-70) 193.29(MH-C2*)	193.29(MH-H2*)	18"	77'	0.50%
MH-B3	202.65	195.67(MH-B) 197.80(CB-50)	195.67(MH-C)	24"	97'	0.50%	

