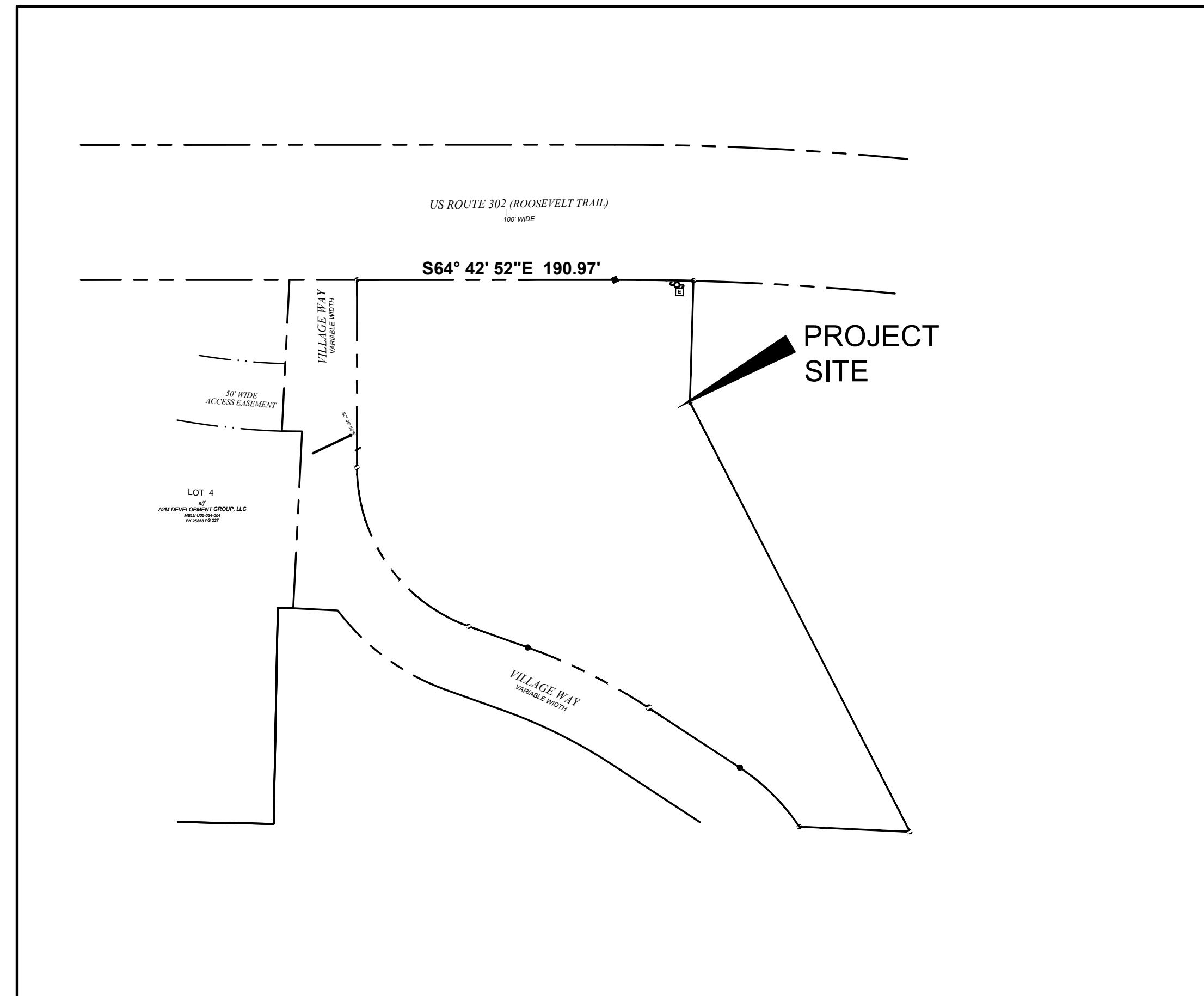


DRAINAGE IMPROVEMENT PLANS FOR LOT 1 OF OLD VILLAGE SUBDIVISION MBLU U05-024-01 NAPLES, CUMBERLAND COUNTY, MAINE

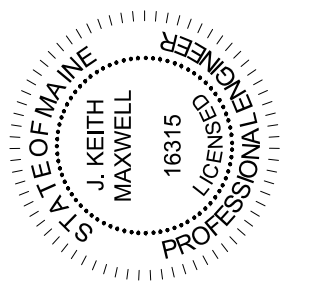
NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY IS MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE, NAD83 (2011), U.S. SURVEY FEET (ME83-WF).
2. CONTOURS SHOWN ARE BASED ON NOAA QL2 2020 LIDAR AND REFER TO NAVD88 DATUM.
3. PLAN REFERENCE - "MINOR SUBDIVISION ON ROUTE 302 IN NAPLES, MAINE", DATED: AUGUST 2012, BY: WAYNE T. WOOD, ME PLS 1328, PLAN BOOK 212 PAGE 243 CUMBERLAND COUNTY REGISTRY OF DEEDS.
4. THE PARCEL IS LOCATED IN THE COMMERCIAL ZONE.
 MINIMUM LOT AREA(SQ. FT.): 40,000
 MINIMUM STREET FRONTAGE(FT.): 100'
 FRONT SETBACK(FT.): 20'
 SIDE SETBACK(FT.): 20'
 REAR SETBACK(FT.): 20'
 MAXIMUM BUILDING HEIGHT(FT.): 55'
 THE DIMENSIONAL REQUIREMENTS SHOWN HEREON ARE TO BE VERIFIED WITH THE CODE OFFICE PRIOR TO DESIGN AND CONSTRUCTION. ADDITIONAL RESTRICTIONS MAY APPLY.
5. THE PROPERTY SHOWN HEREON LIES WITHIN THE SEBAGO LAKE WATERSHED.
6. THIS PROPERTY SHOWN HEREON IS LOCATED IN FEMA FLOOD ZONE "C", AREA OF MINIMAL FLOODING AS SHOWN ON FEMA FIRM Z300500016B, EFFECTIVE DATE: APRIL 1, 1982.



Sheet List Table	
Sheet Number	Sheet Title
C-1.0	COVER SHEET
C-2.0	EXISTING DRAINAGE
C-3.0	PROPOSED DRAINAGE
C-4.0	DRAINAGE CALCULATIONS

NO.	DATE	BY	DESCRIPTION



PREPARED FOR
MICHAEL CURRIER
WINDSONG DEVELOPMENT, LLC
30 STOVER'S POINT ROAD
HARPSWELL, ME

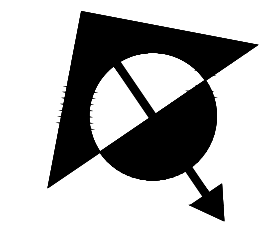
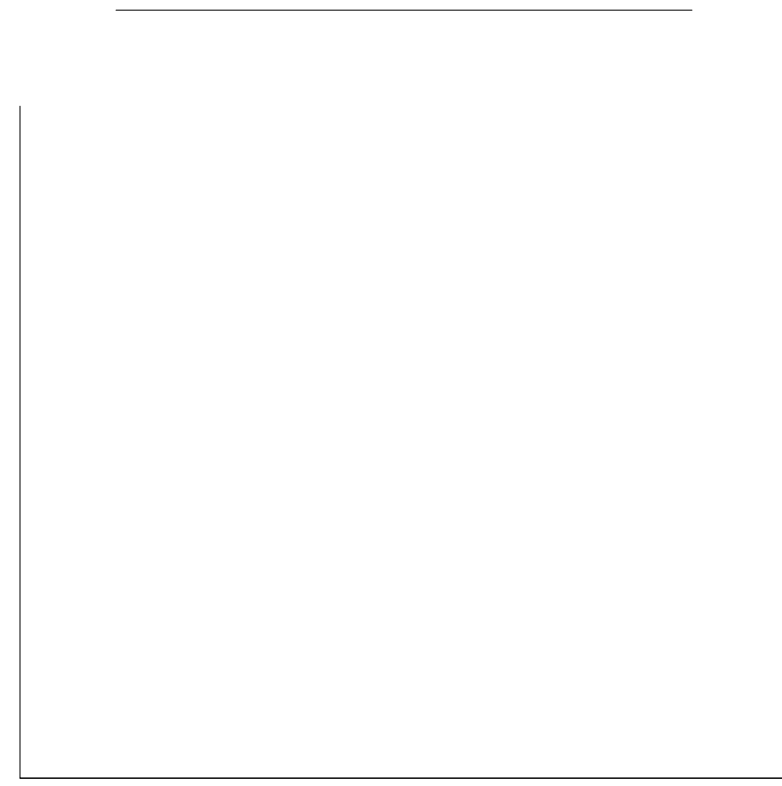
SITE PLAN OF PROPOSED
COMMERCIAL DEVELOPMENT
LOT 1 OF OLD VILLAGE SUBDIVISION
MBLU U05-024-01
NAPLES, CUMBERLAND COUNTY, MAINE

DATE:
APRIL 18, 2023

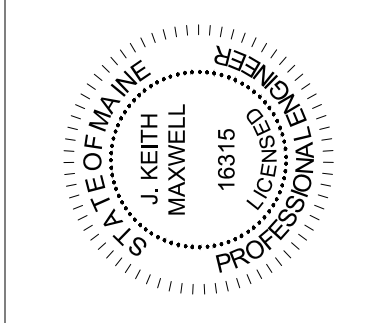
PROJECT NO. 2023-006	SCALE: 1"=30'
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CAD FILE:
2023-006 SITE PLAN ME83-WF.dwg

SHEET
1



NO.	DATE	BY	REVISION

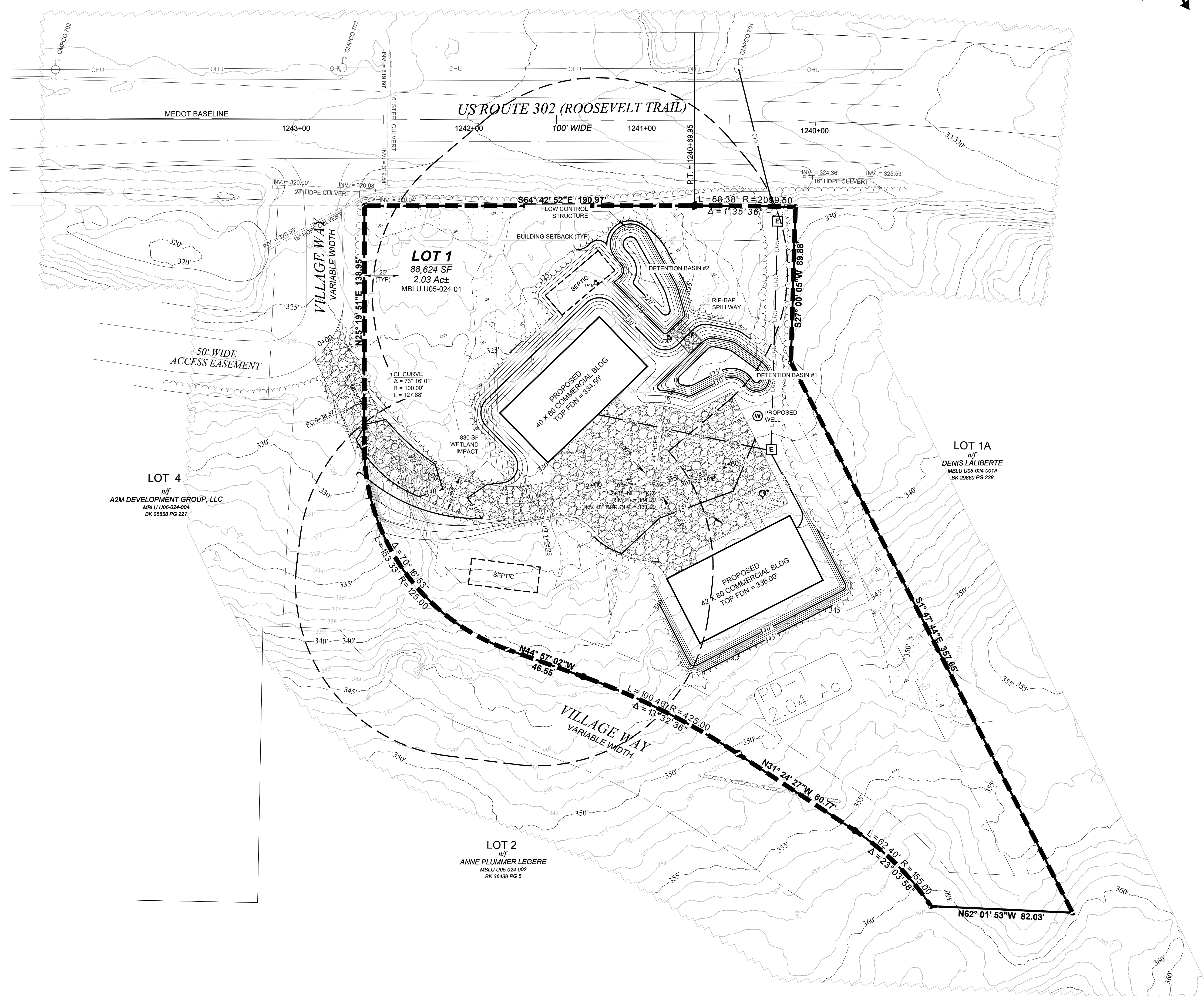
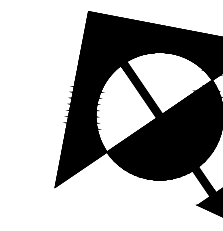


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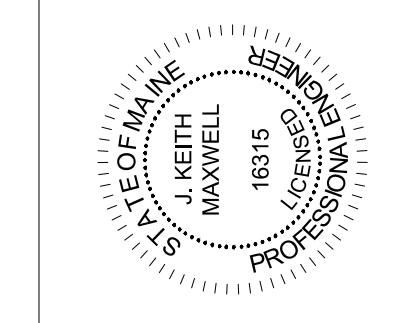
EXISTING DRAINAGE
 LOT 1 OF OLD VILLAGE SUBDIVISION
 MBLU U05-024-01
 NAPLES, CUMBERLAND COUNTY, MAINE

DATE:
 APRIL 18, 2023
 PROJECT NO. 2023-006
 SCALE: 1"=30'
 CAD FILE:
 2023-006 SITE PLAN MESS-WF.dwg

SHEET
2



NO.	DATE	BY	REVISION / DESCRIPTION



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 30 STOVER'S POINT ROAD
 HARPSWELL, ME

PROPOSED DRAINAGE
 LOT 1 OF OLD VILLAGE SUBDIVISION
 MBLU U05-024-01
 NAPLES, CUMBERLAND COUNTY, MAINE

DATE:
 APRIL 18, 2023
 PROJECT NO. 2023-006 SCALE: 1"=30'
 CAD FILE: 2023-006 SITE PLAN MESS-WF.dwg

SHEET
 3

TABLE 1: EXISTING 100 YR STORM DRAINAGE CHART CALCULATIONS												
Drainage	Total	Runoff	Time of	Rainfall Intensity					Design Discharge			
Area	Area	Coefficient	Concentration								Flow	
No.		(Allowable)	Tc	I5	I10	I25	I100	Q5	Q10	Q25	Q100	
	(Acres)	Cw	(Min.)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(cfs)	(cfs)	(cfs)	(cfs)	
DA 1	2.04	0.45	10.0	4.89	5.75	6.85	9.85	4.5	5.3	6.3	9.0	
TOTAL PROJECT FLOWS									5.3	6.3	9.04	

TABLE 2: POST DEVELOPED RUNOFF CHART CALCULATIONS												
Drainage	Total	Runoff	Time of	Rainfall Intensity					Design Discharge			
Area	Area	Coefficient	Concentration									
No.		C	Tc	I5	I10	I25	I100	Q5	Q10	Q25	Q100	
	(Acres)		(Min.)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(cfs)	(cfs)	(cfs)	(cfs)	
P-DA 1	2.04	0.90	15.0	4.89	5.75	6.85	9.85	8.98	10.56	12.58	18.08	
TOTAL PROJECT FLOWS (ON SITE)									8.98	10.56	12.58	18.08

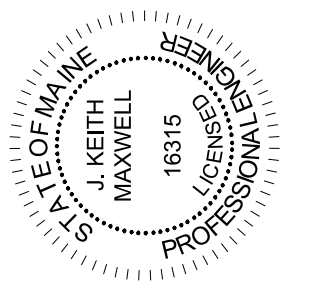
TABLE 3: MODIFIED RATIONAL METHOD: DETENTION POND ~100-YEAR FLOOD ANALYSIS						
Drainage Area=	2.05	Acres				
Weighted Runoff Coefficient Cw=	0.90					
Time of concentration C =	10.0000	Minutes				
Rainfall Intensity I(100) =	9.85	Inches/Hr.				
Detention Pond Release Rate (RR) =	9.04	cfs				
Storm Duration	Intensity	Post Developed	Inflow (Q in)	Outflow (Q out)	Volume	Volume
(td)		Flow-Q	(60 * td * Post-Dev. Q)	(0.5 * 60 * (tcp+td) * RR)	(cf)	(ac-ft)
(minutes)	(in/hr)	(cfs)	(cf)	(cf)	(cf)	(ac-ft)
10.0000	9.31	17.17	10,302	5,425	4,877	0.112
15.0000	8.09	14.92	13,430	6,782	6,648	0.153
20.0000	7.18	13.25	15,903	8,138	7,765	0.178
25.0000	6.48	11.96	17,938	9,494	8,444	0.194
30.0000	5.92	10.92	19,660	10,851	8,809	0.202
35.0000	5.46	10.07	21,150	12,207	8,943	0.205
40.0000	5.07	9.36	22,462	13,563	8,899	0.204
45.0000	4.74	8.75	23,633	14,920	8,714	0.200
						DESIGN VALUE

TABLE 4: PROPOSED DETENTION VOLUME CAPACITIES		
POND (Designation)	Volume Required (Cu. ft)	Volume Provided (Cu. ft)
A	8,713.65	9,185.0

DETENTION BASIN#1 STAGE STORAGE TABLE			
ELEV	AREA (sq. ft.)	DEPT H (ft)	AVG END TOTAL VOL. (cu. ft.)
325.00	510.50	N/A	0
325.50	571.46	0.50	270
326.00	633.79	1.00	572
326.50	698.03	1.50	905
327.00	763.57	2.00	1270
327.50	842.75	2.50	1672
328.00	925.76	3.00	2114
328.50	1,001.53	3.50	2596
329.00	1,079.76	4.00	3116
329.50	1,159.94	4.50	3676
330.00	1,401.96	5.00	3967

DETENTION BASIN#2 STAGE STORAGE TABLE			
ELEV	AREA (sq. ft.)	DEPT H (ft)	AVG END TOTAL VOL. (cu. ft.)
319.00	185.21	N/A	0
319.50	306.72	0.50	123
320.00	447.21	1.00	311
320.50	594.23	1.50	572
321.00	752.17	2.00	908
321.50	887.15	2.50	1318
322.00	1,029.93	3.00	1798
322.50	1,103.71	3.50	2331
323.00	1,178.86	4.00	2902
323.50	1,257.43	4.50	3511
324.00	1,336.83	5.00	4159
324.50	1,418.24	5.50	4848
325.00	1,630.59	6.00	5218

NO.	DATE	BY	DESCRIPTION



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DRAINAGE CALCULATIONS
LOT 1 OF OLD VILLAGE SUBDIVISION
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NAPLES, CUMBERLAND COUNTY, MAINE

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CAD FILE: 2023-006 SITE PLAN MESS-WF.dwg

SHEET 4