

**BLOCK 11, LOT 6.02
FLOOD HAZARD AREA DESIGN FLOOD LINE**

Course No.	Type	Length	Bearing	Delta	Radius	Tangent	Chord Bearing	Chord Distance
A1	Curve	111.40'		58°11'40"	109.68'	61.04'	S 30°14'54" W	106.68'
A2	Curve	75.21'		04°49'18"	893.68'	37.63'	S 02°24'52" W	75.19'
A3	Curve	44.71'		25°13'16"	101.58'	22.73'	S 26°33'46" W	44.35'
A4	Curve	34.85'		02°19'13"	860.51'	17.43'	S 42°16'54" W	34.85'
A5	Curve	54.13'		18°54'07"	164.07'	27.31'	S 33°59'27" W	53.88'
B1	Curve	34.30'		34°25'36"	57.09'	17.69'	S 62°24'21" E	33.79'
B2	Curve	6.33'		10°07'23"	35.84'	3.17'	S 74°33'28" W	6.32'
B3	Curve	6.34'		29°12'02"	12.45'	3.24'	S 54°53'45" E	6.27'
B4	Curve	6.49'		37°46'51"	9.84'	3.37'	S 21°24'19" E	6.37'
B5	Curve	8.67'		41°48'25"	11.88'	4.54'	S 23°25'05" E	8.48'
B6	Line	7.16'	S 44°19'18" E					
B7	Line	3.50'	S 38°23'44" E					
B8	Curve	0.21'		00°47'25"	15.34'	0.11'	S 38°01'23" E	0.21'
B9	Curve	2.34'		12°36'19"	10.65'	1.18'	S 37°47'23" E	2.34'
B10	Curve	8.28'		32°07'11"	14.77'	4.25'	S 15°25'38" E	8.17'
B11	Line	69.55'	S 04°42'09" E					
C1	Curve	13.36'		27°07'43"	28.21'	6.81'	S 11°07'31" E	13.23'
C2	Curve	23.18'		06°08'34"	216.24'	11.60'	S 05°30'38" E	23.17'
C3	Curve	22.35'		18°58'26"	67.49'	11.28'	S 00°54'18" E	22.25'
C4	Line	7.14'	S 10°23'31" E					
C5	Line	3.01'	S 10°26'50" E					
C6	Curve	4.90'		31°43'59"	8.85'	2.52'	S 05°25'09" W	4.84'

**FLOOD HAZARD AREA
DESIGN FLOOD ELEVATION
(METHOD 6)**

HEC-RAS Stream STA	Elev (ft) Δ
31+00	333.21
30+00	329.84
29+20	328.21
28+90	327.79
28+00	325.50
27+30	324.63
26+80	323.54
26+00	320.99
25+85	320.77
25+35	319.66
25+00	318.92
24+00	315.20
23+00	312.72
22+60	311.76
22+00	310.18
21+00	306.72
20+40	303.33
20+00	301.38
19+00	296.79
18+00	293.73
17+00	289.74
16+00	284.24
15+00	282.44
13+00	274.79
12+00	272.14
11+00	267.56
10+00	265.32

**BLOCK 11, LOT 6.02
FLOODWAY LINE**

Course No.	Type	Length	Bearing	Δ
D1	Line	15.47'	S 79°01'32" E	
D2	Line	89.00'	S 42°23'11" W	
D3	Line	35.91'	S 14°19'58" E	
E1	Line	8.74'	S 03°02'49" E	
E2	Line	51.11'	S 01°09'57" E	
E3	Line	2.96'	S 39°13'42" E	

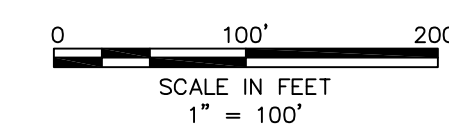
RIPARIAN ZONE NOTE: Δ
DUE TO THE NARROW WIDTH OF THE TRIBUTARY STREAMS,
THE RIPARIAN ZONE LIMITS WERE MEASURED FROM THE
CENTER OF THESE WATERCOURSES.

LEGEND

	TRACT BOUNDARY/ PROPERTY LINE
	RIPARIAN ZONE LIMIT
	FLOOD HAZARD AREA BOUNDARY
	FLOODWAY BOUNDARY

HEC-RAS NOTE:
INTERPOLATED STREAM SECTIONS BETWEEN STA. 31+00 TO STA. 10+00
WERE NOT SHOWN FOR CLARITY PURPOSES ONLY.

DATA REFERENCE:
2008 NJ STATEWIDE LIDAR: Somerset County
New Jersey Projection: State Plane 1983
Horizontal Datum: NAD83
Horizontal Units: U. S. Feet
Vertical Datum: NAVD88
Vertical Units: U. S. Feet
Image: NJ 2015 High Resolution Orthophotography



DATE: JUNE 2022	
SCALE: 1"=100'	
DESIGNED BY: JJM	
DRAWN BY: JJM	
CHECKED BY: PWO	
JOB NO. 21-01-WAR	
DATE	
Peter W. Olieman, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NUMBER 24GE03096300	

Van Cleef
ENGINEERING WITH FOCUS

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CERT. OF AUTHORIZATION NO. 246A28122300

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Site Development
Surveying/Aerial Drones/GIS
Water/Wastewater

HEC-RAS STATIONS, FHA & FLOODWAY LINES
FOR
BLOCK 11, LOT 6.02
WARREN TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

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