

MINNESOTA “NO-RISE” CERTIFICATION

This is to certify that I am a duly qualified professional engineer licensed to practice in the State of Minnesota.

It is further to certify that the attached technical data supports the proposal to construct a stair type small watercraft launch (North Access) and a traditional boat style launch (South Access) to serve water recreational activities in Western Aitkin County, S16, T47, R27 on the Mississippi River. The launches are located adjacent to each other on the same parcel of land, but on opposite sides of a peninsula of land that the river flows around separating the two locations by approximately 1.2 river miles. The launch locations are located in a FEMA Zone AE Floodway.

This length and geometry for both proposed launch facilities have been added to the Effective HECRAS Model to assimilate the Proposed Condition results. These results were compared to the Existing or Pre-project conditions. Resulting water surface impact to the 100-year base flood elevations - were not raised or lowered by more than 0.00 feet, representing a **No-Rise Condition**. These results are documented by Hydraulic Analysis results for pre and post construction project hydraulic performance summaries, which are attached. The HECRAS source file is Aitkin05.dat.

Attached are the following documents that support my findings:

HECRAS Pre and Post Construction Summary Output Tabulations.

Date: 10/6/2025

Signature:  P.E

{SEAL}

Title: Water Resources Engineer - License # 44959

EXISTING													
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
RIVER-1	Reach-1	17	PF 1	13000	1166.3	1204.75		1204.75	0.000001	0.38	148035	25271.55	0.01
RIVER-1	Reach-1	16	PF 1	13000	1172.3	1204.74		1204.74	0.000001	0.39	142829.3	22846.34	0.01
RIVER-1	Reach-1	15	PF 1	13000	1170.5	1204.74		1204.74	0.000002	0.71	78061.36	16051.24	0.03
RIVER-1	Reach-1	14.625	PF 1	13000	1171.62	1204.72		1204.73	0.000007	1.21	42950.31	8381.39	0.04
RIVER-1	Reach-1	14	PF 1	13000	1173.5	1204.67		1204.7	0.000014	1.72	29792.14	6755.39	0.06
RIVER-1	Reach-1	13.196	PF 1	13000	1175.11	1204.66		1204.67	0.000005	1.11	50015.89	10094.54	0.04
RIVER-1	Reach-1	13	PF 1	13000	1175.5	1204.66		1204.67	0.000004	0.92	64702.11	15439.56	0.03
RIVER-1	Reach-1	12	PF 1	13000	1169.2	1204.65		1204.65	0.000001	0.57	92425.27	14719.63	0.02
RIVER-1	Reach-1	11	PF 1	13000	1174	1204.62		1204.63	0.000004	1	47308.42	7469.87	0.03
PROPOSED													
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
RIVER-1	Reach-1	17	PF 1	13000	1166.3	1204.75		1204.75	0.000001	0.38	148025.8	25271.53	0.01
RIVER-1	Reach-1	16	PF 1	13000	1172.3	1204.74		1204.74	0.000001	0.39	142820.9	22846.12	0.01
RIVER-1	Reach-1	15	PF 1	13000	1170.5	1204.74		1204.74	0.000002	0.71	78055.48	16050.96	0.03
RIVER-1	Reach-1	14.625	PF 1	13000	1171.62	1204.72		1204.73	0.000007	1.21	43007.51	8381.35	0.04
RIVER-1	Reach-1	14	PF 1	13000	1173.5	1204.67		1204.7	0.000014	1.72	29791.32	6755.26	0.06
RIVER-1	Reach-1	13.196	PF 1	13000	1175.11	1204.66		1204.67	0.000005	1.1	50093.79	10094.54	0.04
RIVER-1	Reach-1	13	PF 1	13000	1175.5	1204.66		1204.67	0.000004	0.92	64702.11	15439.56	0.03
RIVER-1	Reach-1	12	PF 1	13000	1169.2	1204.65		1204.65	0.000001	0.57	92425.27	14719.63	0.02
RIVER-1	Reach-1	11	PF 1	13000	1174	1204.62		1204.63	0.000004	1	47308.42	7469.87	0.03

NORTH ACCESS (CANOE LAUNCH)

SOUTH ACCESS (BOAT LAUNCH)