



**A. E. Hodsdon**  
Consulting Engineers  
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May 1, 2023  
P-2785

Ms. Becky Hapgood, Town Manager  
Town of China  
571 Lakeview Drive  
China, ME 04358

RE: ***Recommendations for Improvements to the South China Boat Launch***

Dear Becky:

Thank you for contacting A.E. Hodsdon (AEH) to look at possible improvements to the South China boat launch. Jeff Allen and I met with you and Shawn to review the needs of the existing boat launch property to make it more useful to the community.

One of the most important issues to address is the stormwater run-off to the lake that contributes to increased phosphorus levels. We were informed that there were water bars installed at one time. There was no evidence of this during or site visit and run-off presently runs down the gravel road directly into the lake.

There was some discussion about possibly paving the roadway and installing depressions in the pavement to direct the water to the roadside ditch prior to entering the lake. We would propose to install an underdrain filter in the left ditch (as you look down the road). This will allow filtration and sedimentation of the run-off prior discharging into the lake. This, however, may necessitate the Town getting a drainage easement on the abutting property as well as potentially Maine Department of Environmental Protection permitting.

The Town-owned property is narrow and there is no room for expansion to include on-site parking. AEH believes that if the road is paved, it may attract more use, and there is no place to park vehicles. The cars may try to park on the side of the road where the road is already too narrow for any parking.

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Secondly, there is no place to turn a vehicle around once at the Lake. A person would have to back a trailer all the way down the road that is 525-ft long. Also, as you explained, the lake at this launch facility is very shallow and drops off slowly. We have heard stories of having to back a vehicle a distance into the lake to get the boat off the trailer. This raises a concern for another vector to introduce pollution into the lake.

Our recommendation for this site is to keep it as a gravel road and make improvements to help eliminate or minimize the run-off to the lake. Although the Town would like to see a maintenance free facility, it may not be the best thing for the lake. The property is narrow and not conducive to a road wide enough for two-way traffic.

The road should be superelevated to all drain to the left ditch where the filter would be located and fill in the wheel ruts that have developed. A curb or a berm should be placed at the end of the road approximately 20' from the edge of the water, vegetation should be planted between the end of the road and the lake as a buffer. This would prevent people from attempting to back into the lake while still allowing hand-carry launching.

Keeping the culverts and ditches clean will help get the water from the road to where we want it to go.

Based on our discussions, we have prepared cost estimates to make the recommended improvements. We have included a cost estimate for paving the road although this approach is not recommended.

<b>Cost Estimate No. 1 – Upgrade to Existing Gravel Access Roadway and Site</b>		
<b>No.</b>	<b>Description</b>	<b>Amount</b>
1	Gravel road regrading (525 l.f.) (2 workers with equipment & material x 2 days)	\$6,000.00
2	Stormwater filter	10,000.00
3	Maintain ditches and culverts	2,000.00
4	Install berm and vegetated buffer	5,000.00
<b>Total Cost Estimate No. 1</b>		<b>\$23,000.00</b>

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<b>Cost Estimate No. 2 – Pave Access Road</b>		
<b>No.</b>	<b>Description</b>	<b>Amount</b>
1	Gravel road regrading (525 l.f.) (2 workers with equipment & material x 2 days)	\$6,000.00
2	525 l.f. x 20' wide x 3.5" thickness (1,150 s.y. @ \$50/s.y.)	57,500.00
3	Stormwater filter	10,000.00
4	Maintain ditches and culverts	2,000.00
5	Install berm and vegetated buffer	5,000.00
<b>Total Cost Estimate No. 2</b>		<b>\$80,500.00</b>

We recommend that the Town make the site a carry-in site only, and develop nearby off-site parking for the people that will use the site.

We are available if you have any questions or concerns.

Thank You.



Mark McCluskey  
Project Manager  
A.E. Hodsdon Engineers  
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