APPENDIX D

Prospectus for Vermont AOT's Program for Adaptive Use of Historic Bridges

Mission

We will establish a comprehensive and viable program for adaptive use of historic bridges for pedestrian, bikepath, or other alternative public transportation uses, at a cost competitive with new, prefabricated pedestrian bridges. Vermont's historic bridges will thus remain in public use and will continue to serve transportation, educational, aesthetic, and economic functions. We will avoid the need to purchase new bridges manufactured in other states and, at the same time, will employ Vermont labor.

Purpose and Need

1. **Anticipate Adaptive Use Recommendations Under Lichtenstein Study.** The Lichtenstein study will recommend that certain bridges can no longer function on the state's highway systems and should be adapted to alternative transportation use. We should be prepared to implement those recommendations. The factors influencing any successful adaptive use are diverse and complex, and we should strive to manage these factors efficiently.

2. **Adapt Bridges Currently in Storage.** We currently have stockpiled ten historic truss bridges and have agreed to use our best efforts in placing them at new locations. This goal is attainable, and we should pursue it diligently. A formal program for adaptive use will allow us to pursue these opportunities far more efficiently and far less expensively than our current approach.

4. **Historic Preservation.** Vermont's historic bridges are a resource that eventually will generate an economic return far beyond the current costs associated with their preservation. The goal of bridge preservation is a worthy one.

Components

1. **Partnership with Corrections Division.** A working agreement with Corrections Division to provide materials and labor to rehabilitate historic bridges is a key part of this program. Corrections Division's sawmill in Windsor will provide high quality timber to be used on bridge decks, and their machine shop can produce steel components. Labor from their Community Restitution Program can conduct repair work, painting, and assembly of deck materials.

2. We can also explore the possibility of gaining certification for Corrections Division to conduct lead paint abatement.

3. **Partnership with Bikepath Programs.** Complete coordination with bikepath programs will be vital and would be aided by policy that requires adaptive use of historic bridges on bikepaths whenever feasible. In addition, we should probably develop standard guidelines for bridge rating and width. H10 loading is recommended.

4. **Partnership with Federal and State Agencies.** We might also encourage the development of a joint federal/state program to identify sites on federal or state lands where bridges could be relocated. Such a program would involve coordination among the various federal agencies (e.g. National Park Service, National Forest Service, Army Corps of Engineers) and state agencies that own the sites where bridges could be placed.

We have already communicated with the Vermont Forest Service and have provided a list of available bridges.

5. **Disadvantaged Business Enterprises.** It may be useful to explore possible contracts with DBE's for lead paint abatement on steel truss bridges.

6. **Lichtenstein Study.** Logically, the program would continue to manage the truss bridge study currently being conducted by A.G. Lichtenstein & Assoc.

7. **Experimental Partnerships.** We might also develop partnerships with engineering programs at Dartmouth, Norwich, and University of Vermont.

8. **Publications.** The publication of a book discussing Vermont's historic bridges would be a logical outgrowth of this program.

9. **Interpretation.** Interpreting and promoting historic bridges as part of heritage tourism, and the mapping of specific tour routes, should be a part of this program.

Functions

1. **Engineering Services.** The program should be staffed by (or have the services of) an engineer who can provide the functions listed below. Creating a permanent position would be one alternative. Another would be to establish a pool of engineers interested in volunteering for these projects. Selection would be conducted equitably, and those chosen would be permitted to work additional hours.

a) Survey and document the historic bridge and evaluate its structural integrity.
b) Assess the suitability of proposed new sites.
c) Prepare rehabilitation plans. These should satisfy required load capacity, address any hydraulics concerns, include a materials list, and provide a cost estimate. Plans should also address the matter of any required lead paint abatement.
d) Complete final design and plans following coordination with Department of Corrections.
e) Provide inspection during construction phase.

2. **Administrative Services.** The program should be staffed by an administrator who can provide the following services:

a) Work with communities and members of the public to identify appropriate sites for the relocation of historic bridges and to obtain adequate funding.
b) Coordinate with Department of Corrections, Federal Highway Administration, Vermont Agency of Transportation, Regional Planning Commissions, communities, and other involved parties to prepare contracts and draft any required documents.
c) Evaluate rehabilitation plans to insure that the historic integrity of bridges is preserved.
d) Obtain all required permits and approvals from resource agencies.
e) Provide inspection during construction phase.
f) Draft and lobby for any federal or state legislative amendments required to implement such a program.

Funding

1. **Transportation Costs.** Costs of transporting bridges to the new locations should be considered part of the project costs for construction of new bridges.

2. **Rehabilitation Costs.** Costs of repair, must also be funded. If bridges are adapted to bikepath or other alternative transportation uses, a large portion of the rehabilitation costs would be paid by federal funding. Under current law, however, FHWA will participate in the relocation and rehabilitation of bridges removed from highway systems only up to the costs of demolition. For the time being, then, it may be necessary to arrange additional funding sources for rehabilitation.

> We will need to clarify and, if necessary change, federal law that limits FHWA participation in the rehabilitation of bridges being removed from highway systems to the costs of demolition. See 23 U.S.C. 144 (o)(4)(B).

3. Special Projects. A portion of the costs for construction of new bridges might be assigned to the costs of rehabilitation of bridges possessing exceptional historic significance.

HISTORIC BRIDGE ADAPTIVE USE PROGRAM

	PROJECTS CURRENTLY UNDERWAY					
	BRIDGE	OWNER	USE	LENGTH	EST. COST	FUNDING SOURCES
1.	Hardwick, No. 27	VAST	Snowmobiles	55	12000	VAST
			Pedestrians			Preservation Trust
2.	Hinesburg, No. 30	Town	Pedestrians	41	24000	Enhancements
			Bicycles			VAOT Planning Div.
3.	Springfield, No. 81	Town	Motor Vehicles	160	200000	VAOT Bike & Ped
			Bicycles			
			Pedestrians			
4.	Westfield, No. 17	VAST	Snowmobiles	52	12000	VAST
			Pedestrians			
	PROJECTS PROPOSED					
	BRIDGE	OWNER	USE	LENGTH	EST. COST	FUNDING SOURCES
1.	Hardwick, No. 27	VAST	Snowmobiles		3000	Enhancements
	Prototype Railing Only					
2.	Bethel, No. 4	Town of Brandon	Pedestrians	56	70000	VAOT Structures Div.
			Bicycles			Enhancements
3.	Richmond, No. 10	Town	Pedestrians	200	75000	VAOT Structures Div.
		VDHP	Bicycles			Enhancements
		Cross Vt Trail				
4.	Berlin, No. 72	City of Montpelier	Pedestrians	90	35000	Enhancements
			Bicycles			
5.	Montpelier, No. 6	City of Monpelier	Pedestrians	141	65000	VAOT Structures Div.
			Bicycles			Enhancements
6.	Morristown, No. 53	Town of Morristown	Pedestrians	83	60000	VAOT Structures Div.
		VDHP	Bicycles			Enhancements
7.	Berlin, No. 4	Town of Charlotte	Vehicles	60	60000	Private
			Pedestrians			Enhancements
			Bicycles			
8.	Rochester, No. 36	Peavine Rail Trail	Bicycles	111	60000	VAOT Bike & Ped.
		VDHP	Pedestrians			Enhancements
9.	Rutland, No. 17	City of Rutland	Bicycles	127	40000	VAOT Bike & Ped
			Pedestrians	80	22000	Enhancements
10.	Wallingford, No. 50	Town of Stowe	Pedestrians	70	20000	Enhancements
			Bicycles			Preservation Trust
				TOTAL	510000	
	ALTERNATE PROJECTS					
	BRIDGE	OWNER	USE	LENGTH	EST. COST	FUNDING SOURCES
1.	Arlington, No. 25	TBA		85		
2.	Arlington, No. 22	TBA		58		
3.	Shoreham, No. 24	TBA		54		
4.	Middletown Springs, No. 21	TBA		49		
5.	Thetford, No. 25	TBA		70		