Report of the Sudbury Walkway Committee

February 2000

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1 About the Sudbury Walkway Committee

1.1 Chartered by the Sudbury Planning Board

The Town of Sudbury Planning Board initiated the Walkway Committee with a Walkway Forum on August 10, 1999 that attracted over sixty town citizens.

The objective of the Walkway Committee as established by the Sudbury Planning Board is:

To develop a walkway implementation plan for presentation at Town Meeting in April 2000.

Where the walkway implementation plan has the following goals in mind:

- Expand and connect the network of walkways
- Promote safety and quality of life
- Integrate with the Town's rural character
- Maximize Town return on investment

1.2 Summary of Walkway Committee Findings

A system of integrated walkways is specifically mentioned in every element of the 1999 Master Plan for Sudbury.

Sudbury has an urgent need for 16 miles of new walkways at a cost of about \$2.8 million.

Building these walkways will benefit all citizens of Sudbury.

Use of existing walkways will increase due to the more complete loops that will be available.

Betterments will not be an effective way of funding part or all of the walkways.

Borrowing outside the levy limit over a five-year period will be the best way to fund completion of the walkways in an acceptable time period.

A combination of Town Personnel and Contractors can be used to design and construct the new walkways over five years.

The tax impact to an average Sudbury household in each of the five years will be about \$117, and is non-recurring after that.

1.3 Part of the 1999 Master Plan – Sustainable Sudbury

The 1999 Sudbury Master Plan provides a framework for long term policy formation that ensures a consistent decision making process to improve the quality of life for all Sudbury residents. In the vocabulary of the Master Plan this is referred to as the establishment and maintenance of a sustainable community.

According to the Master Plan: "Sustainable development generally reserves land for open space... is of a scale that is accessible to pedestrians, and decreases reliance on automobiles." A system of integrated walkways is specifically mentioned in all six elements of the 1999 Master Plan.

The Master Plan specifically recommends capital funds expansion for walkways in business districts. Sudbury must provide safe options for getting around town, especially for children and senior citizens that do not drive. Walkways provide access to the town's open spaces and foster community by bringing people together. Please see the attached "Walkways Detailed in the Master Plan."

1.4 Active Participants

Members have met weekly on Thursday evenings to develop a walkway plan that will meet the goals outlined above, and benefit all the citizens of Sudbury.

Mary Barnett	Steve Brunner	Steve Burke	Marilyn Ellsworth
Christine Faucher	Radha Gargeya	Linda Greenwood	Lynne Holland
Sara Houle	Howard Levy	Wolfgang Mueller	Larry O'Brien
Terry Pomper	Cynthia Powell	Jan Ryan	Lisa Sullivan

2 Current Walkways in Sudbury

2.1 History

There are about 160 miles of roadways in Sudbury. There are existing walkways on about 25% or 40 miles of the roadways. See attached "Map of Current Walkways."

These existing walkways have been built by a combination of the Sudbury Highway Department (now the Department of Public Works) and outside contractors. Current bylaws call for developers to put walkways in new developments. However, the Planning Board will sometimes suggest that the developer build an equivalent amount of walkways in a higher need area. Alternatively, the developer can set aside an amount equal to the cost of the walkways into a town fund. The town can then use money from this fund to build walkways in high priority areas.

In recent years, about \$10,000 of the DPW budget has been allocated to the maintenance of walkways and the building of new walkways. DPW Director, Bill Place reports that the town currently has the capacity and resources to build only about 2,000 feet of new walkways per year.

At this rate it will take over 40 years to build the nearly 85,800 feet of walkways identified as high priority.

There is a list of about 16 miles of walkways identified as high priority by the Town Safety Officer, the Town Planner, and the Town Engineer. This list was reviewed and modified slightly by the Walkway Committee. See attached "List of Proposed Walkways."

Each year at recent Town Meetings there have been several articles for funding walkways in particular neighborhoods. These articles were brought forth and supported by residents from different streets. The problem with such an approach is that it pits neighborhoods against each other in the search for precious tax dollars.

Besides the above high priority list, there is a short list of walkways scheduled to be built. These are funded by the town or developers. These walkways will be completed by the end of Summer 2000 and will total approximately two miles of walkways. See attached "List of Walkways Currently Underway."

2.2 Surrounding Towns

2.2.1 Lincoln

Marilyn Ellsworth met with Tim Higgins, Lincoln Executive Secretary to discuss walkways. Lincoln has never used betterments. The town has completed 3 walkway segments in the past 5 years on Codman Road, North of Route 2 near Hanscom Field, and Route 117 from Route 126 to the Concord town line. Costs were about \$100,000 per mile. The project on Route 117 took about a year from start to finish. A consensus approach was used to design the walkways in neighborhood meetings. This was described as "time-consuming, but very satisfying." In 1985 Lincoln appointed a roadside path committee to look at needs across the town. At that time they established a sequence for new roadside paths based on safety and connecting major routes. All construction is contracted out.

2.2.2 Concord

Marilyn Ellsworth met with David Turrosi, Concord Highway Superintendent to discuss walkways. Concord has never used betterments. They have a dedicated improvement fund for walkways of \$60,000 per year, with \$30,000 slated for maintenance and \$30,000 for new construction. Concord has 26 miles of completed walkways, in its area of 26 square miles. Walkways were taking a dozen years to complete by petition. The Concord Highway Department dedicated 10 men to highways and walkways. Most walkways built are contracted out.

2.3 Safety Report

Safety is the most important reason for the construction of new walkways, according to Fire Chief Michael Dunne and Police Safety Officer Alan Hutchinson, who are enthusiastic supporters of walkways. They provided the Walkway Committee with safety information about Sudbury roadways and intersections. Please see the attached list of "Sudbury's Most Dangerous Intersections", and the "Top 15 Needed Walkways as Identified by Officer Al Hutchinson" as marked with "◆" on the "List of Proposed Walkways."

Jean Natale, Sudbury Public School's Payroll & Transportation Manager, reported the following information about the number of children who ride the bus and walk to school, as of December 1999. Though most school children live within a 2 mile radius of their school, only 14% walk.

School	Bus Riders	Walkers	% Walkers
Haynes	388	80	17%
Loring	544	121	18%
Nixon	415	50	11/%
Noyes	541	47	8%
Curtis	860	161	16%
Totals	2748	459	14%

3 Criteria for Proposed Walkways

The Walkway Committee chose roads that need walkways based on the following criteria:

- Provide safe walking routes to schools, public facilities and recreation fields.
- Reduce risk in high traffic areas where pedestrian safety is an issue.
- Complete links and loops to maximize use of existing walkways and promote a sense of community.
- Make the commercial district pedestrian friendly.
- Address the walkway issues outlined in the Master Plan for a sustainable Sudbury.

4 Implementation Proposal

This proposal, if approved, would result in the addition of approximately 85,800 feet (16 miles) of additional walkways. The design and implementation of this project will take place over a five year time period. The reasoning for this time period is as follows:

- 1. By spreading the project over several years we will be able to use town employees for a significant portion of the design and construction aspects of the projects, thereby helping to manage costs.
- 2. By authorizing the entire project now but implementing it over five years, we will be able to

efficiently prioritize easement acquisition and design work, both of which are prerequisites to construction. The result will be annual cycles of systematic easement need identification, easement acquisition, design and construction.

The proposed list of additional walkways has been thoughtfully prepared, carefully reviewed and is comprehensive. Nevertheless, during the implementation of this project there may develop opportunities for minor variation or additions (within the authorized funding limits). By spreading the project out over several years we will be able to take advantage of these opportunities.

5 Implementation Plan Specifics

Calendar				
	Spring	Summer	Fall	Winter
				_
2000		2% Construction		
			Design	
				-
2001	10% Cor	nstruction	1	
			Design	
				7
2002	20% Cor	nstruction	1	
			Design	
				7
2003	20% Cor	nstruction	I	
			Design	
				1
2004	25% Cor	nstruction	I	
			Design	
				1
2005	23% Cor	nstruction]

We estimate that over a six-year period approximately 15% of the walkway design and construction will be done with Town staff and 85% will be contracted out. As a result, we estimate a total project cost of \$2.799 million as calculated below.

	Cost Per Foot	Footage	Total Cost
Town (materials only)	\$ 8.00	11,930	\$ 95,440
Contract	\$ 33.00	73,870	\$ 2,437,710
SubTotal		85,800	\$ 2,533,150
5% inflation/year			\$ 266,301
Grand Total			\$ 2,799,451

6 Major Implementation Issues Considered

6.1 Funding Options

After having met with Ms. Maureen Valente (the acting Town Manager) to consider all financing options available for walkways, the Committee recommends borrowing outside the levy limit. This will require approval at Town Meeting and approval at town ballot, and will require the money appropriated be spent within five years.

Other options considered were:

- Operating Budget Funding (annually renewable)
- Borrowing within the levy limit (5 year term)
- Capital exclusion outside the levy limit (1 year term)
- Betterments
- Stabilization fund
- Selling existing town assets

Assuming an interest rate of 6%, the table below shows the average cost per household using figures provided by the Town Financial Planner.

Balance	Principal	Interest	Pavment	\$/Household
2799451	559890	167967	727857	128.82
2239560	559890	134374	694264	122.88
1679670	559890	100780	660670	116.93
1119780	559890	67187	627077	110.99
559890	559890	33593	593484	105.04
			average	116.93

6.2 Easements

An easement is basically the right to walk over property that the town does not own. Easements are typically needed for walkways where the road right of way is not large enough to accommodate both a road and a walkway with prescribed setbacks. When a walkway is built in that situation, the town must seek legal permission from the owner to use or improve a specific piece of the property. By granting permission, the owners let the public walk over the property on that walkway.

The easement process can only begin when the engineering of a walkway is complete and the amount of land needed is determined. Once an easement is granted, it will be registered as part of that property owner's deed.

Typically there are questions from property owners when an easement is asked of them. The more typical questions include the issue of liability and if the property owner will be paid for the easement. The Town assumes liability for the construction and maintenance of the walkway and does not pay the owner for easements.

The Committee determined that they could be instrumental in initiating discussions with affected property owners using a neighborhood approach. The Committee can also help demystify the process for affected property owners to help expedite the easement process once the engineering of a specific area is complete.

6.3 Maintenance

Walkways last for around twenty years according to the DPW Director Bill Place. Tree roots, utilities, and construction projects impact the life span of walkways, which may then require repairs and maintenance after ten years. The typical repair and maintenance calls for resurfacing of the damaged walkway section. The current repair cost for resurfacing is around \$2.50/ft.

Maintenance and repair for existing walkways is allocated annually in the Department of Public Works operating budget.

For the existing 42 miles of walkways built and already funded to be built, a budget of about \$27,720 (42 miles * 5280 feet per mile * \$2.50 per foot / 20 years) would be necessary each year if we assume each walkway needs to be resurfaced once every 20 years. Once we add the 16 miles of proposed walkways, an additional \$10,725 would be needed to maintain the walkway surfaces.

The committee recommends funding of at least \$30,000 a year for maintenance initially, moving to \$40,000 a year. The committee has urged the Finance Committee and the Director of Public Works to consider this in future operating budgets.

When considering the maintenance budget, a point of reference would be the town of Concord. The town is similar in size to Sudbury (approximately 26 square miles and 16,000 residents) and they currently have twenty-five miles of completed walkways. Concord has a Capital Improvement Walkway Fund that was increased in 1999 to \$60,000 per year (for the prior five years the fund was \$40,000/yr). This allotment is split evenly at \$30,000 for maintenance of current walkways and \$30,000 for construction of new walkways.

6.4 Conservation Issues

Deborah Dineen, Conservation Coordinator, met with Sara Houle of the Walkway Committee on October 15, 1999. Deborah confirmed that we could build sidewalks near wetland and vernal pools without disturbing them and be in compliance with state and local wetlands protection laws. Before any construction, the Department of Public Works consults with the Conservation Commission to ensure compliance with these laws.

The entire list of proposed walkways was reviewed and Deborah identified several where alternatives will have to be considered due to conservation issues. She pointed out current examples of such alternatives already in use, including small pre-fabricated bridges, box culverts, backfill and retaining walls, and stone dust paths. For example, stone dust would most likely be the material approved for any walkways crossing conservation lands, such as the Meachen-Meggs property.

The Conservation Commission offers creative ideas and solutions to build the proposed walkways while protecting our wetlands.

6.5 Betterments

The Walkway Committee decided against including betterments as part of the recommended walkway plan.

The option of betterments was covered in the September 30, 1999, meeting by Mr. Bill Keller. Mr. Keller is a practicing attorney and a member of the Sudbury Planning Board.

Betterments are an option available to a town when a capital improvement (such as sewers or walkways) are being considered for an area and it can be shown that such an improvement will enhance the value of that area then known as a "Betterment District." The Betterment District can only include those properties directly improved by the project. Once voted on and passed as part of a Town Meeting article, the betterment is divided equally among the properties of the Betterment District (typically on a quantifiable basis such as road frontage or property size).

The owners of the properties within the Betterment District have the option of paying for the betterment all at once or having the betterment added to the real estate tax bill over a prescribed period of time (five to ten years). If the second option is chosen, the betterment then becomes a lien on the property and is the responsibility of subsequent owners until it is paid. Senior Citizens (over 65) can have the option of requesting a deferral of the betterment or abatement if hardship is an issue. The fact that a property is in a Betterment District does not require the owner to give an easement for the betterment project but does require the owner to pay whether or not an easement is given.

The Walkway Committee determined that including betterments and Betterment Districts in the proposed Town Meeting article would be a complication and not worth the investment that would be required in logistics and planning them. Betterments would also raise issues of inequity due to the existing walkways that were built without betterments.

7 Attachments

7.1 People and Organizations Consulted by this Committee

Mr. William Place, DPW Director, Town of Sudbury

Mr. William Keller, Attorney-at-Law, Planning Board Member, Town of Sudbury

Mr. Tim Higgins, Executive Secretary, Town of Lincoln

Mr. David Turrosi, Highway Superintendent, Town of Concord

Ms. Maureen Valente, Town Manager, Town of Sudbury

Mr. Paul Funk, Director, Business and Finance, Sudbury Public Schools (K-8)

Ms. Deborah Dineen, Conservation Coordinator, Town of Sudbury

Chief Michael Dunne, Fire Chief, Town of Sudbury

Officer Alan Hutchinson, Safety Officer, Police Department, Town of Sudbury

Jean Natale, Payroll and Transportation Manager, Sudbury Public Schools

Planning Board, Town of Sudbury October 13, 1999 Meeting to update Planning Board

Selectmen, Town of Sudbury November 8, 1999 Meeting to update the Selectmen

Capital Improvement Planning Committee, Town of Sudbury December 7, 1999 Meeting to update the Capital Planning Committee

Finance Committee, Town of Sudbury November 9, 1999 Meeting to update the Finance Committee

7.2 Walkways Detailed in the Master Plan

Italicized text below is taken straight from the 1999 Master Plan draft.

1: Land Use Element

Goal 1. Strive for comprehensive, integrated land use decisions which attempt to achieve environmental, economic, and aesthetic sustainability.

Objective B: Maintain the community's traditional, historic character.

5. Improve the appearance of the Route 20 commercial districts - provide amenities in the business district to encourage pedestrian use and create a user-friendly scale and character for the area.

The Master Plan specifically recommends capital funds expansion for walkways in business districts for various reasons. First, walkways can influence the types of business that come into the area. The availability of pedestrian traffic encourages beautification and improvements of storefronts since they are more closely available to potential consumers. Conversely, the lack of a safe walking path eliminates the opportunity to attract and retain this business opportunity. If sidewalks exist in a given area they have proven to be used, and attract consumer oriented businesses that would not otherwise be available as a town asset.

Objective C: Encourage land use options that are directed toward economic sustainability in all sectors (commercial/industrial, housing, open space) in order to balance growth with the Town's ability to provide services.

4. Develop eco-tourism and historic tourism opportunities in Sudbury.

Local citizens have designed a walking trail that leverages Sudbury's rich history and natural beauty to position the town as a local tourist destination. Making this walking trail safe and passable for pedestrians is a minimum requirement. It is not realistic to expect the town to compete as a tourist destination without a plan to provide a pedestrian friendly environment for visitors to the town center and shopping areas.

2: Economic Development Element

Goal 2. Create a plan to establish a centralized business district.

Objective A: Develop a pedestrian-friendly, concentrated business district generally around Route 20/Union Avenue area, including public amenities, adequate traffic circulation and parking that will enhance Sudbury's existing and future businesses.

Walkways are good for businesses in the area. Walkways are part of the infrastructure and are consistent with the Town's economic development goals.

3: Natural and Cultural Resource Element

Goal 1. Ensure the preservation of the town's natural resources.

Objective B: Preserve, enhance and connect, where feasible, large parcels currently in agriculture, open space and recreational use.

Open spaces and natural beauty are essential to the character of our town. Enjoyment of the natural environment will be significantly enhanced by providing safe and uniform access to the outdoors via the use of a properly planned and constructed sidewalk system.

4: Housing Element

Goal 1. Encourage greater diversity of housing opportunities in Sudbury to meet the needs of a changing and diversified population with respect to age, household size and income

7. Provide the necessary infrastructure to allow mixed uses already permitted in the business district under current zoning.

Residential apartments above stores would result in essential and increased reliance on walkways that would encourage mixed-use property in the business district per the plan's direction.

5: Transportation Element

Introduction discusses the need for Bike Paths and Local Walkways.

Goal 1. Promote a transportation system that is safe, convenient, accessible and economical without adversely impacting Sudbury's character.

Objective A: Reduce traffic congestion on Route 20.

5. Increase alternative forms of transportation in Sudbury, including but not limited to car pools, bus service, and bikeways.

Objective B: Reduce traffic congestion in other parts of town.

3. Address circulation around the Town Center (both pedestrian and vehicular).

Objective C: Integrate roadside aesthetics with adjacent residential and commercial uses.

3. Increase amenities along Route 20 to create a more usable scale for pedestrians (benches, walkways, landscaping).

4. Complete the town walkway program by appropriating funds annually to construct walkways.

Provide safe options for getting around town, especially for children and senior citizens that do not have easy access to automobile transportation. Today there are limited alternatives for both young children and seniors that do not have the ability to travel through town via automobile beyond the current busing systems. If walkways are built they will be used by groups of people that currently do not have many alternative forms of transportation.

The Master Plan specifically recommends that the town support the Walkway Committee and commit to providing walkways.

6: Community Services and Facilities Element

Goal 1. Ensure that Sudbury's public facilities and services are adequate to meet the needs of the population as it grows toward full build-out.

Objective A: provide adequate services and facilities to meet the needs of all residents.

7. Integrate public use areas into the business districts.

Pleasant public places bring people together which fosters a continually improving sense of community. The natural byproducts of this are improvement of the local economy, improvements to the local educational system, increased safety for community members and increased availability of access to community events for people who would otherwise not be included.

7.3 Master Plan Questionnaire Summary

41% of the town residents who responded to the Master Plan Questionnaire supported using taxes to construct walkways in their neighborhood. The Walkway Committee considers this a sign of substantial interest in walkways, given that there were no costs or details regarding a proposal such as this committee is recommending, and that about 25% of the town already has walkways. Our proposal, while comprehensive, does not propose to add walkways within each and every neighborhood, but to connect all the neighborhoods to each other.

7.4 List of Walkways Currently Underway

Powder Mill Road:	
Virginia Ridge to Singing Hill Circle	900 ft. (town funded)
Mary Catherine Lane & Fox Hill	1600 ft. (developer funded)
Route 117: Mossman to Haynes Road	2000 ft. (town/dev. funded) DONE
Maynard Road: Wyman Road to Mark Lane	3600 ft. (developer funded) ½ DONE
Hunt Hill	1100 ft. (developer funded)
Jason Drive to Woodside Road	950 ft. (developer funded)
TOTAL	

7.5 List of Proposed Walkways

Location	Engineering Design Costs	Est. Const. Costs	Length
Boston Post Road ◆Dunkin Donuts to Goodman's Hill Road (Improve)	\$10,600	\$132,500	5,300 ft.
Concord Road ◆Thompson to North	\$13,000	\$162,500	6,500 ft.
Dakin Road ♦Concord Town Line to LEAP ♦Blacksmith Drive to North Road (Rte	\$1,200 117) \$4,400	\$15,000 \$55,000	600 ft. 2,200 ft.
Dudley Road (Entire length)	\$6,200	\$77,500	3,100 ft.
Dutton Road ♦ & Tanbark Road to Pratt's Mill Road ♦MBTA Tracks to Wayside I nn Road	\$4,200 \$15,000	\$62,500 \$192,500	2,400 ft. 7,700 ft.
Goodman's Hill Road ♦Kato Drive to Route 20	\$3,500	\$65,000	2,600 ft.
♦ Haynes Road to Pantry Road	\$7,000	\$87,500	3,500 ft.
Horse Pond Road ◆☆State Police Crime Lab to Route 20) \$1,200	\$15,000	600 ft.
Landham Road ◆☆Coolidge Lane to Route 20 ☆Eddy Street to Framingham Town Lin	\$3,200 ne \$6,000	\$40,000 \$7,500	1,600 ft. 300 ft.
Marlboro Road (Entire length)	\$13,500	\$185,000	7,400 ft.
Maynard Road Martin Drive to Hudson Road	\$14,000	\$175,000	5,200 ft.
Moore Road ◆ & White Oak Lane to Dutton Road	\$700	\$6,000	350 ft.
Mossman Road ද Possum Lane to North Road (117)	\$1,400	\$15,000	700 ft.

North Road (Route 117) Pantry Road to Longfellow Road (omitting Haynes to Mossman)	\$7,900	\$98,750	3,950 ft.
Old Lancaster Road Goodman's Hill Road to Concord Road	\$8,400	\$105,000	3,700 ft.
Peakham Road ◆☆Robert Best Road to #118 Peakham R ◆☆Finish from S.W. Est, to Old Garrison		\$60,000 \$17,500	2,000 ft. 700 ft.
Powdermill Road & Virginia Ridge Road to North Road (117) & Tavern Circle to Maynard Town Tine) \$2,000 \$1,600	\$42,000 \$20,000	2,000 ft. 800 ft.
Powers Road ⊠Powdermill Road to Concord Town Line	\$8,400	\$143,500	4,200 ft.
Puffer Lane まVillage Road to North Road (117)	\$900	\$10,000	400 ft.
Raymond Road ◆Cider Mill Road to Warren Road Route 20 to Feeley Field	\$2,500 \$1,400	\$32,500 \$17,500	1,300 ft. 700 ft.
Sudbury Road Farm Lane to Noyes School	\$4,400	\$55,000	2,200 ft.
Union Avenue ◆Route 20 to Concord Road	\$10,400	\$130,000	5,000 ft.
Willis Road (Entire length)	\$17,000	\$332,500	8,800 ft.
TOTAL COMPREHENSI VE WALKWAY PROGRAM (\$2,533,150)	\$175,400	\$2,357,750	85,800 ft.

& Sudbury Town Department of Public Works will construct

 \boxtimes May be conservation issues that affect construction feasibility

◆Top 15 Needed Walkways as I dentified by Officer AI Hutchinson

7.6 Sudbury's Most Dangerous Intersections

Sudbury's most dangerous intersections, in terms of accidents and design related problems, as listed by Safety Officer Hutchinson in December 1999:

Route 20 @ Landham Rd. Route 20 @ Nobscot Rd. Route 20 @ Horse Pond Route 20 @ Wayside Inn Rd. Route 20 @ Goodman's Hill Rd. Route 117 @ Pantry/Dakin Rds. Route 117 @ Mossman/Powder Mill Rd. Maynard Rd. @ Hudson Rd. Peakham Rd. @ Hudson Rd. Union Ave. @ Concord Rd.

 \otimes Most accidents investigated

7.7 Map of Current, Planned, and Proposed Walkways

Map of current walkways (*indicated by solid dark lines*), planned and funded walkways (*indicated by stars*) and proposed walkways (*indicated by dots*) is a separate page. This is a duplicate of the map in the article that appears in the Warrant for the Town Meeting.

