

# Healthy Infrastructure Plan



## Albany County, New York

Project by:  
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## I. Introduction

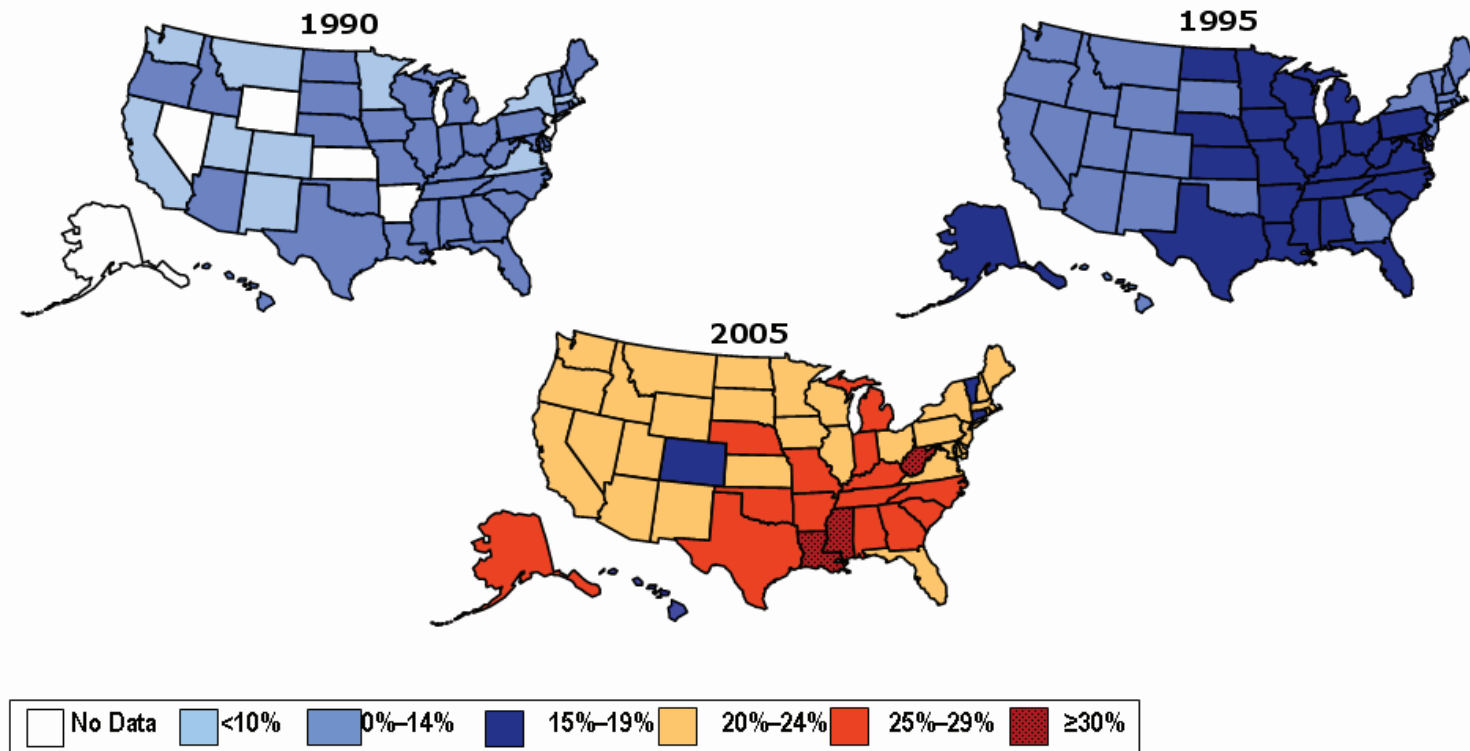
The *Initiative for Healthy Infrastructure* (iHi) project at *University at Albany* (SUNY) is designed to facilitate statewide efforts to create physical environments which fosters healthy active lifestyles. This undertaking includes a cross-disciplinary approach in addressing this issue through teaching, researching, developing policy, public outreach and planning. The primary motivation for this project is in resolving the contradiction between the need for increased physical activity and the deficit in walk-able community infrastructure. Expanding New York State's resource and research base in this area will encourage both more walk-able communities and a healthy population. This project is funded by the *Healthy Heart Program* in the *New York State Department of Health* and is supported by *The Research Foundation of The State University of New York*.

Since one of the goals of the *Healthy Heart Program* is to encourage walking as a routine activity, it is logical to connect this concept with planning, particularly in the development of sidewalks, streets and trails. Unfortunately, community 'health' is not currently considered a performance measure for public works infrastructure, so a new approach that brings together the issue of public health and planning communities is needed. There is increasing evidence that community supports for a heart healthy lifestyle can be effective in reducing the risk of Cardiovascular Disease (CVD). Numerous sources, including the Centers for Disease Control and Prevention, have advocated walking as a primary means of increasing routine physical activity.

The national obesity trend is illustrated in these graphics developed by the Centers for Disease Control and Prevention (CDC). *Source: www.cdc.gov.*

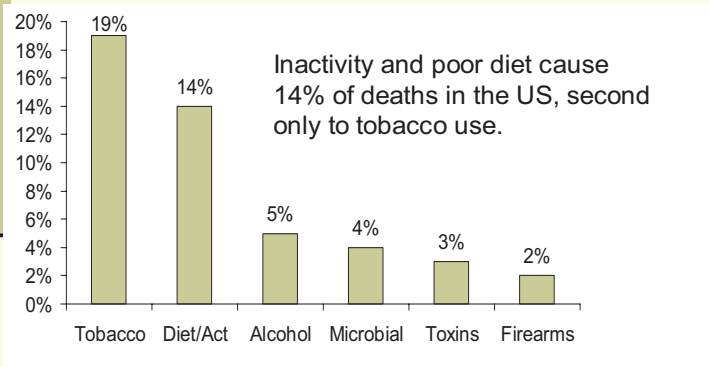
## Obesity Trends\* Among U.S. Adults BRFSS, 1990, 1995, 2005

(\*BMI  $\geq 30$ , or about 30 lbs overweight for 5'4" person)

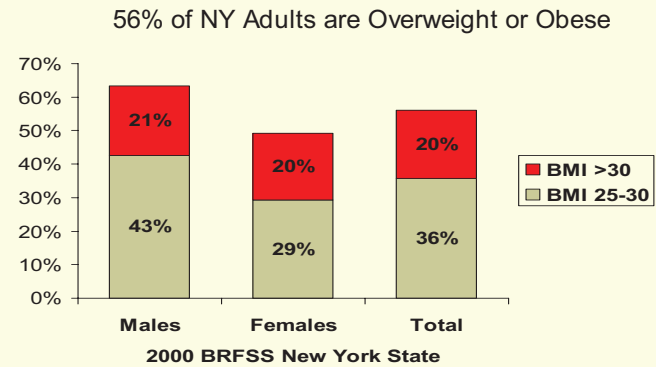


Cardiovascular disease (CVD) is the leading cause of death, disability and health care expenditures among New York State residents. In 1998, more than 70,000 New Yorkers died of cardiovascular disease, accounting for 45% of all deaths. According to data from the 2001 Behavioral Risk Factor Surveillance System, 56% of New Yorkers are insufficiently active (no activity or less than 20 minutes a day, or less than three times/week). At the same time, pedestrians and bicyclists accounted for more than 20% of New York State's traffic fatalities and injuries, 48% of hospitalizations and 59% of injury related hospitalization costs according to data from the Statewide Planning and Research Cooperative System (SPARCS) system. (Provided by the NYS Department of Health (DOH)) In order to encourage people to walk or bicycle more, it is critical to provide a safe infrastructure that supports an active lifestyle.

### Underlying Causes of Death (US)

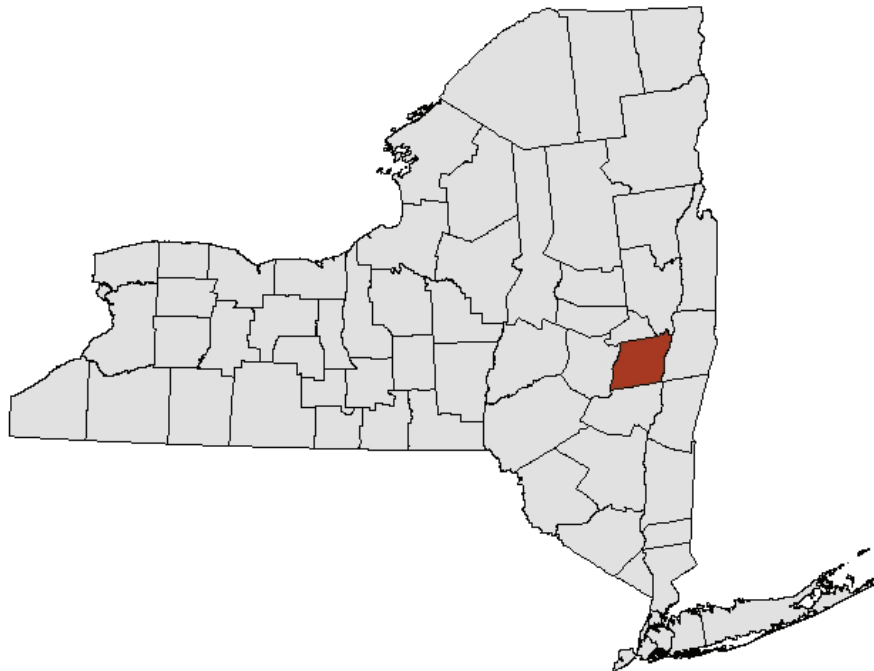


### Overweight and Obesity Among NYS Adults (2001 BRFSS)



The data for the U.S. and New York State indicate that inactivity, poor diet and obesity are serious issues. Graphics provided by Deb Spicer, NYS Department of Health.

Albany County, NY  
Prepared by iHi November 2006



The population of Albany County is approximately 297,414. The county is located almost in the geographic center of the state. The median household income is \$44,245 (2003), with 10.8% of the population living below the poverty line. The county land area covers 523 square miles, with a population density of 562.7 people per square mile. New York State's population is 19,254,630. The state median household income is \$44,139 (2003), with 14.3% of the population living below the poverty line. New York State's land area covers 47,214 square miles with a population density of 401.9 people per square mile.

*Please note: seasonal and or student population may skew these figures.*

*Source: US Census and Albany County*

## II. Community Health Data

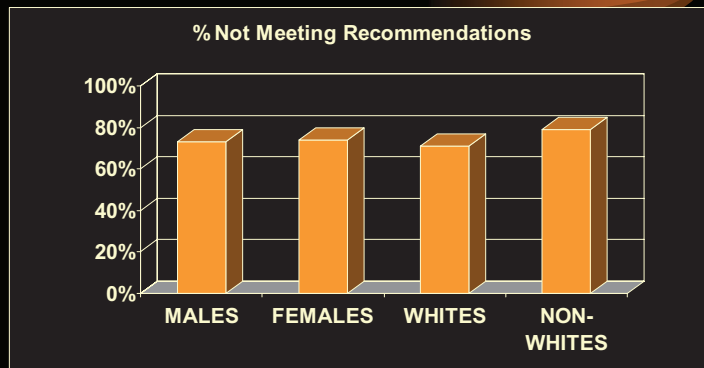
Albany County is fortunate to have a detailed set of data for assessing public health. The New York State Behavioral Risk Factor Surveillance System (data) provides a general overview for statistical comparisons between state, national and county data. The following sections use available local and statewide health data to identify existing conditions and issues for Albany County.

### NYS BRFSS

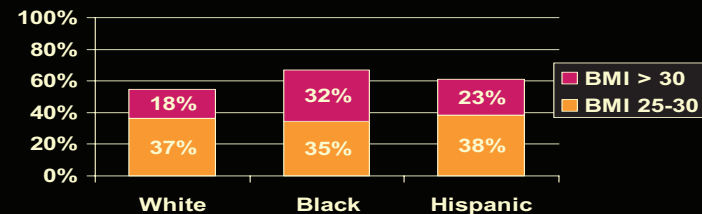
The national trends and data are reflected in the public health data provided by NYS DOH from the 2000 and 2001 BRFSS. The two charts below show levels of physical activity statewide and obesity prevalence in ethnic groups among NYS adults.

The data below indicates that more than 70% of New York State adults (1) do not meet recommended levels of physical activity and (2) that more than 50% of the State's adults are overweight or obese.

### Physical Activity Among NYS Adults, (BRFSS 2000)



### Obesity Among NYS Adults, By Ethnicity 2001, BRFSS



### Mortality data for Albany County

	Population (2000 data)	Total Deaths (per 100,000)	Total Deaths (rate)	Cerebrovascular Disease (#)	Cerebrovascular Disease (rate)	Diseases of the Heart (#)	Diseases of the Heart (rate)
NYS	18,976,457	157,425	829.6	7,935	41.8	57,924	305.2
Albany	294,565	2,972	1008.9	188	63.8	1,035	351.4

\*heart disease is a major public health issue, with levels above the statewide level

### Traffic Safety Data

Health and safety are related issues. The amount that people will walk or bicycle is affected by perceived and real concerns about traffic safety. In recent years, Albany County has been subject to considerable development pressure. The built environment that has resulted from these pressures, often presents barriers to active living. In a report entitled, "Albany County Traffic Safety Data", dated February 2004, the Institute for Traffic Safety and Research provides the following summary of Albany County safety Statistics.

*Please see the following page for complete traffic safety data.*

**New York State Department of Motor Vehicles  
Summary of Motor Vehicle Accidents**

**2004 Albany County**

<b>TABLE 1 Accident Summary Totals</b>		
<b>Category Totals</b>	<b>All Accidents</b>	<b>Police Reported</b>
<b>Total Accidents</b>	<b>4,959</b>	<b>2,611†</b>
Fatal Accidents	17	17
Non-Fatal Personal Injury Accidents	2,803	2,443
Reportable Property Damage Accidents	2,139	151†
<b>Vehicles</b>	<b>9,384</b>	<b>4,976</b>
Drivers Involved	8,493	4,778
Vehicle Occupants	11,370	6,887
<b>Special Accident Series</b>		
Pedestrian/Motor Vehicle Accidents	174	168
Bicycle/Motor Vehicle Accidents	90	90
Motorcycle Accidents	85	83
<b>Fatalities</b>		
<b>Persons Killed (1)</b>	<b>17</b>	<b>17</b>
Drivers Killed	9	9
Passengers Killed	3	3
Pedestrians Killed	4	4
Bicyclists Killed	1	1
Other	0	0
<b>Non-Fatal Injuries</b>		
<b>Persons Injured (1)</b>	<b>3,710</b>	<b>3,290</b>
Drivers Injured	2,575	2,236
Passengers Injured	864	791
Pedestrians Injured	175	168
Bicyclists Injured	87	87
Other	9	8
† It is important to note that the data for 2004 are not strictly comparable to the data for 2001 and 2002. Changes in data collection and reporting that began during 2001 with respect to property damage crashes have reduced the total number of crashes, since the changes resulted in fewer property damage crashes being captured in the statewide Accident Information System (AIS) maintained by the NYS Department of Motor Vehicles.		
(1) Includes pedestrians, bicyclists and all other non-vehicle involved persons as well as vehicle occupants regardless of seating position.		

<b>TABLE 2(P) Severity of Accident</b>		
	<b>Number</b>	<b>Percent</b>
<b>Total</b>	<b>2,611</b>	<b>100.0</b>
Fatal (K) Accidents	17	0.7
Personal Injury Accidents		
Serious (A)	188	7.2
Moderate (B)	437	16.7
Minor (C)	1,748	66.9
Unknown Severity	70	2.7
Property Damage (O) Accidents	151	5.8

General Notes

- \* Some of the tables are based upon information received from police and motorist reports of motor vehicle accidents. Others are based only on the police reports; these are indicated by a (P).
- \* The Property Damage Accident reporting level is \$1,000 or more.
- \* The term "vehicle" always excludes bicycles.
- \* The term "driver" always excludes bicyclists.
- \* Percentages may not total 100.0 due to rounding.

### III. Infrastructure Diagnosis

For the purposes of this study, the medical term ‘diagnosis’ is applied to the county’s public works infrastructure to investigate possible connections between the built environment and public health. The ‘patient’ in this case is Albany County, and the diagnosis looks at whether current levels of physical activity are related to the provision of built environment features such as rural roadways with paved shoulders, trails, parks and other facilities that encourage a physically active lifestyle. Note that at the county level this is a very general analysis, and precision and scope are limited to an overview of existing conditions. Additional investigations will be necessary to supplement this study with more detailed observation and data at the community and neighborhood level.

### U.S Census Transportation Data

While limited in its ability to capture all travel by walking and bicycling (it focuses only on trips to work, not travel for shopping, school, or leisure), the U.S. Census Transportation data is a useful source of county level data. From 1990-2000, the census shows that walking and bicycling in Albany County DECLINED.

*Please see CTPP data on following page*





## CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP 2000)

**Table 1. Profile of Selected 1990 and 2000 Characteristics**

**Geographic Area: Albany County, New York**

Subject	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
<b>POPULATION</b>						
<b>Total population</b> .....	292,594	100.0	294,565	100.0	1,971	0.7
In households .....	278,472	95.2	278,990	94.7	518	0.2
In group quarters .....	14,122	4.8	15,575	5.3	1,453	10.3
<b>HOUSEHOLD SIZE</b>						
<b>Total households</b> .....	115,901	100.0	120,645	100.0	4,744	4.1
1-person household .....	34,886	30.1	39,794	33.0	4,908	14.1
2-person household .....	36,920	31.9	38,682	32.1	1,762	4.8
3-person household .....	19,308	16.7	18,632	15.4	-676	-3.5
4-person household .....	15,411	13.3	14,807	12.3	-604	-3.9
5-or-more-person household .....	9,376	8.1	8,730	7.2	-646	-6.9
Mean number of persons per household .....	2.40	(X)	2.31	(X)	-0.09	(X)
<b>VEHICLES AVAILABLE<sup>1</sup></b>						
<b>Total households</b> .....	115,901	100.0	120,645	100.0	4,744	4.1
No vehicle available .....	17,019	14.7	17,142	14.2	123	0.7
1 vehicle available .....	43,710	37.7	46,816	38.8	3,106	7.1
2 vehicles available .....	41,150	35.5	43,167	35.8	2,017	4.9
3 vehicles available .....	10,558	9.1	10,503	8.7	-55	-0.5
4 vehicles available .....	2,564	2.2	2,342	1.9	-222	-8.7
5 or more vehicles available .....	900	0.8	675	0.6	-225	-25.0
Mean vehicles per household .....	1.49	(X)	1.47	(X)	-0.02	(X)
<b>WORKERS BY SEX<sup>1</sup></b>						
<b>Workers 16 years and over</b> .....	147,258	100.0	141,840	100.0	-5,418	-3.7
Male .....	75,665	51.4	72,910	51.4	-2,755	-3.6
Female .....	71,593	48.6	68,930	48.6	-2,663	-3.7
<b>MEANS OF TRANSPORTATION TO WORK</b>						
<b>Workers 16 years and over</b> .....	147,258	100.0	141,842	100.0	-5,416	-3.7
Drove alone .....	104,394	70.9	108,966	76.8	4,572	4.4
Carpooled .....	18,103	12.3	13,902	9.8	-4,201	-23.2
Public transportation (including taxicab) .....	11,022	7.5	7,956	5.6	-3,066	-27.8
Bicycle or walked .....	9,928	6.7	6,929	4.9	-2,999	-30.2
Motorcycle or other means .....	837	0.6	411	0.3	-426	-50.9
Worked at home .....	2,974	2.0	3,678	2.6	704	23.7
<b>TRAVEL TIME TO WORK</b>						
<b>Workers who did not work at home</b> .....	144,284	100.0	138,164	100.0	-6,120	-4.2
Less than 5 minutes .....	4,764	3.3	4,481	3.2	-283	-5.9
5 to 9 minutes .....	16,502	11.4	15,171	11.0	-1,331	-8.1
10 to 14 minutes .....	28,106	19.5	25,797	18.7	-2,309	-8.2
15 to 19 minutes .....	32,228	22.3	30,084	21.8	-2,144	-6.7
20 to 29 minutes .....	35,164	24.4	34,544	25.0	-620	-1.8
30 to 44 minutes .....	20,039	13.9	19,489	14.1	-550	-2.7
45 or more minutes .....	7,481	5.2	8,598	6.2	1,117	14.9
Mean travel time to work (minutes) .....	18.6	(X)	20.3	(X)	1.7	(X)
<b>TIME LEAVING HOME TO GO TO WORK</b>						
<b>Workers who did not work at home</b> .....	144,284	100.0	138,164	100.0	-6,120	-4.2
5:00 a.m. to 6:59 a.m. ....	22,864	15.8	24,737	17.9	1,873	8.2
7:00 a.m. to 7:59 a.m. ....	48,648	33.7	44,838	32.5	-3,810	-7.8
8:00 a.m. to 8:59 a.m. ....	37,709	26.1	33,868	24.5	-3,841	-10.2
9:00 a.m. to 9:59 a.m. ....	7,971	5.5	8,669	6.3	698	8.8
10:00 a.m. to 11:59 a.m. ....	4,844	3.4	4,739	3.4	-105	-2.2
12:00 p.m. to 11:59 p.m. ....	20,274	14.1	18,807	13.6	-1,467	-7.2
12:00 a.m. to 4:59 a.m. ....	1,974	1.4	2,506	1.8	532	27.0

1 See the entry for this item in the Technical Notes in the root directory or state subdirectories (filename: tech\_notes.txt).  
(X) Not applicable.  
Source: U.S. Census Bureau. Census of Population and Housing, 1990 and 2000 long-form (sample) data.

## **Spatial Analysis using Geographic Information Systems**

Through the use of census data and geocoded locations for specific spatial attributes, it is possible to identify key features within the county. For the purposes of this phase of IHI's project, Healthcare and Education facilities were identified as types of community destinations which can help describe the potential for walking to routine destinations as part of an active lifestyle. The potential of a resident walking to a destination can be identified as accessible within a .5 mile radius. This is the equivalent of approximately a 10 minute walk at an average pace of 3 miles per hour. Note that this distance is also a relatively short bicycle ride – approximately a 3 minute ride at a 10 mile per hour pace. The purpose of this diagnostic tool is not to specifically identify which individuals within the county walk or bicycle, but rather to provide a broad perspective on whether it is possible to walk or bike to certain key features within the area.







### **Education**

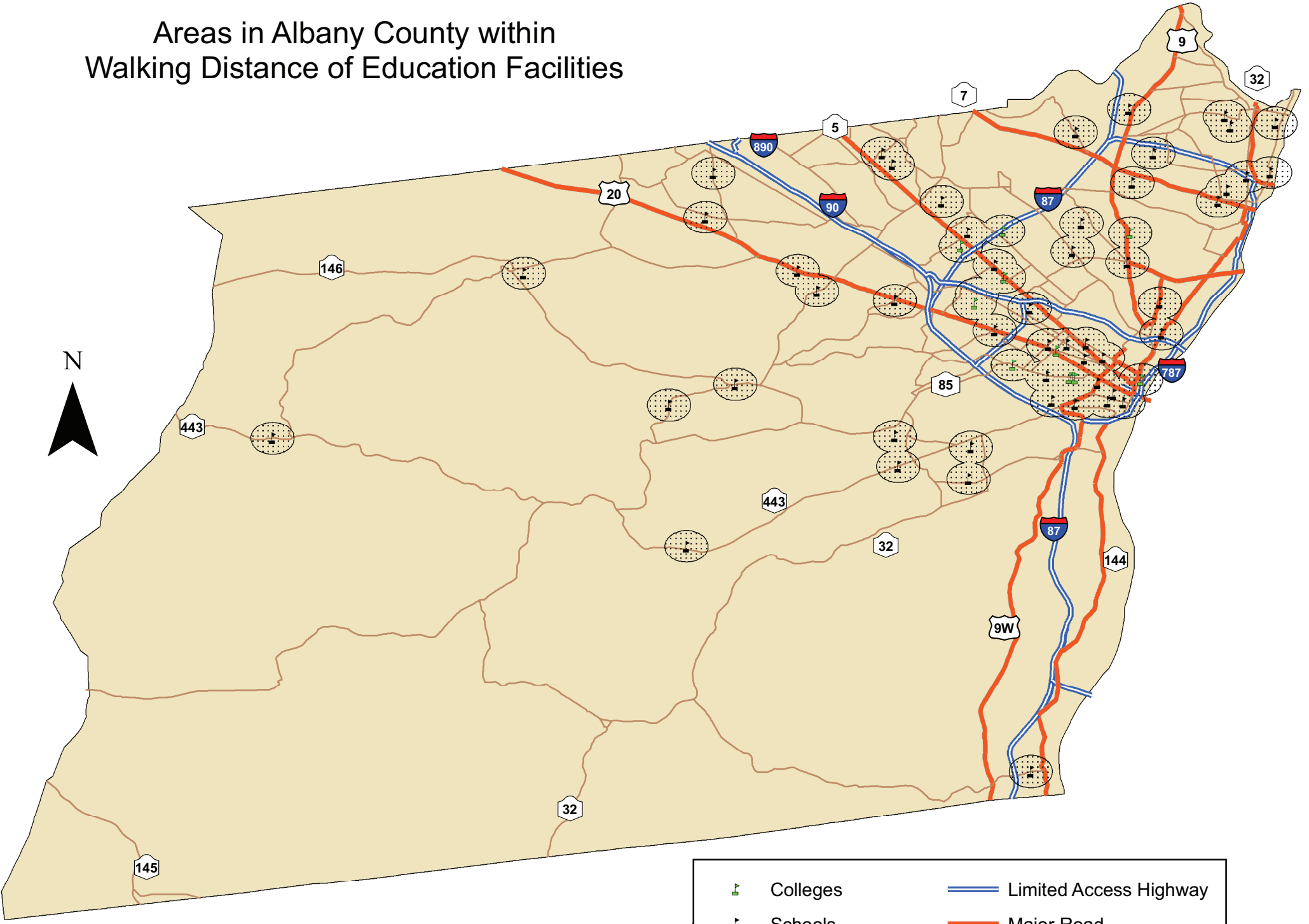
Access to schools is a part of the daily travel routine for Albany County families. Nationally, the trend in the past several decades has been away from children walking or bicycling to school, and towards children being bused and driven to school. The data showing the lack of physical fitness in children (as well as faculty, staff and college students) is related to this change in daily routine. As a result, investigating the potential for schools to be a destination within walking distance of the local population can be an important step towards encouraging a more active lifestyle. About 244,814 people or 83% of the county population lives within walking distance of schools.

*Please see Education map on following page*

# Areas in Albany County within Walking Distance of Education Facilities



	Colleges		Limited Access Highway
	Schools		Major Road
	1/2 Mile Buffer Zone		Minor Road



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## **Parks**

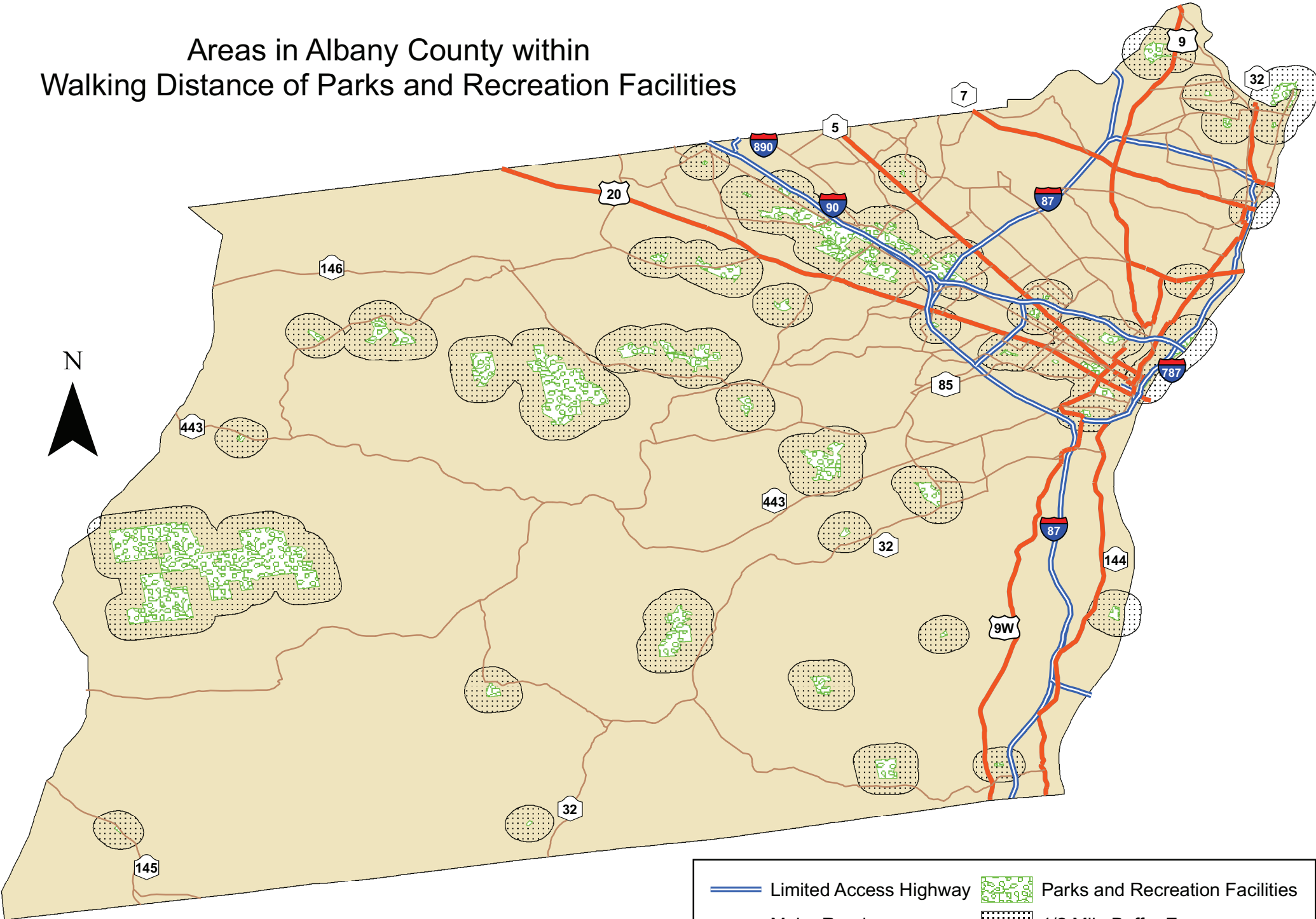
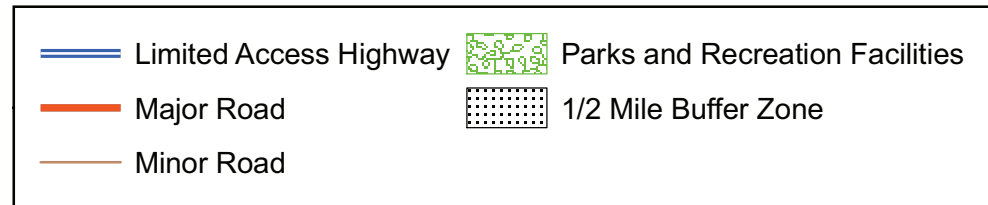
Parks and Recreation Facilities provide locations intended for physical activity, sports and other leisure time activities. Walking, hiking and bicycling are primary activities at these locations, yet in a rural setting, it is important to determine if people are able to walk or bike to parks and recreation, or if they are limited to driving a car to reach these destinations. Albany County is fortunate to have a significant amount of parks and public lands focused along lakeshores, rivers, and in local communities.

*Please see Parks map on following page*

# Areas in Albany County within Walking Distance of Parks and Recreation Facilities



0 3.5 7 14 Miles



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### **Health Institutions**

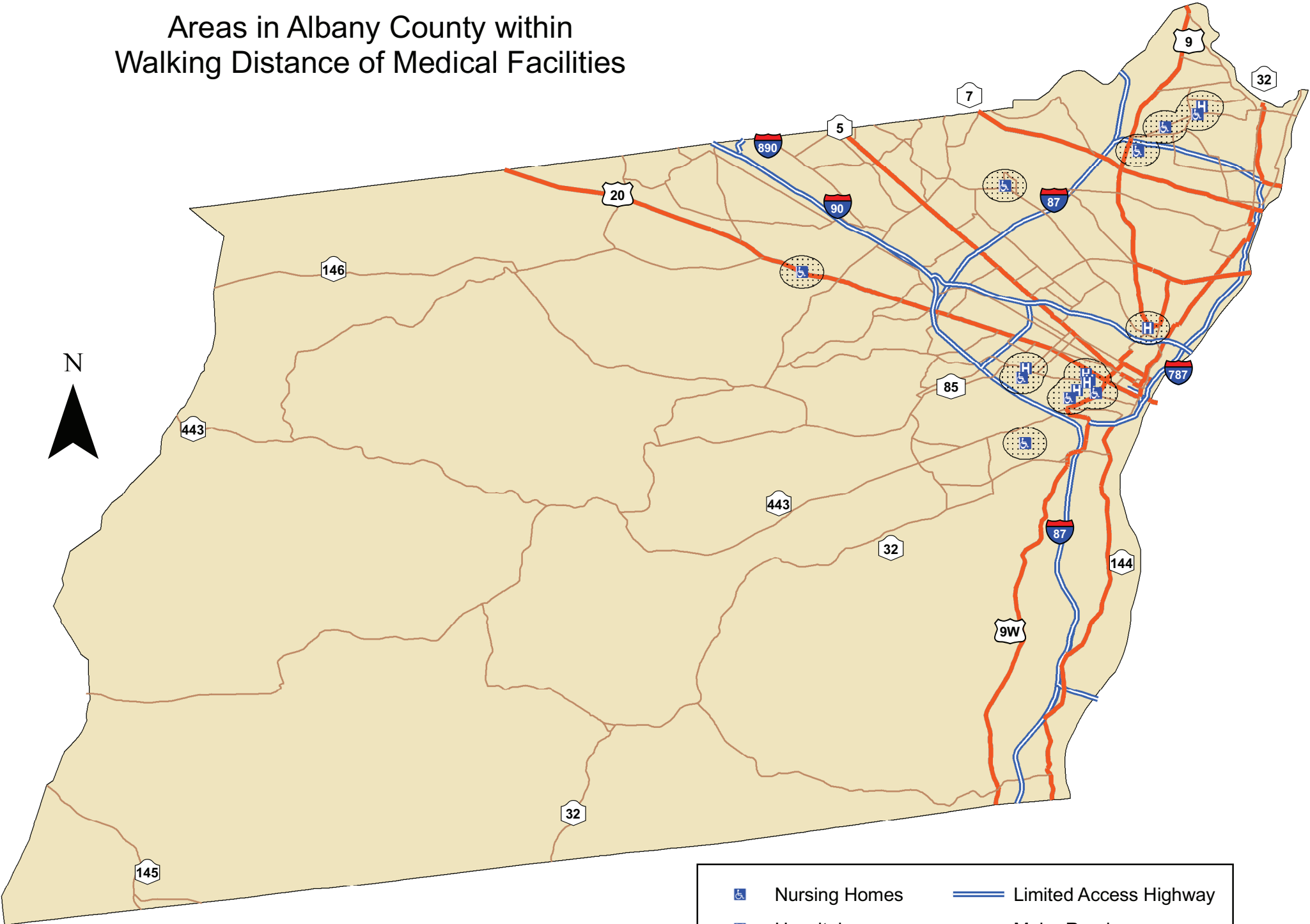
Just as schools and parks can provide walk-able community destinations, health institutions can play a similar role in being a place that encourages physical activity and fitness by being a role model as a destination. This is often not the case with large hospitals and medical centers, and there are many examples of hospitals being surrounded by large parking lots without appropriate consideration for how walking and bicycling relate to public health and the medical institution's role in creating a healthy neighborhood environment. For the purpose of this analysis, healthcare institutions were identified and geocoded, and the same walking distance buffer was applied for the .5-mile radius around the facility. The data indicates that approximately 16 percent of the county population lives within walking distance of a healthcare facility.

*Please see Health Institutions map on following page*

# Areas in Albany County within Walking Distance of Medical Facilities



	Nursing Homes		Limited Access Highway
	Hospitals		Major Road
	1/2 Mile Buffer Zone		Minor Road



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**Transportation Infrastructure (following page)**

For many people, local streets and roads define access to jobs, education, healthcare and recreation. In Albany County, there are more than 2025 miles of state and local roads. The provision of paved shoulders and sidewalks along these facilities is a key to providing a safe environment for pedestrians and bicyclists. In Albany County, the Capital District Transportation Committee (CDTC) Bicycle/ Pedestrian Priority Network is an evolving 136- mile designated system which, ideally, will create safe walking and biking conditions. Unfortunately however, data is not currently available to determine the percentage of these roads that include paved shoulders, sidewalks, bike lanes or trails. An investigation of NYSDOT sufficiency file data indicated that paved shoulders and sidewalks are not systematically included in the State's pavement management and information systems.

*The available data table for the Albany County highway system is provided on the following page.*

# ALBANY COUNTY REGION 1 COUNTY 1

MINOR CIVIL DIVISION		GEO- CODE	URBAN AREA CODE	POP. 2000	TOTAL STATE TOURING ROUTE MILEAGE	CENTERLINE HIGHWAY MILEAGE BY JURISDICTION						
TYPE	Name of Town, Village or City					TOWN VILLAGE or CITY	COUNTY	TOTAL LOCAL	D.O.T. OWNED	OTHER STATE	TOTAL STATE & LOCAL	
TOWNS	Berne	0068		2,850	19.9	79.1	40.3	119.3	20.3	0.0	139.6	
	Bethlehem	0071	001P	31,300	48.9	172.3	17.0	189.3	44.7	8.0	242.0	
	Coeymans	0180		4,780	25.2	52.2	24.9	77.1	21.6	4.6	103.3	
	Colonie	0187	001	67,430	49.3	278.7	19.7	298.4	46.0	0.3	344.6	
	Green Island	0345	001	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Guilderland	0355	001P	30,950	40.9	163.1	16.4	179.4	34.9	7.4	221.7	
	Knox	0443		2,650	19.1	36.5	35.3	71.7	19.1	0.0	90.8	
	New Scotland	0581	001P	5,920	33.9	80.0	25.2	105.2	34.1	0.0	139.3	
	Rensselaerville	0706		1,920	9.1	81.8	45.7	127.5	10.2	0.2	137.8	
	Westerlo	0890		3,470	17.3	55.6	59.4	114.9	17.3	0.0	132.3	
	<b>SUBTOTAL</b>				<b>151,270</b>	<b>263.5</b>	<b>999.2</b>	<b>283.6</b>	<b>1282.8</b>	<b>248.1</b>	<b>20.6</b>	<b>1551.5</b>
	VILLAGES	Altamont	1012		1,740	2.2	5.9	0.8	6.6	2.3	0.0	8.9
Colonie		1110	001	7,920	3.9	29.6	0.3	29.9	3.7	0.0	33.5	
Green Island		1204	001	2,280	0.2	9.0	0.7	9.7	0.5	0.0	10.2	
Menands		1304	001	3,910	7.2	11.6	0.0	11.6	7.6	0.0	19.2	
Ravena		1414		3,370	2.4	11.7	0.0	11.7	1.4	1.0	14.1	
Voorheesville		1509	001P	2,710	1.6	11.2	2.4	13.6	1.6	0.0	15.2	
<b>SUBTOTAL</b>				<b>21,930</b>	<b>17.6</b>	<b>79.0</b>	<b>4.1</b>	<b>83.1</b>	<b>17.0</b>	<b>1.0</b>	<b>101.1</b>	
CITIES	Albany	2001	001	95,660	42.9	241.6	2.2	243.8	22.3	20.9	287.1	
	Cohoes	2009	001	15,520	6.4	61.7	0.0	61.7	1.8	0.0	63.5	
	Watervliet	2060	001	10,210	6.1	37.3	0.0	37.3	2.7	0.0	39.9	
<b>SUBTOTAL</b>				<b>121,390</b>	<b>55.4</b>	<b>340.5</b>	<b>2.2</b>	<b>342.8</b>	<b>26.8</b>	<b>20.9</b>	<b>390.4</b>	
<b>COUNTY TOTAL</b>		<b>----</b>	<b>----</b>	<b>294,590</b>	<b>336.4</b>	<b>1418.7</b>	<b>290.0</b>	<b>1708.7</b>	<b>291.9</b>	<b>42.5</b>	<b>2043.0</b>	

## Infrastructure Investment Analysis

Healthcare is a significant budget expenditure and cost for New York State and local communities. The direct and indirect costs due to medical care, workers compensation claims, and lost time related to injuries is illustrated below in a graphic provided by NYSDOH.

Specifically, in Albany County, physical inactivity costs over \$408 Million per year. This includes over \$49 Million in medical care costs, over \$898,000 in workers compensation costs, and over \$358 million in lost productivity. Broken down, it costs each resident of Albany County around \$1,800 per year. It is estimated that a 5% increase in Physical activity would save tax-payers over \$20 million each year.

Source: [www.activelivingleadership.org](http://www.activelivingleadership.org), figures from US Census

Slide Source (bullets 1 & 2): Chenoweth, "Physical Inactivity in NYS, An Economic Cost Analysis", 1999  
Slide Source (bullet 3): Pratt, M. "Higher Direct Medical Costs Associated with Physical Inactivity", *The Physician and Sports Medicine*, October, 2000. This study used data from the 1987 National Medical Expenditures Survey.

### Cost of Physical Inactivity in NYS

- Inactivity costs NYS **\$3 billion** a year
- A 5% increase in physical activity rates in adults would save NY **\$180 million** a year.
- Inactive adults have **\$330** more per year in direct medical costs than active adults (in 1987 dollars).

## IV. Initiatives for Albany County

### **The Capital District Transportation Committee (CDTC) Bicycle & Pedestrian Task Force**

The Task Force deals with issues ranging from public education to facility planning. The members provide technical guidance on Community and Transportation Linkage Program projects and other bicycle and pedestrian related projects throughout the region.

The organizations that are presently represented on the Task Force include: local municipalities, NYS Department of Transportation, NYS Department of Health, Guilderland Pathways Committee, Saratoga County Heritage Trails Committee, CDTA, Hudson River Valley Greenway, the New York Bicycling Coalition and the Mohawk Hudson Cycling Club among others. Other organizations or interested private citizens are encouraged to join the task force to raise their concerns regarding bicycling and walking in the Capital District.

Meetings are open to the public. For more information, contact the CDTC at 518- 458-2161

### **The Capital District Transportation Committee Bicycle/Pedestrian Priority Network**

*From the CDTC:* this network could become a continuous system of usable facilities. Currently, there are 136 miles designated in Albany County. Each segment placed on the network should the following characteristics:

Parts of major travel routes -- they connect major activity centers with each other and are the most critical parts of connections between these activity centers and major residential areas

Most likely facilities to contain some sort of barrier to cycling or walking

Few practical alternatives nearby (as any alternative routes would add significant length to a trip)

Accessible to residential areas via local (non-through), lower volume roads

Have potential for use as bike routes, with proper accommodations

### **Capital District Transportation Committee's Transportation Improvement Plan (TIP)**

The CDTC, like all Metropolitan Planning Organizations (MPO), is required to publish a TIP that lists all projects federally-funded in the local area. Some projects included new bicycle and pedestrian facilities and others include bicycle and pedestrian enhancements.

A complete list of local projects is available at <http://www.cdtcmpo.org/tip.htm>.

## **Transit Links**

Capital District Transportation Committee Bike-on-Bus project—all CDTA busses now have bike racks. Please visit [www.cdta.org](http://www.cdta.org) for more information.

## **Priority Projects for Albany County**

### **The Patroon Greenway Project**

The Patroon Greenway Project is being developed to connect The Pine Bush, Tivoli and Corning Preserves in Albany, New York. The first phase of the project involved establishing a proposed alignment for a trail along the Patroon Creek from Rensselaer Lake at Fuller Road to the Hudson River. This 6.5 mile corridor includes a diverse range of land uses including residential, commercial, institutional and recreational assets. The defining feature is currently I-90 between I-87 and I-787; but the creek and the adjacent preserves create a rare opportunity to create a new definition of this corridor as a linear resource connecting local communities and regional assets. Source: <http://www.cdtcmpo.org/linkage/patregional.pdf>

### **Albany—Upper Madison Block Planning Initiative**

*“The Upper Madison Block Planning Initiative is the first in the City of Albany’s block-by-block effort to enlist neighbors in identifying concise improvements to their neighborhood.”* In a survey, residents expressed the need for improved crosswalks to emphasize the neighborhood’s walk-ability. Pedestrian improvements, along with improving conditions for cyclist, are part of this neighborhood plan. Examples of such improvements include the addition of bike lanes, bump-outs to decrease crosswalk distance and reconfiguring the traffic pattern along Madison Avenue.

### **Albany—Central Avenue**

The Ave2000 advisory committee developed extensive plans for Central Avenue within the City of Albany. One priority in the plan is for Central Avenue to become pedestrian friendly throughout the entire city. Included in the “Desired Streetscape Character” section of the plan for a portion of Central Avenue is: *“Wide sidewalks should be maintained, and pedestrian crossings should be installed at all intersections a mid-clock location...bumpouts should be approximately 20 feet wide and 10 feet deep.”* Also, *“bicycle racks should be installed to improve access by means other than automobile.”*

### **Town of Bethlehem**

The Town's Comprehensive Master Plan, sites the importance of creating more pedestrian friendly areas such as the Delmar Four Corners Area. The plan includes enhancement suggestions for sections of Delaware Avenue (sidewalks, identified crosswalks, curb cuts and medians). The Plan also stresses the importance of the creation of a walking and biking network connecting recreational facilities to neighborhoods to reduce vehicle dependence. In addition, steps have been taken to clearly identify bike lanes and routes throughout the town.

The Town of Bethlehem is also a Hudson River Greenway community.

### **Town of Colonie**

From the Colonie Comprehensive Plan: the Town should require infrastructure such as bike lanes and sidewalks with all new development and redevelopment. Other points include: establishing traffic calming measures throughout the Town; developing a Town-wide Sidewalk Plan (for areas where sidewalks are appropriate); providing adequate bicycle facilities and routes throughout the Town; and creating walking connections between neighborhoods. Specific projects cited for pedestrian enhancement include the Route 5 corridor and sections along the Mohawk River.

### **Town of Coeymans**

Currently, the Hudson River Greenway does not run through the Town on Coeyman; plans include designating shoulders on NYS Route 144 part of the Greenway. Additionally, opportunities exist for local trails to be linked to the Greenway.

### **Village of Voorheesville**

There have been major pedestrian and biking improvements within the village.

### **The Long Path and John Boyd Thatcher State Park**

This facility, operated by the New York-New Jersey Trail Conference, runs from the New Jersey side of the George Washington Bridge to Thatcher State Park in Albany County. For more information on the Long Path: <http://www.nynjtc.org/trails/longpath/index.html>. Thatcher State Park, operated by the New York State Office of Parks, has numerous opportunities for walking, biking and cross-country skiing in winter. Thatcher State Park: <http://nysparks.state.ny.us/parks/info.asp?parkID=125>

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### **Purple Path at the University at Albany**

The Purple Path is a proposed new multi-use facility around the inner perimeter of University Drive at the University at Albany. This new facility will offer students, faculty, and staff a great place to run, walk, and bike in a scenic and educational environment. For more information on the Purple Path, go to <http://www.albany.edu/~ihi/purplepath.html>

### **Harriman State Campus**

Located next to the University at Albany, this 300-acre facility is scheduled to become a mixed-use area once all the relocation of the state agencies is complete. The multimillion dollar project is to be the largest development plan in the city of Albany since the construction of the Empire State Plaza. Upgrades to pedestrian and bicycle infrastructure should be included in the master plan for this area. <http://www.harrimancampus.com/default.asp>

## V. Community Infrastructure Prescriptions

The information gathered for this project can help in informing Albany County and local communities about the issues and potential solutions related to physical activity, cardiovascular fitness, and the built environment. Data in the previous sections (see NYS BRFSS data) have indicated that Albany County residents are at risk for heart disease, that physical activity is declining, and that transportation and health care costs represent a significant amount of local public expenditures. In order to translate these facts into action, it is first necessary to understand the current recommendations of the health profession in terms of change in individual behavior. Currently the Surgeon General of the United States is recommending that adults have 30 minutes of moderate physical activity on most, if not all days of the week and that children have at least 60 minutes of physical activity on most days, if not all days of the week. In many cases, this amount of physical activity can be achieved while walking to work, school, or for recreation within a local community – if these destinations are accessible in terms of pedestrian facilities. At the same time, research is beginning to show that for many people, leisure time physical activity frequently involves walking, and that roads, streets and sidewalks are important facilities for this purpose.

While it is not certain that there is a direct cause and effect relationship between providing sidewalks, paved shoulders, trails and bicycle facilities and specific improvements in the conditions of cardiovascular disease, there is sufficient evidence to indicate that Albany County would benefit from infrastructure improvements that encourage a more active lifestyle. **The following sections identify several possible policy and funding opportunities for Albany County.**

## Policy Suggestions

### Safe Routes to School

There is a growing national and international movement towards encouraging children to walk and bicycle to school. Schools are a logical focal point for creating safe, healthy, physically active communities. While current conditions indicate the majority of children are being bused and driven to school, changes in the physical environment (including sidewalks, crossings and traffic calming of school zones) can be combined with encouragement programs to facilitate a return to safe routes to school in Albany County. Please see the iHi NY Safe Routes to School document on our website here: <http://www.albany.edu/~ihi/2briefing.pdf>.

### Complete Streets

Benefits of *Complete Streets* range from improved safety conditions for pedestrians and bicyclists to less congested roadways. Numerous communities across the country have already adopted such policies. A proposed *Complete Streets* policy for Albany County can be found here: <http://www.completestreets.org/index.html>.

### Local Sidewalk Program / Winter Maintenance

It is common practice in Upstate New York communities for adjacent property owners to be responsible for construction and maintenance of sidewalks. While this limits a municipality's maintenance cost and shifts the existing or perceived liability to the adjacent landowner, it also creates discontinuous and often nonexistent pedestrian facilities. While there may not be a single, one size fits all solution to these issues, there are a number of excellent best practices which could be facilitated at the county level. Examples include mapping the existing sidewalk systems and identifying missing links. Sidewalk construction could be facilitated into group discount purchases in order to ease the cost burden on property owners. Winter maintenance could be enhanced through economic opportunity programs, providing jobs for the unemployed or youth seeking to enter the workforce.

### Land Use and Walkability

As a 'home rule' state, New York does not have regional land use planning for rural counties, and as a result, most land use decisions are made at the local municipal level. With a dispersed rural population, the creation of compact development centers in villages and hamlets would support walking, especially if combined with locating public facilities such as post offices, libraries and local government offices within town centers. In order to encourage people to walk as part of their daily routing, it is important to group destinations and activities within walking distance of businesses and residences to the greatest extent possible.

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### **Road Shoulder Guidelines**

Many of the County's highways are low volume two lane roads. In most cases where there are few motor vehicles and traffic speeds are kept slow, these are already good places to walk or bicycle. On roads with higher traffic volumes and speeds, providing paved shoulders can be a significant benefit to motorists, bicyclists and pedestrians. A consistent policy for providing paved shoulders as a typical roadway feature could be implemented by NYSDOT, the County and municipal agencies. The document on the following page, developed in Oregon, provides an excellent rationale for these facilities.

# Paved Shoulders

## Reasons for Highway Shoulders

*Prepared by Michael Ronkin, Bicycle and Pedestrian Program Manager & Members of the Preliminary Design Unit Oregon Department of Transportation*

Before the 1971 "Bike Bill" was passed, and the terms "shoulder bikeways" or "bike lanes" were commonly used, the Oregon Highway Division advocated (1) building paved shoulders when constructing roads and (2) adding paved shoulders to existing roads. These were often referred to as "safety shoulders." There are good reasons for this term.

The following reasons are what AASHTO has to say about the benefits of shoulders in three important areas: safety, capacity and maintenance. Most of these benefits apply to both shoulders on rural highways and to marked, on-street bike lanes on urban roadways. See other side for other benefits specific to urban areas.

**Safety** - highways with paved shoulders have lower accident rates, as paved shoulders:

- Provide space to make evasive maneuvers;
- Accommodate driver error;
- Add a recovery area to regain control of a vehicle, as well as lateral clearance to roadside objects such as guardrail, signs and poles (highways require a "clear zone," and paved shoulders give the best recoverable surface);
- Provide space for disabled vehicles to stop or drive slowly;
- Provide increased sight distance for through vehicles and for vehicles entering the roadway (rural: in cut sections or brushy areas; urban: in areas with many sight obstructions);
- Contribute to driving ease and reduced driver strain;
- Reduce passing conflicts between motor vehicles and bicyclists and pedestrians;
- Make the crossing pedestrian more visible to motorists; and
- Provide for storm water discharge farther from the travel lanes, reducing hydroplaning, splash and spray to following vehicles, pedestrians and bicyclists.

**Capacity** - highways with paved shoulders can carry more traffic, as paved shoulders:

- Provide more intersection and safe stopping sight distance;
- Allow for easier exiting from travel lanes to side streets and roads (also a safety benefit);
- Provide greater effective turning radius for trucks;
- Provide space for off-tracking of truck's rear wheels in curved sections;
- Provide space for disabled vehicles, mail delivery and bus stops; and
- Provide space for bicyclists to ride at their own pace;

**Maintenance** - highways with paved shoulders are easier to maintain, as paved shoulders:

- Provide structural support to the pavement;
- Discharge water further from the travel lanes, reducing the undermining of the base and subgrade;
- Provide space for maintenance operations and snow storage;
- Provide space for portable maintenance signs;
- Facilitate painting of fog lines.



## **VI. Funding Options**

Bicycle and Pedestrian Improvements can be made possible in Albany County with funding through multiple avenues. There are numerous funding sources, including federal grant programs such as the Transportation Improvements Program or Congestion Mitigation Air Quality Improvement Program. Both the New York Bicycling Coalition and Parks and Trails New York (PTNY) have excellent information regarding funding.

New York Bicycling Coalition: <http://www.nybc.net/programs/funding.shtml>

Parks and Trails New York: <http://www.ptny.org/index.shtml>

There may also be state, local and private money available too. In addition, see the iHi website for more information on funding sources.

## **Conclusion**

This report is part of our efforts to develop an approach for identifying connections between public health, transportation infrastructure and community decision-making. With that caveat in mind, the following discussion can provide some useful concepts both for Albany County and for the future development of the iHi program. One way of summarizing the data collected for this document is to connect the physical activity and transportation needs of Albany County with an image common to promoting healthy lifestyles – the food pyramid. While people may disagree on the exact proportions of carbohydrates and protein in a healthy diet, the concept of the food pyramid is that the most resource intensive food group – meat – should be eaten in moderation, and that the food group which can be produced with the least amount of energy and the greatest return to the population – grains – should form the basis of a healthy diet. The same principle can be applied to transportation. If we used the forms of transportation that consume the greatest amount of resources (petroleum), we would place automobiles and air travel at the top of the pyramid and attempt to conserve our use of these costly forms of travel. Walking and bicycling would form the foundation of a pyramid that is based on the principals of a healthy transportation diet.

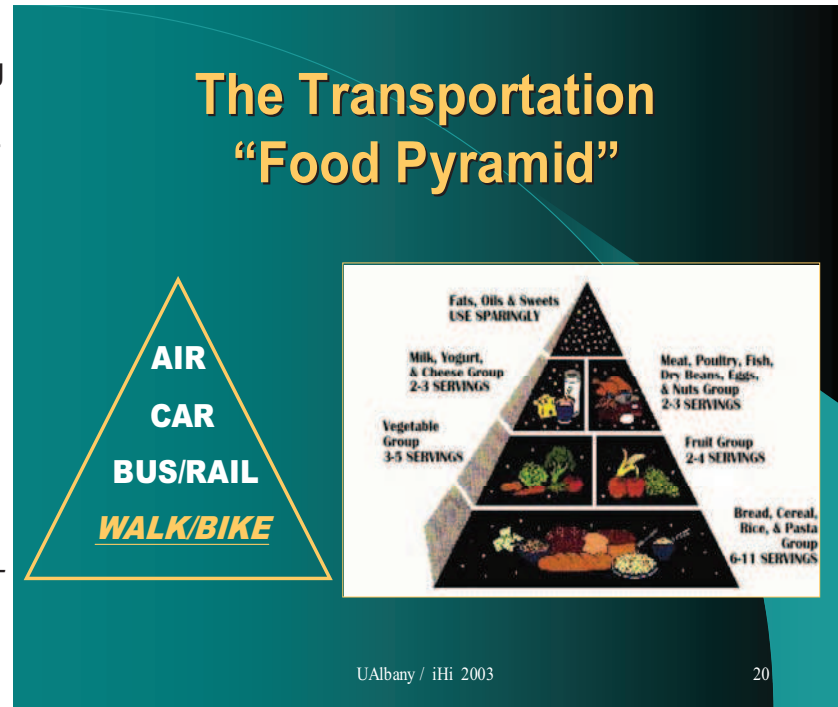
## **Do you know how much your local school district spends on student transportation?**

Many districts allocate more funding on transportation than on physical activity programming! See the NYS Comptroller's Report and select school districts: [http://www.osc.state.ny.us/localgov/datanstat/findata/index\\_choice.htm](http://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm)

Albany County is faced with some important choices for the future. With a population at risk for cardiovascular disease, and with a significant percentage of county tax revenues being used for both transportation and health care, there is a need and an opportunity to increase the community's investment in healthy infrastructure. Projects such as the Patroon Greenway project and CDTC's bicycle Task Force are all part of the solution. Bringing these initiatives together under the umbrella of combining public health and public works will create new opportunities for Albany County, its residents, businesses and visitors.

*The "Transportation Food Pyramid" (Olson, 2003) shows the relationship between a healthy diet and a healthy use of transportation resources.*

*Please Note: The USDA now has a tool online so individuals can customize their own pyramids. Go to: <http://www.mypyramid.gov/>*



### Additional Important Links

Albany County Health Department: <http://www.albanycounty.com/departments/health/>

Albany County Planning Department: <http://www.albanycounty.com/departments/edcp/>

NYS DOH: <http://www.health.state.ny.us/>



For additional information, please contact:

Initiative for Healthy Infrastructure – iHi  
State University of New York at Albany  
Department of Geography and Planning  
[www.albany.edu/gp/ihi](http://www.albany.edu/gp/ihi)



Source: Jeffrey Olson



# Healthy Infrastructure Action Plan / Survey

Thank you for being part of our efforts to connect public health, infrastructure and your community. We'd appreciate it if you would spend a few moments providing us with your opinion on this project.

County Name: .....

1. On a 1 to 10 scale, with '10' being the best score, is this document useful for your community?  
*(please circle your response)*

No 1 2 3 4 5 6 7 8 9 10 Yes

2. On the same 1-10 scale, are you more aware of the connection between public health and infrastructure now that you have read this document?  
*(please circle your response)*

No 1 2 3 4 5 6 7 8 9 10 Yes

3. Will you personally become and advocate for healthy infrastructure in your community as a result of this plan? *(please check  one)*

Yes  No  Not Sure

4. What plans, programs or projects should be added to the plan?

.....  
.....  
.....

5. What actions will your community implement as a result of this plan? *(check  all that apply)*

- Formal adoption of the plan by elected officials
- Increased funding for healthy infrastructure projects
- Formation of a healthy infrastructure task force
- Safe Routes to Schools Program
- New Policy to Include Pedestrian and Bicyclist Facilities



## Healthy Infrastructure Action Plan / Survey

County Name: .....

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6. Completion of a specific project.

**Project name:** .....

7. Other. *Please describe:*

.....  
.....  
.....  
.....

Would you like to receive more information about iHi?  
Please provide us with your contact information:

Name.....

Organization.....

Address.....

Phone.....

Fax.....

Email.....

**Please send your response to:**

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