



S.A.V.E. presents Route 41 plan

The two-lane proposal meets PennDOT's needs; focuses on safety, minimum impacts

S A.V.E. has presented PennDOT with a detailed two-lane alternative plan that:

- ◆ meets all Route 41's needs;
- ◆ provides a safe, feasible, sustainable and attractive alternative that supports the region's land-use goals; and
- ◆ substantially reduces both the severe environmental impacts and the enormous costs of PennDOT's four-lane proposals.

Copies of the 166-page report that describes and illustrates the plan are being delivered to all the federal, state, regional, county and local government officials, both elected and appointed, who are involved in the Route 41 improvement project. The plan was designed by the Vermont-based traffic consulting firm, Smart Mobility Inc., a national leader in regional transportation modeling and design.

S.A.V.E. had the plan prepared for inclusion in the preliminary alternative analysis and the Draft Environmental Impact Statement, the critical process that will decide the fate of Route 41.

"This report presents our argument that a two-lane alternative is superior to the four-lane proposals," writes Dr. Louis A. Kaplan, chair of S.A.V.E.'s board of directors, in his cover letter. *See page 6 for full text.*

Kaplan stresses that the two-lane plan makes Route 41 safe, accommodates other modes of transportation, and provides cost-efficient infrastructure improvements and enough

capacity to meet future traffic volumes.

S.A.V.E. hired Smart Mobility to design the plan as an alternative to PennDOT's proposals – all four-lane highways that include bypasses and massive intersections and flyovers. PennDOT's plans for the 9.8-mile section from Limestone Road (Route 7) to Route 926 would cost about \$150 million to build. The two-lane alternative encompasses the full length of Route 41, from the Delaware state line to Gap.



The two-lane plan for the same section would cost about \$29 million and still meet all the needs identified by PennDOT in its comprehensive analysis of Route 41's future. Included in the cost of the two-lane alternative is a scaled-down bypass around Avondale.

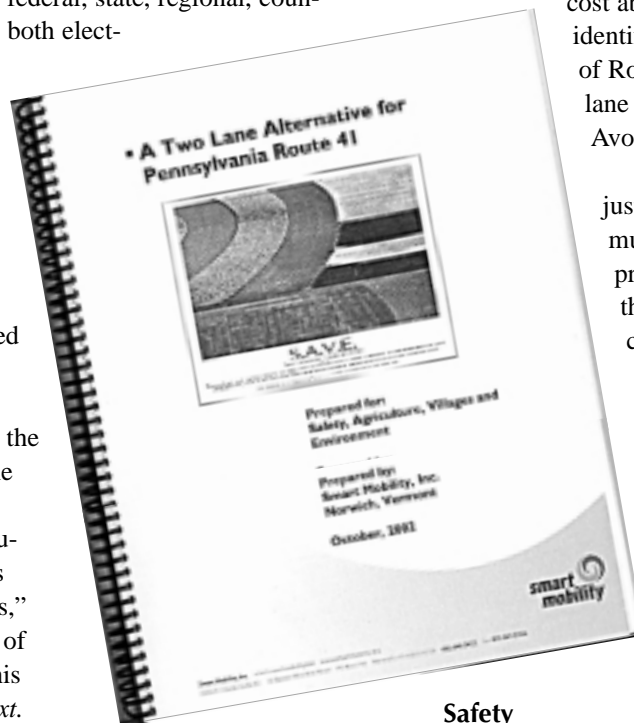
"The Two-Lane Alternative Plan goes beyond just a road design, and incorporates broader community goals of smart growth, sustainability, and preservation of the area's special resources into the plan for Route 41," write the Smart Mobility consultants in the introduction to their report.

Route 41's needs

There are four basic needs – or deficiencies of Route 41 – identified in the Final Needs Study prepared for PennDOT by KCI. These include safety, traffic capacity, infrastructure and modal interrelationships (a term traffic engineers use to mean all forms of transportation).

Safety

The two-lane plan stresses safety. It does so by using a number of design innovations to reduce potential traffic problems that are the main causes of accidents, injuries and fatalities. Traffic-calming



techniques moderate speeds and modern roundabouts calm congested intersections. *See boxes and illustrations.* Textured and colored islands and landscaping are designed to guide and slow traffic and calm intersections. For the stretches of road between intersections a variety of techniques are used to slow traffic and improve safety for all users, including pedestrians, bicyclists and drivers of farm vehicles and Amish carriages. Among the techniques are landscaped roadsides, soil-gravel shoulders that are attractive but stable enough for emergency stopping, and islands along the more developed stretches.

Future capacity

The two-lane plan provides enough capacity and level of service at intersections to meet PennDOT’s traffic forecasts up to the year 2027. And, the single-lane modern roundabouts are not only safer and more attractive; they also do a far better job of keeping traffic flowing than do traffic lights.

The problem with PennDOT’s position, notes the Smart Mobility report, is that it bases its recommendation for four lanes on measures that emphasize traffic speed rather than the more important concern of traffic capacity. *See Volume to Capacity vs. Speed.*

VOLUME-TO-CAPACITY

VS.

SPEED

PennDOT’s highway level-of-service figures that are used to justify the four-lane proposals rely on traffic speeds, which is unsuitable for the Route 41 corridor. The two-lane alternative uses traffic calming to improve safety by slowing traffic, yet keeping it flowing. Moderate speeds of 35 to 45 mph will thus be a sign of success not failure.

The two-lane plan stresses future capacity of Route 41 rather than speed, and it uses the “volume-to-capacity ratio” to determine the road’s ability to serve future traffic volumes. The volume-to-capacity ratio measures the more important matter of whether a road can accommodate the traffic rather than the less important measure of traffic speed.

41 concrete bed, while PennDOT proposes a costly reconstruction of the entire road. Modern “rubblizing” (*see box*) techniques can rehabilitate the roadbed quickly and cost effectively with the least disruption to the environment.

Route 41’s current condition does not justify the need for the massive and total reconstruction that PennDOT proposes, according to the Smart Mobility report.

Modal interrelationships

The two-lane plan would easily accommodate other forms of transportation. Unlike a high speed, four-lane highway, a traffic-calmed two-lane road is designed to be friendly to pedestrians and cyclists, as well as to provide park-and-ride lots and bus transit services.

Design goals

In addition to meeting the Route 41 improvement project’s needs with regard to safety, future capacity, infrastructure and modal interrelationships, the design goals of the two-lane plan include the following.

Compatibility with regional plans

The two-lane plan supports and complements local and regional land-use plans, including Chester County “Landscapes” and the Octorara Regional Economic Development Plan, both of which encourage “smart growth” along the Route 41 corridor.

Infrastructure

The two-lane plan proposes rehabilitating the deteriorated Route

Costs: Two-lane vs. four-lane

PENNDOT FOUR-LANE PLAN (DELAWARE TO R926)

	Cost/mile	Total cost
Chatham bypass – 1.4 miles	\$20 million	\$28 million
Avondale bypass – 2.6 miles	\$20 million	\$52 million
On-alignment widening – 5.8 miles	\$9 million	\$52.2 million
Estimated right-of-way purchase		\$17.5 million
Project total – 9.8 miles		\$149.7 million

TWO-LANE ALTERNATIVE (DELAWARE TO R926)

Avondale bypass – 0.3 miles	\$10 million	\$3 million
Rural rehabilitation – 4.6 miles	\$1.5 million	\$6.9 million
Developed area rehab – 4.9 miles	\$3 million	\$17.15 million
Estimated right-of-way purchase		\$2 million
9.8 miles - from Delaware to R926		\$29.05 million

TWO-LANE ALTERNATIVE (R926 TO R30)

Full rehabilitation, intersection improvements, roundabouts		\$17.75 million
10 miles - from R926 to R30		\$17.75 million
Project total - 19.8-mile full length of R41		\$46.8 million

Estimate for PennDOT’s rebuilding of full length of R41 \$245 million*

*The two-lane alternative costs a fraction of the PennDOT plans and encompasses the full length of Route 41. PennDOT’s plans do not begin to address any of the safety issues north of Route 926.

Minimizing environmental impacts

Major transportation improvement projects such as PennDOT's four-lane proposals for Route 41 induce more traffic and development.

Because reduction in highway travel time makes an area more accessible to employment and services, wider and faster highways inevitably attract more traffic. The two-lane plan addresses the needs of Route 41 without altering regional travel times and accessibility.

In addition, the increased traffic of a four-lane highway would add significant polluting emissions to a region that already faces problems meeting Clean Air Act standards.

Design segments

Although the two-lane plan looks at the entire Route 41 from the Delaware line to Route 30 in Lancaster County, the design has been divided into segments according to the varying needs and characteristics of the corridor.

Route 7 to Old Baltimore Pike (east)

This section faces high development pressure that includes a big box store complex and residential subdivisions. The major intersection, Newark and Penn Green roads, will have roundabouts. The Limestone (Route 7)-Kaolin roads interchange will be redesigned to

provide safer entry for northbound traffic. A single-lane roundabout could be used at the planned big box store complex, and developed areas could be treated with medians to manage access to Route 41.

Old Baltimore Pike to U.S. 1

This is the most developed and urbanized section of Route 41. The two-lane plan envisions medians in the developed areas outside Avondale and traffic-calmed intersections in the borough.

Roundabouts could be used at the intersections of any major new developments, such as the new shopping center that has been proposed adjacent to Route 1.

Long-term improvements include a two-lane bypass around Avondale, most of which will use existing infrastructure and have relatively small environmental impacts. The bypass speed will be 25 mph and there will be at-grade access for existing land uses and intersections. This bypass would have an impact at the northern end at the edge of the floodplain and wetland areas along White Clay Creek, but its impact would be minimal compared to PennDOT's plans.

Roundabouts will be used at the major intersections at U.S. Route 1 – one at each ramp. They will also be used at Old Baltimore Pike (west), at the bypass intersection with State Street, at the southern bypass junction with Old Baltimore Pike and at Old Baltimore Pike (east) where it veers off Route 41 toward Kennett Square.

Roundabouts keep traffic moving safely

Roundabouts are without question the safest form of intersection traffic control, according to a Federal Highway Administration study. The modern roundabout involves a radical revision to the old chaotic traffic circle. It is designed to slow motor vehicles to speeds of under 30 mph, yet it keeps traffic flowing continuously. Roundabouts maintain a higher capacity than similar-sized signalized intersections and lower vehicle delays. The two-lane plan uses roundabouts at major intersections as illustrated along the bottom of these pages.

According to PennDOT's own guidelines: "A well-designed roundabout has the potential to improve the conditions of an existing intersection or can be a highly effective component of a new transportation system. A modern roundabout offers benefits such as increased safety, increased capacity, reduced delay, and calmer traffic. In addition, air and noise pollution can be reduced and the aesthetics of the area enhanced." (From PennDOT's "Guide to Roundabouts.")

Why do roundabouts work so well?

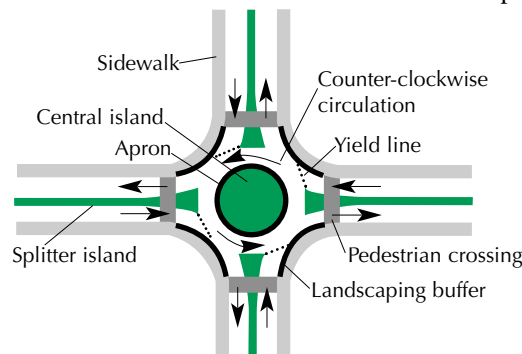
"Because," explains a Sept. 2001 article in Discover Magazine, "they force drivers to make efficient use of

gaps between cars that would otherwise add delays." During peak traffic in a roundabout every space is used unlike traffic signals which can't let cars through an intersection whenever a gap occurs.

The modern roundabout is different from the old chaotic traffic circle. The new roundabout has a smaller radius that forces drivers to slow down. At the same time, it keeps traffic moving as fast as possible and is safer than a signaled intersection which lets traffic through at highway speeds. According to studies,

a pedestrian hit at 50 mph or above has a 22 percent chance of dying. If hit at 25

mph a pedestrian has only a 2 percent risk of death. Roundabout studies also report a 39-percent overall decrease in vehicle crashes and a 76-percent decrease in accidents severe enough to cause injuries, according to the Discover report. Collisions involving fatal or incapacitating injuries fell by as much as 90 percent. If vehicles do crash, the circular traffic flow ensures that they are glancing blows and never head-on or full side-on smashes.



DESIGN FEATURES OF A SINGLE-LANE ROUNDABOUT

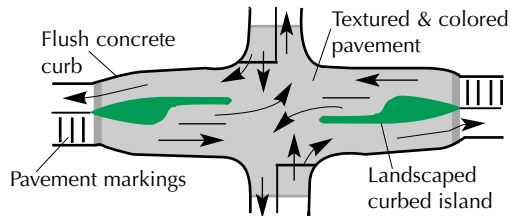
U.S. 1 to Route 926

This is the most rural section of the three southern segments. Traffic-calmed designs are planned for five intersections. A roundabout could be used in Chatham at the Route 841 intersection if traffic grows to levels projected by the Delaware Valley Regional Planning Commission. This would require relocating the currently vacant “Chatham Store” building. A sketch of the traffic-calmed design at the Route 926 intersection appears at the bottom left corner of this spread.

Route 926 to Gap

While this section is not included in PennDOT’s Route 41 improvement project, it is included in the two-lane alternative. That’s because S.A.V.E. believes that the entire corridor should be treated comprehensively and the safety concerns of this accident-prone segment should be addressed.

Roundabouts are proposed at the major intersections of Route 10 in Cochranville, Highland Road at the Octorara Area Schools, Atglen and Christiana. Traffic-calmed designs are planned for the other important intersections.



TRAFFIC-CALMED, UNSIGNALIZED 4-WAY INTERSECTION

These intersections increase the safety and side street capacity by slowing down through-traffic speeds. Features include textured and colored pavement surfaces and curbed islands with landscaping or other textures to channel and slow traffic. Slower speeds reduce accident severity and give drivers more time and options to avoid accidents. The slower speeds of Route 41 traffic will allow side street traffic to enter Route 41 in smaller gaps between oncoming vehicles.

‘RUBBLIZING’

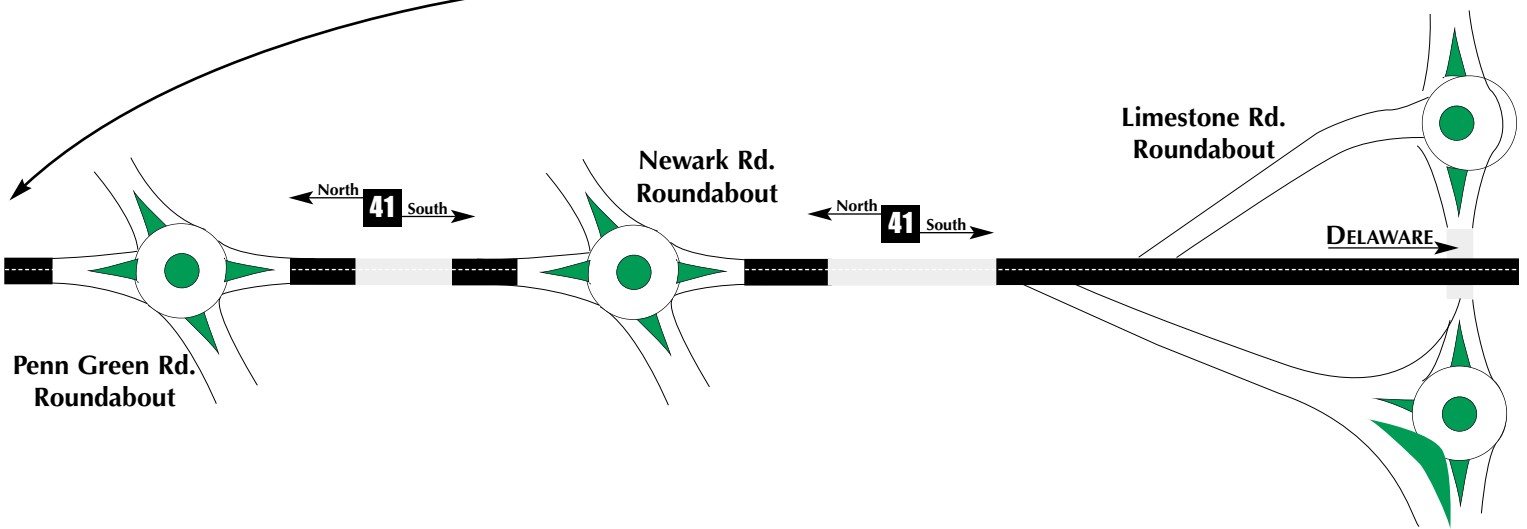
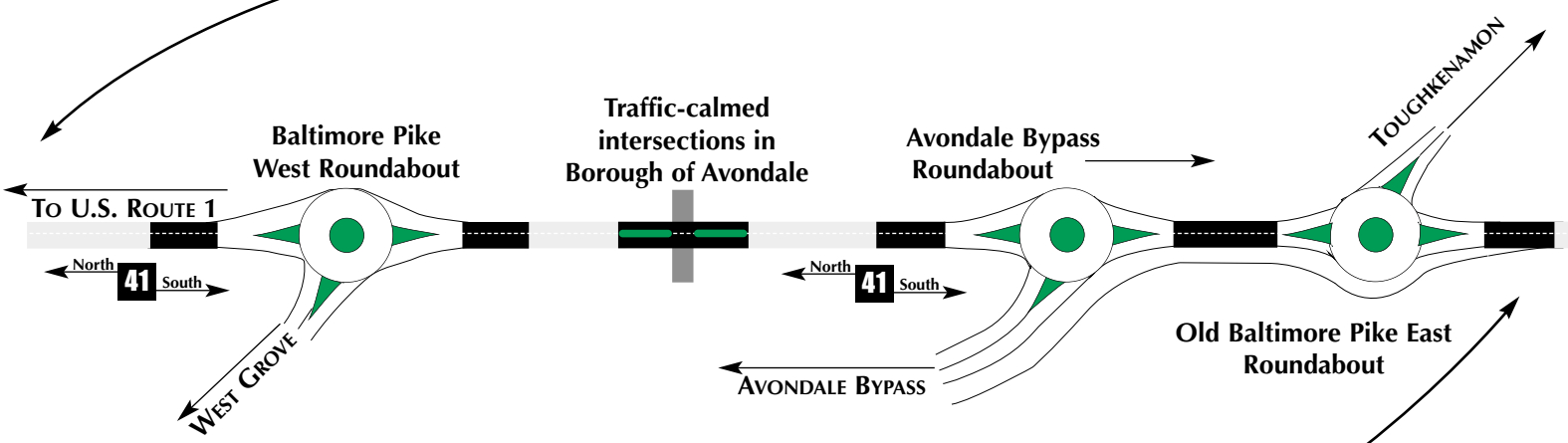
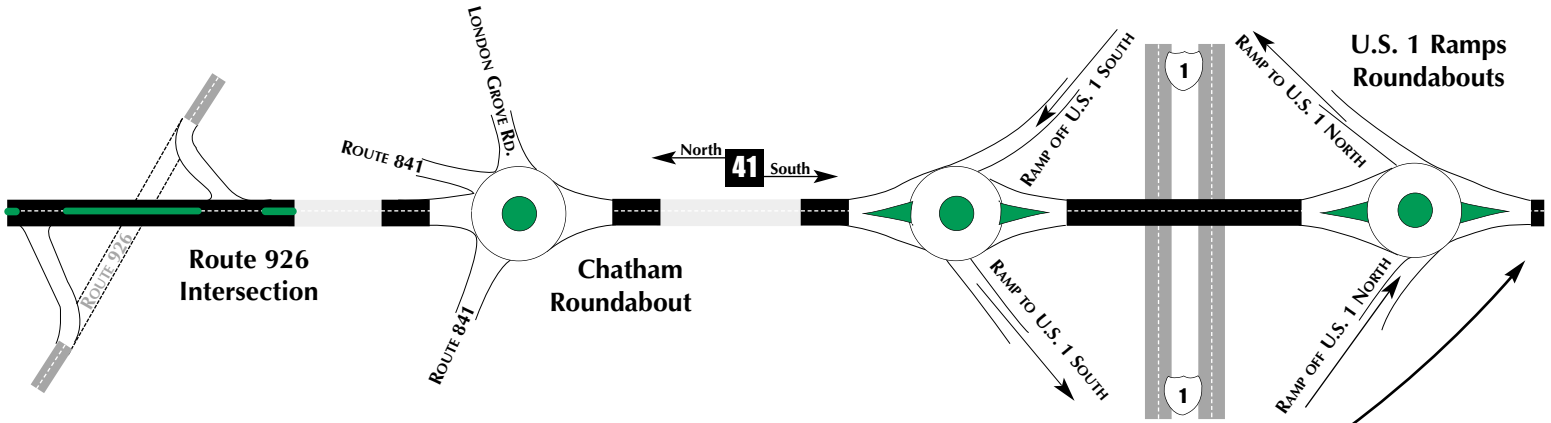
The two-lane plan for Route 41 proposes ‘rubblizing’ the existing concrete roadbed. This innovative process uses a large machine that crushes the concrete in place. The concrete is compacted and overlaid with asphalt. The process is quicker, much cheaper, safer and environmentally more sustainable than PennDOT’s reconstruction as it uses existing materials.

WHERE TO FIND FULL REPORT

The two-lane plan report is available online at www.save41.org. Copies have been given to all local municipalities and will also be available for viewing at these local libraries:

Coatesville Public Library
Chester County Library & District Center
Bayard Taylor Library in Kennett Square
Avon Grove Area Public Library
Oxford Library

A copy is also viewable at S.A.V.E.’s office at 101 East Street Road. (Behind Landhope Farms Willowdale convenience store at the intersection of routes 82 and 926.) Office hours are Monday, Wednesday, Friday from 10 a.m. to noon, and by appointment. Phone: (610) 925-0041. E-mail: director@save41.org



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S . A . V . E .

SAFETY, AGRICULTURE, VILLAGES AND ENVIRONMENT, INC.

November 8, 2002

Michael Girman III
Project Manager,
Pennsylvania Department of Transportation
7000 Geerdes Boulevard
King of Prussia, PA 19406

Dear Mr. Girman:

I am pleased to present you with the enclosed two-lane alternative plan for Route 41. This report was prepared for SAVE by Smart Mobility, Inc. for inclusion in PennDOT's preliminary alternative analysis and draft environmental impact statement for project SR0041. The Final Needs Study prepared by KCI in December 1994 identified safety, traffic capacity, infrastructure, and modal interrelationships as deficiencies that any acceptable plan alternative must fulfill. Our plan meets those needs.

This report presents our argument that a two-lane alternative is superior to the four-lane proposals in making the roadway safe, accommodating future transit service, and providing cost efficient infrastructure improvements, all while including enough capacity to meet future traffic volumes. We maintain that the appropriate performance measure to assess highway mobility for Route 41 should be the volume to capacity ratio, and show that the two-lane alternative can accommodate the traffic forecasts made by DVRPC and used by PennDOT.

Our two-lane alternative plan is consistent with state-of-the-art transportation practices and incorporates the principles of smart growth. I believe that our proposal is consistent with the community goals of residents within the Route 41 corridor and provides a sustainable solution to the problems associated with the need for resurfacing, restoration, and rehabilitation of the existing roadway.

Clearly, the two-lane alternative plan as presented will require more design work to bring it to the same level of site-specific detail that PennDOT has put into the existing alternatives. However, there is nothing in our design concept that is inconsistent with providing traffic calming throughout the corridor, and it is my hope that PennDOT will solicit the input of traffic-calming experts like Ian Lockwood in making the two-lane alternative a national model for roadway rehabilitation.

The outcomes of road expansion projects nation-wide are all too familiar to even the casual observer. Residents of the Route 41 corridor who seek a safe, sustainable solution to the problems of this roadway and cherish the landscape through which it passes desire a different outcome. There is a time to recognize policy failures that have led inevitably to induced traffic and induced growth, and to seek innovative solutions that shift policy towards a more desirable goal. I believe that the two-lane alternative plan is a step in that direction and look forward to working with you and others to advance this concept towards a final project design that will obtain overwhelming community support.

Sincerely,



Louis A. Kaplan, Ph.D.
Chair, S.A.V.E. Board of Directors



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100% soy-based ink on
recycled-content paper.

I/we would like to join or renew membership in S.A.V.E. and support the effort to devise and promote a safe and sustainable plan for the Route 41 corridor at the following level:

- \$20 Individual
- \$40 Household
- \$100
- \$200
- \$500
- \$1,000
- \$5,000/above
- Other

I/we have:

- enclosed a check made payable to S.A.V.E., Inc.
- authorized S.A.V.E. to charge my VISA, Mastercard, AmEx or Discover as follows:

...../...../..... Expires

Signature

- Contacted Jay Meister at Morgan Stanley (610-444-2026) in Kennett Square for donating a gift of securities.

Name..... Municipality

Address

Telephone E-mail

- I/we prefer to be acknowledged as "Anonymous."
- Please contact me/us – we'd like to get more involved!
- I/we have enclosed a matching gift form.

Membership contributions are tax deductible to the full extent allowed by the law.



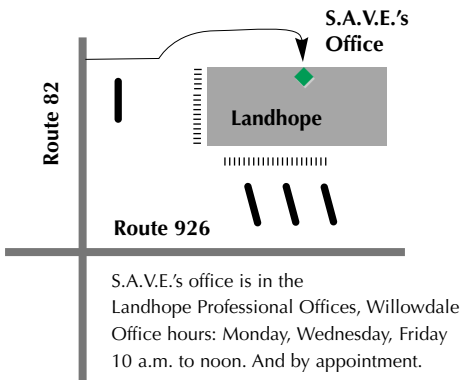
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S.A.V.E.'s vision for a Route 41 that is characterized by public safety, livable communities, revitalized commercial centers, productive farms and permanently preserved open space is gaining widespread support. Organizations that have endorsed this vision include:

- ◆ Brandywine Conservancy
- ◆ Sierra Club, Pennsylvania Chapter
- ◆ GreenSpace Alliance
- ◆ London Grove Township
- ◆ West Marlborough Township
- ◆ Pennsylvania Environmental Council
- ◆ Greater Hockessin Area Development Association
- ◆ Clean Air Council
- ◆ Environmental Defense Fund
- ◆ Elk Creek Watershed Association
- ◆ Piedmont Watershed Association
- ◆ White Clay Fly Fishermen Club