WALKABLE OLEAN

A VISION FOR UNION STREET

FOR: HONORABLE LINDA WITTE, MAYOR, THE CITY OF OLEAN, NEW YORK
MARY GEORGE, DIRECTOR OF PLANNING
TOM WINDUS, COMMISSIONER OF PUBLIC WORKS

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"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody."

Jane Jacobs

IMAGE: CHUCK BANAS
COVER IMAGE: CHUCK BANAS

CONTENTS

LIBRARY OF CONGRESS

PART 1

INTRODUCTION

Olean's Opportunity

What is traffic calming?

OLEAN'S OPPORTUNITY

The City of Olean has beautiful, accessible natural scenery, a thriving college and university, and a grand American main street. The city has the ingredients to restore its civic life, its vitality, and recover its property value.

As with many revitalized towns across the country, the best place for Olean to start is with the downtown district, specifically Union Street, the city's main commercial thoroughfare. Improving the design of this street will enhance citizens' quality-of-life, raise property values, and encourage investment, as well as make the street easier and less costly to maintain.

The purpose of this report is to foster vision and leadership, including a prompt rejection of the status quo. We confront a stark choice: blight or renewal. Fortunately, there are many successful role models, some very nearby in New York State. And, many of the needed changes are already permitted and promoted by state policy.

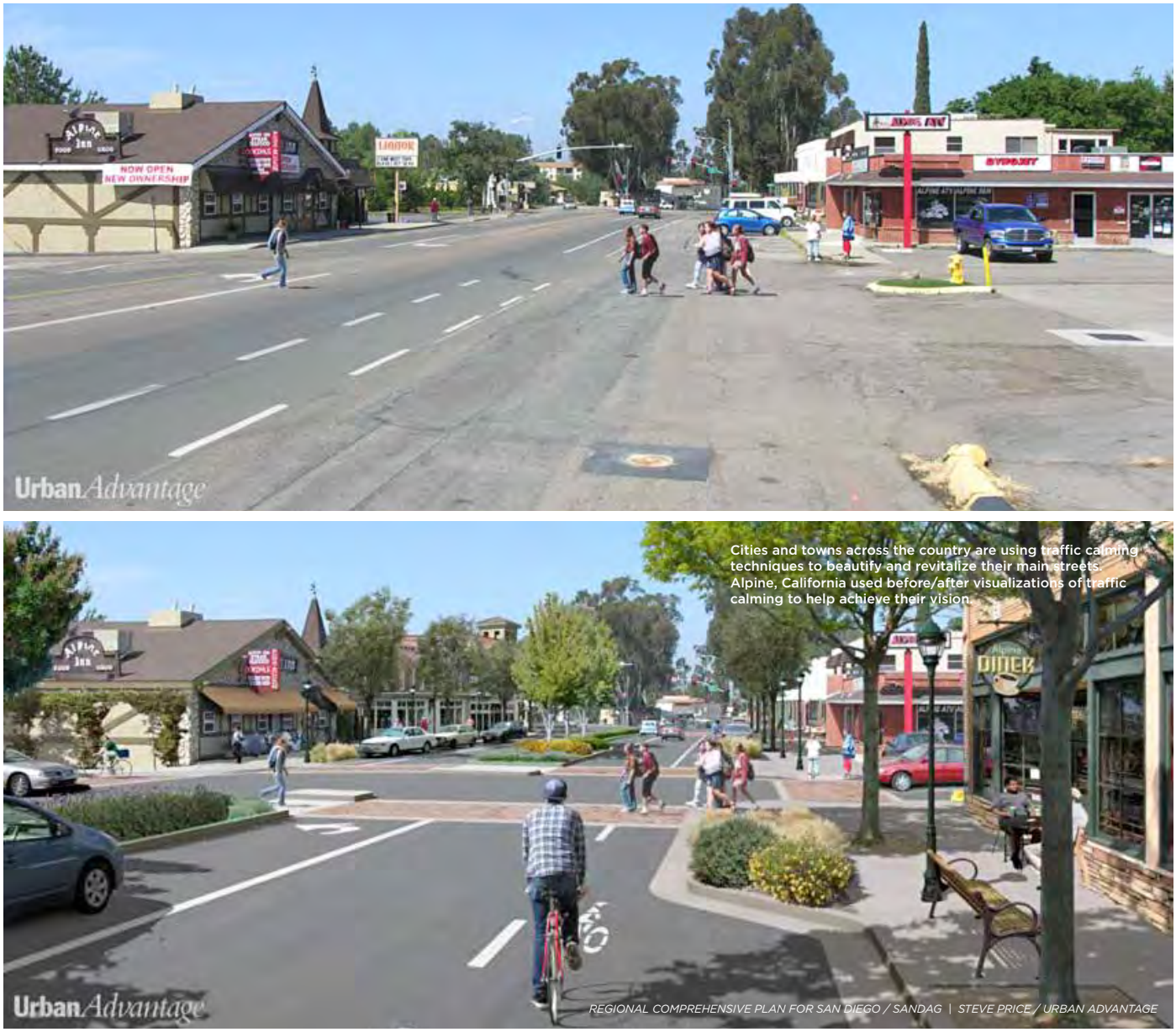
This report proposes a redesign of Union Street, using the principles and practices of traffic calming. To get started, it will help to define some terms, after which we present a case study of Hamburg, NY, a community that recently calmed and beautified Route 62, the main street through their downtown.

WHAT IS TRAFFIC CALMING?

The concept of *traffic calming* refers to the design of streets in order to reduce traffic speeds, improve safety, and enhance quality-of-life. Traffic calming techniques are based on the premise that streets should be designed for more than just cars and trucks; they should be designed for all users.

Certainly, the functions of a street commonly include the efficient movement of cars, but all roadways are not expressways. Streets should not be dominated by the automobile. . Ultimately, the purpose of a street is to serve people—to walk, bike, shop, work, play, meet, as well as to drive.

Many communities nationwide have used traffic-calming techniques as a primary tool to improve whole neighborhoods. More details on these tools and techniques can be found in the Appendix.



Cities and towns across the country are using traffic calming techniques to beautify and revitalize their main streets. Alpine, California used before/after visualizations of traffic calming to help achieve their vision.

REGIONAL COMPREHENSIVE PLAN FOR SAN DIEGO / SANDAG | STEVE PRICE / URBAN ADVANTAGE

DAN BURDEN / WALKABLE & LIVABLE COMMUNITIES INSTITUTE

PART 2

CASE STUDY: HAMBURG, NY

RESTORING VITALITY AND VALUE

Traffic calming techniques address many of the actual causes of blight and disinvestment by calming and civilizing the behavior of traffic, as well as providing room for all of the other desired social and economic activities of the street. In recent years, many towns and cities around the country and in New York State have used these techniques to transform their streets into vibrant, people-friendly places. Property values have surged. Traffic is calmer. People have returned. These efforts have even increased the amount of vehicular traffic that the refurbished streets can handle.

This section will examine, in-depth, one such project. Starting in 2005, residents and political leaders in the Village of Hamburg, NY (just south of Buffalo) used many of today's best traffic calming techniques to restore value and vitality to their village's traditional main street.

"Citizens and businesses like to see a partnership with government that pays them back."

Laura Hackathorn
Trustee, Village of Hamburg

PROJECT BACKGROUND

In 2002, the Village of Hamburg had a choice. NYSDOT was planning a $13 million complete reconstruction of the village's commercial thoroughfare, the roughly two-mile-long stretch of Route 62 known locally as Main Street and Buffalo Street. Former Mayor John S. Thomas, village trustees, and concerned citizens advocated for something better than a standard rebuild project.

Residents formed the "Imagine Hamburg" Committee and worked with the State, pushing for a walkable, traffic-calmed street with roundabouts. They brought in Dan Burden, a civic activist and founder of the nonprofit Walkable Communities, which has helped citizens in over 2,500 cities worldwide make their communities more livable. With Dan's help, the village started an education and outreach campaign, including several "charrettes," or design workshops, where village residents could raise concerns, make suggestions, communicate their values, and collaborate with designers on a vision and plan.

"Our nation is in a transformation. We've been building a lot of the wrong stuff for the wrong reasons for a long time. Hamburg can be an inspiration for the entire nation."

Dan Burden
Founder & President, Walkable Communities Inc.

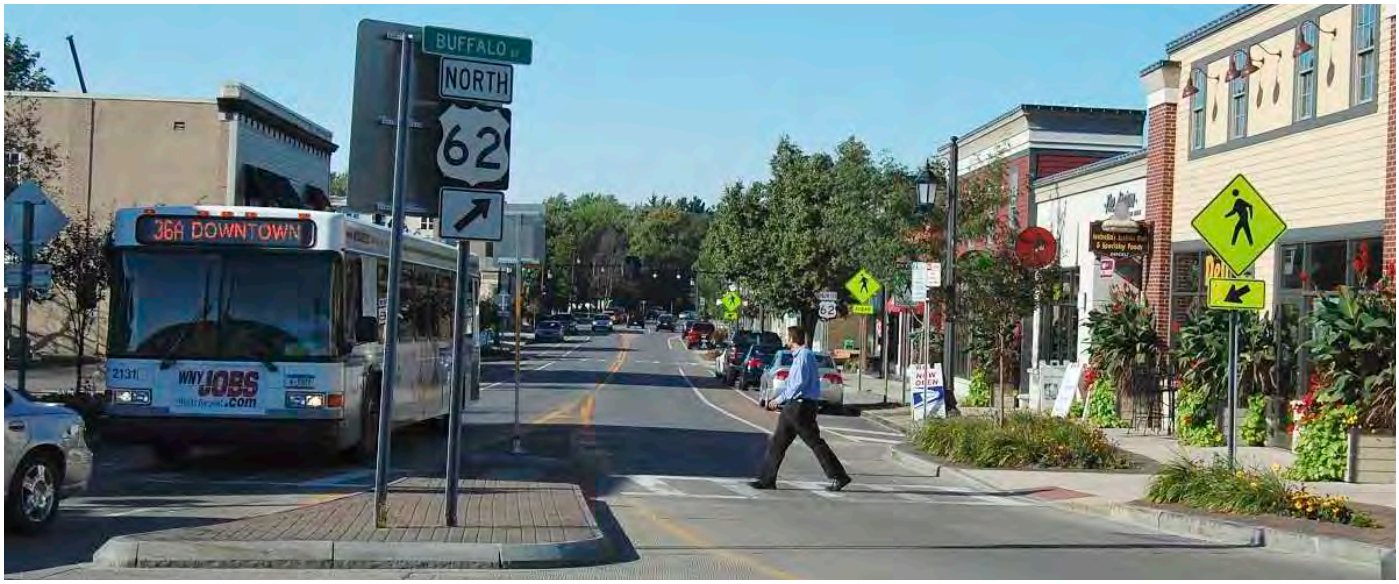
Initially, there was some skepticism. The charrettes allowed participants, including NYSDOT staff, fire and police chiefs, and many residents to overcome suspicion and build a strong consensus.

Construction began in 2005 and was finished by 2009. Four roundabouts replaced traditional intersections, and the stretches of roadway in between were traffic-calmed. The project sparked a renaissance in the village.

Shoppers, strollers, joggers, and cyclists have returned. Investment by developers and small-business owners has surged. And traffic congestion has eased.

In 2010, the American Association of State Highway Transportation Officials, The American Automobile Association, and the US Chamber of Commerce selected the Hamburg roundabouts as one of the top ten transportation projects in the country.

In 2010, the Village of Hamburg project was selected as one of the top ten transportation projects in the country. "I don't think any of us imagined it would make such a difference," said Margaret Rust of Imagine Hamburg.



NEW INVESTMENT, RISING PROPERTY VALUES

The redesign of Main and Buffalo Streets has triggered a renaissance in the Village of Hamburg. Private investment and property values are up.

The original 2006 grant of $200,000 resulted in over $1 million in new private investment.

Since 2005, commercial building permits have skyrocketed from less than 20 to almost 100 per year.

Village leaders knew it was not enough to simply redesign the road, so they took a wholistic approach, understanding that private development also needed to be guided to support the public investments in the streetscape.

Prior to the start of the project, the village developed building design guidelines, incorporating them into the local zoning code. The changes strengthened the traditional business district, with zero-setback rules for new buildings on Main Street, support for upper-floor residential and mixed-use by requiring two-to-three story buildings, and enhancement of the pedestrian experience with glass and signage standards.

The guidelines create the predictability essential to attracting private investment, while maximizing the public investments in the roadway. This kind of preparation helped the village to win several grants under the New York State Main Street Grant Program.[1]

The grants contribute up to 50% of the cost of approved façade improvements and building rehabilitation, paid directly to business owners.

The traffic calming, design guidelines, and grants helped drive investment. Due to effective coordination and support, no businesses were lost during construction.

The state also receives a great return on its expenditure. **The initial $200,000 received in 2006 contributed toward $1.2 million in private investment**. Subsequent grants totaling $600,000 have returned at least an equal amount of new private investment.[2]

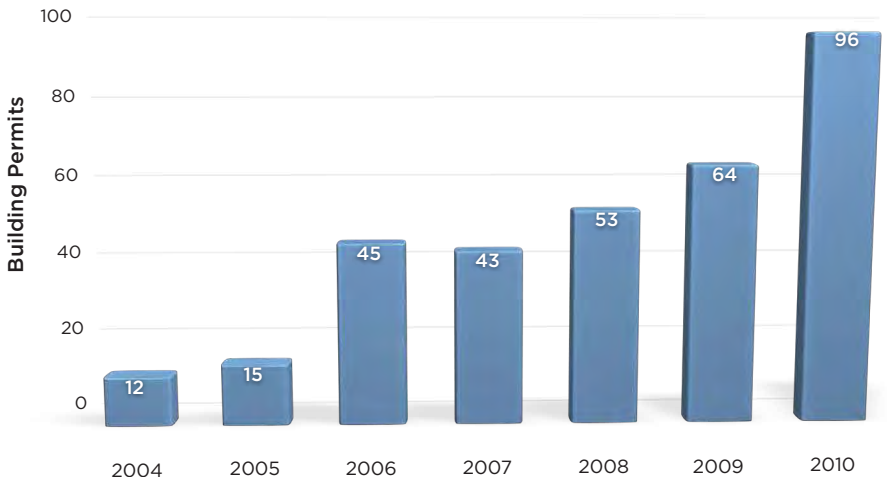
In the last five years, **annual building permits in the village skyrocketed, tripling in 2006, and doubling again in 2010**. Average **property sale value along Route 62 increased by 169%** since 2005.[3]

Over 40 property owners have been assisted so far, with more than **$3.1 million in future building rehabilitation commitments** from over 30 businesses.[2]

Because of these successes, the Village of Hamburg project is recognized by the New York State Division of Housing and Community Renewal as "Best Practices" for the Main Street Grant Program.

Dramatic Increases in Investment

Commercial Building Permits Issued
Village of Hamburg, 2004–2010 [3]



[1] *New York Main Street Program, www.dhcr.state.ny.us/Programs/NYMainStreet/*

[2] *Hamburg Village Newsletter, June 2010, tinyurl.com/hamburgvillagenews-june2010*

[3] *Town of Hamburg, NY, Building Inspection Department, townofhamburgny.com/Building_Inspection.html*

FEATURED ELEMENTS

① ROUNDABOUTS

Perhaps more than any other part of this project, the roundabouts were the focus of much initial skepticism. But an education campaign led by activists and village officials built a productive consensus.

Virtually all skepticism evaporated once people began to use the four modern roundabouts. In line with expectations, the village has seen about a 90% drop in severe accidents and a 60% drop in accidents overall. Construction costs were on par with standard signalized intersections.

② MAIN STREET

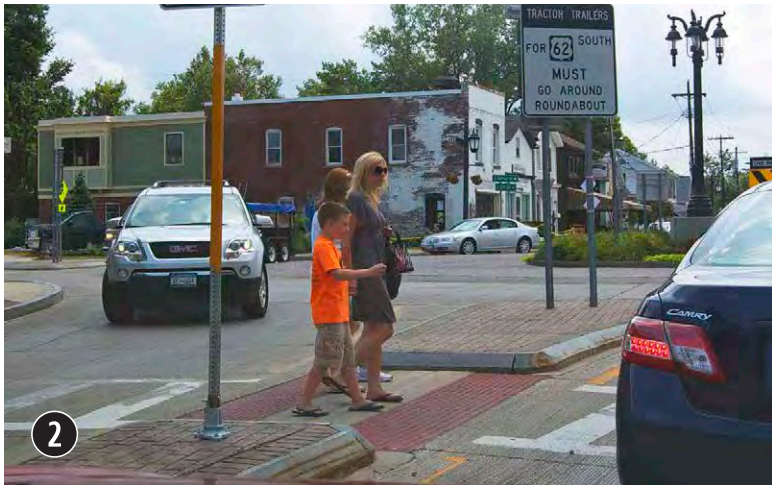
Two driving lanes were removed and the remaining two lanes narrowed, allowing wider sidewalks, two bike lanes (tinted red), and additional street trees.

The village has been transformed into a people-friendly place, and has attracted considerable private investment.

Main Street now handles roughly the same volume of traffic than before reconstruction, but congestion is down about 30%.

"The roundabouts move a lot of traffic. More than the old signals did. And they're easy to plow."

Marc Shuttleworth
Superintendent, Hamburg DPW



ALL IMAGES: CHUCK BANAS

① MID-BLOCK CROSSWALK

A mid-block crosswalk, including curb extensions ("kick-outs") on Buffalo Street. Pedestrians don't have to walk to the corner to cross, and the kick-outs and fog lines tame traffic speeds between intersections. These traffic calming measures have created an environment of civility and mutual respect.

Cars move slowly, pausing for pedestrians, yet traffic moves efficiently. Once dominated by the car, Buffalo Street is now a comfortable place for all users.

② PEDESTRIAN ISLANDS

Islands provide a safe haven for pedestrians, who only need to cross one direction of traffic (and in this case, one lane) at a time.

Slow speeds and good sight lines mean that pedestrians and bicyclists never feel endangered, even at times when there is lots of traffic. Constrained by islands and alerted by pavement markings, motorists are much more alert.

③ FLEXIBLE ROADWAY DESIGN

Flexibility in design is important. Bicycle and parking lanes can do double-duty as a loading zone. Speeds are slow enough so that the many activities necessary for a lively street can coexist.

"There has been a 63% drop in accidents. We used to spend lots of time writing up accident reports and issuing tickets. Now we're able to spend time on more important things."

Dennis Gleason
Village of Hamburg Police Chief

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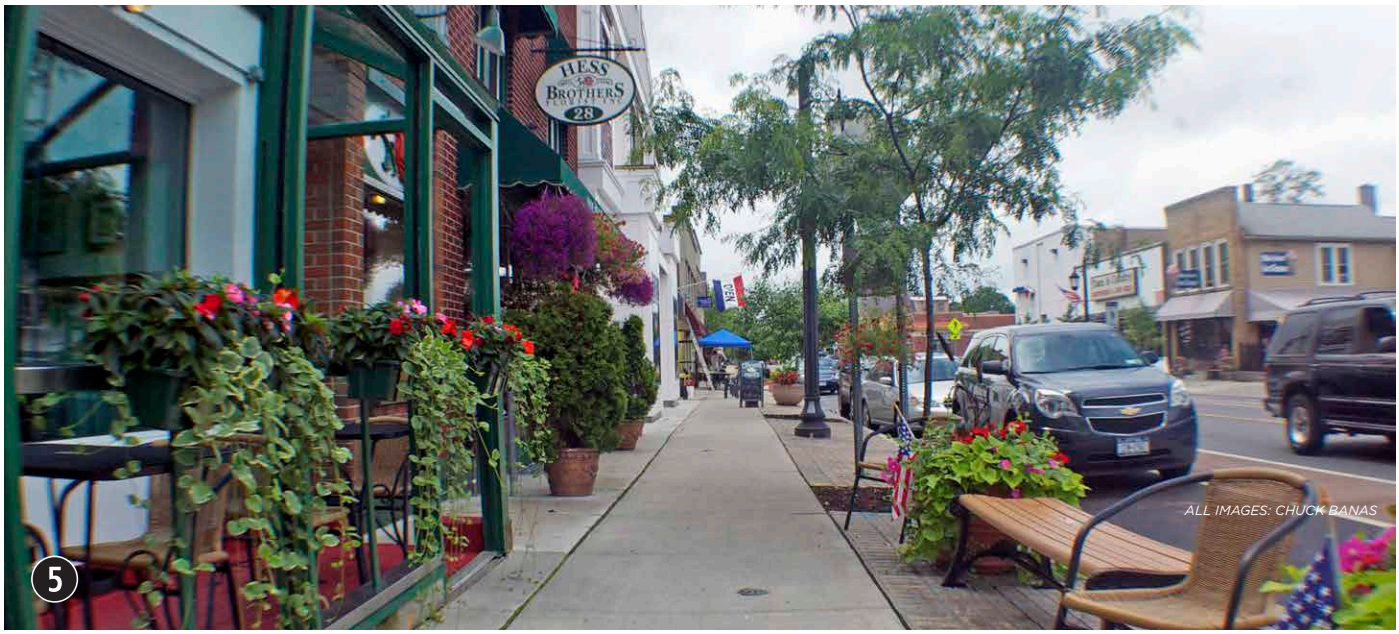

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ALL IMAGES: CHUCK BANAS

④ NEW INVESTMENT

After a period of decline, many village property owners are now investing in their buildings. The village is seeing a boom in both renovation and new construction.

⑤ RENEWED PRIDE

A good example of the successful partnership between business, government, and citizens, business owners have spruced-up their sidewalks and façades.

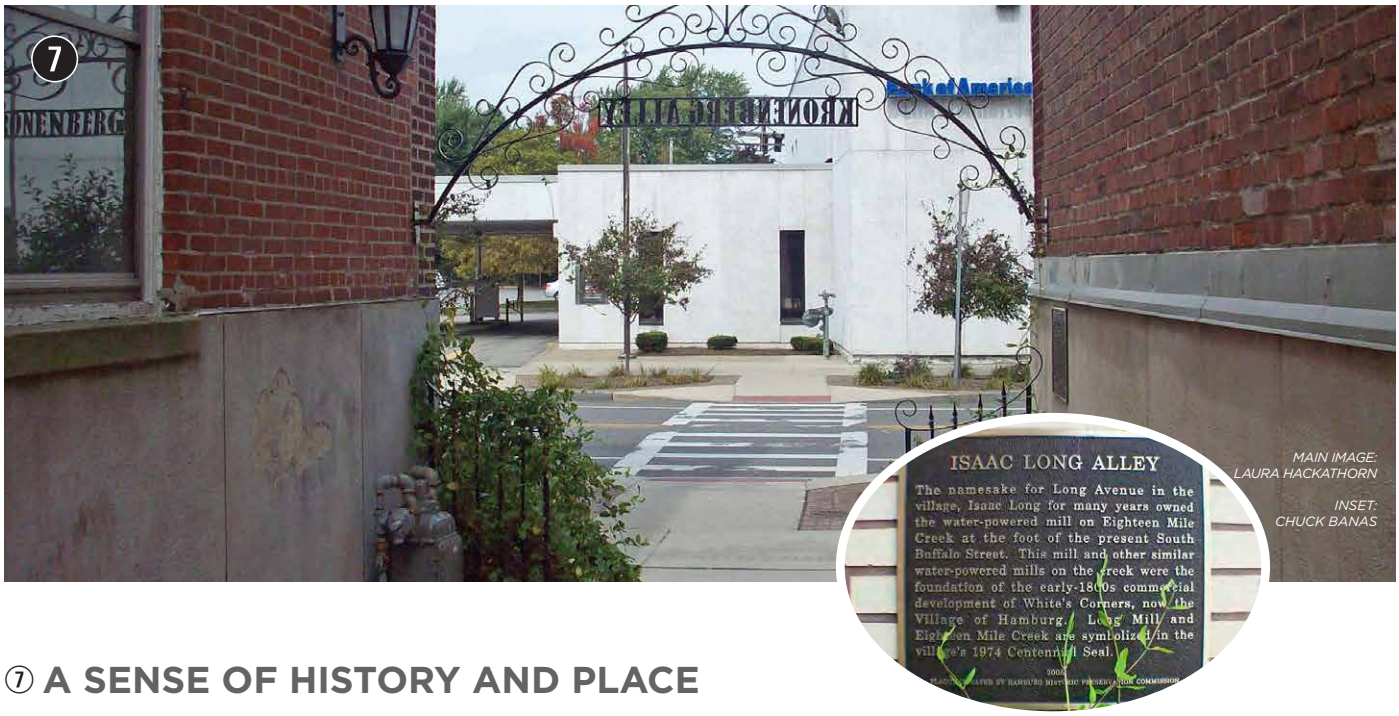
"I've always thought it was an amazing collaboration between government and a group of citizens. It seems to be causing a metamorphosis in the downtown business core."

Paul Gaughan
Hamburg Village Trustee

CHUCK BANAS

⑥ BEYOND THE STREET

Streetscape improvements extend beyond the street itself. In this case, there was a good opportunity to turn an eyesore into a civic amenity. The curb cut for a large parking lot has been traffic-calmed with a "parklet," containing a interpretive marker for a village walking tour.



MAIN IMAGE: LAURA HACKATHORN

INSET: CHUCK BANAS

⑦ A SENSE OF HISTORY AND PLACE

Details matter. The village has embellished several side alleys, which provide access to parking lots behind businesses on Main Street.

Scrollwork arches and historical plaques highlight the village's rich history, and reinforce the walkable character of the street.

ALL IMAGES: LAURA HACKATHORN, VILLAGE OF HAMBURG TRUSTEE

BEFORE & AFTER

MAIN & BUFFALO STREETS

The old four-way intersection was dominated by the automobile, and was notorious for traffic congestion. Dangerous and uncomfortable for pedestrians, blight had started to creep into the village.

The people-friendly redesign of the street has created a boom in development. With the guidance of citizens and town officials, virtually all of the private investment is oriented toward the pedestrian. The center of the village has a renewed identity and sense-of-place.

"I love the roundabouts. There used to be long lines of cars waiting at the light. It was frustrating. Now the traffic just flows. Drivers are more respectful of everyone else."

Jennifer, Employee at Tina's Kitchen

ALL IMAGES: CHUCK BANAS

TRUCKS & LARGER VEHICLES

Buffalo Street is a designated truck route, and the redesign of the roadway takes this into account. With easy curves, generous clearances, and special design features, Hamburg's modern roundabouts easily accommodate trucks and other large vehicles.

Extremely long vehicles like tractor-trailers, fire trucks, or oversized vehicles use a "truck apron," a standard roundabout design feature. A truck apron is a raised area in the center of the roundabout equipped with a mountable curb, usually paved in a differing texture or material.

A secondary benefit of the truck apron is for emergency vehicles. Since the apron area is almost never used by traffic, it also serves as a safe, reliably clear bypass for ambulances and police.

Understandably, though, public safety officials are often initially skeptical of roundabouts, as well as many other traffic calming measures. But for a project like this to be successful, it is vitally important for emergency responders and public safety officials to understand the broader issues, to realize that the interests of emergency responders and citizens are not mutually exclusive.

In fact, the wide streets that facilitate emergency response are themselves a daily source of danger to pedestrians, bicyclists, and motorists.

Fortunately, as studies have shown, virtually all suspicions disappear once the community uses the new roadways and roundabouts (see *Safety & Statistics* in the Appendix).

In this way, traffic calming can help improve the health and safety of all citizens, and is perfectly aligned with the missions of public safety officials and first responders.

CHUCK BANAS

PART 3

VISUALIZATIONS: OLEAN, NY

Current Conditions
Union & State
Union & Front
Union Street Section
Union Street Median

BACKGROUND

When planning a traffic calming project, it helps to examine similar examples. It also helps to use many of the visualization tools available today. This section contains several examples of Union Street today, and what it might look like in the future.

These images were prepared to give the reader a general idea of what is possible, and serve as a starting point for conversation. They are not intended to be the final word on the subject, and it is not presumed that these renderings are the only possible options. Certainly, it remains for the people of the Olean to decide what is best for their own community.

The Good: North Union Street, Downtown

The Not-So-Good: North Union & Main Streets

ALL IMAGES: CHUCK BANAS

CURRENT CONDITIONS

Olean has a grand American Main Street with excellent potential. It is obvious that the community thinks of Union Street as a the center of both civic and commercial activity. Immediately downtown, efforts have already been made to make the street more pedestrian-friendly. The streetscape features curb kick-outs, mid-block crossings, bollards, angled parking, and benches as well as other street furniture.

This is a good start. However, most of the improvements did not go far enough, and this is why Union Street isn't thriving. Travel lanes are too wide, and there are too many of them. There are no medians or pedestrian islands. Bike lanes are too narrow, poorly marked, or not marked at all. At most corners, curb radii are too large. Lighting is inappropriate.

With four travel lanes, each 12 feet in width (and sometimes 14 or 15 feet), left-turn lanes, and wide shoulders, these measurements closely resemble expressway geometries. Indeed, the street as currently designed could easily handle 50,000 vehicles/day, at average speeds greater than 45 mph. This is not only design overkill, it is dangerous, especially for a downtown street that includes pedestrians, bicyclists, and handles less than 12,000 vehicles/day—the same amount, incidentally, as Hamburg's Main Street.[1]

Most of the basic design elements along Union Street encourage an automobile-dominated environment. However, by fixing some of the fundamentals, the street could be transformed.

[1] *NYSDOT, 2009 Traffic Data Report for New York State, www.nysdot.gov/divisions/engineering/technical-services/highway-data-services/traffic-data*

ALL IMAGES: CHUCK BANAS

VISUALIZATION: UNION & STATE STREETS

Currently, this is a standard four-way signalized intersection. Travel lanes are too wide, there are no pedestrian islands, no bike lanes, and overly-generous shoulders. Despite the location in the heart of downtown, the current design most resembles a high-speed rural highway or suburban arterial.

Traffic speeds along both Union and State Streets are high, with prevalent stacking problems, especially in the left-turn lanes.

Instead of a standard traffic signal, a roundabout is proposed. This will ease traffic flow and create a palpable sense-of-place at this important location.

In the visualization, several driving lanes have been removed, and the remaining lanes are narrowed, leaving space for a bicycle/safety lane, additional room for pedestrians, and more street trees.

The center of the roundabout is a good place to put a civic monument, public art, or, as seen here, a lantern and gardens.

ALL IMAGES: CHUCK BANAS

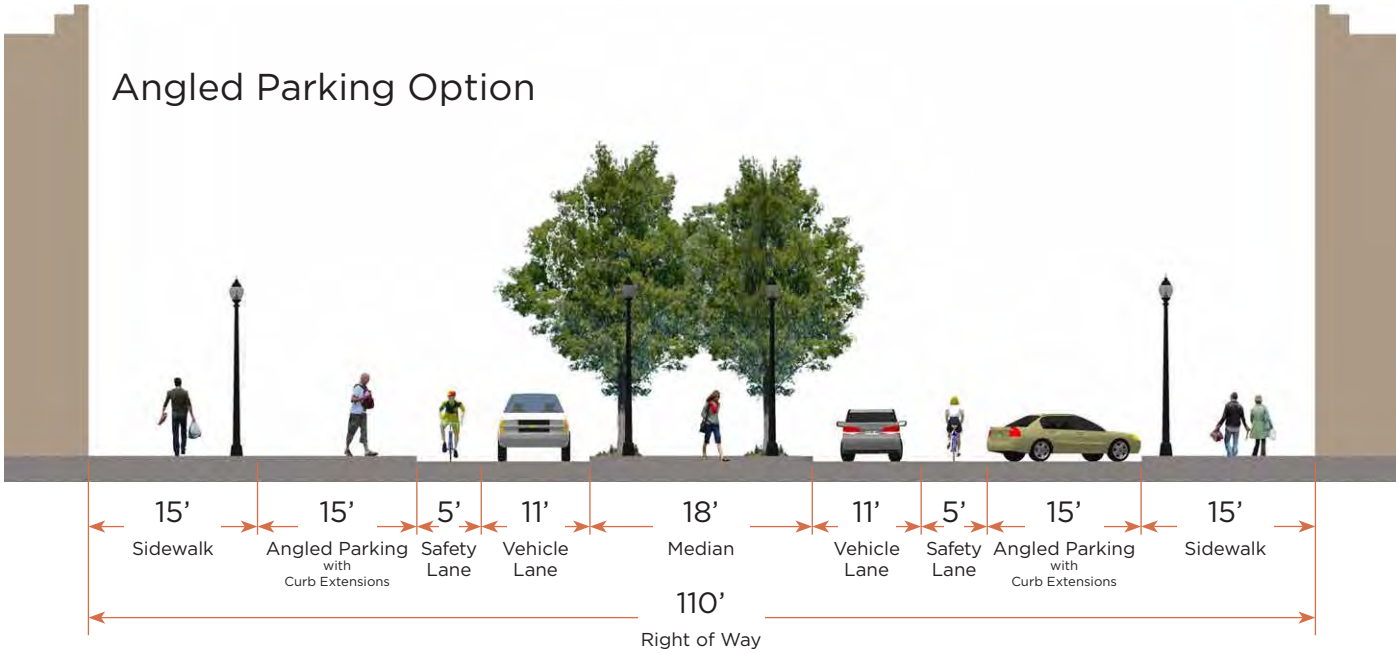
VISUALIZATION: UNION & FRONT STREETS

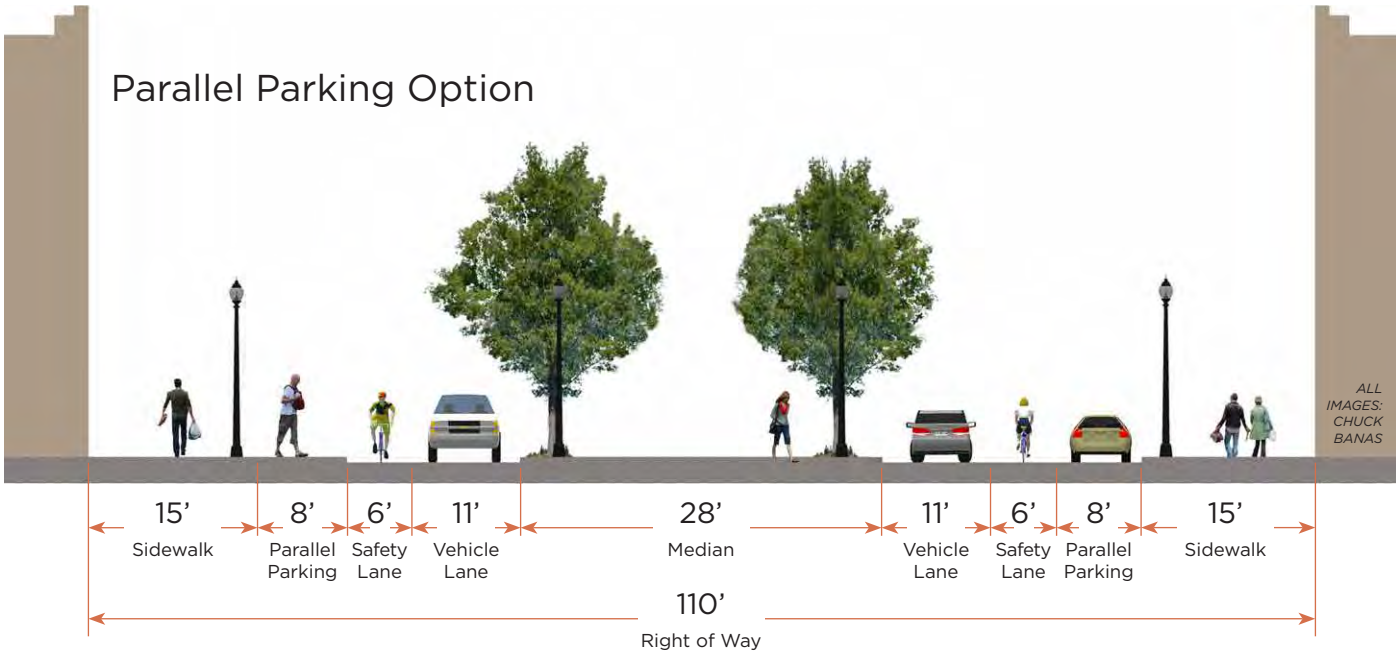
These images depict Front Street at Union Street, looking northwest. Here lies an opportunity to better connect Olean's largest business district employer with the business district.

Olean General Hospital could provide spinoff benefits for restaurants and stores on North Union Street if the design of the streetscape encourages employees and visitors to venture off the Hospital campus.

Currently, this three-way signalized intersection—with overly-wide travel lanes, no pedestrian amenities, and no accommodation for bicycles—acts as a barrier between downtown and the hospital.

If the intersection is improved with a roundabout and facilities for people on foot, it will become a gateway to the city, a point of transition from rural to village driving behavior. A proper redesign will improve traffic flow and end the problem of stacking in the left-turn lane; and it will connect the city to the hospital while opening-up attractive views of Olean Creek.





STREET SECTIONS, UNION STREET

At roughly 110 feet, Olean has an extremely wide main street. While this is a big reason why the street isn't very people-friendly, it also provides a lot of room to make necessary improvements.

There are two alternatives presented here: "angled parking" and 'parallel parking." The angled parking option retains the existing angled parking lanes, an effective traffic-calming tool for wide streets. This might be more economical, as the existing curb extensions and parking lanes would not have to be reconfigured.

The parallel parking alternative shows the narrower parking lanes and a wider median. Notably, parallel parking has been shown to be slightly safer than angled parking, depending on context. As long as traffic speed are sufficiently slow, as they would be with both of these options, there seems to be very little difference between the two configurations in terms of safety.

Capacity is another story. Angled parking provides over twice the number of parking spots per block. While there is currently a tremendous oversupply of both on-street and off-street parking along Union Street, it may be advantageous for business owners to retain the angled configuration in the long-term.

ALL IMAGES: CHUCK BANAS

VISUALIZATION: UNION STREET, DOWNTOWN

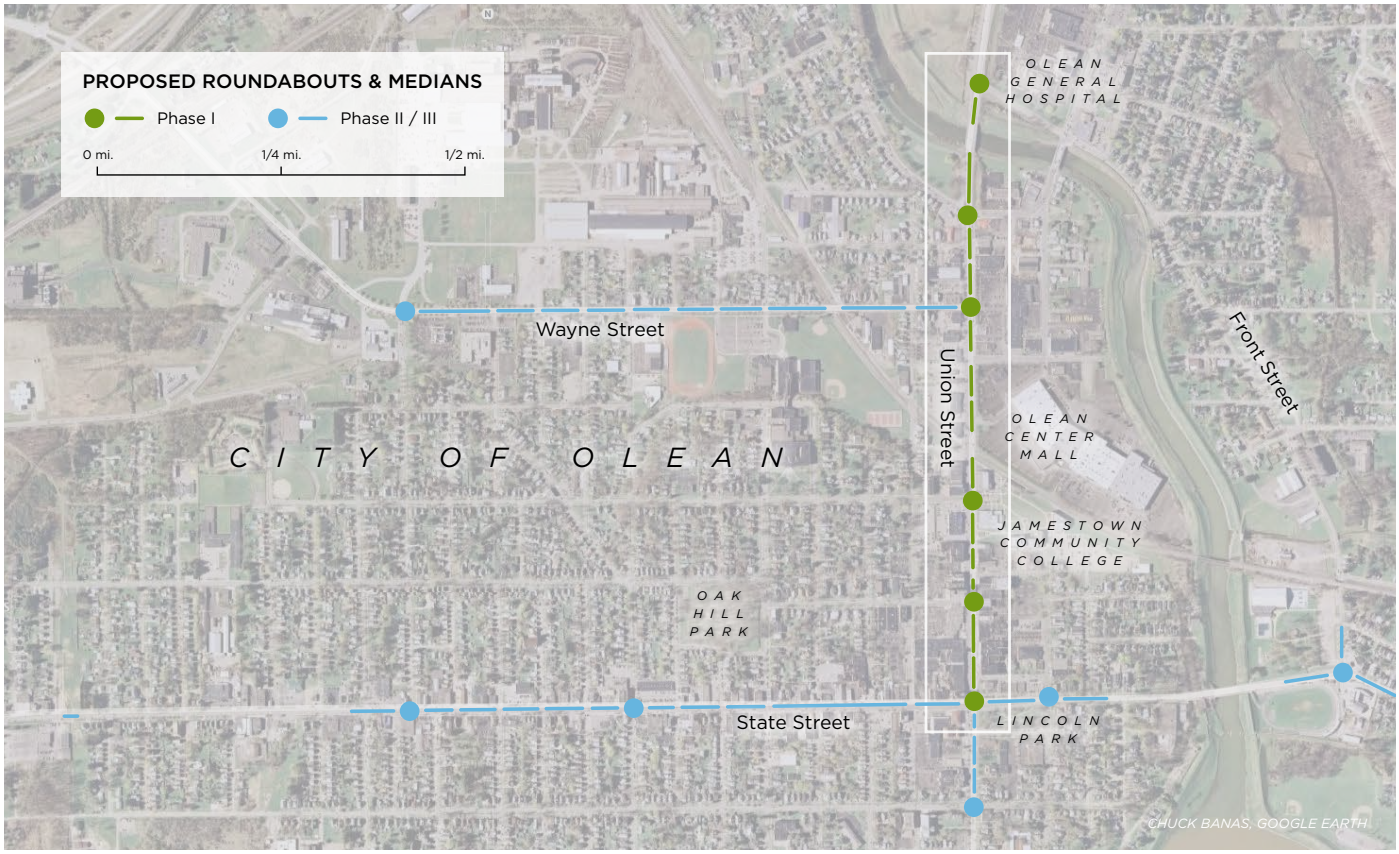
Even including some of prior streetscape improvements, the extreme width of Union Street is evident in these images.

Currently, travel lanes are too wide (12–13 feet) and there are too many lanes, given the relatively low amount of traffic. Pedestrian amenities are inadequate. There are no pedestrian islands. At 50 feet, even with several well-intentioned curb extensions, the crossing distance for pedestrians is too far. The "cobra-head" expressway lighting is inappropriate for this context, and the tall standards and wide spacing promote fast traffic speeds.

There are few people on the street, even fewer who seem to be using the street informally or recreationally. The place suffers from a palpable emptiness, a lack of a sense-of-place, when it should rightly be the center of civic and commercial life.

This visualization in the bottom image fixes the basics. A tree-lined median is added. Two of the four travel lanes are eliminated, and the two remaining lanes are narrowed from 12 feet to 10 feet. There are tinted bike/safety lanes, additional curb kick-outs, and appropriate lighting.

Note that this rendering most closely follows the "angled parking" alternative on the previous page, but the reader can easily envision the parallel parking configuration.



PROJECT OVERVIEW & ESTIMATES

The map above illustrates locations for roundabouts, medians, and other traffic calming measures proposed for the City of Olean. Phase I (pictured in green) is a roughly 0.8 mile-long stretch of Union Street, from Front to State Streets.

A suggested Phase II and/or Phase III (pictured in blue, but not part of this estimate) would be completed at some later date as funding allows, adding more roundabouts, medians, and other amenities at strategic intersections along State, Wayne, and South Union Streets.

Based on national figures as well as data from NYSDOT and the Village of Hamburg, the cost estimate for Phase I is broken down here. The estimate assumes that this project would not require any significant utility work, roadbed reconstruction, or property acquisition. Curb-to-curb widths will not change.

As in the Village of Hamburg, if the project is coordinated with local businesses, institutions, and residents, it can be conservatively estimated that **building permits will double or triple within three years**. Furthermore, **new private investment should total roughly $2–4 million** over the first five years.

If the city wins a Main Street Grant, as Hamburg did, these numbers are likely to be even higher, as they would reflect the direct incentives of the grant program.

	Unit Cost, Low	Unit Cost, High	Qty.	Cost, Low	Cost, High
Roundabouts	$ 50,000	$ 100,000	6	$ 300,000	$ 600,000
Medians, per linear ft.	$ 150	$ 300	3,000 ft.	$ 450,000	$ 900,000
Street lights	$ 3,000	$ 5,000	64	$ 192,000	$ 320,000
Benches	$ 1,500	$ 3,000	40	$ 60,000	$ 120,000
Bike racks	$ 600	$ 1,200	20	$ 12,000	$ 24,000
Bollards	$ 500	$ 750	100	$ 50,000	$ 75,000
			Subtotal	$ 1,064,000	$ 2,039,000
			10% Mobilization Cost	$ 106,400	$ 203,900
			20% Contingency	$ 212,800	$ 407,800
			15% Design Fee	$ 159,600	$ 305,850
				Low	**High**
			Total Estimated Cost, Phase I	**$ 1,542,800**	**$ 2,956,550**

MEN'S HEALTH MAGAZINE, MAY 2009

PART 4

APPENDIX

A History of Traffic Calming
The National Movement
The Tool Kit
Safety & Statistics
Resources

SUPPLEMENTAL MATERIAL

This section is provided for those wishing to delve a little further into the history, methodology, and data of traffic calming.

The final sub-chapter includes a list of online resources for reference.

Keene, New Hampshire. *Like Olean, the City of Keene has a very wide Main Street. ① By the 1960s, the street was dominated by automobiles and asphalt, and showed signs of decline. ② Over successive years, the city used many traffic calming techniques to calm traffic, including tree-lined medians, narrower vehicle lanes, wide sidewalks, curb kick-outs, and textured crosswalks. ③ In the last decade, several modern roundabouts were installed at problematic gateway intersections, ④ All of these design improvements have added tremendous value to the city, protecting property values and helping to drive investment.*

A HISTORY OF TRAFFIC CALMING

The concept of *traffic calming* refers to the design of streets in order to reduce traffic speeds, improve safety, and enhance quality-of-life. Traffic calming techniques are based on the premise that streets should be designed for more than just cars and trucks; they should be designed for all users.

Most streets have three major functions: economic, social, and as a transportation route. Since the middle of the twentieth century, however, the functions of town planning have usually been dominated by traffic engineering, and the social and economic functions of the street were largely ignored. Main streets and other surface streets were often thought of in the same vein as expressways—as places where the only function was to move large amounts of traffic quickly.

> *"The cures for traffic congestion have often been worse than the congestion itself."*
>
> *Anthony Downs,*
> *Noted author and scholar in public policy*

The pattern was the same in New York State as across the country. In the effort to eliminate traffic congestion, once-vibrant main streets were widened and turned into veritable expressways for cars and trucks. Sidewalks were narrowed. In many cases even street trees, considered impediments to traffic, were removed. For the most part, traffic flow did improve, but speeds also increased. Pedestrians no longer felt safe or welcome. This helped to devalue and erode the character of these places. Inevitably, the people and businesses left.

To tame unruly traffic, control devices like signals, stop signs, and speed limit signs were added, but the root cause of the problem—the physical design of the street—was rarely addressed. The decline of many of these streets inevitably continued until their popularity and value decreased to such an extent that the congestion problem was solved by default.

THE NATIONAL MOVEMENT

> *"If you design cities for cars and traffic, you get cars and traffic. If you design for people and places, you get people and places."*
>
> *Fred Kent, Project for Public Spaces*

Those unfamiliar with the term *traffic calming* might recognize its more famous cousin, *Complete Streets*. As part of this movement, states, cities, and towns are passing Complete Streets legislation, and citizens are asking their planners and engineers to build roads that are safer, more livable, and welcoming to everyone—young or old, motorist or bicyclist, walker or wheelchair user, bus rider or shopkeeper.[1] A useful way to understand it is this: if traffic calming is the set of tools, then Complete Streets is the policy that puts those tools into practice.

Another related movement is *Smart Growth*, a highly publicized effort that operates mainly at the level of regional and state policy. States like Oregon and Maryland are best known for their extensive, successful Smart Growth programs. Many other states have passed varying and lesser kinds of Smart Growth legislation, New York State a relative latecomer among them.

Smart Growth recognizes that many of the policy decisions made to improve economies and quality-of-life have the opposite effects. As in virtually every other part of the country, the prevailing development pattern in New York State results in increasing blight in older cities, towns, and villages, along with over development of the countryside. This is combined with a piling on of both public and private debt, increased cost to provide services, and increases in property taxes—often coupled with dramatic service cuts.[2]

The goal of Smart Growth is to promote smarter, less expensive, and more sustainable alternatives to the pattern of sprawling development. Smart Growth encourages growth in developed areas with existing infrastructure to sustain it, particularly downtowns, main streets, village centers, historic districts, and older first-tier suburbs. Smart growth means developing all communities—urban, suburban, and rural—with housing and transportation choices near jobs,

Continued on next page

[1] *National Complete Streets Coalition, completestreets.org*

[2] *Empire State Future, empirestatefuture.org*

West Palm Beach, Florida. *Starting in the mid-1990s, the City of West Palm Beach, Florida implemented a series of traffic calming projects. People and businesses returned. Rents on Clematis Street went from $5 per square-foot to $25, and property values shot up tenfold.*

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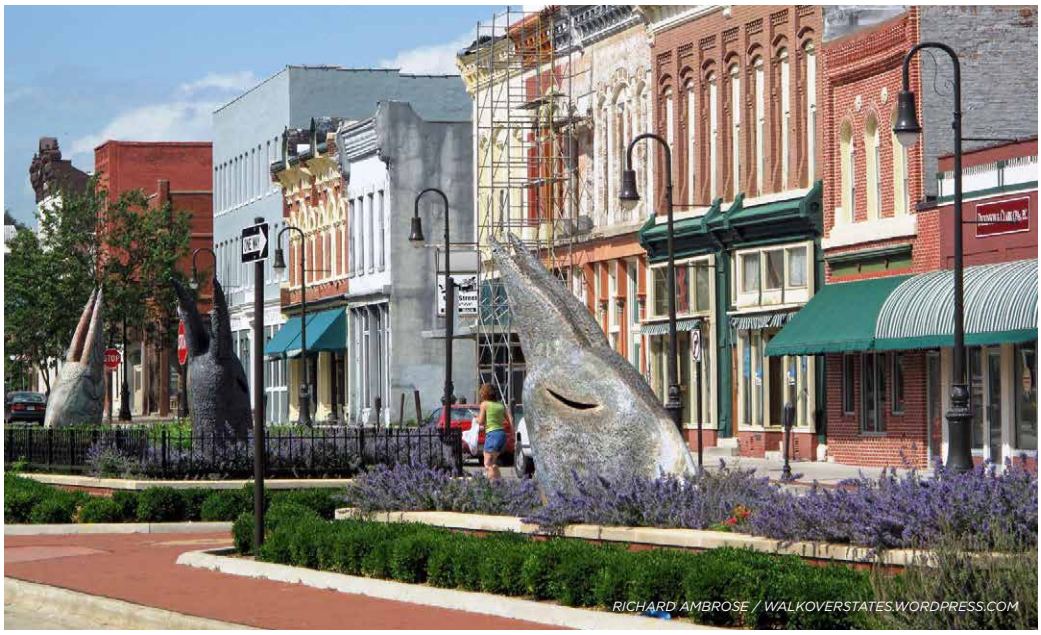
Continued from previous page

shops, and schools. The aim is to build a healthy economy that offers viable choices in transportation, housing, and education while respecting farmlands, open space, and natural and historic resources. In this way, Smart Growth can help restore economic prosperity, as well as reduce tax burdens on government and taxpayers.

New York State treats Smart Growth as a bottom-up, stakeholder-driven process that respects the local right of "home rule" on land-use decisions. It is not a one-size-fits-all solution that is mandated from above, but rather a set of incentives and assistance programs that can be adapted to unique local conditions. The policy focuses limited infrastructure dollars on existing rather than redundant new infrastructure, and emphasizes development that restores the cores of cities, villages, and town centers.[3]

NYSDOT is also in sync with many of these policies; today it is standard procedure for the agency to consider roundabouts at intersections, as well as to examine other "contextually sensitive" traffic calming methods for all road improvement projects.

[3] *New York State Smart Growth Cabinet, smartgrowthny.org*



Council Bluffs, Iowa. *The redesigned Main Street of Council Bluffs features a planted median and public art. The project has spurred renewed pride and investment.*

Galena, Illinois. *The popular, pedestrian-oriented Main Street of this former lead mining town employs many traffic calming tools. Successfully making the transition from its old economy, Galena is rated as one of the top small-town tourist destinations in the Midwest.*

THE TOOL KIT

Dan Burden, a civic activist and founder of the nonprofit Walkable Communities, has helped citizens in over 2,500 cities worldwide make their communities more walkable. Here he explains some of the basic tools of traffic calming, and how these tools can be used to make any community healthier and more valuable.

In practice, however, traffic calming is not a rigid, one-size-fits-all solution. It is merely a set of principles and tools. To an extent, each community presents it's own unique conditions, and differing methods and/or combinations of techniques are routinely used.

"Once you slow the traffic down, all of human performance changes. There is more time to see, to respond correctly. By bringing the speed down, the safest possible conditions are created."

Dan Burden
Founder & President, Walkable Communities Inc.

ADAPTED FROM MEN'S HEALTH MAGAZINE, MAY 2009 / WILL RIZZO & DAN BURDEN

WIDEN THE SIDEWALKS

"Building a sidewalk isn't enough to inspire people to use it. In commercial areas, they should be 10 feet wide with another few feet of landscaping to buffer pedestrians and make them feel safely separated from traffic."

PROTECT BICYCLISTS

"Like pedestrians, cyclists feel safer around traffic when they have their own space on the road. Five-foot-wide bike lanes tell drivers that cyclists have a legitimate place on the road, while adding a visual cue for motorists to slow down."

REDUCE THE NUMBER OF LANES

"Sometimes cities can't widen the roadways to accommodate medians and bike lanes. In that case, I recommend what I call a 'road diet.' Say there are two lanes of traffic in each direction.

"I propose slimming the road to three lanes: one in each direction, with a turn lane in the center. The extra space can then be converted into pathways for pedestrians and cyclists."

GO NARROW

"When drivers are confined by narrower lanes, traffic slows down and motorists are more alert. Every foot removed causes drivers to slow. Most states require 11- to 12-foot-wide lanes, but studies have found that 9- to 10-foot lanes lead to fewer accidents. The secret is building lanes just wide enough for all users."

SEPARATE TRAFFIC WITH MEDIANS

"Medians Invite foot traffic. Pedestrians have to cross only one or two lanes before reaching security, which is much more appealing than having to run across five lanes of two-way traffic."

REPLACE TRAFFIC SIGNALS WITH ROUNDABOUTS

"Roundabouts may force drivers to proceed at 15 to 20 miles an hour as they approach their turns, but they move 30 percent more vehicles than traffic signals do. Roundabouts are also much safer than intersections. Serious crashes, such as head-on collisions, are reduced by about 90 percent."

PAINT FOG LINES

"Visual tricks can make lanes seem narrower. Most fog lines, the shoulder's painted boundary, are four inches wide. On University Place's busiest streets, we made them eight inches. Drivers feel more enclosed by the bolder lines and travel slower."

PLANT TREES

"When trees line streets, they create a sense of security and separation from the road that attracts pedestrians and gives drivers a reference point for speed. Urban trees also increase property values up to 20%. Three trees for $1,000 in front of a $400,000 home eventually return $60,000 in added value."

SAFETY & STATISTICS

Traffic calming projects have increased the safety and value of communities nationwide, as the statistics show. But despite the evidence, these types of projects can often be politically difficult to build because of initial public and professional resistance. However, after construction, skepticism invariably gives way to enthusiasm.

As seen in the graph at top right, the Transportation Research Board found that public attitudes changed significantly for the better after roundabouts were constructed.[1]

In terms of safety, keeping speeds low is the primary goal. At slower speeds, both motorists and pedestrians have the time and space to make the correct decisions. The importance of slow speeds is evident from the graph at bottom right. The National Highway Traffic Safety Administration measured pedestrian injuries and impact speeds and found a significant difference in results between 20 and 40 miles per hour (mph). At 40 mph, the chances of fatality are 85%, and at 20 mph on 5%. Also, at 20 mph, 30% of cases resulted in no injury, with no uninjured cases at 40 mph.[2]

For these reasons, practically all traffic calming projects target a design speed of under 30 mph, preferably 25 mph or less in an urban area such as a main street.

Roundabouts are frequently one of the most controversial tools in the traffic calming kit, but the numbers speak for themselves. Roundabouts reduce accidents overall, and nearly eliminate serious, high-speed impacts.

In a 2005 safety report on roundabouts, the Insurance Institute for Highway Safety found a significant improvement in both safety and traffic flow after roundabouts replaced standard signalized intersections.[3]

Specifically, the study found:

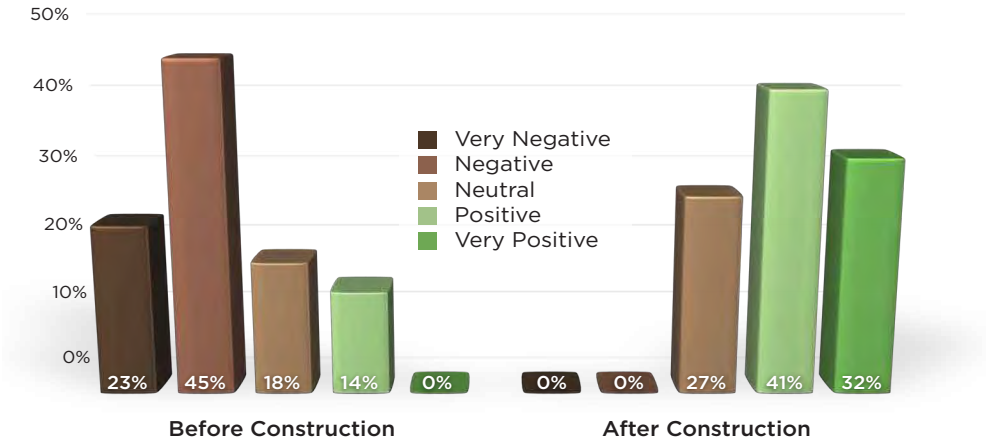
- 40% overall decrease in crashes;
- 75% decrease in injury crashes;
- 90% decrease in fatal/incapacitating crashes; and
- 74% reduction in traffic delays.

Cost is also a common concern, and the statistics again favor roundabouts, even when increased property values aren't factored in. Construction costs range from as low as $10,000 to retrofit an existing intersection (with no grading or infrastructure work) to about $500,000 for a large, brand-new roundabout involving major drainage and grading.[1]

The life-cycle cost savings of a roundabout is considerable. Initial construction costs are on par with standard signalized intersections, but maintenance costs are reduced by more than 50%.[4]

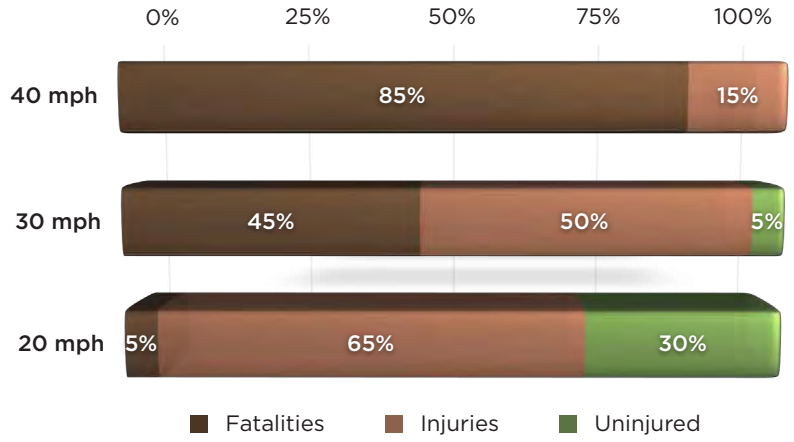
Using is Believing

Public Attitude Toward Roundabouts
Before & After Construction[1]



Slower is Safer

Pedestrian Injuries vs. Impact Speeds[2]



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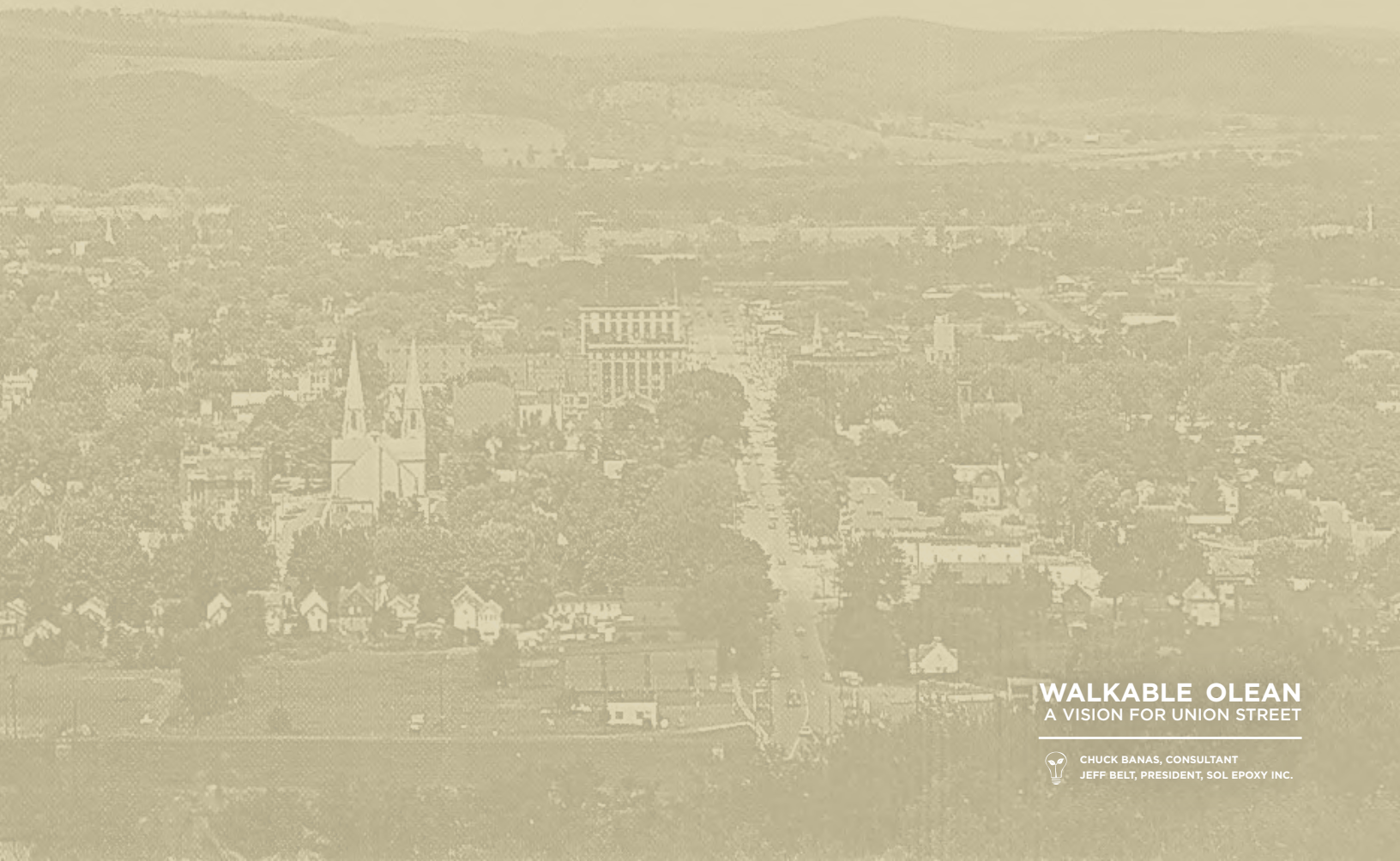

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CHUCK BANAS, CONSULTANT
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