Route 190 Corridor Study

A Multi-Faceted Approach

Prepared by:
Robert P. Jurasin, P.E., Wilbur Smith Associates
Herbert S. Levinson, Transportation Consultant

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ABSTRACT

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A Multi-Faceted Approach

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Route 190 is an east-west arterial in the suburban communities of Enfield and Somers in northern Connecticut. The ten-mile corridor passes through areas of different character – the western end is commercially developed with a connection to Route I-91 and the eastern end is rural. The corridor passes through four village areas, three of which are designated as National Historic Districts. This paper summarizes the key results of the Route 190 Corridor Study conducted for the Capitol Region Council of Governments.

The study evaluated traffic conditions and suggested improvements to assure future mobility and to preserve the historic character of the four villages. Recommendations included traffic engineering, bicycle and pedestrian improvements.

The traffic forecasts indicated that there would be no need to widen Route 190. The realignment of intersection approaches and provision of turn lanes will provide necessary capacity increases.

Extensive attention was paid to pedestrian and bicycle needs. Existing problems and concerns were investigated. Recommended spot improvements included addition of crosswalks at several intersections, wider shoulders for bicyclists, and new sidewalks in several locations. The study recommends sidewalks or multi-use trails to connect village centers with a major town education and recreation complex. A conceptual plan was also developed to complete a gap in the facilities available to bicyclists and pedestrians, involving crossing the Route I-91 corridor and providing links to existing facilities on the eastern side.

A special feature was development of plans for the four village areas that combine transportation improvements with other treatments to strengthen village character. These include sidewalk treatments, street furniture, special lighting and gateway treatments with signs and special paving. The realignment of approaches to one intersection affords the opportunity to create a small "village green" that will enhance the sense of place in that village. One local road would actually be narrowed specifically for traffic calming purposes.

The study addressed access management for the two communities in several ways. First, access management was incorporated into recommended improvements, by closing some driveways or by planning for future consolidated access in undeveloped portions of the corridor. Secondly, the local planning, zoning and subdivision regulations were reviewed and recommendations were made to strengthen the ability to control and manage access.

Two general approaches were taken: possible overlay districts, for which special regulations were developed, and a more general incorporation of access management provisions into town-wide regulations.

The corridor study was conducted with an extensive public and community participation process. Local Advisory Committees (LACs) were established for each community; they met throughout the study to review technical work, consider alternative and give policy advice. The LAC consisted of municipal officials, citizen and business groups, as well as people concerned with historic preservation and environmental matters. The Connecticut Department of Transportation (ConnDOT) also served on the LAC. Three public meeting were held in each community to listen to ideas and concerns, as well as to review alternative improvement schemes. Three newsletters were distributed prior to the public meetings to explain the alternatives and encourage attendance at the meetings, particularly among property owners in the corridor.

The public involvement program was effective in building consensus for recommended improvements. Concepts for improvements evolved as they were presented for review and comment. Discussion at LAC meetings was key to reaching consensus on improvements that involved closing or limiting access to some streets, rerouting of traffic through residential areas, or where taking of property will be necessary to provide room for improvements. Project concepts often included additional features to address existing problems, such as provision of off-street parking and drainage improvements. In some cases, more than one alternative was carried forward to the design stage, recognizing that more detailed study would be necessary.

The communities have adopted the overall corridor improvement plans, and the Connecticut Department of Transportation is planning to implement several of the recommended projects.

The study indicates that a corridor improvement plan can be implemented for two-lane rural roads, and that such a plan can also extend beyond the immediate corridor.

ROUTE 190 TRANSPORTATION CORRIDOR STUDY

A MULTI-FACETED APPROACH

The Connecticut Route 190 Corridor Study in the Towns of Enfield and Somers, was funded by the Federal Highway Administration and the Connecticut Department of Transportation, and administered by the Capitol Region Council of Governments. The Study was undertaken by Wilbur Smith Associates with the assistance of Planimetrics, Herbert S. Levinson, Rumney Associates, Patel Engineering and United International Corporation.

Connecticut Route 190 is the primary roadway serving the villages of Hazardville and Scitico in Enfield, and Somersville and Somers Center in Somers. It passes through developed areas, historic town centers and countryside, linking these areas with I-91 and other key north-south roads. See Figure 1. These village centers have a long and rich history of settlement and architectural development. The U.S. National Park Service has designated three of the four village centers—Hazardville (Enfield); Somersville and Somers Center—as National Historic Districts, although none of the villages has a historic designation from the State of Connecticut.

Objectives and Approach

The principal mission was to improve safety and mobility along this 10-mile roadway section while preserving and/or enhancing the historic character and economic vitality of the communities it serves. The Final Plan is the result of a collaborative effort among local residents, local officials and regional and State planners. This effort was guided by two Local Advisory Committees, one for each town. The main objectives were:

1. To evaluate present and future traffic and safety conditions in the two towns and along the study corridor;
2. To develop, assess, and recommend safety and access management improvements;
3. To identify and recommend pedestrian/bicycle and public transport improvements; and,
4. To functionally design the improvements using Context Sensitive Solutions (CSS) that will preserve the character of the historic village centers, improve safety, and reduce congestion.

A Cooperative Approach. The study was conducted cooperatively with the two towns, through an extensive community participation program. This program included:

- A Steering Committee composed of representatives of both Enfield and Somers;
- A Local Advisory Committee in Enfield and another in Somers to provide guidance, review study reports and proposals and provide feedback;
- A series of Public Information meetings to share information with and receive comments and suggestions from the public; and
- A series of Newsletters to update the public on the progress of the study and to alert them to upcoming meetings.

These elements were supplemented by informal meetings between the study team and town government officials, as well as meetings with concerned citizens and property owners.

Study Steps. The key steps included:

- Conducting orientation meetings at the start of the study;
- Reviewing planning documents and previous studies;
- Conducting field reconnaissance investigations, and collecting traffic data;
- Developing and assessing existing and projected future land use, and transportation conditions and opportunities;
- Developing, assessing and presenting transportation safety and access management strategies;
- Including input by the Local Advisory Committees, stakeholders and community groups at informational meetings, and through direct communications; and,
- Preparing Recommended Transportation and Access Management Plans for the two towns.

Existing Conditions

Transportation conditions and opportunities along the Route 190 corridor relate to its physical setting, history and settlement patterns. The western part of the Study Corridor, located just east of I-91 in western Enfield, contains several shopping malls—the roadway provides two through travel lanes each way that are separated by a raised median. Access is well managed, and traffic signals are coordinated.

Throughout the rest of the corridor, Route 190 is mainly a two-lane roadway that passes through the village centers of Enfield and Somers and several rural areas. Left turn lanes are provided at some of the 20 intersections of primary concern; of which 14 are signalized. Sidewalks are provided in the western section of Route 190 near Enfield Square, in the Village of Hazardville in Enfield, and in Somersville and Somers Center.

On-street parking is prohibited along most sections of Route 190 of the corridor. Parking is allowed only in a portion of the Village of Hazardville and in Somers Center.

Posted Speed Limits – The posted speed limit for Route 190 ranges from 30 to 45 miles per hour. It is 45 mph along the four-lane section adjacent to shopping malls in the western end of the corridor, and where development is sparse in the eastern end of the corridor. In the town centers, the speed limit is 30 to 35 mph.

Traffic Signals – Traffic signal locations, cycle lengths, and coordination features are shown in Table 1. Traffic signals are coordinated during peak use periods between Phoenix Avenue and Palomba Drive (five signals) at the western end of the corridor. They operate on an 80-second cycle during the A.M. peak and a 110-second cycle during the P.M. peak.

Signals in the rest of the corridor are coordinated only at few closely adjacent pairs of intersections in Hazardville (South Road/Elm Street) and in Scitico (Route 191 and Taylor/Scitico Road).

Travel Times and Service Levels – Travel time studies were conducted during peak and off-peak periods. The overall travel times were 16.3 minutes westbound in the A.M. peak, 15.5 minutes westbound in the off-peak (3:00 P.M.), and 19.7 minutes eastbound during the P.M. peak. These correspond to speeds of 36, 37, and 33 mph.

Route 190 signalized intersection service levels—as measured by HCM analysis procedures indicate that several intersections operate at service levels D and E (and one at F) during peak periods. The higher service levels were mainly at locations where through traffic must share lanes with vehicles turning left.

Safety – Between 1993 and 1998, some 1,461 accidents were recorded in the corridor. Property damage accounted for 70%, injuries 29%, and fatalities 1%. Accidents were concentrated in the western sections of the corridor where traffic volumes, cross traffic, and turning movements were the greatest.

Bus Service – Fixed route bus service in Enfield is provided by the Pioneer Valley Transit Authority (PVTA) operating out of Springfield, Massachusetts. The Connecticut Department of

Transportation provides commuter service between downtown Hartford and the Park-and-Ride Lot in Enfield Commons.

Assessment – Most sections of Route 190 generally function well. However, there are several offset and congested intersections, multiple driveways close to each other, on-street parking, lack of dedicated left-turn lanes at key locations, inadequate pedestrian and bicycle facilities, and locations with sight distance restrictions. Consequently, several specific locations have high crash accident frequencies and/or peak-hour congestion.

Future Traffic Volumes

Continued population and employment growth in the corridor will result in a 15 to 20 percent increase in average daily traffic volumes by Year 2025. Table 2 gives actual 2000 volumes and anticipated 2025 volumes along key sections of roadway in Enfieldand Somers; in both cases, volumes decline substantially as Route 190 proceeds from west to east. The 2025 projected volumes were furnished by the Capitol Region of Governments.

Anticipated 2025 peak-hour traffic volumes at key locations are given in Table 3. The peak hour one-directional volume in the two lane sections of Route 190 would range from about 400 to 905 vehicles per hour.

These anticipated traffic volumes will require increased capacity at several key intersections. Adjustments in traffic signal timing and sequences, provision of left-turn lanes at signalized intersections, and installation of traffic signals at several stop-sign controlled intersections will largely alleviate anticipated Year 2025 capacity deficiencies.

Recommended Transportation Plans – Objectives and Overview

Separate transportation plans for Enfield and Somers reflect the consensus achieved with the two communities on goals and improvements. The plans reflect these basic objectives:

- They address mobility, environmental and safety concerns;
- They preserve the rural character of much of the area, and enhance the historic village centers. They apply context sensitive design solutions to transportation improvements. These complementary actions include pedestrian/bicycle strategies and streetscape enhancements in the village centers; and,
- They emphasize transportation system management actions that can be easily implemented and are cost-effective. Improvements are generally integrated within the

existing Route 190 cross-section with minor widenings to provide protected turning lanes and suitable shoulders/bicycle lanes. They build upon and incorporate the programmed improvements at the Route 190 intersections with Palomba Drive and with South Road/Elm Street in Hazardville; and the ongoing streetscape improvements also in Hazardville. Widening to provide multi-lane operations throughout the corridor was specifically not advanced.

Recommended Plan in Enfield

The transportation plan includes improvements for each of the following four distinct areas in Enfield:

- The regional commercial area between I-91 and Palomba Drive;
- The transitional area between Palomba Drive and the Village of Hazardville;
- The Village of Hazardville; and,
- The Scitico commercial area.

Each area has a different set of land uses, traffic volumes, roadway conditions, and pedestrian concerns. As a result, the types of improvements required also vary. Improvements generally focus on individual intersections or short sections of roadway.

The recommended transportation plan is shown in Figure 2. Table 4 gives a more detailed description of the individual improvements. The major elements include:

- Modifying traffic signal sequences, coordination and cycle lengths;
- Providing dedicated left-turn lanes at key intersections;
- Improving intersections in the Hazardville and Scitico Village Centers, and at Phoenix Avenue;
- Modifying the Route 190 cross section in the transition area to provide dedicated or protected left-turn lanes and sidewalks;
- Developing an integrated bicycle and pedestrian plan through the major commercial area and across I-91; and,
- Enhancing the streetscape in the Hazardville and Scitico Village Centers.

A description of key features follows:

Commercial Area I-91 to Palomba Drive – The plan calls for improved pedestrian connections, signal coordination; and intersection operations.

1. Pedestrian Improvements – The recommended pedestrian improvement plan is shown in Figure 3. Improvements include:

   - ConnDOT Project 48-H027, which will provide approaches to the Route 190 bridge over the Connecticut River and link to the Windsor Locks Canal Trail on the west side. The eastern terminus of this project is at Route 5 in Enfield.
   - A multi-use bicycle and pedestrian trail along Freshwater Brook from a point west of Route 5 to Palomba Drive. This trail would follow the State right-of-way for the access ramps from I-91 to Route 190 westbound. It would also require a crossing of Route I-91;
   - An additional branch of the multi-use trail would follow Freshwater Brook northeast from the I-91 crossing to Freshwater Pond. It would join an existing walkway that leads from the Pond to Route 5. This walkway links to the town hall and the Village of Thompsonville; and,
   - New or widened sidewalks along Phoenix Avenue, Freshwater Boulevard, and Route 190 would connect with the multi-use trail.

   This conceptual plan will provide safe and convenient pedestrian and bicycle connections from the commercial area on Route 190 all the way to the Windsor Locks Canal Trail on the western side of the Connecticut River.

2. Improved Signal Coordination – The plan calls for improving and extending the traffic signal coordination system. Traffic signals along Route 190 between the I-91 northbound off ramp and Palomba Drive are currently coordinated on a 110-second cycle during the afternoon peak period and an 80-second cycle in the morning peak period. The traffic signal coordination should extend to other times of the day with various timing patterns for weekday morning and afternoon peaks, for the Saturday peak and for off-peak periods. Traffic signals on Freshwater Boulevard to the immediate north and south of Route 190, located at the entrance to Enfield Common/Cranbrook Drive and entrances to Brookside Plaza/Stop & Shop respectively, should be coordinated with the signals along Route 190.

   The coordination system should also extend eastward to include the signal at the Enfield Professional Park about 0.6-mile east of Palomba Drive. The signal cycle length should be increased from 80 to 90 seconds during the morning peak period (and possibly midday as well).

3. Enfield Common – Fairfield Square Connector – The plan includes a vehicle connection between these two centers that also provides direct access to Phoenix Avenue.

4. Route 190 and Phoenix Avenue – The intersection of Route 190 with Phoenix Avenue is the gateway to the corridor. It serves an industrial park and provides access to the Enfield Square Shopping Center from the south. It carries the heaviest traffic volumes of any intersection in the corridor. Capacity limitations on the northbound Phoenix Avenue approach are a result from a signal northbound left turn lane that carries heavy turning volumes. The recommended improvement plan is shown in Figure 4. Key features are:

   - Dual northbound left-turn lanes are provided on Phoenix Avenue to better serve the heavy northbound left-turning volumes (300 vph in 2025). The existing three approach lanes can be more effectively used by restriping them to provide two left-turn lanes; and,
   - The dual left-turn lanes will require separate phases for northbound and southbound traffic. In addition, a "lead-lag" phasing sequence for east-west traffic would reduce the likelihood of through traffic blocking access into the left-turn lanes along Route 190 and improve safety.

Transition Area – Palomba Drive to Hazardville – This section of Route 190 is transitional in both land use and roadway characteristics. Although many parcels are vacant, commercial zoning continues to the edge of the Hazardville residential area. The roadway tapers from four lanes at Palomba Drive (six lanes after completion of the State's committed improvement project) to one lane in each direction with left-turn lanes at Enfield Professional Park. This section carries about 24,000 vehicles per day, forecast to increase to 27,500 vpd by 2025. There are currently no sidewalks except in front of a few isolated properties.

The recommended plan for the eastern section between Palomba Drive and the Enfield Industrial Park is shown in Figure 5. This plan provides a three-lane cross section, 5-foot shoulder for bicycles on each side, and a sidewalk on the north side. The center lane is a "painted median" that incorporates left turn lanes at selected locations, and limits property access to right turns. The two options show varying provisions for left turn access.

The three-lane configuration extends only as far as the entrance to Enfield Professional Park, to serve areas zoned for commercial development. East of this point, the cross section transitions back to the existing two-lane cross section through Hazardville.

Hazardville – Hazardville Center is a traditional village center with a mix of small businesses and residences. The town is trying to preserve its character through a streetscape project that began construction in 2001. Roadway improvement proposals are consistent with this plan.

Route 190 is a two-lane undivided roadway arterial road, with turning lanes at the Maple Street intersection. On-street parking is permitted on the south side of Route 190 between Maple Street and School Street. The roadway carries 18,000 to 20,000 vehicles per day, forecast to rise to 23,000 vehicles per day by 2025.

Traffic problems along Route 190 in Enfield are limited to two locations: the South Road/Elm Street intersection and the Maple Street intersection. Problems at the South Road/Elm Street intersection are being corrected by the State of Connecticut. Therefore, the plan limited its traffic recommendations to the Maple Street intersection.

1. Route 190-Maple Street Intersection – Alternate improvement plans are shown in Figure 6 (A and B). The difference between the plans involves the treatment of the southwest corner.

    a. Alternative 1 provides two lanes of traffic on the eastbound approach of Route 190: one exclusive left-turn lane and one shared through and right-turn lane. This allows the pavement on the southwest corner to be narrowed by approximately 12 feet and allow additional green space in the village center, thereby enhancing the sense of place and ambiance.

    b. Alternative 2 provides a third eastbound lane for right turns. Both plans provided eastbound and westbound lanes for left turn and a "protected" parking lane.

2. Streetscape Plan – The Town's streetscape plan is being implemented. This plan retains the existing spatial proportions between buildings, streetscape and roads. Pedestrian amenities will enhance the village character. Street furnishings such as light poles, benches, planters and trash receptacles will make pedestrians feel welcome, and remind passing motorists that this is a neighborhood that is cared for by residents and business owners.

Scitico – This section of Route 190 contains strip commercial areas that have lost most of its village character. The two-lane wide roadway carries daily traffic volumes of between 16,000 and 18,000. These volumes will increase to 22,000 vpd by 2025.

Traffic problems are limited to the two central, closely spaced intersections: Taylor Road and Broad Brook Road (Route 191). The plan recommends improvements for both intersections.

1. Taylor-Scitico Road Intersection – The existing offset alignment contributes to congestion and makes pedestrian crossings difficult. The recommended improvements shown in Figure 7 correct this problem, and reduce east-west traffic congestion by adding an exclusive eastbound left turn lane on Route 190, by eliminating the offset intersection

geometry, and eliminating cut through traffic. Option 1 provides an eastbound right turn access to Scitico Road, while Option 2 completely closes the southern leg. Both options "close the intersection" and provide shorter cross walks.

2. Broad Brook Road (Route 191) Intersection –The plan recommends an exclusive westbound left turn lane at this "T" intersection. This would improve 2025 peak hour levels of service from E to C.
3. Streetscape Plan – A streetscape plan was prepared to help create better pedestrian connections and a more attractive roadside appearance. The goal was to create a better sense of place, rather than just preserving a historic village character that has already been eroded. The plan calls for good visibility for pedestrians, sufficient street lighting, and safe crosswalks. Proposed plantings include new flowering trees to help enclose the streetscape and soften views of commercial land uses.

Recommended Plan for Somers

The transportation plan includes improvements for four distinct areas in Somers:

- The Village of Somersville;
- The Village of Somers Center; and,
- Pedestrian and bicycle improvements in the corridor.

The recommended plan is shown in Figure 8. Table 5 gives further details about specific improvements. The plan's main focus is on the villages of Somersville and Somers Center. It includes:

- Installing traffic signals at two intersections (already an approved project at School Street);
- Coordinating adjacent traffic signals;
- Installing left-turn lanes at key intersections;
- Providing geometric improvements at intersections;
- Enhancing bicycle and pedestrian connections; and,
- Improving the Route 190 streetscape in Somersville and Somers center.

A description of key features follows.

Pedestrian and Bicycle Improvements – Residents expressed a strong interest in improving bike and pedestrian travel. The potential improvements shown in Figure 9 were based on input from advisory committee members and participants at public meetings. These improvements include:

1. Building a sidewalk on the north side of Route 190 in Somerville to complement the existing sidewalk on the south side;
2. Constructing sidewalks along north sides of Route 83 in Somers Center;
3. Providing new pedestrian links and a multi-use trail near the school complex; and,
4. Relocating guard rails along a section of Route 190 to improve walking space. A sidewalk between the school complex and Route 190 already has been built.

Somersville – The Village of Somersville includes a small commercial district on Route 190 and a mixed-use area to the south. The old mill, a millpond now used for recreation, and a historic blacksmith shop are all sensitive assets. Two churches, a school, and the local post office are also located in the village. Single and multi-family homes complete the community. Route 190 carries 13,000 vehicles per day; by 2025, daily volumes should increase to 15,000.

1. Intersection Improvements – Traffic and safety improvements focus on four locations:

- Route 190 at Maple/Shaker/Quality;
- Route 190 at School/Hall Hill;
- School and Maple; and,
- Maple, Scitico, and Pinney.

The recommended improvements for these locations are show in Figures 10 and 11. They include (a) minor widening of Route 190 to provide left turn lanes at Shaker Road and School Street; (b) simplifying the Maple-Quality-Shaker intersection by limiting access to Quality Avenue to eastbound right turns; and providing additional crosswalks; (c) building a new connector road between Quality Avenue and Maple Street to maintain convenient access; (d) signalizing the intersection of Route 190 and School Street; and coordinating the signals with those at Shaker Road; (e) adding traffic calming elements to School Street by pavement narrowing or curb bump and installing 4-inch raised crosswalks; (f) realigning the Maple School intersection; and (g) realigning and modifying traffic controls at the Maple, Scitico and Pinney intersection.

2. Streetscape Plan – The streetscape plan for Somersville was designed to reclaim a sense of place in the community, to slow traffic through the village, and to add a more pedestrian-friendly atmosphere. This plan (as well as the one described later for Somers Center) should be

coordinated with the streetscape plans proposed in Enfield. Collectively they should present the same visual clues to approaching motorists.

The plan includes shade and flowering trees to visually narrow the roadway and help manage speeds. They vary from side to side to reduce the straight, elongated "tunnel" effect. Pedestrian amenities such as benches and planters are suggested to complete the sense of place and pedestrian comfort, and complement clearly identified crosswalks. A "build-to-line" concept requires both residential and commercial buildings to be located a similar distance from the roadway edge, and that parking is placed at the rear of buildings. The plan also calls for a special paving strip and welcome sign at the entrances or gateway to the village. This would give drivers a visual (and tactile) clue that they are entering a community and that they need to slow down and drive more alertly.

Somers Center – Somers Center is a designated historic village with a unique character. Route 190 through Somers Center provides one lane in each direction with a turning lane for westbound traffic at the Route 83 intersection. On-street parking is permitted in front of the Town Hall. Route 83 carries about 12,500 vehicles per day, forecast to increase to over 14,000 by 2025.

1. Route 190-83 Intersection Improvements – This off-set intersection geometry results in congestion as left turns frequently interlock. It also makes signal sequences more complex and pedestrian crossings more difficult. The recommended plan shown in Figure 12 alleviates these problems by creating a simple direct crossing. Alternate 1 shows a curved alignment and Alternative 2 a "straight" any alignment; alignment between these options is also feasible.

   Both improvement options include the following features: (a) left turn lanes on all four approaches to the intersection and related changes in traffic signal operations; (b) a possible small "Village Green" on the west side of realigned Route 83; (c) a realigned Route 83 on the north of Route 190 to provide a larger snow shelf and wider pedestrian area between the roadway and Somers Inn; (d) relocated stop-bars along Route 190 to close the intersection and improve visibility of crosswalks; (e) new marked crosswalks in all four quadrants; and (f) new sidewalks along Route 83.

   Both alternatives will require the relocation of the Woodward House. It should be relocated where it will remain part of the Somers streetscape. The new location will depend on the status of the development of the property on the southeast corner at the time of the realignment project.

2. Streetscape Plan – Somers Center's historic village fabric remains largely intact with a few minor exceptions; new development has been designed to fit into this theme. For

instance, the bank building on the northeast corner of Routes 190 and 83 was specifically located as a visual complement to the historic buildings on opposite corners.

Accordingly, the plan calls for a "build-to" or "parking setback" line similar to that for Somersville throughout the village. Visual emphasis should be placed on significant architectural features, and the visual impact of the pavement from the road should be minimized. Attractive signage, entrance plantings, and other pleasing features should be encouraged. Shade and flowering trees should soften the visual impact of pavement and complement existing trees.

The streetscape plan includes gateways at both ends of the village; it calls for an entrance sign; attractive landscaping, and a band of alternative paving materials across the roadway at each location.

Access Management

Access management guidelines were developed for each community in several ways. First, access management provisions were incorporated into many of the recommended improvements, by closing driveways, or by planning for consolidated access in undeveloped sections of the corridor. Second, local planning, zoning and subdivision regulations were reviewed, and ways to better manage access were developed. These recommendations were contained in a separate document that accompanied the project report.

Each access management report contains an introduction, a review of existing practices; recommended guidelines and regulation; and appendices that contain specific language. Two general approaches were identified. (1) Establishing possible corridor overlay districts with special regulations, and (2) placing access management provisions into existing townwide regulations.

Traffic Signal Spacing – The suggested spacing guidelines call for proximate signals along Route 190 to operate on common background cycles.

1. Enfield. The desired signal spacing should permit a minimum 40 percent through band in each direction of travel at speeds of about 35 mph at cycle lengths of 80 to 110 seconds. This generally translates into uniformly spaced signals about 2,000 feet to a half mile. Because there are several closely spaced signals today, this guideline would apply only where new signals are considered.

2. Somers. The desired signal spacing should be based on a 70 to 80 second cycle with speeds of about 35 mph. Through bands should be at least 40 per cent.

Unsignalized Access Spacing – Unsignalized access spacing should reflect operating speeds (about 35 mph) and existing minimum lot frontages.

1. Enfield - The suggested unsignalized access spacing for Route 190 (and other arterial roadways) are 150 feet through developed or developing areas to 200 feet in less developed sections.

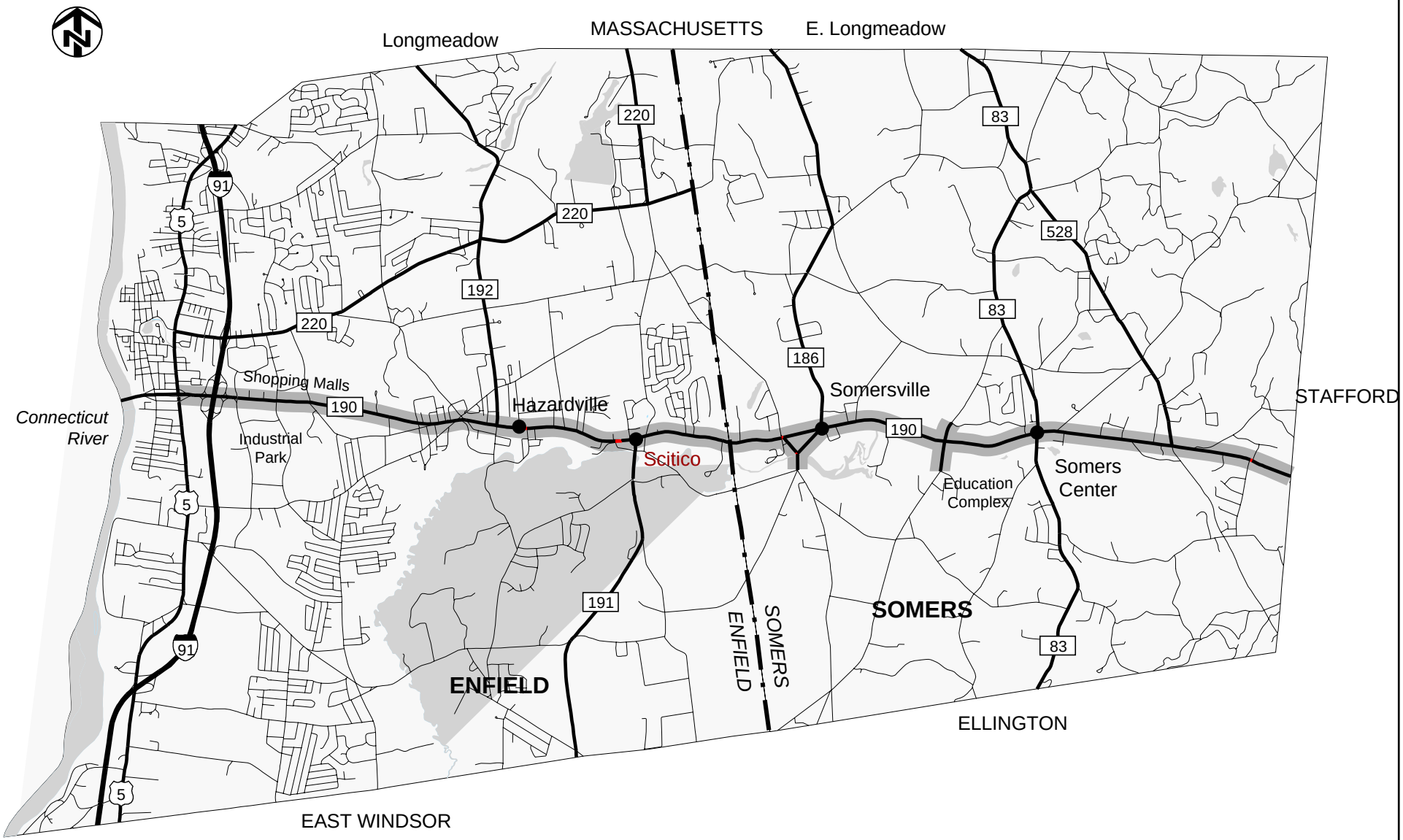
2. Somers – The suggested unsignalized access spacings are 100 feet in Somers Center, 150 to 200 feet in areas west of the Center; and 350 feet in the relatively rural areas to the east of the center.

Summary and Significance

The recommended transportation plans for Enfield and Somers represent a pragmatic, context-sensitive approach to transportation, access management and village development issues and opportunities in the two towns and their historic village centers. The plans reflect the preferences of the communities in balancing mobility, aesthetics, community and environmental needs. Overall, the improvements are modest in scale, costs and impacts. The communities have adopted the overall corridor improvement plans, and the Connecticut Department of Transportation is planning to implement several of the recommended projects.

The study indicates that a corridor improvement plan can be implemented for a two-lane road, and that such a plan can also extend beyond the immediate corridor. The plan is context sensitive in that it balances historic preservation and mobility needs. It maintains essentially a two-lane arterial, with only minimum widening. It includes "off corridor" treatments that improve circulator in Village Centers. Intersection designs emphasize pedestrian as well as traffic improvement.

Finally, the Final Plan is the result of a collaborative effort among local residents, local officials, and regional and State transportation planning. The communities have adopted the overall corridor plans, and the Connecticut Department of Transportation is planning to implement several of the recommended improvements.



Approximate Scale - 1"=1.3 Miles

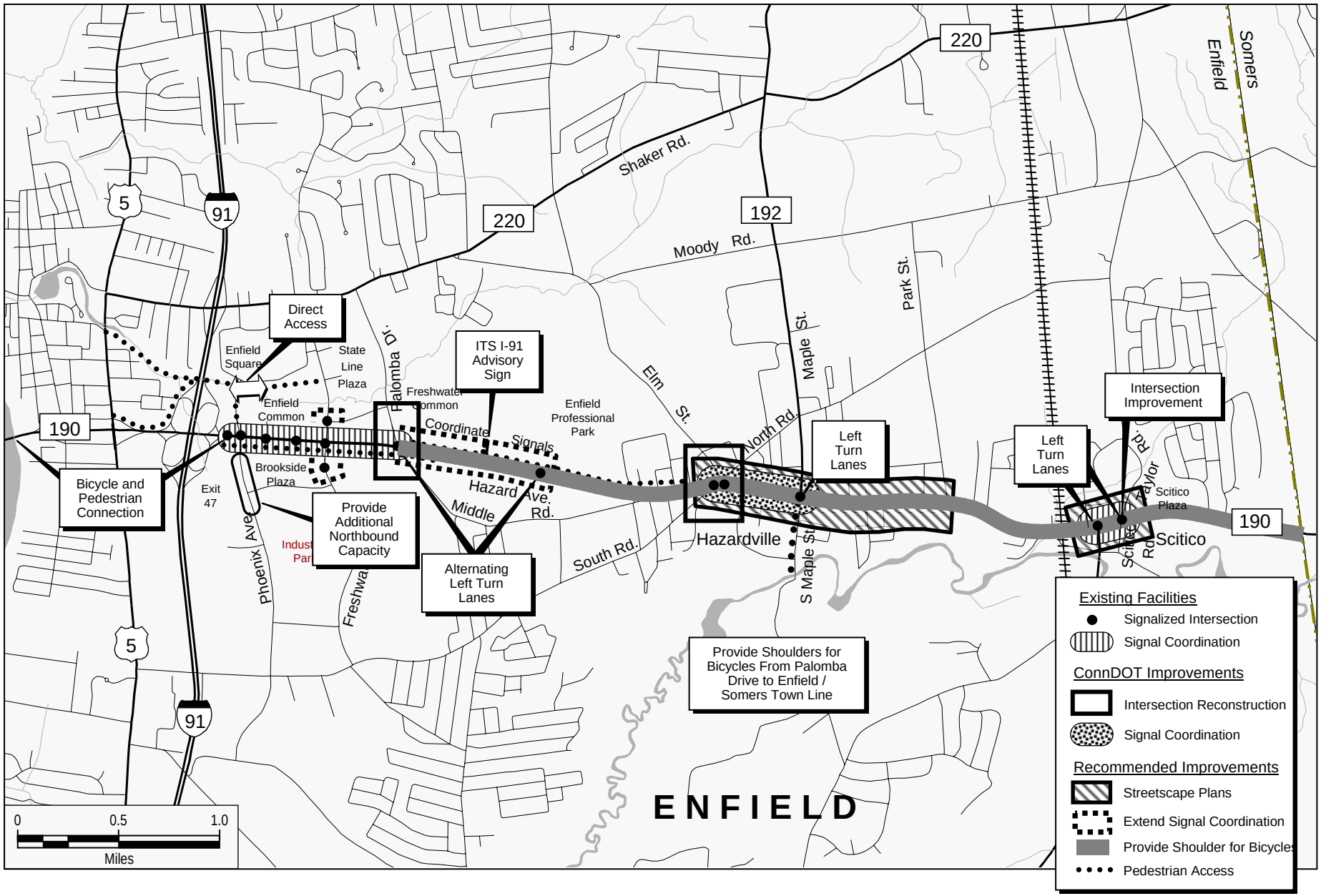
STUDY AREA

ROUTE 190 CORRIDOR STUDY

ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

FIGURE 1

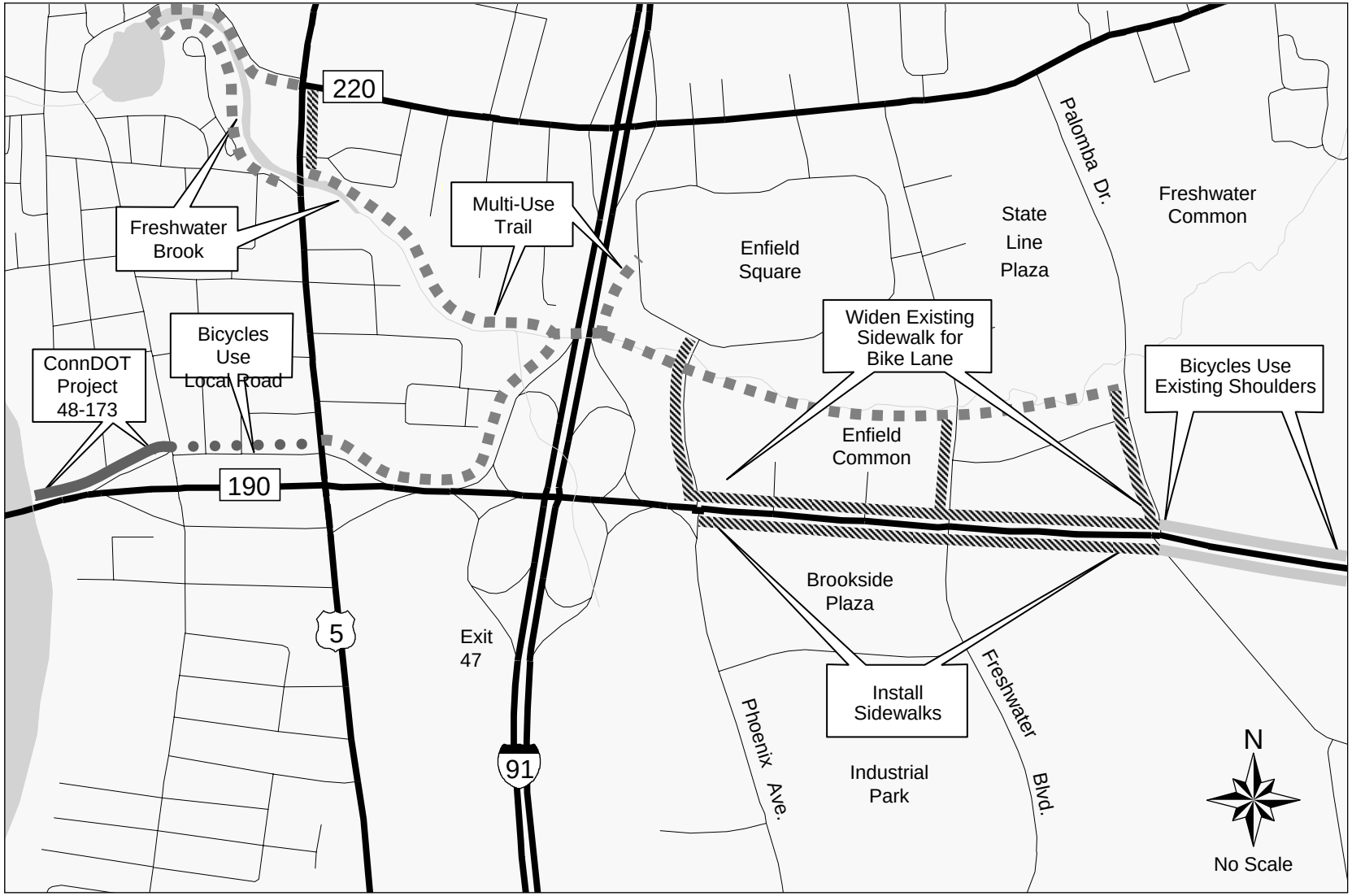


ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

RECOMMENDED TRANSPORTATION PLAN - ENFIELD

FIGURE 2



Note: Conceptual Pathway Location – Over/Under Crossing May Vary.

BYCYCLE AND PEDESTRIAN IMPROVEMENT PLAN - ENFIELD

Route 190 Corridor Study

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ECONOMISTS

FIGURE 3

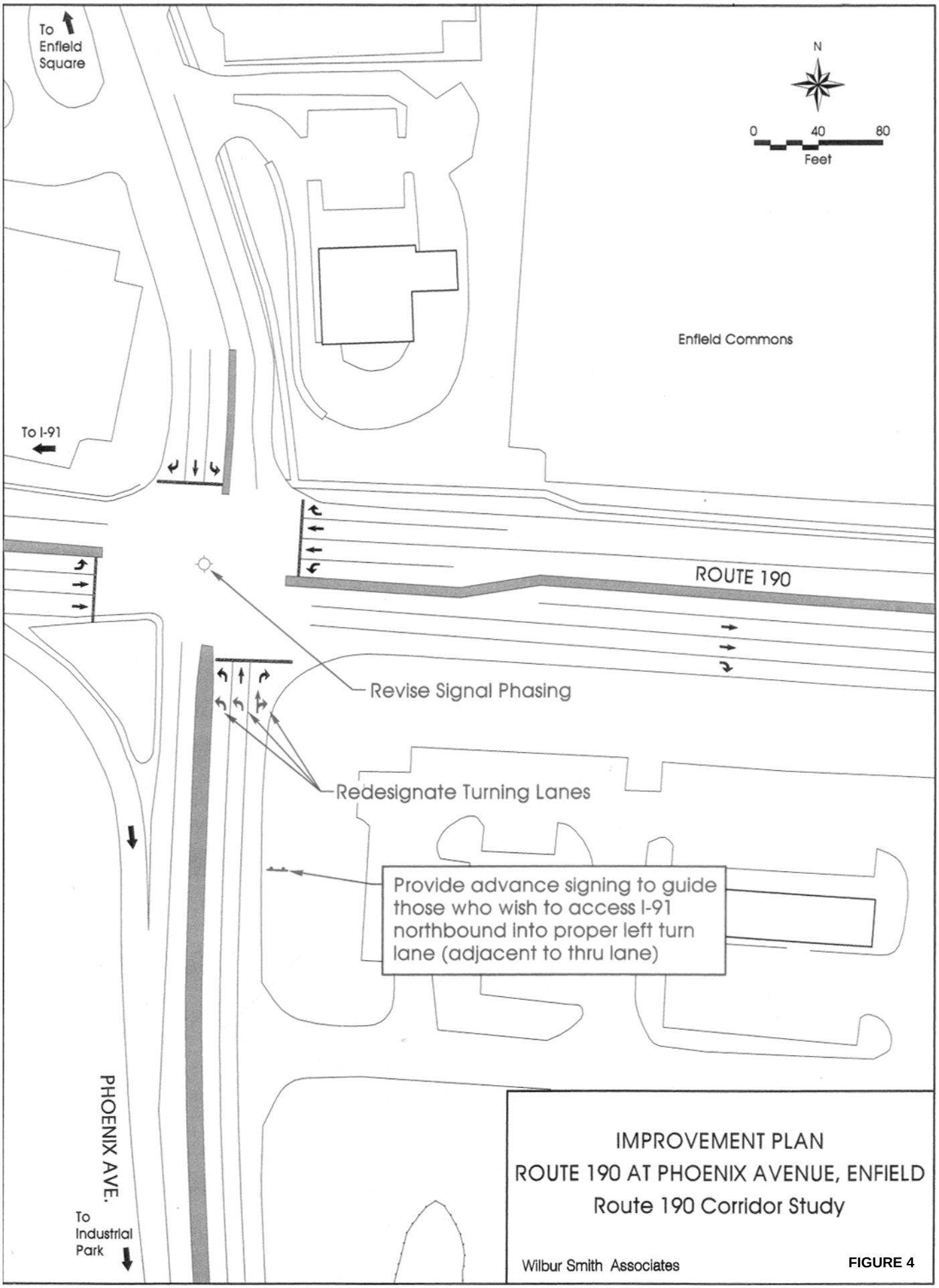
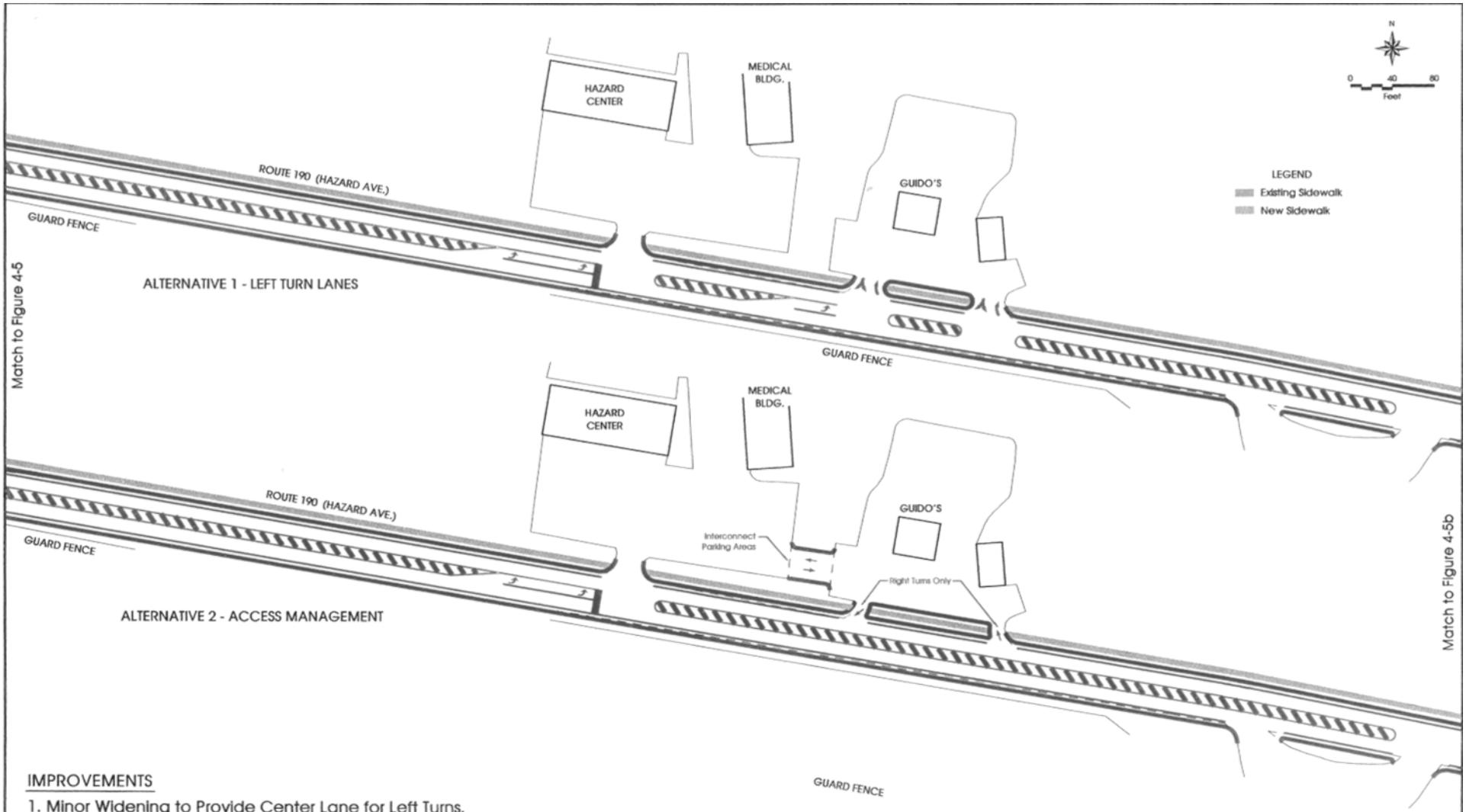
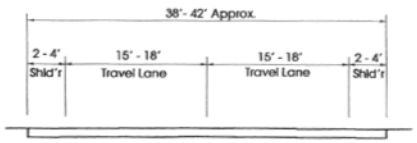

To Enfield Square
N
0
40
80
Feet
Enfield Commons
To I-91
ROUTE 190
Revise Signal Phasing
Redesignate Turning Lanes
Provide advance signing to guide those who wish to access I-91 northbound into proper left turn lane (adjacent to thru lane)
PHOENIX AVE.
To Industrial Park
IMPROVEMENT PLAN
ROUTE 190 AT PHOENIX AVENUE, ENFIELD
Route 190 Corridor Study
Wilbur Smith Associates

FIGURE 4

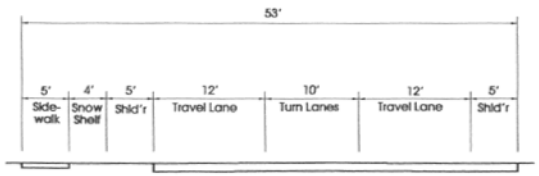


IMPROVEMENTS

1. Minor Widening to Provide Center Lane for Left Turns.
2. Add Sidewalks on North Side of Route 190.
3. Add 5' Shoulders for Bicyclists.



EXISTING CROSS SECTION



RECOMMENDED CROSS SECTION

RECOMMENDED IMPROVEMENTS ROUTE 190 - ENFIELD TRANSITIONAL AREA

Route 190 Corridor Study

Wilbur Smith Associates

FIGURE 5

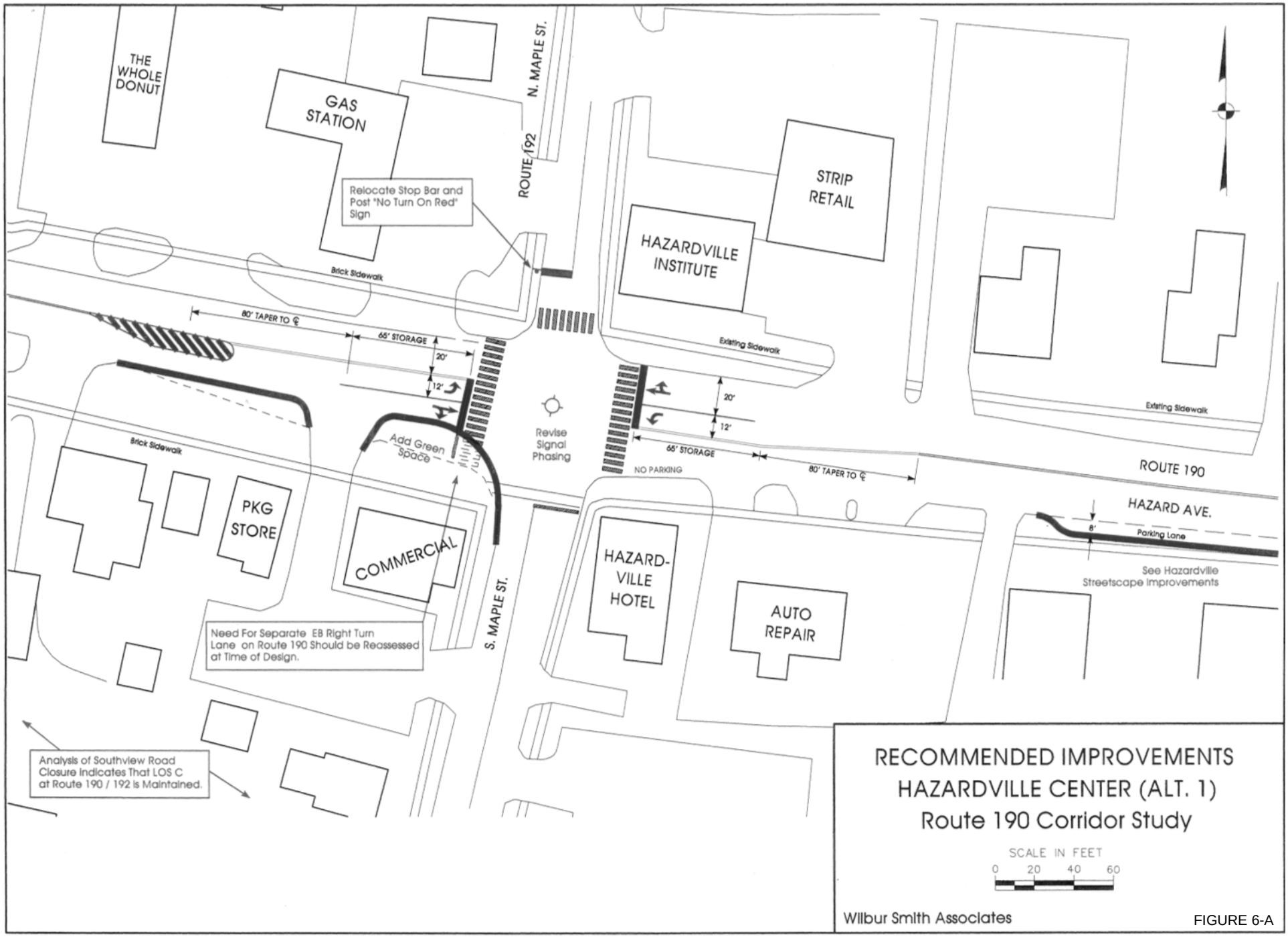

THE WHOLE DONUT
GAS STATION
N. MAPLE ST.
ROUTE 192
Relocate Stop Bar and Post "No Turn On Red" Sign
Brick Sidewalk
80' TAPER TO ℄
65' STORAGE
20'
12'
HAZARDVILLE INSTITUTE
STRIP RETAIL
Existing Sidewalk
Existing Sidewalk
Revise Signal Phasing
20'
12'
65' STORAGE
NO PARKING
80' TAPER TO ℄
ROUTE 190
HAZARD AVE.
8'
Parking Lane
See Hazardville Streetscape Improvements
Brick Sidewalk
Add Green Space
PKG STORE
COMMERCIAL
S. MAPLE ST.
HAZARD-VILLE HOTEL
AUTO REPAIR
Need For Separate EB Right Turn Lane on Route 190 Should be Reassessed at Time of Design.
Analysis of Southview Road Closure Indicates That LOS C at Route 190 / 192 is Maintained.
RECOMMENDED IMPROVEMENTS
HAZARDVILLE CENTER (ALT. 1)
Route 190 Corridor Study
SCALE IN FEET
0 20 40 60
Wilbur Smith Associates

FIGURE 6-A

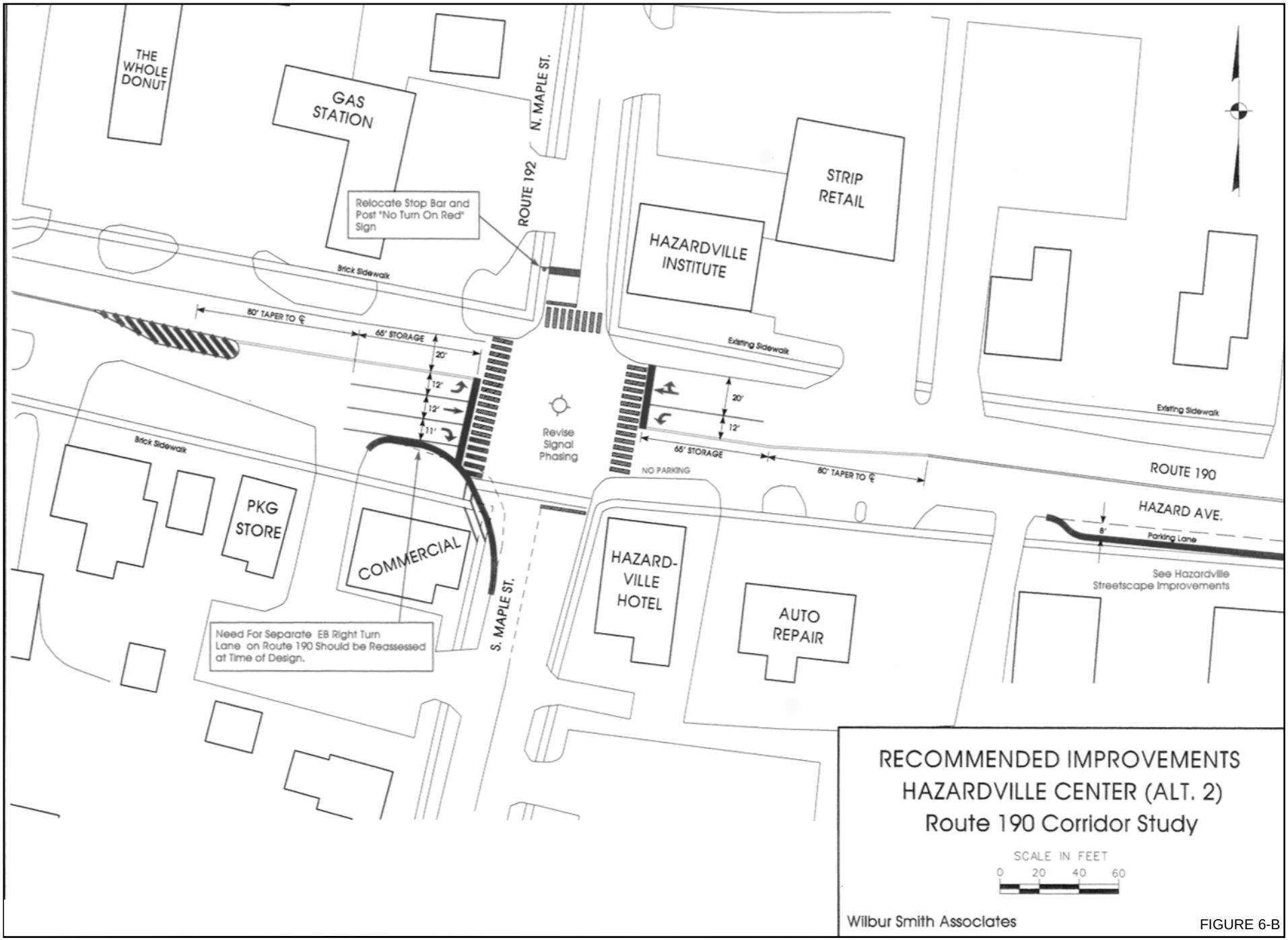
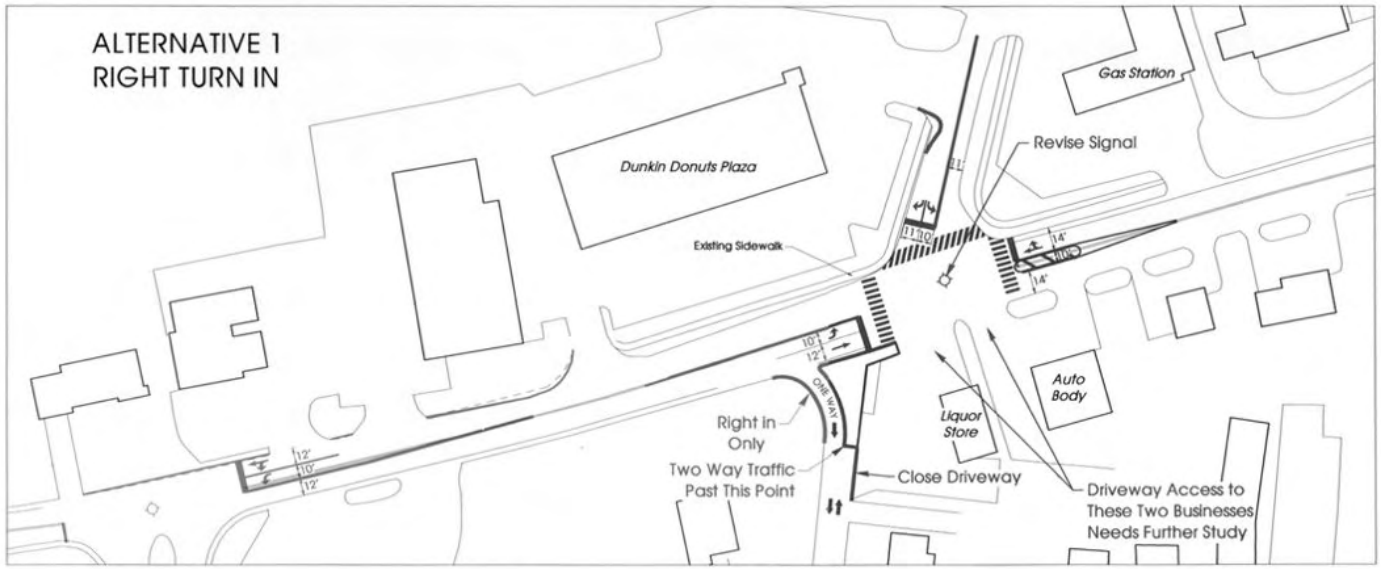
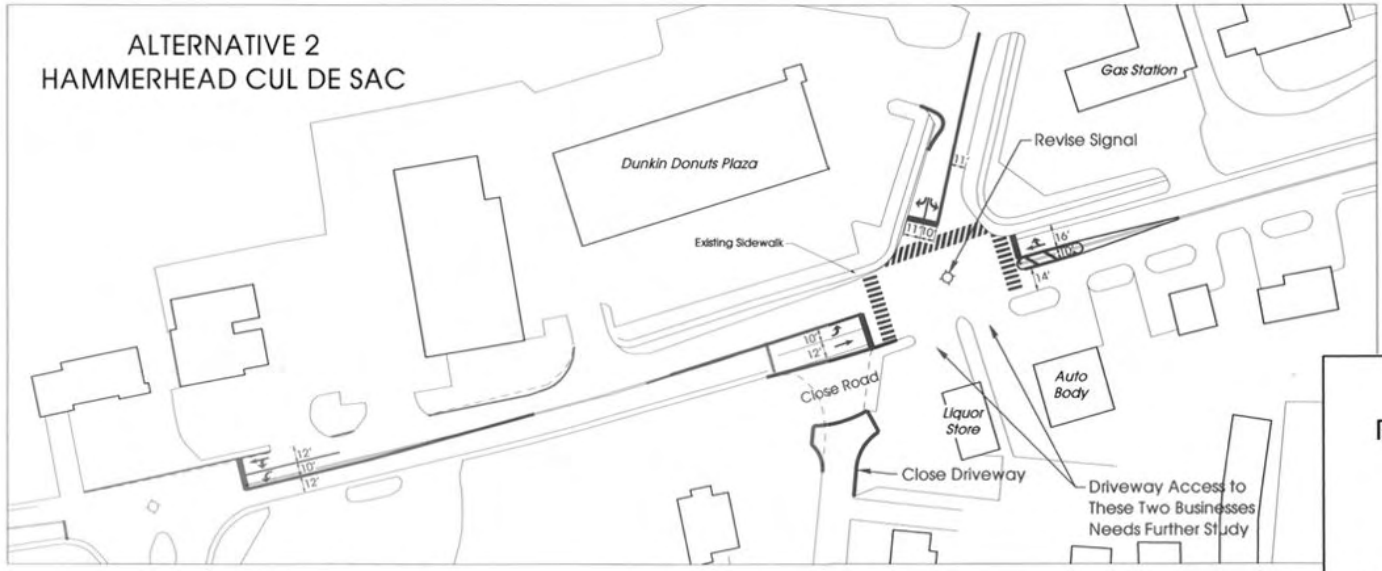
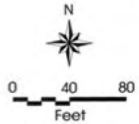

THE WHOLE DONUT
GAS STATION
N. MAPLE ST.
ROUTE 192
Relocate Stop Bar and Post "No Turn On Red" Sign
Brick Sidewalk
80' TAPER TO ℄
65' STORAGE
20'
12'
12'
11'
HAZARDVILLE INSTITUTE
STRIP RETAIL
Existing Sidewalk
Revise Signal Phasing
20'
12'
65' STORAGE
NO PARKING
80' TAPER TO ℄
Existing Sidewalk
ROUTE 190
HAZARD AVE.
8'
Parking Lane
See Hazardville Streetscape Improvements
Brick Sidewalk
PKG STORE
COMMERCIAL
S. MAPLE ST.
HAZARD-VILLE HOTEL
AUTO REPAIR
Need For Separate EB Right Turn Lane on Route 190 Should be Reassessed at Time of Design.
RECOMMENDED IMPROVEMENTS
HAZARDVILLE CENTER (ALT. 2)
Route 190 Corridor Study
SCALE IN FEET
0 20 40 60
Wilbur Smith Associates

FIGURE 6-B



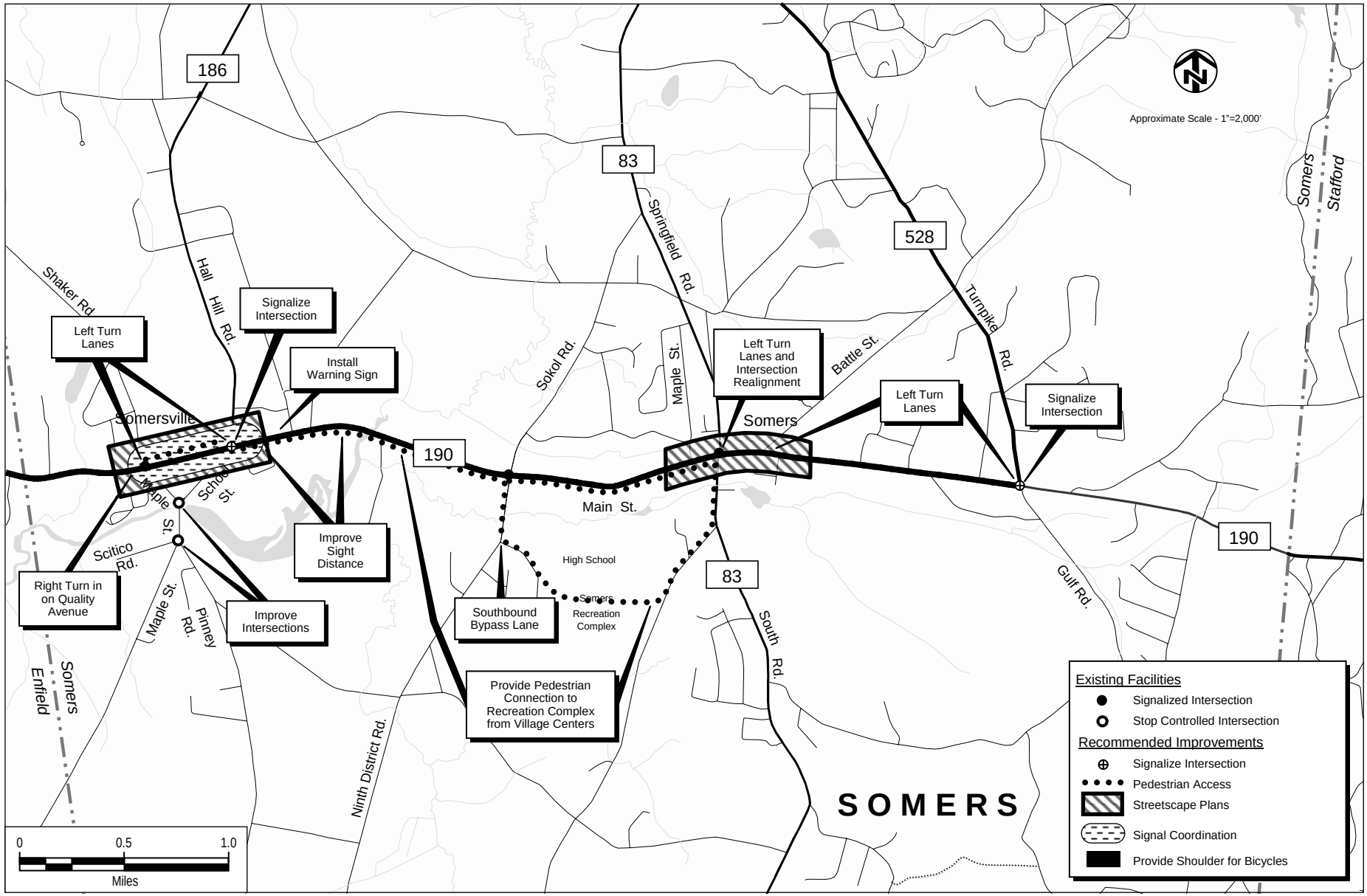




RECOMMENDED IMPROVEMENTS
SCITICO
Route 190 Corridor Study

Wilbur Smith Associates

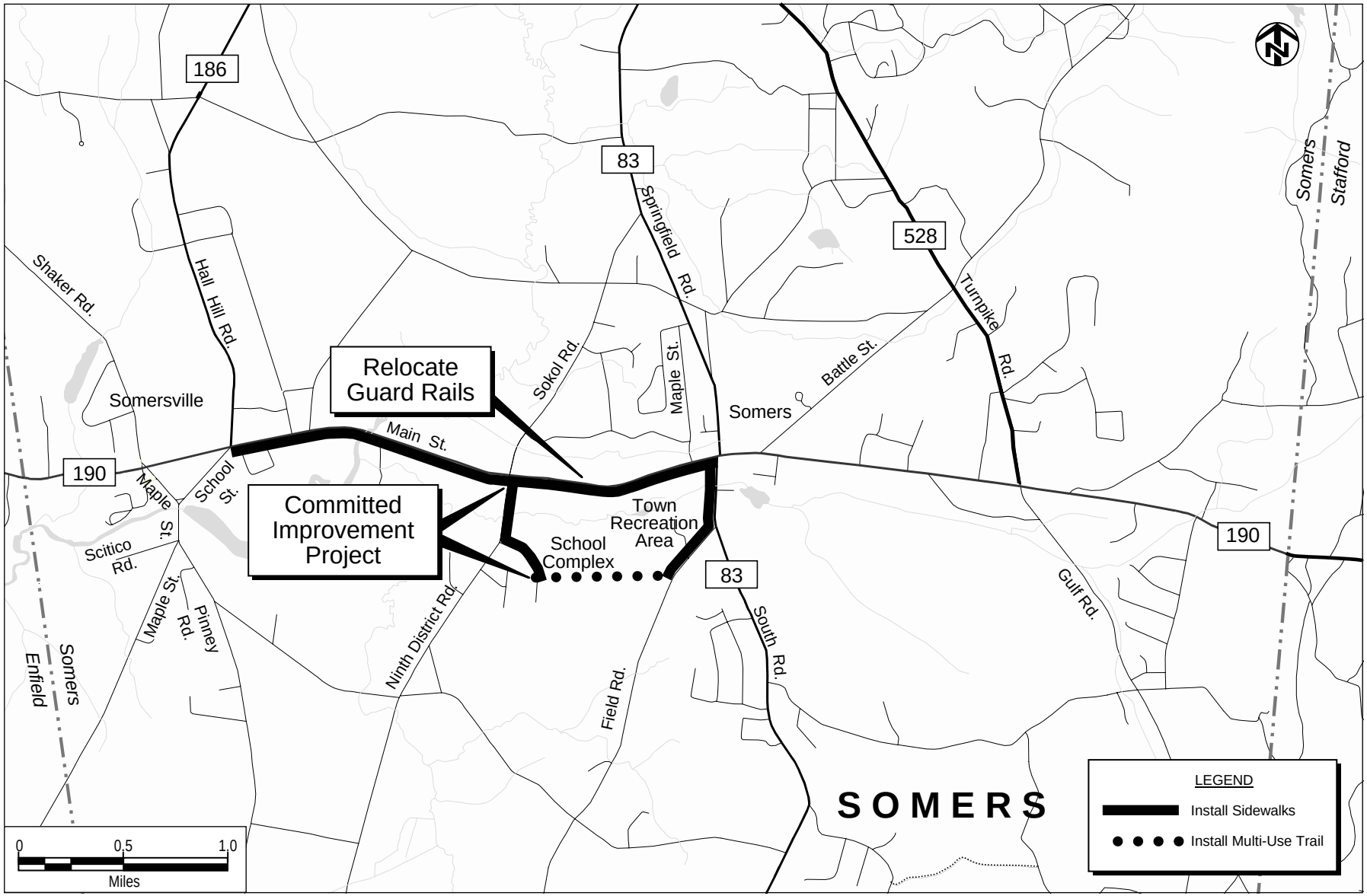
FIGURE 7



ENGINEERS PLANNERS ECONOMISTS
Wilbur Smith Associates

RECOMMENDED TRANSPORTATION PLAN - SOMERS

FIGURE 8



PEDESTRIAN CONNECTIONS - SOMERS

ROUTE 190 CORRIDOR STUDY

Wilbur Smith Associates
ENGINEERS PLANNERS ECONOMISTS

FIGURE 9

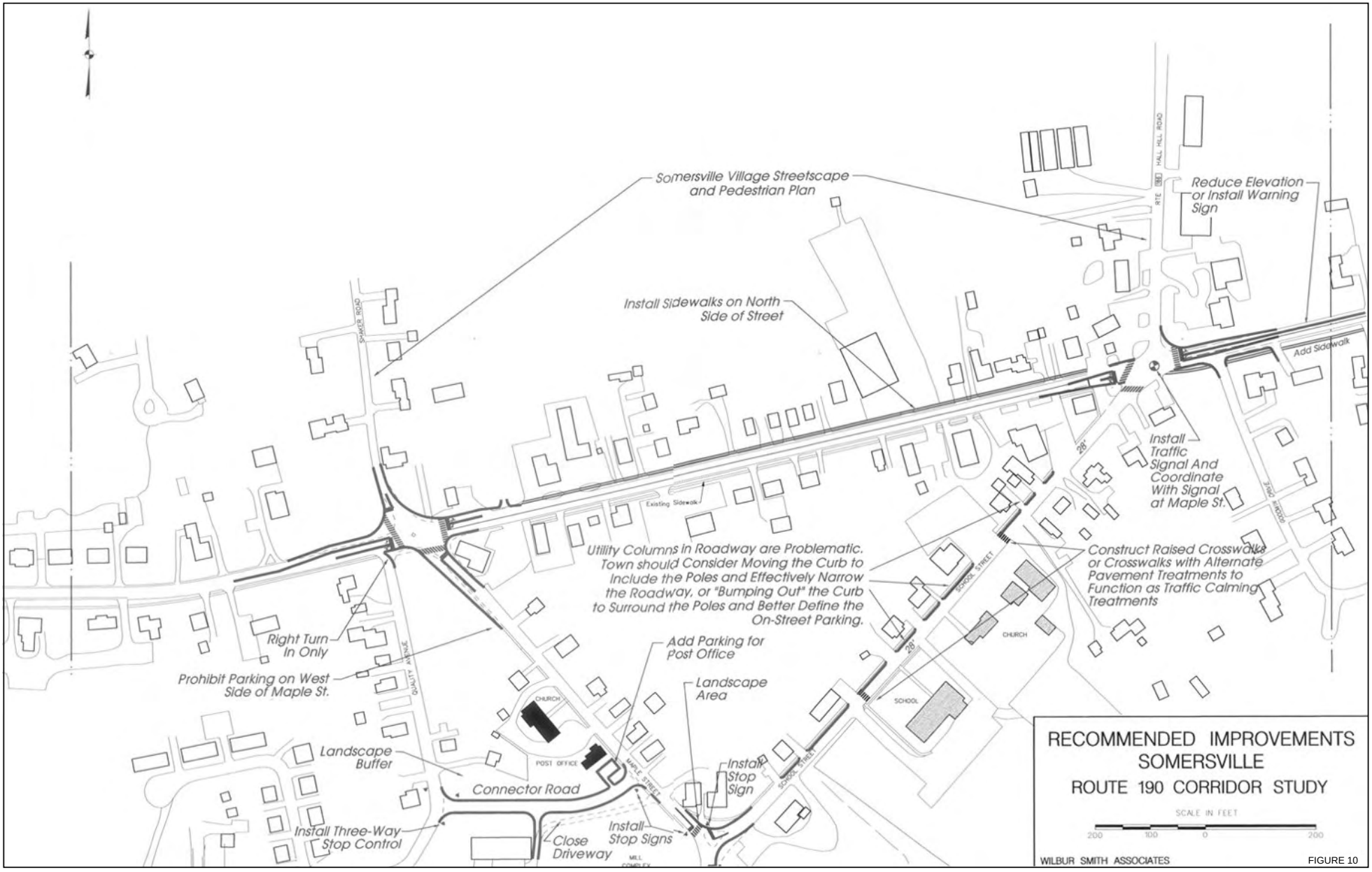

Somersville Village Streetscape and Pedestrian Plan
Reduce Elevation or Install Warning Sign
Install Sidewalks on North Side of Street
Add Sidewalk
Install Traffic Signal And Coordinate With Signal at Maple St.
Utility Columns in Roadway are Problematic. Town should Consider Moving the Curb to Include the Poles and Effectively Narrow the Roadway, or "Bumping Out" the Curb to Surround the Poles and Better Define the On-Street Parking.
Construct Raised Crosswalks or Crosswalks with Alternate Pavement Treatments to Function as Traffic Calming Treatments
Right Turn In Only
Prohibit Parking on West Side of Maple St.
Add Parking for Post Office
Landscape Area
Landscape Buffer
Connector Road
Install Stop Sign
Install Three-Way Stop Control
Close Driveway
Install Stop Signs
Existing Sidewalk
SHAKER ROAD
QUALITY AVENUE
MAPLE STREET
SCHOOL STREET
HALL HILL ROAD
RTE 190
CHURCH
POST OFFICE
SCHOOL
MILL COMPLEX
28'
RECOMMENDED IMPROVEMENTS
SOMERSVILLE
ROUTE 190 CORRIDOR STUDY
SCALE IN FEET
200 100 0 200
WILBUR SMITH ASSOCIATES

FIGURE 10

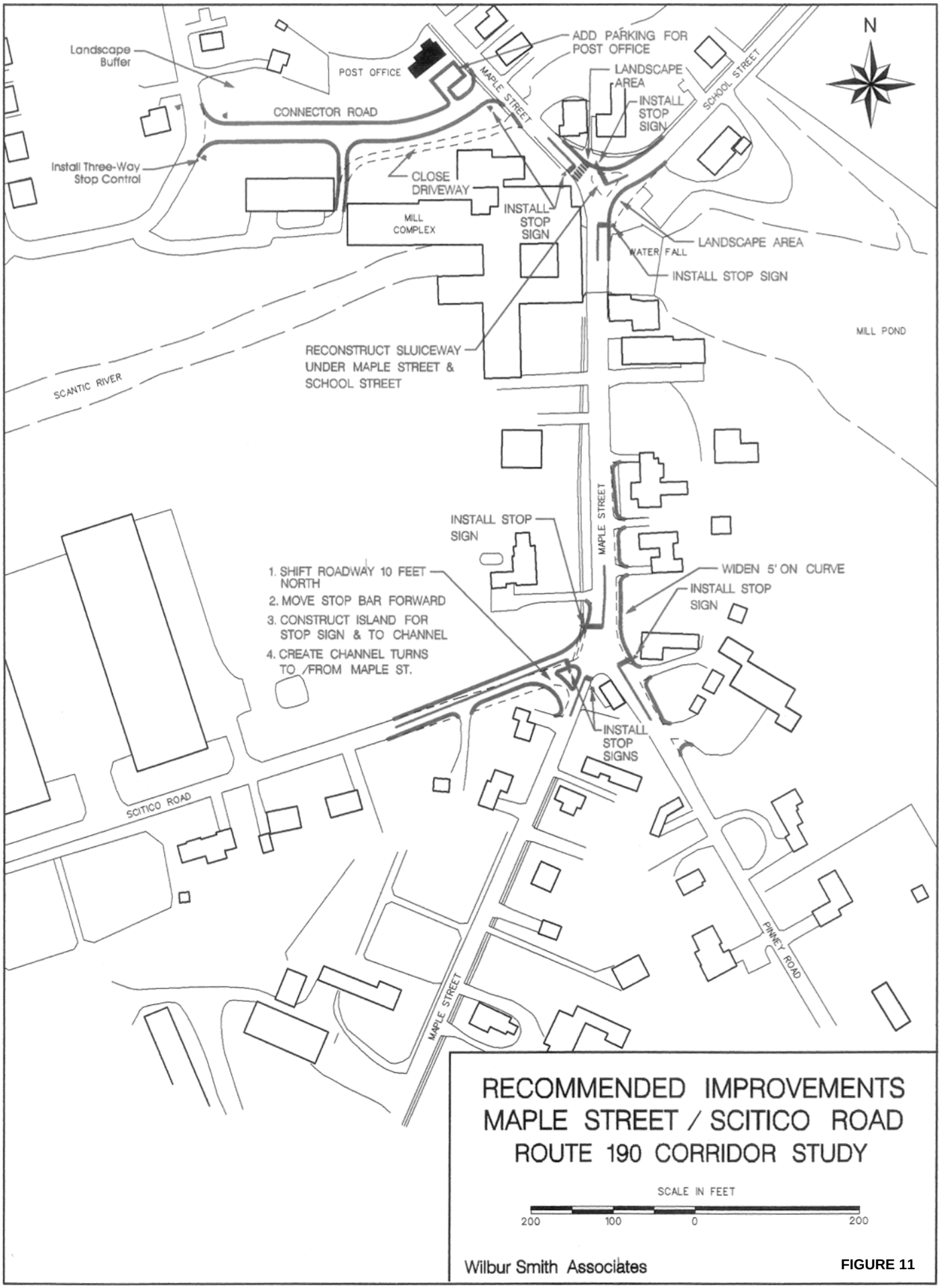
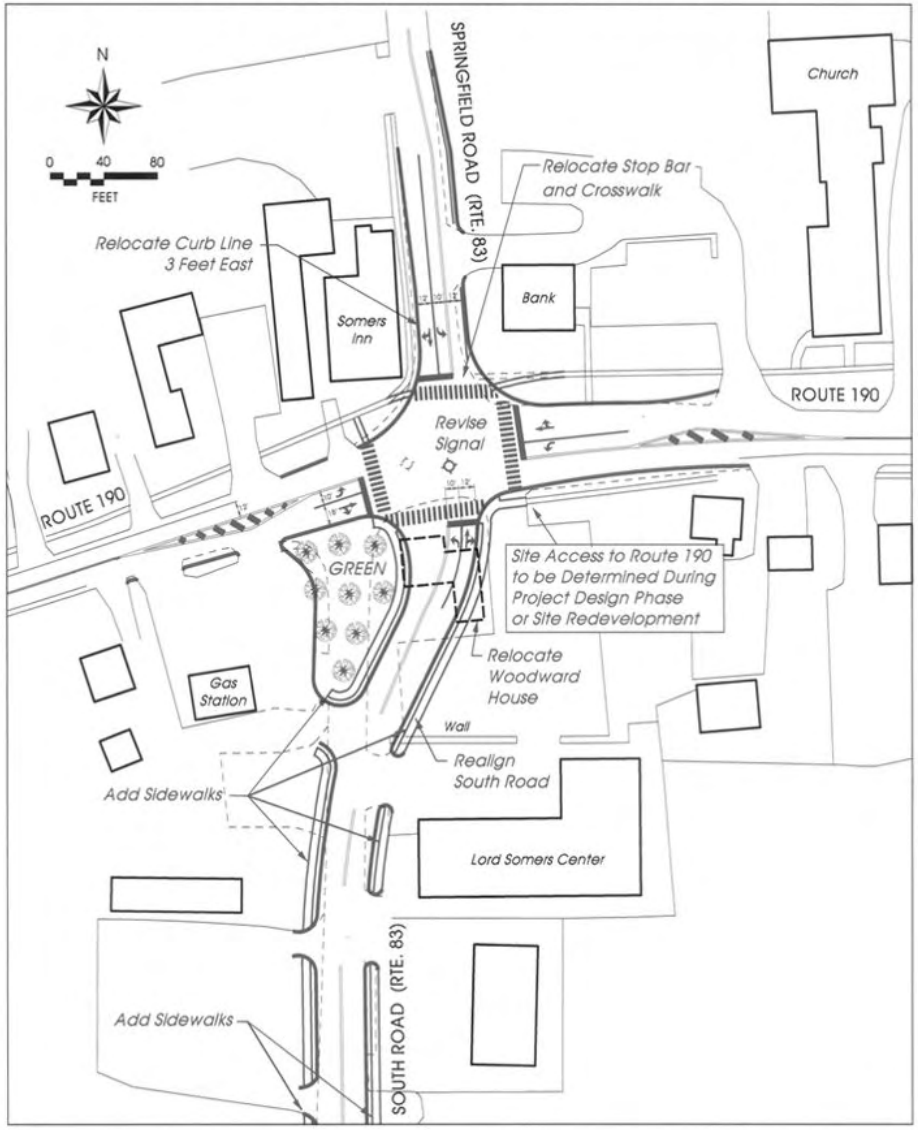
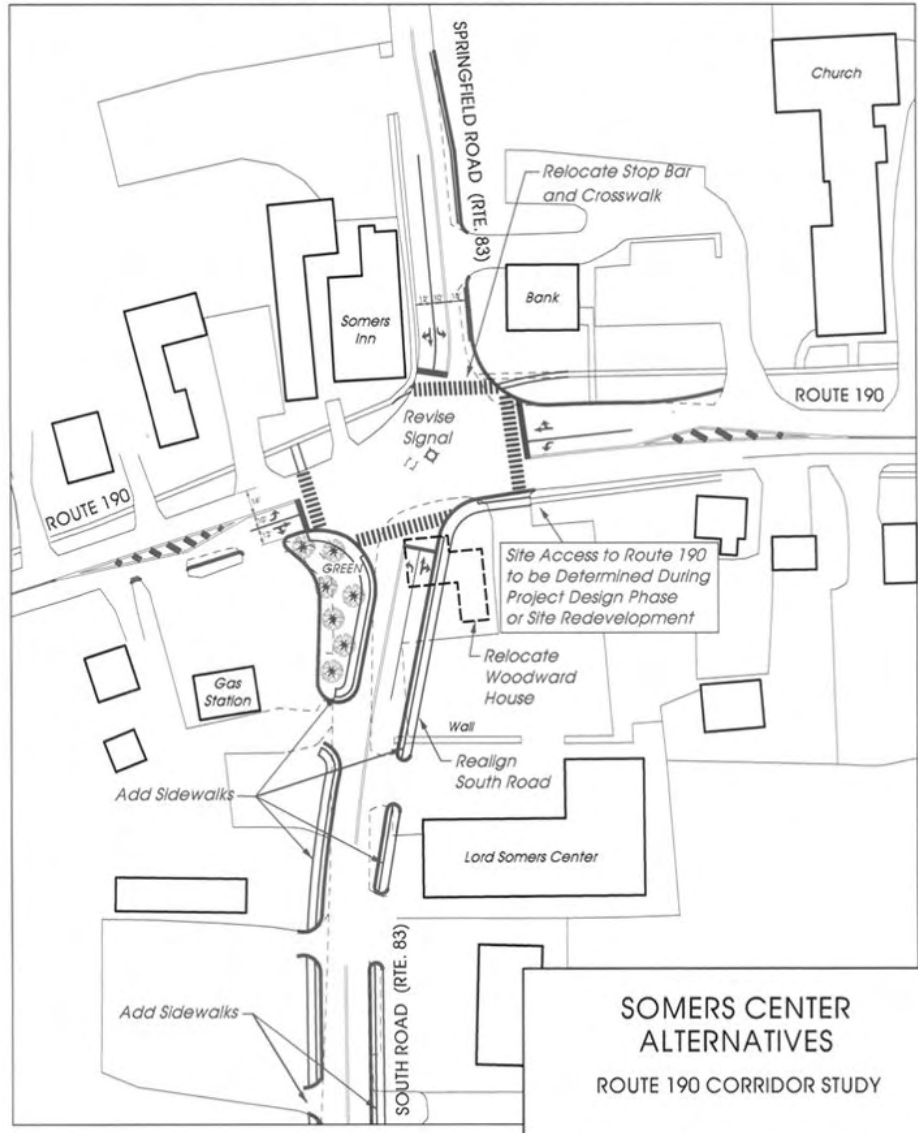

N
Landscape Buffer
POST OFFICE
ADD PARKING FOR POST OFFICE
LANDSCAPE AREA
INSTALL STOP SIGN
MAPLE STREET
SCHOOL STREET
CONNECTOR ROAD
Install Three-Way Stop Control
CLOSE DRIVEWAY
MILL COMPLEX
INSTALL STOP SIGN
WATER FALL
LANDSCAPE AREA
INSTALL STOP SIGN
MILL POND
RECONSTRUCT SLUICEWAY UNDER MAPLE STREET & SCHOOL STREET
SCANTIC RIVER
MAPLE STREET
INSTALL STOP SIGN
1. SHIFT ROADWAY 10 FEET NORTH
2. MOVE STOP BAR FORWARD
3. CONSTRUCT ISLAND FOR STOP SIGN & TO CHANNEL
4. CREATE CHANNEL TURNS TO /FROM MAPLE ST.
WIDEN 5' ON CURVE
INSTALL STOP SIGN
INSTALL STOP SIGNS
SCITICO ROAD
PINNEY ROAD
MAPLE STREET
RECOMMENDED IMPROVEMENTS
MAPLE STREET / SCITICO ROAD
ROUTE 190 CORRIDOR STUDY
SCALE IN FEET
200
100
0
200
Wilbur Smith Associates

FIGURE 11

ALTERNATIVE 1: CURVED ALIGNMENT



ALTERNATIVE 2: STRAIGHT ALIGNMENT



SOMERS CENTER ALTERNATIVES

ROUTE 190 CORRIDOR STUDY

WILBUR SMITH ASSOCIATES

FIGURE 12

Table 1

TRAFFIC SIGNAL CYCLE LENGTHS

LOCATION	Cycle Length (Seconds) A.M. PEAK	P.M. PEAK	COORDINATION
Enfield			
Phoenix Avenue	80	110	x
Brookside Plaza (W)	80	110	x
Brookside Plaza (E)	80	110	x
Freshwater Blvd.	80	110	x
Palomba/Middle	80	110	x
Professional Park	95	95	
South Road	70	80	y
Elm Street	70	80	y
Route 192	75	75	
Route 191	110	110	z
Taylor Road	110	110	z
Somers			
Maple-Shaker	90	90	
Ninth District Road	90	90	
Route 83	90	90	

SOURCE: Route 190 Corridor Study, *Existing Traffic Conditions*, May 2000. (From Traffic Signal Plans)

WILBUR SMITH ASSOCIATES

Table 2

DAILY TRAFFIC VOLUME (000s) ALONG ROUTE 190

	ACTUAL – 2000	ANTICIPATED – 2025
Enfield		
- West of Phoenix Avenue	36.9	43.6
- West of Elm Street	23.9	27.5
- West of Somers Town Line	14.6	16.8
Somers		
- West of Route 83	12.4	14.3
- East of Gulf Road	8.9	10.7

Table 3

ANTICIPATED 2025 PEAK HOUR TRAFFIC VOLUMES ALONG ROUTE 190

Eastbound	**A.M.**	**P.M.**
- West of Phoenix Avenue	1,320*	1,645*
- East of Palomba Drive	615	1,125**
- Enfield/Somers Town Line	375	935
- Somers/Stafford Town Line	310	445

Westbound	**A.M.**	**P.M.**
- Somers/Stafford Town Line	435	405
- Enfield/Somers Town Line	705	575
- East of Palomba Drive	875	1,015**
- West of Phoenix Avenue	1,230*	1,465*

***** Multiple lanes.

****** Multiple lanes when planned ConnDOT improvements are completed.