

THAMES STREET
BEAUTIFICATION PROGRAM
GROTON, CONNECTICUT

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This report is part of a project funded through
a grant from the Connecticut Department of
Economic Development.

Memorandum

To: Honorable Catherine Kolnaski, Mayor
City of Groton, Connecticut

From: William L. Burbank, Project Manager
Thames Street Streetscape Design Plan

Date: May 16, 1990

Subject: Final Report and Plans

It has been a pleasure to work with you, David Schweid and other city residents in developing the final Design Plan. From the blustery January site walk to the conversations with citizens to our joint work for building partnerships, the entire program has begun to build success.

The attached report, with reduced plans and an Executive Summary has touched all of the vital issues related to the benefits and liabilities of proceeding with implementation. The balance of available funds from the Economic Development Grant will be a vital resource to begin the investment process. A successful completion of work around the School Street intersection will help leverage additional support for other amenity placements.

Thank you for the opportunity to serve your community. The work was enjoyable and the momentum gained has been satisfying. The BSC Group is excited about participating in future phases of work on Thames Street.

Executive Summary

At the completion of 1989, the City of Groton selected The BSC Group to prepare a Design Plan for historic Thames Street. The purpose of the streetscape plan was to define proposed improvements with private and public lands along the Thames Street corridor from Flasher Memorial and Baker Street. The proposed Design Plan was conceived to create leverage with private property owners and other state and local public agencies which could add funding and activities to increase the realistic impact of the streetscape plan.

The work with BSC began on a cold January Saturday site walk during which specific concerns were relayed to the planning team. A month later, BSC presented several plan and theme alternatives for community review. After a three week review, an Overall Illustrated Master Plan was submitted to the Mayor and City Planner.

The Overall Master Plan is a conceptual design plan which acts as a catalyst for immediate action. With the balance of the \$100,000 Economic Development Grant, early contracted improvements are recommended. Also, the City and State are working to parlay available program initiatives to expand the conceptual streetscape plan into larger scale improvements in strategic locations within the study area. The current planning of Fort Griswold and the Thames River Estuary Heritage State Park include valuable components along the southern gateway of Thames Street. In the center of the study area, at School Street and north to the Copp Estate, there are areas where public and private partnerships of minor investments will greatly enhance the quality of life. At the gateway area from the north, there are exciting opportunities. The ability of the City of encourage the limited number of property owners to invest in their land will magnify the City's initiative to soften the impact of paving and unkept open spaces. A long sought after public overlook along the old bridge abutment will be possible when the property owners and City work out plans which permit private expansion of business and public access to the water overlook. A similar water access is considered part of the Groton component of the State Heritage Park to the south. However, private interests have built a pier to access the water in a strategic location for a new park, parking and water related commercial businesses. Increased public access to the River and water related businesses will strengthen Thames Street. As more people use the River Cruises rather than drive, there will be a coordinated effort to encourage pedestrian amenities linking Fort Griswold, shops, gardens and the historic homes and grounds to a modest number of tourists and visitors.

The proposed \$2.66 million budget for conceptualized improvements along Thames Street is not to be achieved casually. The willingness to complete many of these improvements will require leaders of state and local governments to agree to the priorities of specific programs. If the property owners express a limited interest in investing in painting, signing and maintaining their own structures, the public investment should be focused in those areas where property owners are willing to participate. The gateways offer the major opportunities with the northern areas dependant on private initiatives. The southern entry to Thames Street has more public ownership and active programs. The resulting momentum will produce early construction amenities. The core of the street study area is where initial funds could be spent. The School Street intersection and the business properties are examples of where partnership can and will begin.

The recommendations of the BSC study are linked to probable leverages to future implementation. Approximately \$55,000 of the initial Economic Development Grant should be spent by the Highway Department to replace walks, set granite curbs, install strategically located ornamental lights, signs and limited plantings. Another \$10,000 should be invested in trees, shrubs and bulbs for planting on private property, located along tops of walls, fences and porches which form much of the physical definition of Thames Street. The planting should be done in the fall of 1990 and be coordinated so that it may be a neighborhood celebration. The balance of the funds should be used to leverage additional state and/or private reinvestment by preparing documents for future construction and/or program funding for related improvements and specific site improvements for a passive garden on the Copp Estate near the middle of the program area and across the street from the Lorelei.

1.0 Introduction

The City of Groton, acting through the Office of the City Planner, solicited the public to receive proposals for Conceptual Design of Streetscape Improvements along 4,500 linear feet of Thames Street in Groton. In December 1989, the BSC Group was retained at a cost of \$8,809.00 to prepare an overall plan, budget and recommendations for implementation. The funds were made available when the City of Groton received a \$100,000 Economic Development Grant by the State of Connecticut. Through the assistance of local officials and the state legislative representatives, the state funds have enabled the City and local property owners to move towards actual improvements. After years of study, the investment process should begin in 1990.

2.0 Statement of Purpose

The purpose of the BSC Plan is to provide local authorities and property owners with a "guide plan" for improvements. The BSC Plan is intended to trigger action by both the private and public sectors to increase investment in the shrinking open space between buildings along Thames Street. The limitations of the Plan are in the level of detail. Lack of accurate plans of the physical environment, the budget and the length of Thames Street hindered BSC from doing an indepth plan. The work completed focused on overall plan goals, target areas for immediate work and building relationships between the public and private sectors to encourage greater progress after initial plans were implemented.

The benefits of the Plan extend beyond the words and visual aids prepared herein. The property owners have contributed years of discussion to help the planning process. After the Thames Street Revitalization Committee made its recommendations to the City in 1989, the gap between planning and implementation remained wide and uncertain. The BSC Plan narrows the gap and recommends initial steps of improvements. The Plan further advances the potential cooperative effect of the state and local officials.

3.0 The Process

The scope of service defined for BSC was focused on three primary tasks. The first was the need to develop an understanding of the Thames Street environment, past studies and a reading of the depth of data about the project area. The second task was to develop alternative plan concepts from which local comments may be solicited. The final task was to prepare

an overall Master Plan which would act as a guide for future beautification.

After a brainstorming of files, reports, plan sketches, representatives of BSC and the neighborhood took a brisk walk up and down Thames Street on a cold but sunny Saturday in January. From our analysis, BSC began to establish the framework for the conceptual planning which was to follow.

Figure No. 1 is a Spatial Analysis of the built and unbuilt environments. The shaded area reflects the corridor of physical space in which people perceive potential improvements. It illustrates the linear nature of the street area and the funneling effect of the narrowing of the available space in the middle of the Project Area. At the southern and northern gateways, there are larger quantities of space. The lack of City owned space elsewhere determines the ability to accomplish proposals.

Figure No. 2 consolidates apparent zones in which responsibilities for physical improvements could be initiated. A quick review of the illustration defines a majority of property as being owned by the private sector. Although the Thames Street Revitalization Committee defined a list of specific sites for improvements, most of these sites are privately owned. The planning process is intended to target sites where improvements may be done and encourage property owners to invest in their land and buildings. Figure 2 suggests the need for the City to help the typical property owner understand the value of painting, cleaning, fencing and planting. Since there is a limit of publicly held lands, the cooperation between the private property owners and the public owners is important. As a matter of interest, there is a further division of responsibility of the State of Connecticut and the City of Groton. Later in the planning process, BSC learned of active planning on two abutting regional parks.

Upon completion of Task One, it became apparent that BSC plans were going to focus on the generic nature of the open space regardless of ownership. BSC was concerned about expectations by neighbors and City officials. At a meeting with the Mayor, City Planner and Highway Supervisor, BSC outlined the specific intent of our work. Due to the lack of City owned land, space and mapping, BSC felt the planning should respond to the overall space available and hope the property owners will respond to the overall needs of the street. Along the public streets, proposals for paving and lighting were anticipated. However, due to the lack of space, it was important that the property owners sensed the value of their roles in completing a range of investment projects on their property. BSC did not wish to enter into planning of the ideas without local officials approval. After lengthy discussion, it was agreed that BSC should proceed with a generic series of alternatives so that

owners could see how an overall orchestrated effort may be beneficial to each owner. Further, the City shared vital conceptual plans for the state owned property north of the waste water facility and the intent for docking facilities as part of the Thames River Estuary Heritage State Park. There was no discussion related to Griswold State Park; a vital state park east of Thames Street and within Groton Bank (the abutting residential neighborhood).

While generating the conceptual alternative plans, the BSC team relayed to the City the importance of planning for "doable" improvements which will build confidence in the process and create a greater willingness to participate. Further, the team talked about the importance of quality improvements. The goals of the process were to define the need to complete improvements which would be a quality lasting statement. The final result of all construction work should stabilize the economic value of the Project Area and to enrich the charm and character of Thames Street.

4.0 Goals, Alternative Concept Plans

During the three month planning study, the BSC approach to the Street was guided by the past work prepared for the City, property owners and local officials. Since the early 1970's, numerous plans and organized studies have never been translated into physical improvements. A review of the reports suggested grand schemes for major change. Traffic issues focused on directional flow and monitoring intensity of traffic during peak flow periods (usually directly related to Electric Boat employee schedules). Increased desire for public access to the Thames Riverfront has been leveraged by local and state coastal policies. The ingredients for planning were all in place; local support, a recognized need, public policy and "seed" money from the State of Connecticut. Task two of the Alternative Plan Concepts synthesized those issues studied in the past and shaped segments of construction which could be accomplished with modest levels of phased investment.

The concept scenarios included improvements which typically characterize a streetscape program were too expensive to complete in one phase without a larger financial commitment to the program. For instance street lighting, paving and curb alignment translates into \$ 30-40 per square foot. In a project area involving 4,500 linear feet of walks (9,000 total including both sides of the street), the budget for a total public program for the City would likely cost in excess of \$ 3 million dollars. The initial budget available is less than 5% of the funds likely to complete the entire work program. Therefore, BSC needed to define project goals to guide the decision process for betterments.

A streetscape program, should include more than a plan. Further, leaders of the cities and towns are correct in their efforts to minimize funding options until local support for a physical "facelift" can be supported by property owners and businesses. Therefore, the Thames Street Master Plan was a normal process which has to start with a technical overview, followed by a realistic plan of action which generates a groundswell of support for lasting reinvestment. Because Thames Street has such an intimate character with clear and direct relationship to local history and the sea, the streetscape planning process by BSC required the following goals;

1. Define "early action" improvements which would cost little money and would exploit the City's ability to build and the property owners' interest in seeing results;
2. Build relationships of trust and goals between the levels of government and increase communication on subjects of mutual interests;
3. Encourage private reinvestment by suggesting joint improvements along the edges of the public corridor;
4. Help meet public goals for greater visual and physical access to the Thames River;
5. Define specific amenity characteristics which the City, State and property owners could use as a guide in future improvements.

In February, BSC presented three alternative plans which illustrate options for the street. Figure No. 4 in Scheme A and is the proposal which would require a large investment in paving (hard surfaces) at strategic pedestrian nodes (gathering spaces) along Thames Street. At the northern gateway by the National Submarine Memorial, the proposal suggests a promenade to the overlook at the former bridge abutment just south of the railroad bridge. Improvements to the southern gateway include an organization of the existing parking lot and a public boardwalk near the water's edge. The proposed park on state property at the foot of Fort Street was designed to generate a convenient gathering area for patrons of the Thames River Estuary Heritage Park River Rides. This component was presented to BSC by the State's consultant for the regional parks master plan.

Figure No. 5 illustrates Scheme B which was a compromise between schemes A and C. The proposal suggests more soft surfaces and vegetation than Scheme A, but less than proposed in Scheme C. The latter alternative expressed a program of lawns, gardens and less paving (See Figure No.6). Subordinate to the three plan variations were three alternative suggestions for site furnishings. Figures No. 7 through No. 9 illustrate the differences. The BSC preference was the nautical theme, although the historic character of much of the buildings along Thames Street were consistent with the historical alternatives.

Following a three week public comment period, (See comments attached as Appendix No. 1), the BSC process began to explore potential interests by the State of Connecticut in expanding the zone of impact of the Thames Street program. At subsequent meetings with representatives of the Department of Environmental Protection, Bureau of Parks & Forests, BSC was informed of pending Master Planning of Fort Griswold and the State's sincere interest in moving the Thames River Estuary Heritage Park (TREHP) into final design and construction. The Groton component of the TREHP included a docking facility and pleasant park at the base of Fort Street.

Further discussion with City officials and area state legislative representatives strengthened the opportunities for the City to secure assistance to achieve greater impact for Thames Street, particularly where the corridor interfaced with the Fort Griswold and Heritage Park programs.

Closer review of the Heritage Park program for the Groton site increased interest in maximizing available dollars. The TREHP Master Plan defined docking and a park site. However, the depth of water, channel currents and lengthy (and expensive) permitting for such a docking facility may threaten the idea. Located south and north of the intended site, there are alternative sites already in place. Although structural compatibility testing may be necessary, the existing docks serve deep water and are accessible from parking and nearby commercial businesses. The owners of the land and piers may have an interest in selling the properties. The sites are magnificent sites which permit panoramic views of the Thames River and unusual opportunities to acquire sites which will provide water use access and historic exhibitionry. The exhibits should inform park patrons of the importance of the River in the development of the region. Given the exposure of the sites, it is likely that the cost of acquisition will be greater than the cost of physical improvements.

The Fort Griswold Master Plan Update offers another chance to strengthen the relationship of local and state initiatives. Careful study of public access up the hill to the Fort should steer the State towards a different street along which walks and other amenities may be placed. A walk through the Groton Bank neighborhood suggests that Latham or Baker Streets have more visual link to the Fort grounds and already have an open space corridor which extends up the final third of the distance to the Fort. Along Thames Street, Latham Street empties into an open space lot which could become another site of public reinvestment.

5.0 The Overall Master Plan

The purpose of the overall plan was to define a general guideline statement for betterments along the Thames Street project corridor. The Plan was based on reactions to the Alternative Plans which were on public display at Groton City Hall for three weeks in March 1990. Several written comments are attached as an Appendix No.1. Past experience on similar programs guided BSC's recommendations within the plan. An overall cost in excess of \$3 million could easily distract local officials from the real need along Thames Street. An overall improvement program takes several years to complete successfully. It requires investment by all owners, public and private. It requires assistance from State and Federal programs as funds permit and the Master Plan should encourage flexibility while creating positive action to improve and stabilize the physical environment.

Part of the value of the BSC process is the effort to encourage several of the available small sites to be linked physically or visually by placement of site amenities which provide continuity. From the southern end of the study area where a possible park site exists to the little state park site north of the wastewater plant, the Master Plan attached as Figure No. 10, illustrates proposed location of trees, new paving, lighting and other amenities. New street paving at intersections which include placement of new nautical lights, bollards to help reinforce pedestrian zones, planting to define private space and desired shade. Across the street from the Lorelei Restaurant is the Copp Estate. The historic home and well kept grounds are important assets to Thames Street. The BSC Plan suggests that the chain-link fence along the walk be removed and replaced with granite posts (similar to the one already in place), and black metal fencing with gates. The gates would be open during controlled hours onto a passive sitting area of formal gardens of shrub, perennials and dwarf hedge plantings. Benches and lights may also be appropriate or, stone dust edged in brick may create the appropriate ambiance at less cost.

At the School Street intersection, there are spatial options which could provide zones for new paving, lights and small groupings of vegetation in planters. With several important businesses located in the area, there could be a willingness of another partnership. If the improvements were provided, the merchants and property owners could help maintain the planters, sweep down the pavement areas and/or increase their commitment to building upkeep (painting & signage) and the limited private open space.

Because of the central location of School Street and the importance of several small businesses, the Master Plan recommends that a Phase One construction should begin at this intersection. The installation of new paving within the intersection, granite curbs and limited utility modification are the highest priorities. The second level of beautification within Phase One would be upgrading the public walks, placement of new street lights and bollards to help define pedestrian zones. Finally, placement of trees and shrubs to soften the hard surfaces will complete a betterment which would act as a catalyst for additional investment by private property owners and secure possible funding for additional locations along Thames Street.

Further north, the private/public partnership is necessary. Limited publicly owned property requires property owners to agree to an investment program by the public. BSC does not recommend sponsorship of one sided investments. If the City were to provide guidance, some materials and labor, building upkeep and landscaping (watering, pruning, weeding), several walls could be capped with new fencing or cresting. After placement of improvements, private owners could take over maintenance. Tree, shrub and bulb planting should be a cooperative program which stresses the values of assisting each other to meet common goals of beautification and compatible building/land uses.

In the northern gateway, the improvements will also necessitate a cooperative program. Much of the existing open space is private property and in poor condition. Planting, paving and stone wall repair should be completed in such a way as to save funds, but maintain quality control. It is important to remind the property owners and local leaders to utilize the local Highway Department to accomplish as much as possible. It is a community asset to have this "in house" capacity. It assures contracting continuity in the work technique and an ability to increase community pride and local identity.

The Overall Plan (Figure No. 10) illustrates what general improvements may be possible through a participation between City and local property owners. An example of future

cooperation which could lead to the benefit of the public is the proposal for a promenade to the overlook on the River. If local officials and the property owners could address the entire agenda of the property owners and the City, a case may be made for future visual access to the vital overlook. As with all Plan components, the promenade is a goal to seek, but only in a partnership with the public and private sectors.

6.0 BUDGET CONSIDERATIONS

Part of BSC's role during the Conceptual Planning process was to direct local attention to probable costs for proposed improvements. The overall costs are too large to realistically expect favorable reaction. However, it is essential to understand that Thames Street and all of its curves, edges of right of ways, utilities and paving does not exist on a single coordinated map or plan. BSC created a working plan from available information, the most recent of which was a 1954 vague line drawing of proposed paving. As work proceeds, the City will need to occasionally invest in detail survey work sheets which guide actual improvements as they are constructed.

Just as the survey needs require investment at areas where improvements will be placed, the amenities provided will be as funds permit and when work can be implemented in a cost effective partnership. Therefore, the \$2.66 million dollar generic plan improvements are for information only and noteworthy because the improvements are serious tools in strengthening the real estate value of property and the quality of life. A breakdown of the overall cost is contained within Appendix No. 2 of this Summary Report.

A review of primary costs fall within areas of lighting, paving and ornamental hardware. The latter amenity includes railings, cresting, trash receptacles as space permits or is required. The lighting includes 94 ornamental lights, thousands of feet of underground wiring and hundreds of feet of conduit an occasional bench or bollard. The lighting will cost the program over 15% of the entire amount. Paving of walks and intersections will be the largest cost. The benefit of working through the Highway Department is most evident in the paving savings. Modular paving where used (as recommended), the average cost per square foot can range up to \$15 if done through public bidding. The material costs are usually one third of the cost. The balance is in labor. With 75-80,000 square feet of paving, the labor factor is intimidating.

Therefore, the program recommendations include dividing up the total cost into "doable" increments which can be done over 4 to 7 years at a pace which is within economic reach. The product may not look complete until several parts of the Plan are implemented. However, the approach is flexible and energized so that if new opportunities arise, the City may be able to complete more sooner.

7.0 Program Recommendations

The Overall Master Plan process was intended as a catalyst and a leverage for partnerships to complete actual improvements. The Economic Development Grant provides the first opportunity. The placement of amenities will alert property owners of the City's commitment to end years of planning and move on to construction. While the construction and detail planning is accomplished in 1990, the energy generated during the work completed should spread into areas of state programs which will accelerate implementation. The Fort Griswold and Heritage State Park Programs offer additional tangible and exciting resources which may increase construction activity within the next five years.

Specifically, the Economic Development Grant from the State of Connecticut should provide the following;

- 7.1 The streetscape improvements illustrated in Phase 1 Concept Plan. As part of Appendix No. 3, the project cost for materials and limited labor shall be approximately \$55,000;
- 7.2 The general tree, shrub and bulb planting, largely on private property, shall cost \$10,000. This work should be for materials such as trees, shrubs and bulbs;
- 7.3 The Copp Estate should have a passive garden, new fencing and lighting. The budget could allocate up to \$10,000 for these improvements which should be met by a similar investment by the Estate; and
- 7.4 The balance of funds, approximately \$10,000 to \$15,000, should be used to leverage new participation by property owners and/or the State's Department of Environmental Protection.

APPENDIX NO. ONE

PUBLIC RESPONSE TO THAMES STREET PLAN

NAME ADDRESS

Gwen McTigue 25 Chapman St. Groton

COMMENT

Great graphics! I vote for nautical lighting and "park benches".
Good Luck!

NAME ADDRESS

Stephen E. Baves 71 Broad St. Groton

COMMENT

Immediate problems: 1. Pavement of roads 2. Denoias' marina-wild
Sumac trees along fence line 3. Prior George Vaul properties
should be condemned 4. Large truck traffic should be prohibited
5. One way traffic should be considered
Overall the plans look great.

NAME ADDRESS

Michael Coleman 66 Slocomb Terrace

COMMENT

Very imaginative & innovative themes. The streetscaping and
landscaping are done very well. The pedestrian access to the
river at the Overlook, State park & across from Baker is
excellent. The special paving at street intersections is a
necessary element. Encourage renovation, restoration and/or
reconditioning of existing buildings, encourage access to
public. I will continue to support the efforts to upgrade
Thames Street. Good Luck.

NAME ADDRESS

David Rabitaille 124 N.L. Turnpike
(I own 302 Thames)

COMMENT

I favor the Plan B concept for the State park area at the foot
of Fort St. Overall feeling is comfortable; lots of trees make
it seem almost rural. Use of a mix of shrubs and trees would
add texture. I love the river walk. If the river can be

cleaned up, it would be quite impressive. Very nice job!!
Thanks for the interest in Thames Street.

NAME ADDRESS

H. Newbury 279 Thames St.

COMMENT

Very nice drawings. I prefer Plan B. Buy Scheetz property to provide a city park.

NAME ADDRESS

James Carlson 75 Slocomb Terrace

COMMENT

As a resident, I prefer the Plan B approach, catering to pedestrian traffic and "soft" surfaces. The more green, the better, as long as the green (trees, kiosks, etc.) don't block river view from the street. Tourist traffic belongs at the area of the Submarine Memorial or at Scheetz property. Take care of residents first, then tourists will follow.

NAME ADDRESS

Clark Lange 80 School St.

COMMENT

Excellent presentation. I prefer Scheme B although perhaps too many trees are indicated on river side. I'm not sure the special paving at street intersections should be considered at the outset due to cost, considering the limited funds available. Apparently the right of way thru Tracor is not achievable, hence further attention to the Overlook should be abandoned.

NAME ADDRESS

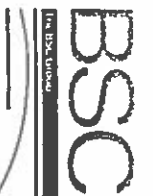
Jonathan Lincoln Fort Griswold State Park

COMMENT

The "kiosk" opposite Fort St. is a good idea. Plan should include signage to direct vehicles wishing to visit Fort Griswold up School St. I feel Plan B is the most desirable for the area of Fort Street.

COST ESTIMATE

Total Summary Sheet



Page 1 of 2

Project Name Groton Thames Street Location Groton, CT
 Project No. 8.2139.00 By TRP Date 4/11/90 Check WTB Date 4/30/90
 Status: Conceptual Preliminary/Schematic Final

Item No.	Item Description	Quantity	Unit	Unit Price	Total Price
1.	Overlook Platform	3,500	s.f.	30.	105,000.00
2.	Snack Bar	1	ea.	20,000.	20,000.00
3.	Information Kiosk	3	ea.	10,000.	30,000.00
4.	Plaza Paving	3,600	s.f.	15.	54,000.00
5.	Intersection Paving	9,000	s.f.	20.	180,000.00
6.	Bollards	5	ea.	800.	4,000.00
7.	Lights	94	ea.	1,700.	159,800.00
8.	Wiring/Electrical	1.s.			120,000.00
9.	Benches	30	ea.	500.	15,000.00
10.	Flag Poles	2	ea.	1,570.	3,140.00
11.	Restore Fountain	1	ea.	6,000.	6,000.00
12.	New Ornamental Fence	280	l.f.	170.	47,600.00
13.	New Fence on Ex. Wall	1,387	l.f.	50.	69,350.00
14.	Repair Existing Orn. Fence	80	l.f.	20.	1,600.00
15.	New Wall Cresting	90	l.f.	30.	2,700.00
16.	New Gates (Opp Estate)	2	ea.	150.	300.00
17.	Repair Wall	217	l.f.	150.	32,550.00
18.	River Walk	570	l.f.	175.	99,750.00
19.	New Paving for Parking Lots	11,868	s.f.	4.50	53,406.00
20.	New Strairs - State Park	1	ea.	5,000.	5,000.00
21.	New Sidewalk Paving	5,100	l.f.	7.50	38,250.00
22.	New Curb	5,100	l.f.	25.	127,500.00
23.	Flowering Trees	99	ea.	285.	28,215.00
24.	Street Trees	137	ea.	500.	68,500.00
25.	Shade Trees	19	ea.	625.	11,875.00
26.	Evergreen Trees	30	ea.	300.	9,000.00
27.	Shrubs/perennials/bulbs		l.s.		30,000.00
28.	Relocate Monument	1	ea.	5,000.	5,000.00
				Page Total	1,327,536.00
				Total	1,327,536.00

COST ESTIMATE



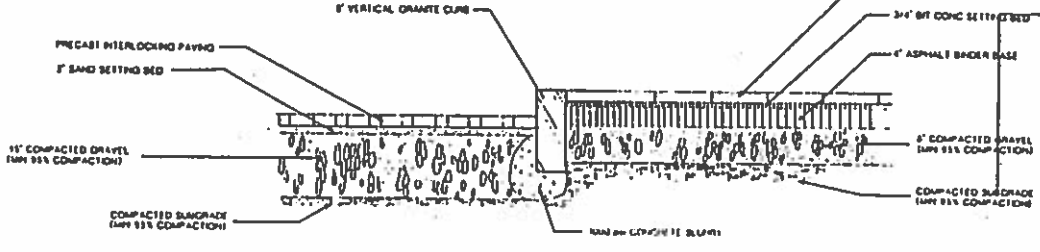
Project Name Thames Street Location Groton, CT

Project No. 8.2139.00 By TRT Date 4/11/90 Check MLB Date 4/30/90

Status: Conceptual Preliminary/Schematic Final

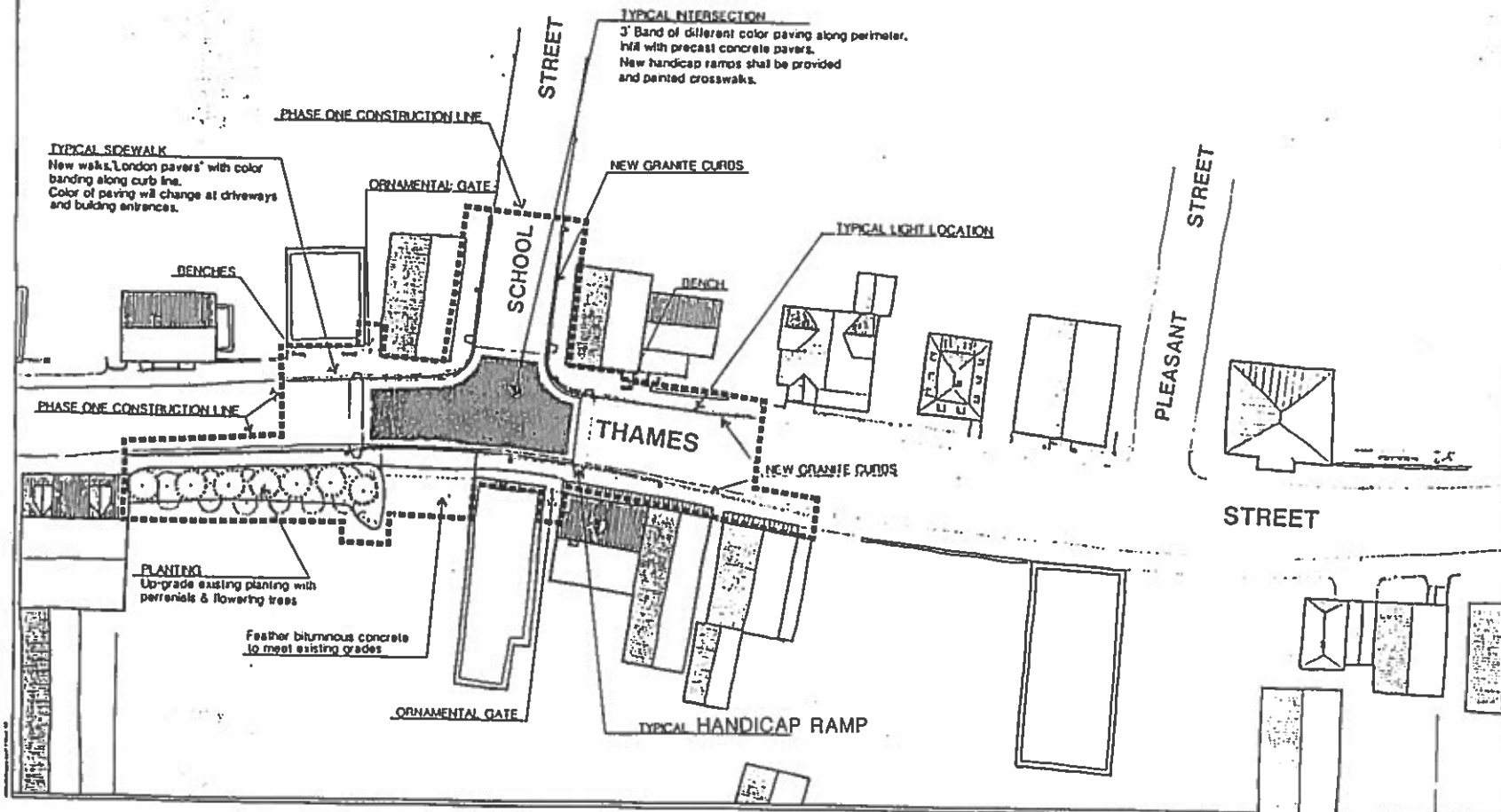
Item No.	Item Description	Quantity	Unit	Unit Price	Total Price
29.	New Walk	60,000	s.f.	10.	600,000.00
30.	New Raised Planter	240	l.f.	30.	7,200.00
31.	New Retaining Wall	80	l.f.	240.	19,200.00
32.	New Paving for House Parking	1,400	s.f.	20.	28,000.00
33.	Demolition		l.s.		25,000.00
34.	Gravel/Site Preparation	1,500	c.y.	15.	22,500.00
35.	20% Contingency				400,000.00
36.	Overhead & Profit @ 10%				230,000.00
37.	Total Conceptual Budget				2,659,436.00

TYPICAL LIGHT FIXTURE
Nautical fixture placed 60°O.C.



TYPICAL PAVING ENHANCEMENT DETAIL SCHOOL AND THAMES STREET INTERSECTION

TYPICAL INTERSECTION
3' Band of different color paving along perimeter.
Fill with precast concrete pavers.
New handicap ramps shall be provided
and painted crosswalks.



TYPICAL SIDEWALK
New walks, London pavers with color
banding along curb line.
Color of paving will change at driveways
and building entrances.

PHASE ONE CONSTRUCTION LINE

ORNAMENTAL GATE

NEW GRANITE CURBS

TYPICAL LIGHT LOCATION

SCHOOL STREET

PLEASANT STREET

THAMES STREET

NEW GRANITE CURBS

STREET

PLANTING
Upgrade existing planting with
perennials & flowering trees

Feather bituminous concrete
to meet existing grades

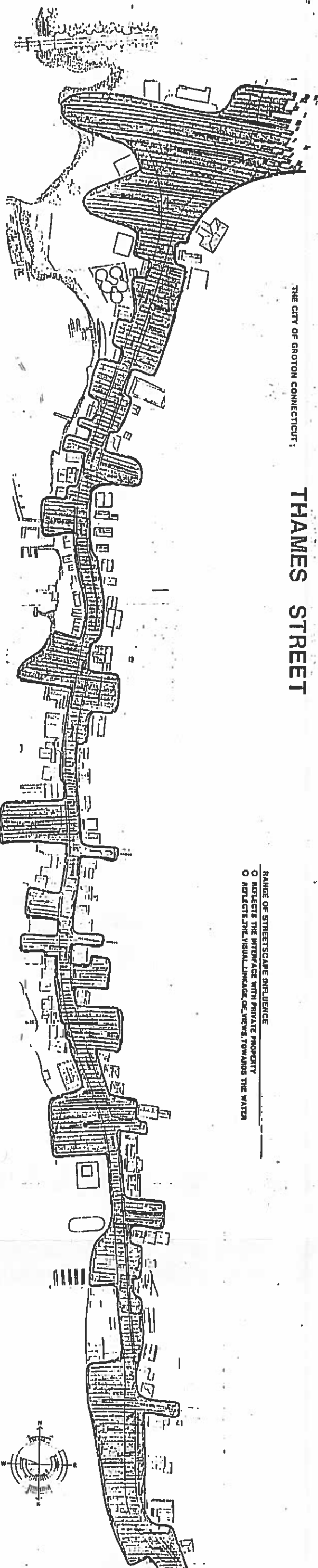
ORNAMENTAL GATE

TYPICAL HANDICAP RAMP

REVISIONS	
NO.	DATE
REFERENCES	
DATE	This plan has been prepared from a plan entitled "Thames Street Reconstruction of Thames Street in the Borough of Groton showing City lot between property lines, to 60' dimensions, including drainage, gutter, sidewalk, and street lighting and the town of Groton assessing and the location of property lines, buildings and other equipment etc. appropriate.
PROJECT TITLE	THAMES STREET STREETScape IMPROVEMENTS Groton, Connecticut
Prepared For:	City of Groton Hon. Catherine J. Kinsell Mayor Planning & Zoning Commission David W. Schmitt, City Planner
215 Main Street	Groton, Connecticut 06340
BSC The BSC Group	
The BSC Group - Worcester for 315 North Street Worcester MA 01608	
Tel: 781 481-1111	
Streetscape Architects Civil Engineers & Surveyors (Environmental Planners)	
PHASE ONE INVESTMENT PLAN	
SCALE	NONE
DATE	11/21/11
DESIGNED BY	
CHECKED BY	
DATE	
SCALE	
PROJECT NO.	
DATE	

THE CITY OF GROTON CONNECTICUT :

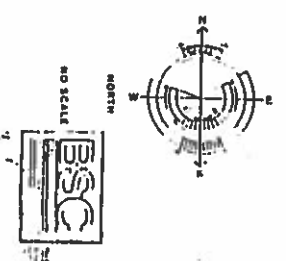
THAMES STREET



RANGE OF STREETSCAPE INFLUENCE
O REFLECTS THE INTERFACE WITH PRIVATE PROPERTY
O REFLECTS THE VISUAL LINKAGE OR VIEWS TOWARDS THE WATER

FIGURE NO. 1

SPACIAL ANALYSIS



THE CITY OF GROTON CONNECTICUT :

THAMES STREET

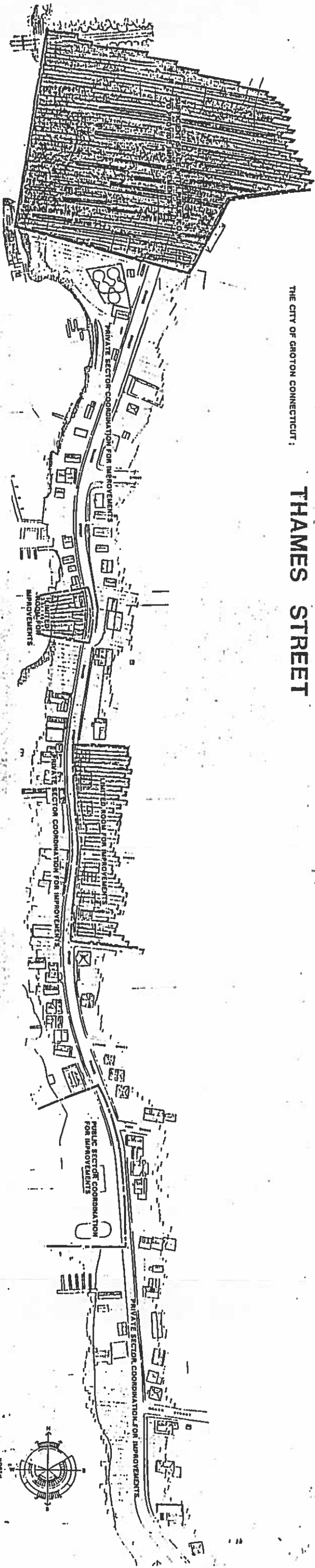


FIGURE NO. 2

PUBLIC/PRIVATE OWNERSHIP



THE CITY OF GROTON CONNECTICUT :

THAMES STREET

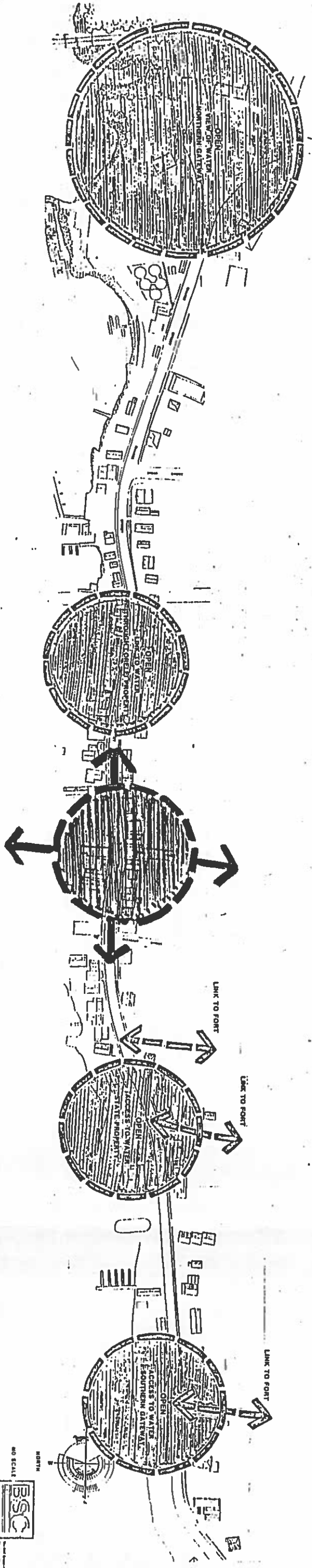


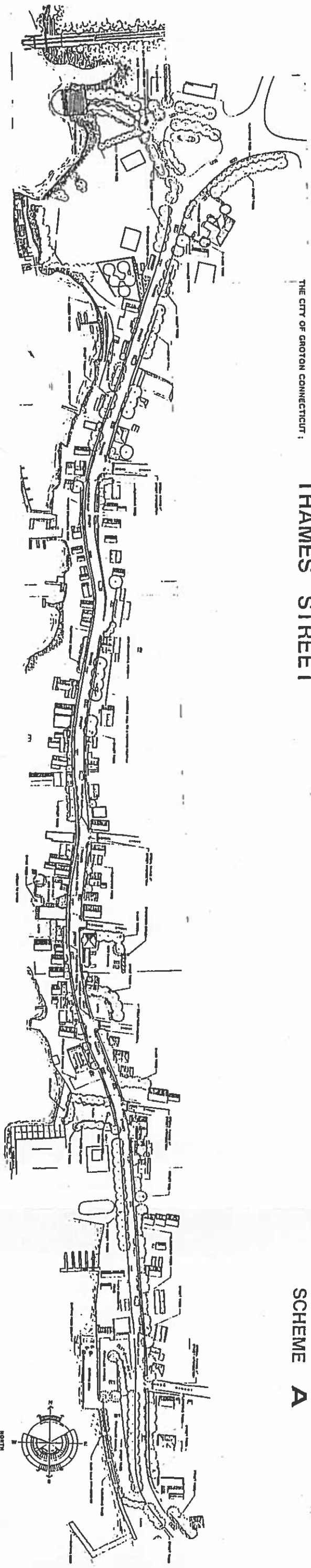
FIGURE NO. 3

GATEWAYS/KEY PROJECT AREAS



THE CITY OF GROTON CONNECTICUT :

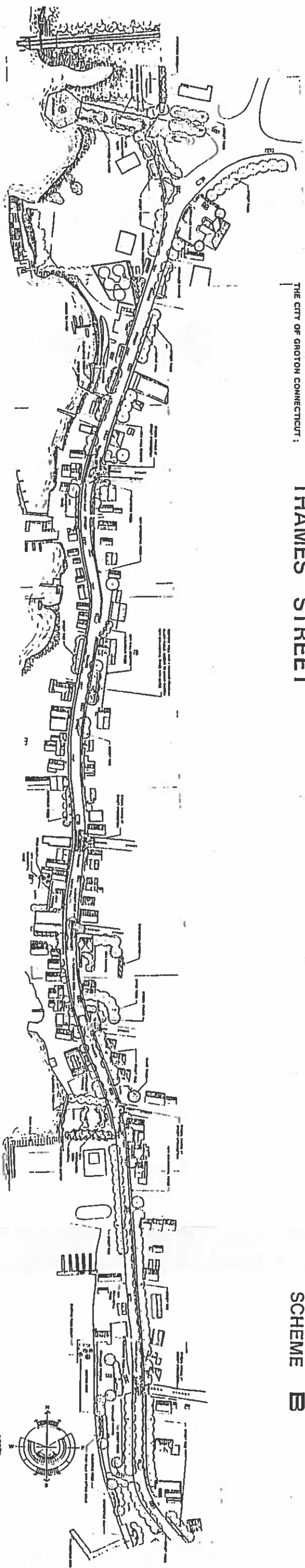
THAMES STREET



SCHEME A

FIGURE NO. 4





THE CITY OF GROTON CONNECTICUT :

THAMES STREET

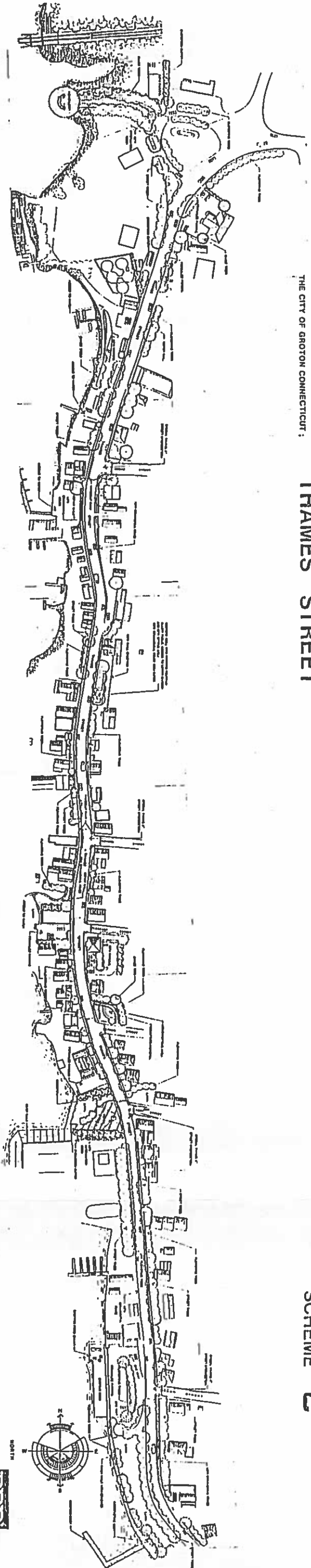
SCHEME B

FIGURE NO. 5



THE CITY OF GROTON CONNECTICUT :

THAMES STREET

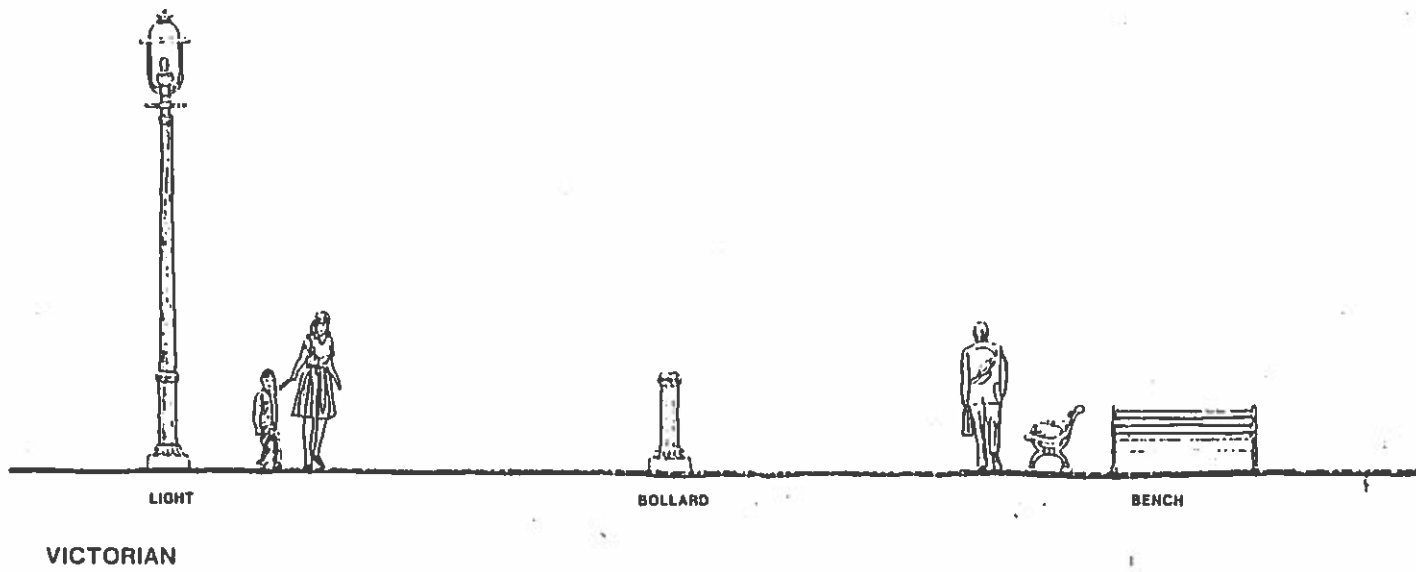


SCHEME C

FIGURE NO. 6

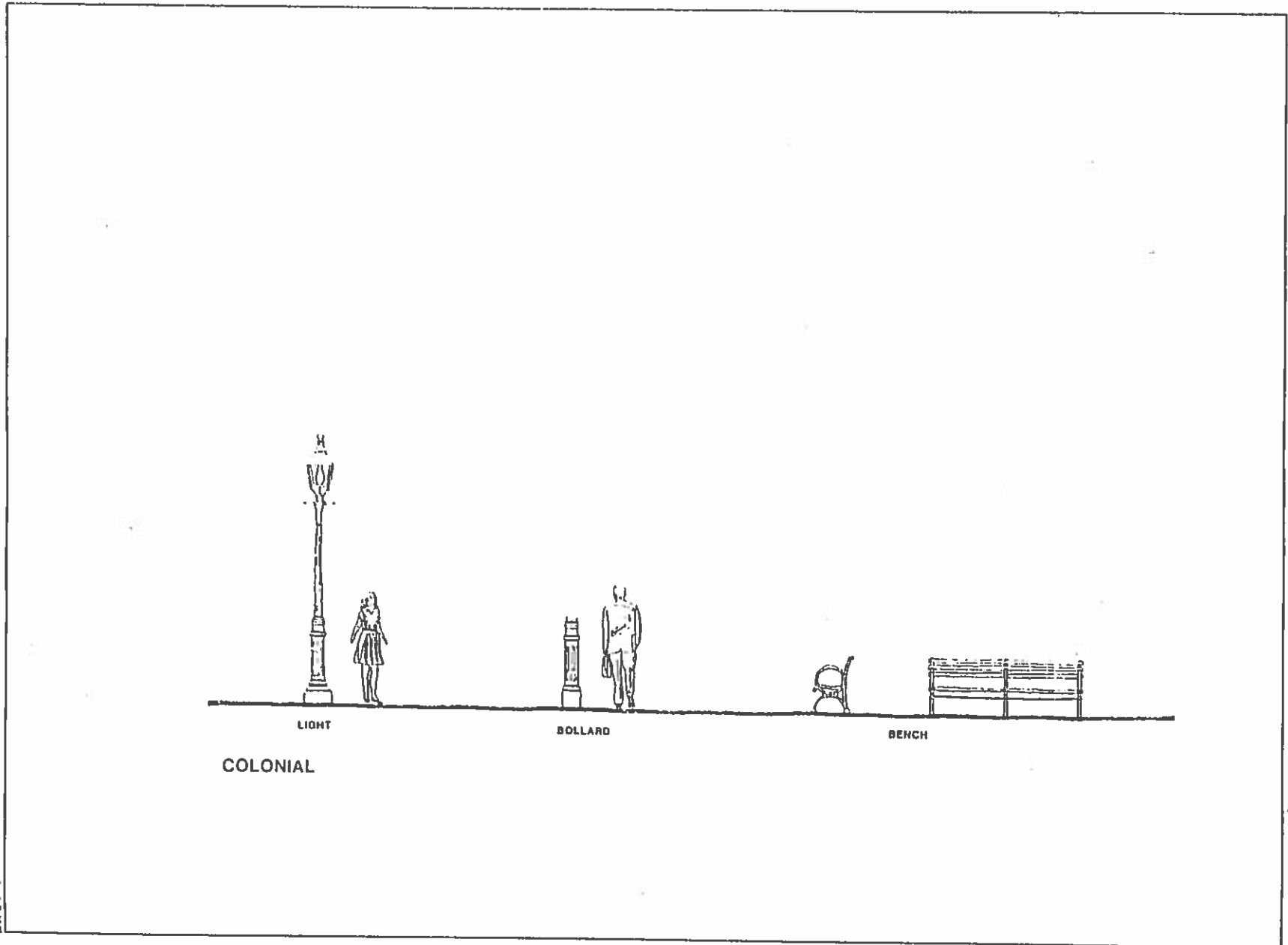


FIGURE NO. 7



REVISIONS NO. 1 1 2 3 4 5 6 7
REFERENCES
PROJECT TITLE THAMES STREET STREETSCAPE IMPROVEMENTS Groton, Connecticut
Prepared For: City of Groton Hon. Catherine J. Mahoney, Mayor Planning & Zoning Commission David W. Schrock, City Planner
125 Marston Street Groton, Connecticut 06340
The BSC Group, Worcester Inc. 30 Bridge Street Worcester, MA 01609
Landscape Architects Civil Engineers & Surveyors Environmental Planners
DATE 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08 11/11/08
SHEET OF

FIGURE NO. 8



THAMES STREET
STREETSCAPE
IMPROVEMENTS
Groton,
Connecticut

Prepared For:
City of Groton
Hon. Catherine A. Johnson,
Mayor
Planning & Zoning Commission
David E. Schofield,
City Planner

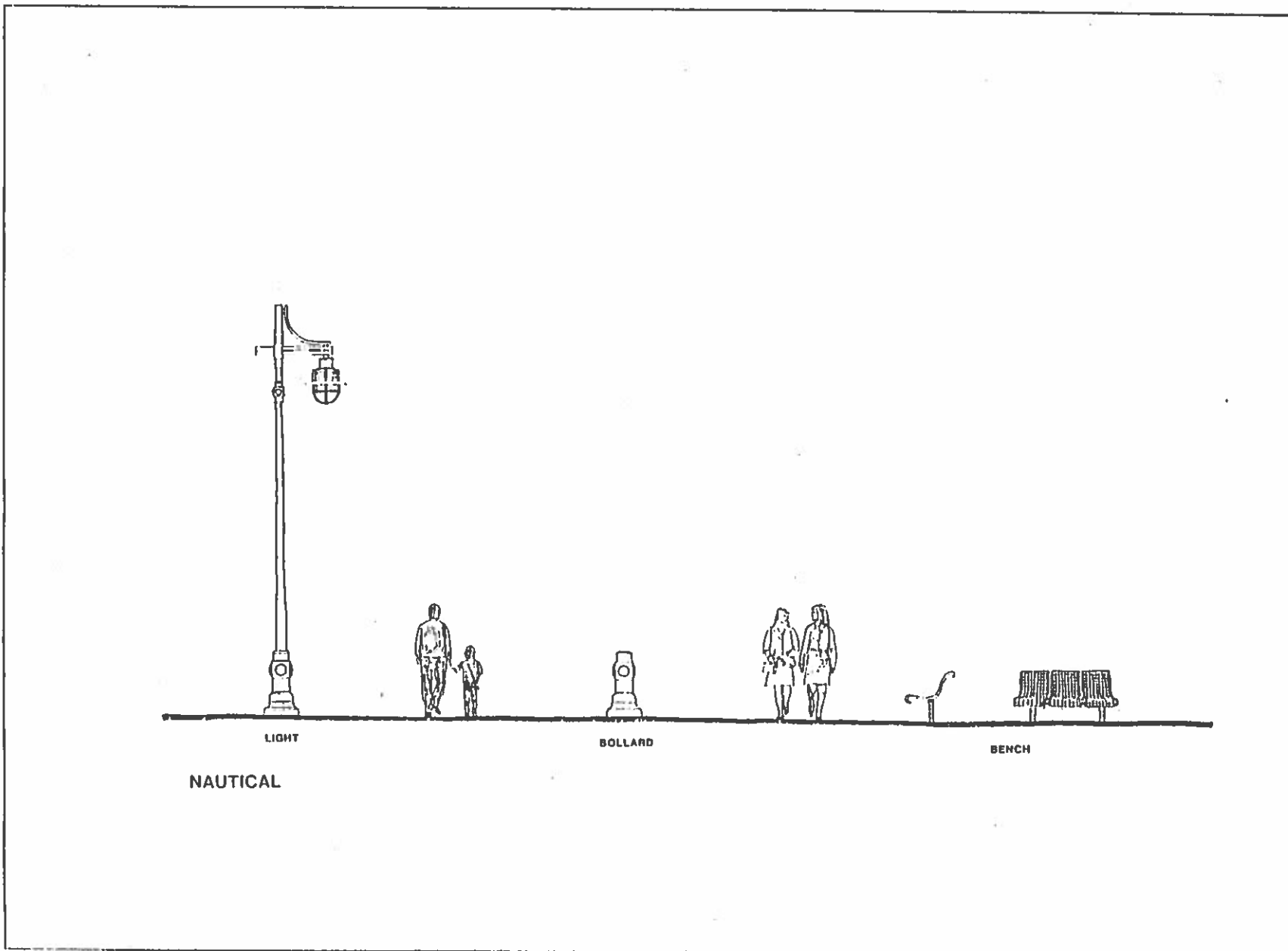
295 Market Street
Groton, Connecticut
06340

BSC
The BSC Group, Inc.
Landscape Architects
Civil Engineers & Surveyors
Environmental Planners

DATE

DATE	
CDMP DESIGN	
DATE	
DESIGN	
FIELD	
DATE NO.	
DATE NO.	1011
DATE NO.	01

FIGURE NO. 9




PROJECT NO. 07

PROJECT NAME

PROJECT TITLE
**THAMES STREET
STREETSCAPE
IMPROVEMENTS**
Grafton,
Connecticut

Prepared For
City of Grafton
Hon. Catherine J. Eshel, Mayor
Planning & Zoning Commission
David W. Schmitt, City Planner

285 Markham Street
Grafton, Connecticut
06340



The BSC Group - Worcester Inc.
1100 State Street
Worcester, MA 01602
www.bscgroup.com

VR PL 001

Landscape Architects
Civil Engineers & Surveyors
Environmental Planners

DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
SCALE	
TITLE	
SHEET	14