

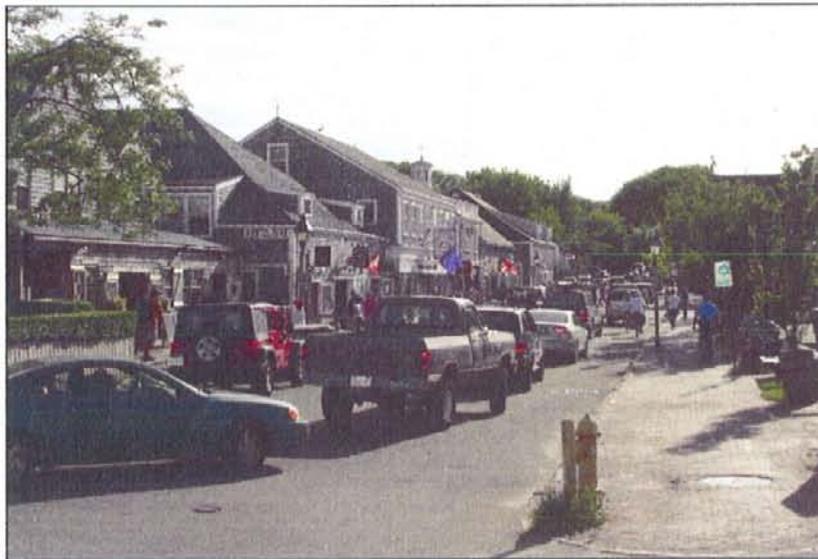
DOWNTOWN CIRCULATION AND FERRY ACCESS IMPROVEMENT STUDY

AN UPDATED DATA COLLECTION AND ANALYSIS EFFORT THAT
PRESENTS RECOMMENDATIONS TO ALLEVIATE DOWNTOWN
TRAFFIC CONGESTION IN AND AROUND THE FERRY TERMINALS

DOWNTOWN NANTUCKET NANTUCKET, MASSACHUSETTS

MMI #2967-04

March 2008



Prepared for:

Town of Nantucket Planning & Economic Development Commission
Nantucket, Massachusetts

Prepared by:



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INTRODUCTION AND HISTORICAL PERSPECTIVE OF THE PROJECT AREA

Geography and Demographic Trends

The town of Nantucket is located off the coast of Massachusetts approximately 20 miles east of Martha's Vineyard and 25 miles south of Cape Cod. The town of Nantucket is coincident with the county of Nantucket and includes the islands of Nantucket, Tuckernuck, and Muskeget.

Refer to Map 1 for a map of the town on a USGS topographic base.

Nantucket has a land area of 46 square miles and approximately 88 miles of shoreline.

Nantucket Sound is located north of the town, and the open Atlantic Ocean is located to the east and south. Sheltered and semisheltered marine systems include Nantucket Harbor, connected to Nantucket Sound; Polpis Harbor, an embayment of Nantucket Harbor; and Madaket Harbor, at the west end of Nantucket Island toward Tuckernuck. Extensive sandy shoals are located east and west of Nantucket. Key physical features of Nantucket Island include high bluffs at Sankaty Head and the Nantucket Cliffs, long systems of beaches and dunes (Great Point and Coatue) formed by longshore currents, several north-south trending elongated ponds that are typically cut off from the ocean by narrow beaches (such as Hummock Pond and Miacomet Pond), extensive moorlands, and numerous areas of tidal wetlands.

Demographic trends for the town of Nantucket have historically been different from many other communities in Massachusetts and continue to differ. Nantucket was the third largest city in Massachusetts while its whaling economy was booming. At the end of its whaling heyday in the 1840s, Nantucket had a population of 9,700. By the 1870s, the town's population was only 4,000. From the 1930s through the 1970s, the year-round population of Nantucket was only 3,500.

According to the 2000 U.S. Census, 9,520 people were residing in Nantucket. This represented an enormous population increase of 58 percent between 1990 and 2000. This growth was due in

large part to the attractive setting and high quality of life as well as the influence of tourism and the need for workers to support the tourism industry. The estimated population in 2005 was 10,168, a more stable seven percent increase over the preceding five years but still representing substantial growth as compared to trends for the Commonwealth of Massachusetts. Meanwhile, the summer tourist season brings an enormous increase in temporary population, currently reaching approximately 60,000 on a peak day. The island peak summertime population surge of day trip tourists, vacationers, retirees, and second home owners is critical to supporting the island's year-round economy.

The historic downtown core is the primary area of congestion for the island and includes many of the island's shops, restaurants, guest houses, and both ferry terminals. This core area also serves as the gateway for the vast majority of all people coming to and departing from the island.

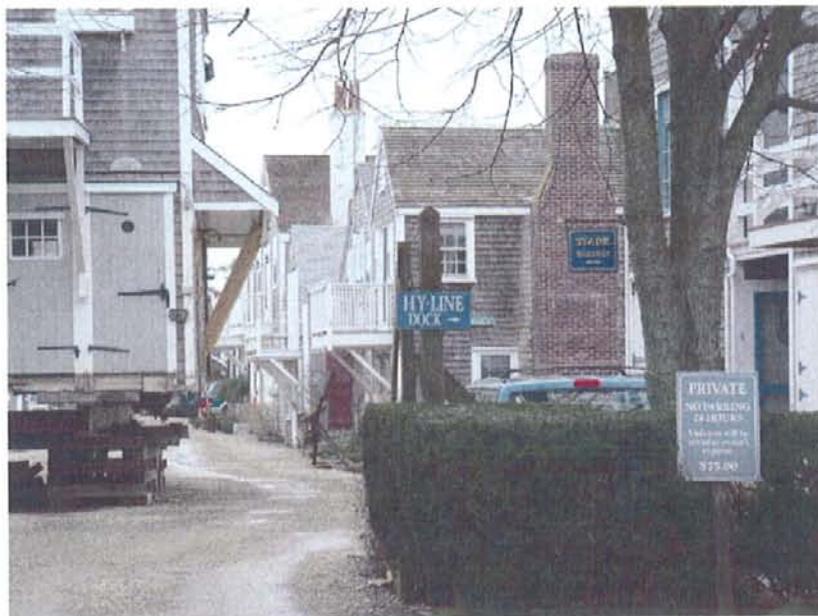
Transportation, Circulation, and Parking Issues

At first glance, there appear to be a number of factors that contribute to the congestion observed and experienced in the downtown area, including many not unique to Nantucket such as the use of modern-day vehicles in an area that was laid out and developed in the 19th century. This kind of problem occurs throughout many historic New England towns. However, several circumstances that contribute to the congestion are unique to Nantucket as compared to other historic community centers, including pressures associated with tourism and the need to deliver almost everything needed in the town via only one dock or wharf, the Steamship Authority dock, in the historic downtown core area.

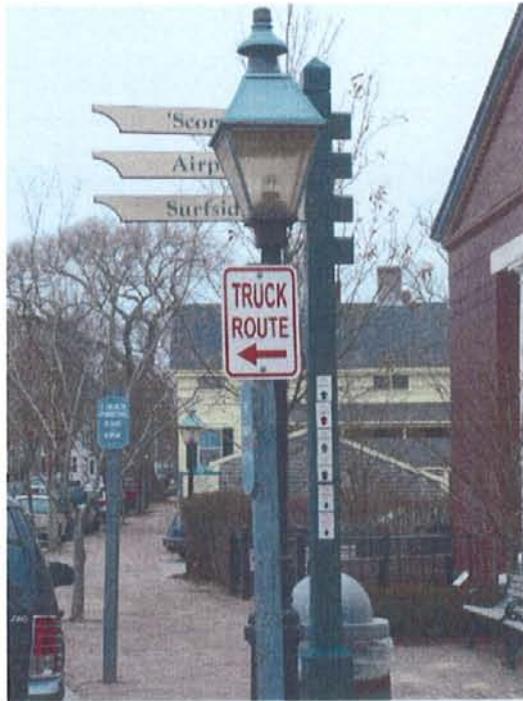
Because of these unique circumstances, Nantucket officials have long understood the causes of the transportation-related issues in the downtown area. This is evident from a review of the following reports:

- ❑ *Nantucket Central Business District Circulation and Parking Study, 1977*
- ❑ *Planning and Implementation for Downtown Parking and Traffic Circulation, 1993*
- ❑ *Downtown Traffic Circulation Analysis, 1996*
- ❑ *A Strategy to Address Parking and Traffic Congestion in Downtown Nantucket, 1998*
- ❑ *Site Analysis Study: Nantucket Island Parking Garage, Spring 2006*

A review of these reports reveals that a number of problems have persisted, including a potential lack of parking and misuse of existing parking; routing of truck and automobile traffic to and from the Steamship Authority dock; unloading of trucks in the downtown area; confusion of pedestrians walking to and from the two ferry terminals; jaywalking and overflow from sidewalks to the streets; the presence of tour buses, vans, and taxis; and the general problem of many people using several modes of transit in a small downtown area (cars, trucks, bicycles, buses, etc.).



During a 10-minute walk of the downtown area, only one sign can easily be found that points pedestrians to the Hy-Line ferry terminal.



Only two small signs designate the preferred truck route as trucks depart from the Steamship Authority ferry terminal.

It is interesting to note that all of these reports focusing on the downtown area predated the permanent and seasonal population increases described above. The population increases have only heightened the need for transportation improvements in and around the downtown area, especially given the fact that many residents employed downtown are using their own vehicles. Indeed, a mid-February visit to Nantucket revealed that on-street parking and truck activity cause navigation in the downtown area to be a challenge even in the off season.

Some of the goals and objectives outlined in the four reports specific to downtown Nantucket were incorporated in the Nantucket Regional Transportation Plan (2007-2030) based on a review of the public participation meeting materials. For example, reducing the number of cars that come to the island and developing parking alternatives in the downtown area are shared goals.

It is clear, as stated in *A Strategy to Address Parking and Traffic Congestion in Downtown Nantucket*, that "there is no one magic bullet to solve the problems in the Downtown." Milone & MacBroom, Inc. concurs fully and understands that only a creative combination of strategies can help to mitigate the existing problems. Mainland solutions such as addition of lanes, extreme roadway widening, and electronic traffic signaling are not consistent with the historic nature of the downtown and have not been considered.

It is the intent of this study to provide up-to-date data on traffic circulation and volume within the project area and provide recommendations for improvements. The recommendations are purposely varied and include both short-term economically feasible improvements and long-range more economically challenging ones. It is the goal of this study not only to refine a strategy for implementing relevant recommendations of previous studies but also to collect and evaluate new alternatives to improve the circulation system as well as to improve the access and flow of all traffic modes between the ferry terminals and both downtown and out-of-town destinations.

SECTION ONE: PROJECT INITIATION, DATA COLLECTION AND BASE MAPPING (JULY 2007 – OCTOBER 2007)

Downtown Study Area

The downtown study area was developed in order to define the project area. This boundary (shown in red on Map 1) is not a zoning boundary or property boundary but rather a subjective immediate downtown business area that reflects a 0.33 mile zone of influence surrounding the two primary ferry docks (the Steamship Authority dock and the Hy-Line dock). The project study area boundary, Map 1, was utilized as the limit for existing conditions analysis, mapping, and data collection.



Engineering,
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**Downtown Circulation and Ferry Access
Improvement Study**

MMI#: 2967-04
MXD: H:study_area.mxd
SOURCE: DEP Bulletin No.40

N
↑

**Study Area
Locations Map**

LOCATION:
Nantucket, MA

DATE:
October 2007

SCALE:
1:6,000

SHEET:
Map 1

The analysis included several project workshop meetings to solicit input from the public, business owners, the Transit Authority, ferry service providers, town staff and municipal organizations. A complete memorandum on the public and private workshops has been included in the Appendix of this report.

The following is a list of general safety, circulation, and aesthetic issues noted as part of the existing conditions analysis.

- Vehicular traffic, to and from the ferry terminal lots, and queuing are the main causes of the periodic congestion in the downtown area.
- The unique and attractive character of the "Historic Downtown Area" is oftentimes overshadowed by the dominance of the vehicle congestion.
- The historic layout of streets and parking does not support current day vehicle sizes (i.e., large SUVs and delivery trucks) and thus leads to insufficient aisle widths, insufficient quantity of parking spaces, and excessive traffic congestion due to the length of vehicles.
- Several side streets that allow on-street parking create extremely narrow and dangerous travel aisles in certain areas.
- Difficult pavement types exist in several sections of the downtown area.
- There is a lack of safe sidewalks, crosswalks, handicap accessible parking spaces, sidewalk ramps, and pedestrian safety features (i.e., crossing signs, crosswalks, etc.).
- There are limited sidewalk widths and pedestrian spaces.

- Existing signposts and poles within sidewalks conflict with pedestrian movements and circulation paths.
- Although the historic areas include an exceptionally decorative theme that is difficult to recreate, there appears to be a lack of a continuation of that streetscape theme and the pedestrian scale amenities (i.e., period style pedestrian level lighting, benches, trash receptacles, street trees, etc.) in the vicinity of the Steamship Authority pier.
- The gateway to Historic Downtown Nantucket is understated.
- There is a lack of defined on-street parking spaces. Insufficient or absent parking space layout causes a disorganized parking scheme.
- There is a lack of additional parking areas other than downtown on-street parking spaces.
- Uneven walking surfaces present a potential tripping hazard and are generally difficult for some abilities to navigate.
- There are limited civic and cultural spaces along the downtown waterfront.
- Poor pedestrian connections (sidewalks, wayfinding signage, etc.) exist to and from the ferry terminals, the downtown shops, and the Nantucket Regional Transit Authority (NRTA).

Existing Conditions Mapping – Inventory Plans

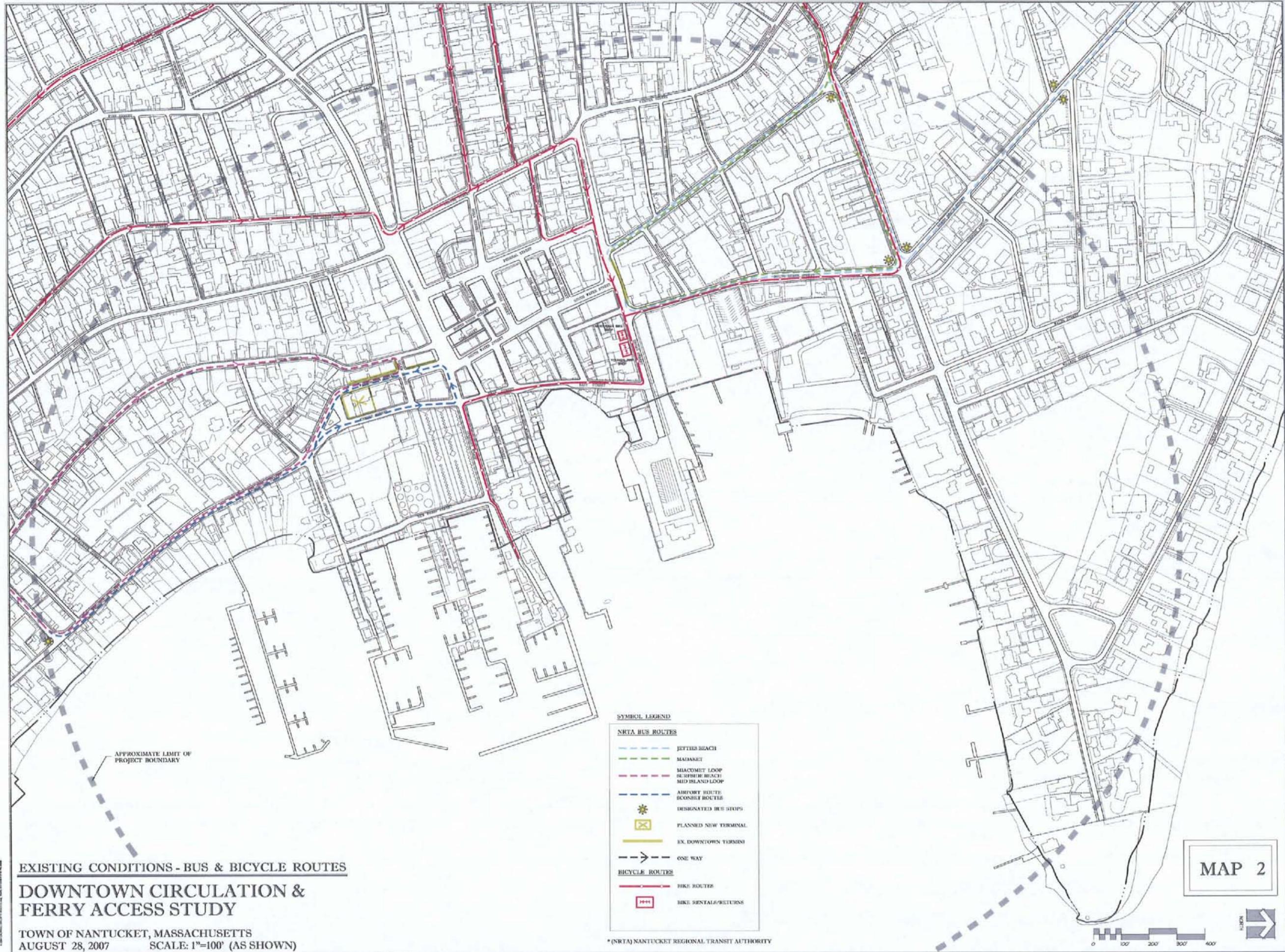
In an attempt to better understand actual field conditions of the unique pavement types, available parking counts, and restrictions, a field inventory was completed for the downtown study area.

Three separate maps were developed in order to better present the data collected:

Map 2 - Bus & Bicycle Routes

Map 3 - Crosswalk & Pavement Inventory

Map 4 – On-Street Parking



EXISTING CONDITIONS - BUS & BICYCLE ROUTES

DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

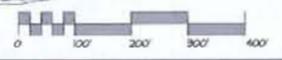
NRTA BUS ROUTES

- JETTES BEACH
- MAHARRETT
- MACOMET LOOP
- BURNETT BEACH
- MID ISLAND LOOP
- AIRPORT ROUTE
- ECONSIST ROUTE
- DESIGNATED BUS STOPS
- PLANNED NEW TERMINAL
- EX. DOWNTOWN TERMINI
- ONE WAY

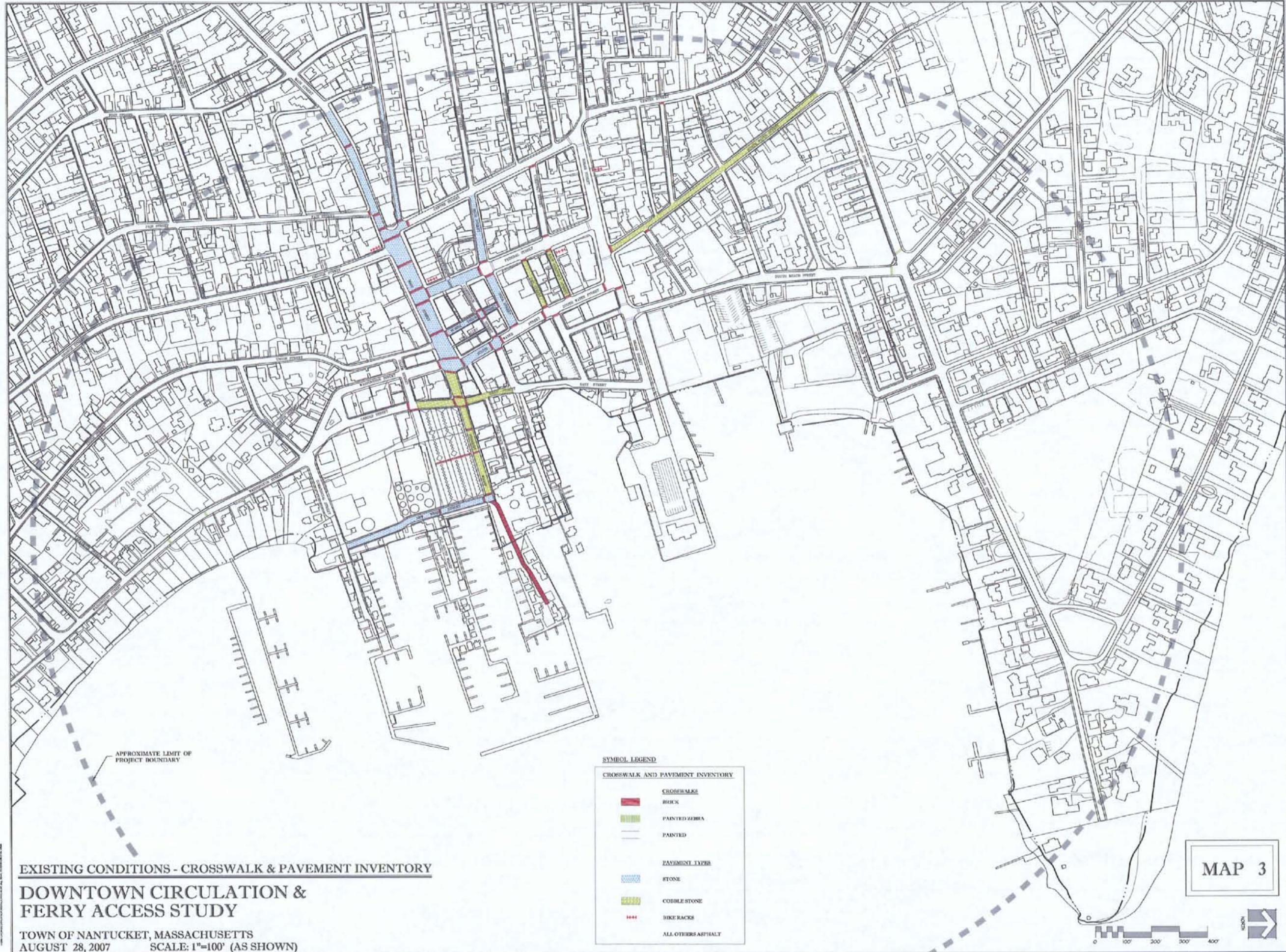
BICYCLE ROUTES

- BIKE ROUTES
- BIKE RENTAL/RETURNS

MAP 2



* (NRTA) NANTUCKET REGIONAL TRANSIT AUTHORITY



APPROXIMATE LIMIT OF PROJECT BOUNDARY

EXISTING CONDITIONS - CROSSWALK & PAVEMENT INVENTORY

DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

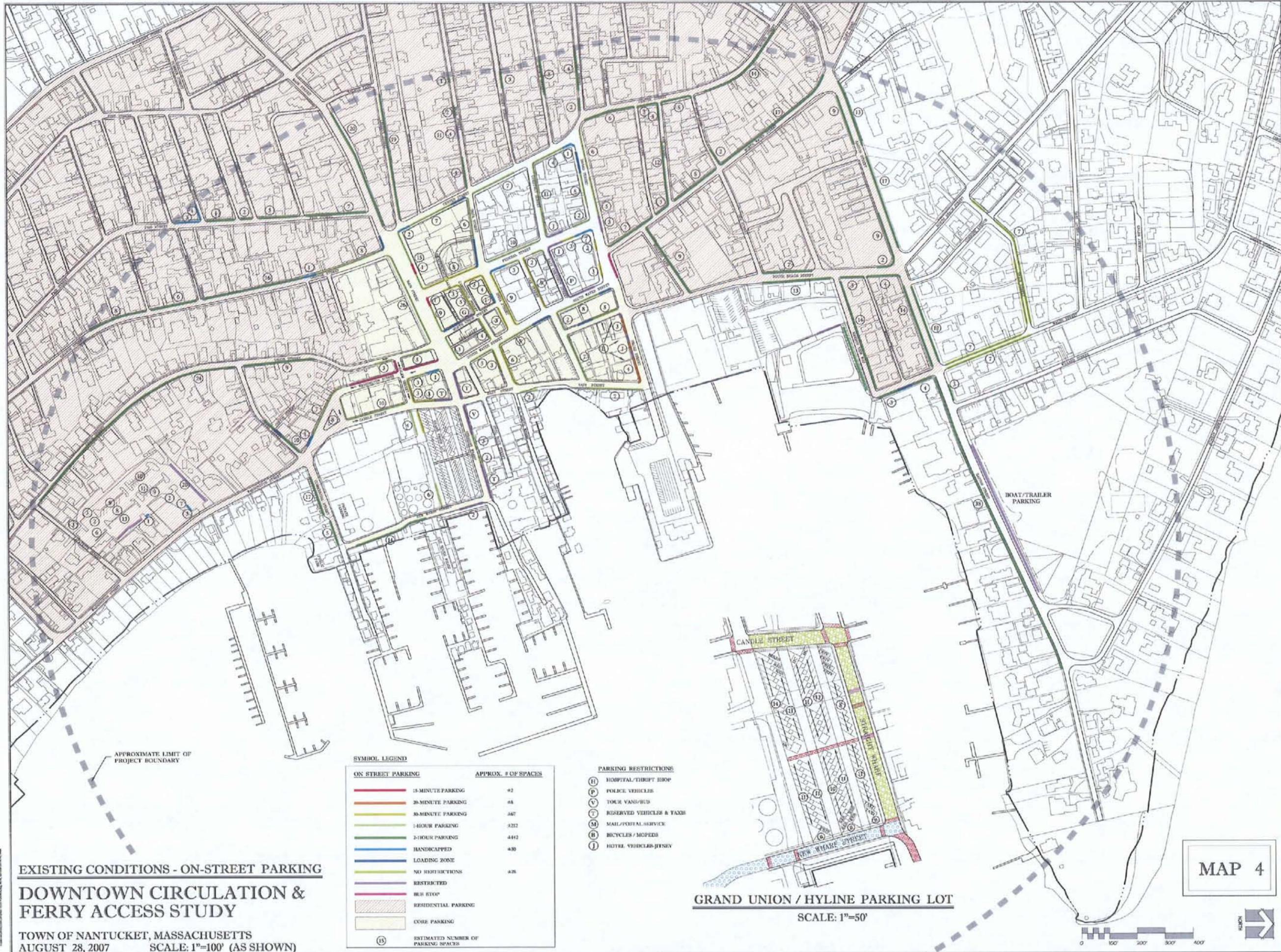
TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

CROSSWALK AND PAVEMENT INVENTORY	
	CROSSWALK BRICK
	PAINTED ZEBRA
	PAINTED
PAVEMENT TYPES	
	STONE
	COBBLE STONE
	BIKE RACKS
	ALL OTHERS ASPHALT

MAP 3





EXISTING CONDITIONS - ON-STREET PARKING

DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

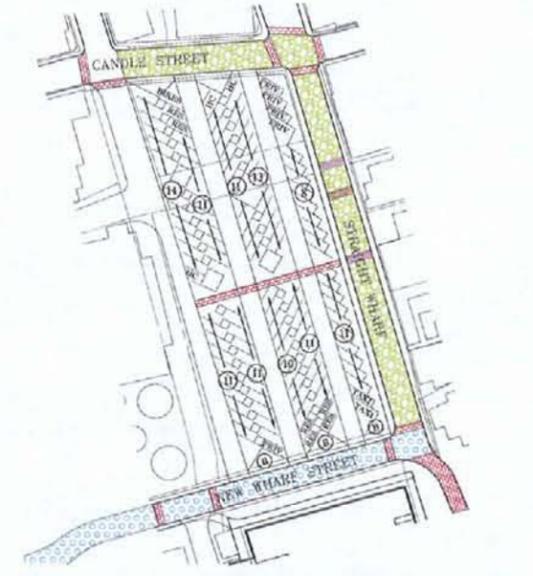
TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

ON STREET PARKING	APPROX. # OF SPACES
15-MINUTE PARKING	~2
20-MINUTE PARKING	~8
30-MINUTE PARKING	~67
1-HOUR PARKING	~212
2-HOUR PARKING	~442
HANDICAPPED	~30
LOADING ZONE	
NO RESTRICTIONS	~28
RESTRICTED	
BUS STOP	
RESIDENTIAL PARKING	
COBE PARKING	

(15) ESTIMATED NUMBER OF PARKING SPACES

- PARKING RESTRICTIONS**
- (H) HOSPITAL/THRIFT SHOP
 - (P) POLICE VEHICLES
 - (V) TOUR VANS/BUS
 - (T) RESERVED VEHICLES & TAXI
 - (M) MAIL/HOSPITAL SERVICE
 - (B) BICYCLES / MOPEDS
 - (J) HOTEL VEHICLES/ITNEY



MAP 4



Traffic Data Collection and Analysis

Ferry Traffic Trends

Ferry operating statistics have been reviewed to identify trends since the previous Nantucket Central Business District Study in 1977. Statistics for the year 2007 were provided by the ferry operators and compared to 1976 data. The results are summarized in Table 1, which reports trends in passenger, vehicle, and bicycle traffic. This table reports traffic carried to Nantucket. Traffic departing the island is expected to be of comparable size.

Passengers

The Steamship Authority was the only ferry operator in 1976. The Hy-Line ferry began operations in 1972, and Freedom Cruises from Harwich were initiated in 1995. Total passengers carried during the extended summer season (April – October) increased from about 148,000 in 1976 to around 404,000 in 2007, an increase of 172 percent. This can be compared to an increase in year-round population on the island of about 130 percent during that time (about 4,430 in 1976 to about 10,240 in 2006). Total passenger traffic increased by an average of 3.3 percent per year.

Passenger traffic on the Steamship Authority ferries increased by about 56 percent, or 1.4 percent annually during this period.

Another trend is that passenger traffic in the shoulder season months (April, May, and October) increased substantially more than the average. This suggests that the summer season is expanding.

**Table 1
Passengers Carried to Nantucket**

Year		April	May	June	July	August	Sept.	Oct.	Total
1976	Steamship Authority	7,186	10,968	23,223	35,959	40,363	20,186	10,451	148,336
2007	Steamship Authority	14,754	24,952	37,881	49,063	52,343	29,638	22,276	230,907
	HyLine Ferry	8,696	15,303	21,268	35,600	39,057	23,459	17,731	161,114
	Freedom Cruises	0	417	1,243	3,847	4,479	1,609	209	11,804
	Total	23,450	40,672	60,392	88,510	95,879	54,706	40,216	403,825
Percent Increase	Steamship Authority	105%	127%	63%	36%	30%	47%	113%	56%
	Total	226%	271%	160%	146%	138%	171%	285%	172%
Annual Percent Increase, 1976 - 2007							SSA Passengers		1.4%
							Total Passengers		3.3%

**Vehicles Carried to Nantucket
by the Steamship Authority**

Year		April	May	June	July	August	Sept.	Oct.	Total
1976	Cars	1,436	1,924	3,335	3,536	3,348	2,385	1,724	17,688
	Trucks	511	542	686	614	622	451	454	3,880
	Total	1,947	2,466	4,021	4,150	3,970	2,836	2,178	21,568
2007	Cars	2,486	3,583	5,395	5,625	5,277	2,792	2,174	27,332
	Trucks	2,155	2,650	2,452	2,366	2,115	1,988	1,988	15,714
	Total	4,641	6,233	7,847	7,991	7,392	4,780	4,162	43,046
Percent Increase	Cars	73%	86%	62%	59%	58%	17%	26%	55%
	Trucks	322%	389%	257%	285%	240%	341%	338%	305%
	Total	138%	153%	95%	93%	86%	69%	91%	100%
Annual Percent Increase, 1976 - 2007							Cars		1.4%
							Trucks		4.6%
							Total		2.3%

Bicycles Carried to Nantucket

Year		April	May	June	July	August	Sept.	Oct.	Total
1976	Steamship Authority	360	928	1,702	2,783	3,565	1,262	447	11,047
2007	Steamship Authority	146	611	1,396	1,895	2,534	1,016	434	8,032
	HyLine Ferry	50	263	574	1,217	1,560	537	196	4,397
	Total	196	874	1,970	3,112	4,094	1,553	630	12,429
Percent Increase	Steamship Authority	-59%	-34%	-18%	-32%	-29%	-19%	-3%	-27%
	Total	-46%	-6%	16%	12%	15%	23%	41%	13%
Annual Percent Increase, 1976 - 2007							Bicycles on SSA		-1.0%
							Total Bicycles		0.4%

Sources: 1976 - Nantucket Central Business District Circulation and Parking Study, 1977
2007 - Ferry Operators

Vehicles

The Steamship Authority remains the only carrier of vehicles to and from Nantucket. The total number of vehicles carried in the season increased from about 21,600 in 1976 to approximately 43,000 in 2007, almost exactly doubling. This corresponds to an average increase of 2.3 percent per year and is smaller than the increase in passengers. In 2007, about 6,500 vehicles, or 15 percent, of all vehicles carried by the Steamship Authority paid the excursion rate.

It is notable that patterns are different for different types of vehicles. While passenger car traffic increased by 55 percent over 31 years, truck traffic increased by 300 percent, or an average annual increase of 4.6 percent. Although car traffic increased by about half while truck volume quadrupled, it should be noted that the means of classifying vehicle types changed between 1976 and 2007. The new system categorizes vehicles such as SUVs and pick-up trucks, which have grown in market popularity since 1976, as trucks. Again, traffic in the early and late months increased faster than average. It is not clear whether this trend will continue, but it does suggest that measures to address truck traffic specifically are desirable.

The increase in vehicles transported to the island swells the summer accumulation of traffic. The 1977 study reported about 5,000 vehicles registered on the island and 9,000 to 10,000 more during the summer peak. In 2007, there were around 18,000 vehicles registered on the island and an estimated 25,000 during the summer peak. Thus, the total number of vehicles on the island in summer increased from about 15,000 in 1976 to around 43,000 in 2007, or nearly tripled.

Bicycles

Seasonal bicycle traffic has remained relatively stable in this 30-year period, increasing from about 11,000 vehicles in 1976 to around 12,400 in 2007. This corresponds to an increase of about 0.4 percent per year. In 2007, the Steamship Authority ferries carried nearly twice as

many bicycles as the Hy-Line ferries (8,032 vs. 4,397) but substantially fewer than in 1976 (11,047). The lack of growth in bicycles carried on the ferries could be explained through an increase in bicycle rentals during this period, but this has not been confirmed.

It was estimated in 1976 that there were between 8,000 to 9,000 bicycles on the island during the peak summer season based on the number carried on the ferries, at bicycle rental shops, and individually owned. It is estimated by these same methods that there could have been 21,000 to 26,000 bicycles on the island during the 2007 peak summer season.

Traffic Surveys

A program of traffic turning movement counts was undertaken to provide current data and to reveal traffic patterns in the study area. Three time periods were surveyed - weekday midday, weekday afternoon, and weekend midday. The survey periods were established in part with respect to ferry schedules in order to capture traffic approaching and departing the ferry terminals. The survey periods were 11:00 a.m. to 2:00 p.m. and 4:00 p.m. to 7:00 p.m. for midday and afternoon, respectively.

Counts were undertaken at 18 locations around the study area. Traffic volumes from these counts also enabled determination of traffic volumes by interpolation at eight additional locations. These locations are summarized in Table 1-1 and illustrated in Figure 1.

The surveys took place during the period Thursday, July 26, 2007, to Saturday, July 28, 2007. The majority of weekday surveys took place on Thursday, with two locations surveyed on Friday. All weekend surveys took place on Saturday. Traffic volumes from these surveys were summarized, and the peak hour for traffic movements in each period was determined. The weekday midday peak hour was determined to be 11:15 a.m. to 12:15 p.m. The weekday afternoon peak hour was determined to be 5:00 p.m. to 6:00 p.m. The weekend midday peak

hour was 11:30 a.m. to 12:30 p.m. The peak hour traffic volumes are illustrated in Figures 2, 3, and 4 for weekday midday, weekday afternoon, and Saturday midday, respectively.

Bicycle traffic was counted at three intersections: Easton and North/South Beach Streets; Center, Chestnut and Hussy Streets; and Washington, Coffin and Commercial Streets. Pedestrian movements were not counted, but pedestrian and bicycle activity was observed.

The peak hour traffic volumes for all three time periods were analyzed with a traffic analysis software called Synchro. In addition to traffic volumes and street layouts, account was taken of bus movements, counted or estimated bicycle and pedestrian traffic, and parking maneuvers. The output of the analysis includes indications of volume/capacity ratios, Levels of Service (LOS), vehicle queues, and delays. The results of the analyses are given in Tables 2-1 to 2-25. (Please note that the intersection of South Water Street and Chestnut Street was not analyzed as there are no conflicting vehicle movements.) See Table 1-1. Tables 2-5a, 2-6a, 2-9a, 2-18a, 2-20a, 2-21a, and 2-25a depict intersection analyses of proposed recommendations found in Section Two of this report.

Summary of Analyses

LOS are within a desirable range (C or better) in most locations. LOS are generally better on through streets than on side streets (A vs. B/C). There are two notable exceptions to this pattern:

1. The intersection of Broad Street with South Beach Street and South Beach Street Extension. The indicated LOS for the southbound approach on South Beach Street was F in all three time periods, with delays ranging from just under three minutes in the Saturday midday peak to seven minutes in the weekday afternoon peak. The delays correspond to vehicle queues ranging from 240 feet to over 500 feet. There is also a concentration of pedestrian and bicycle traffic at this location due to movements to and from the ferry, bicycle rental shops, and tourist attractions. Some of the delays and

associated vehicle queues are attributable to police direction of traffic favoring disembarking ferry traffic from Steamboat Wharf.

2. The intersection of Main, South Water, and Washington Streets. The westbound approach on Main Street shows LOS D, E, and F in the weekday midday, weekday afternoon, and Saturday midday peak hours, respectively. Saturday conditions correspond to a delay of 3.5 minutes per vehicle and queues of over 200 feet, which is long enough to back up into the upstream intersection of Candle and Easy Streets with Straight Wharf. South Water Street is a primary path for vehicles traveling to the southern and eastern ends of the island from the Steamship Authority ferry, and Main Street is the path for vehicles departing the Hy-Line ferry. This area also experiences heavy pedestrian traffic.

These findings are not surprising as the worst conditions are indicated at locations with both local and ferry-related traffic as well as substantial numbers of pedestrians and bicycle traffic.

Perspective on Existing Conditions and Possibilities for Improvements

An interesting and complex picture emerges from all of the data gathering, field inspections, and analyses. Although it was given in the brief for the study, the surveys independently confirmed that the ferry operations have a major impact on conditions downtown, suggesting that the ferry operators can be major contributors to solutions.

Perceptions of conditions downtown vary between two major groups. The first are residents and regular/seasonal visitors, who know the system and have been able to work with or around its constraints or idiosyncrasies. The other group is first-time or infrequent visitors, who are unfamiliar with the area and often confused or unclear about their choices.

It is clear from the passenger surveys that a substantial number of ferry riders have no business downtown and no particular intention to stop there. Congestion downtown occurs in part because of the mixture of local and through traffic. Ways to accommodate both sets of needs are explored in this study. Due to the pattern of one-way streets, the paths to and from the vehicle ferry are indirect and not obvious to a first timer. Various ideas to improve circulation are suggested. There are a limited number of candidates for streets that could be closed or operated in directions other than they are presently, but changes in particular locations and further detailed studies are recommended.

In addition, congestion and some traffic accidents occur because of conflicts between moving and parked vehicles. Parking regulation and enforcement take up a considerable amount of municipal resources. It is human nature to seek a parking space as close to one's destination as possible and considered good for business to provide such spaces. Improvements to parking involve not just providing more spaces but adjustments to regulation and approach.

Congestion also occurs in part because of conflicts between vehicles, bicycles, and pedestrians. Bicycles and pedestrians would use facilities separate from roads if available. Possibilities for upgrading existing facilities and possible new ones are explored. Several of the ferry passengers commented on the linkage through downtown to the established bike paths.

Finally, congestion occurs in part because most people drive rather than use other modes. While driving makes sense for many types of trips, origins, and destinations, ways to improve public transit's mode share are explored. NRTA has done a remarkable job of building a sustainable system with growing ridership and operating schedules that larger systems would envy. A complaint about the system is the lack of direct service to the ferry terminals, which is presently impractical due to existing terminal congestion. Ways to overcome this are explored. One possibility might be to consider transit use of the ground floor of the proposed new parking structure near the Grand Union. This location is closer to the ferry terminals, easily walkable from the Hy-Line terminal, and may not involve any schedule delays.

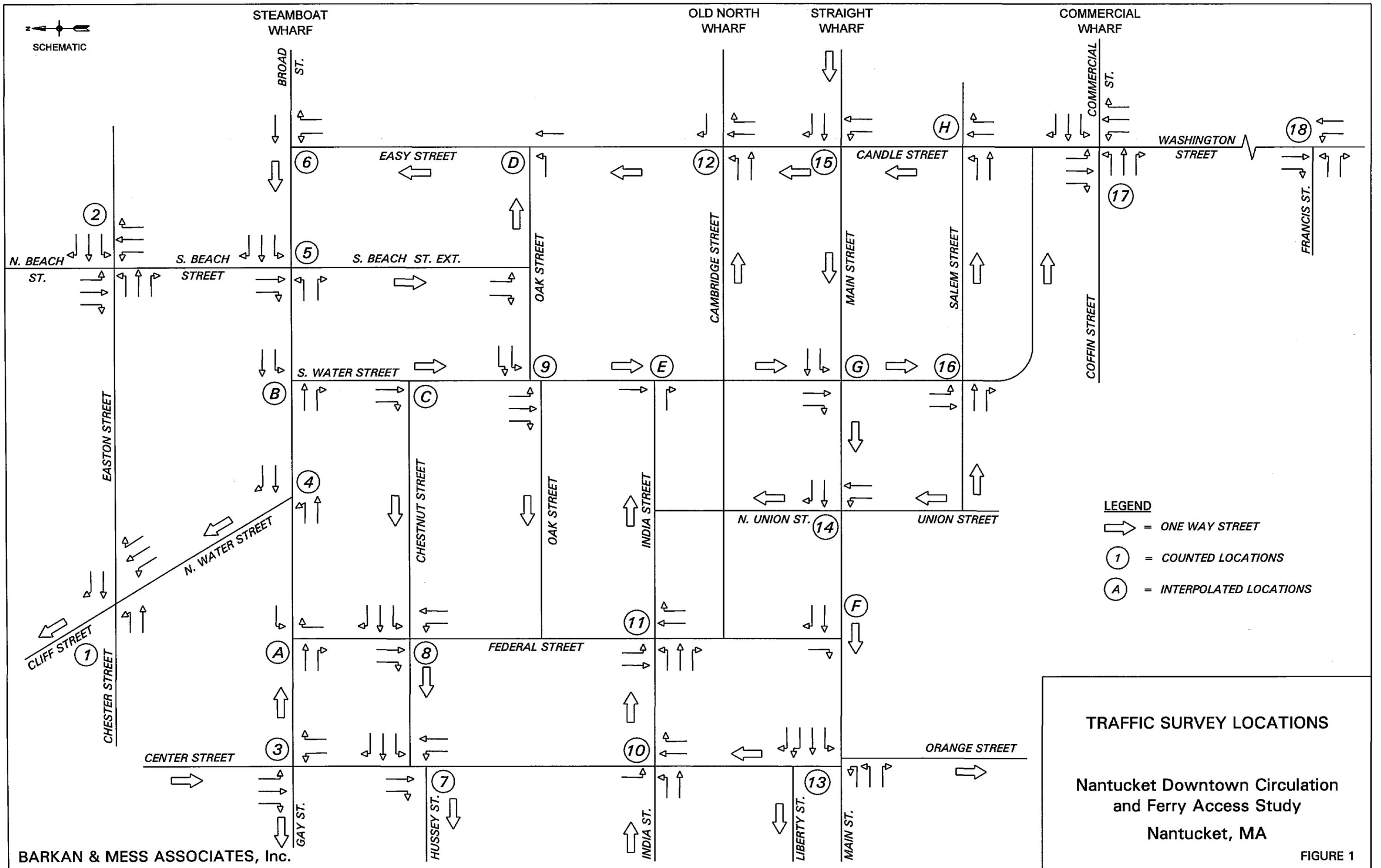
Another concern raised in the surveys was a perceived lack of information and direction. As noted above, this affects first-time visitors rather than veterans but may also deter them from coming back. Ideas for wayfinding and information distribution are suggested in cooperation with the ferry companies.

Although this study is meant to take a fresh look at downtown conditions, previous studies have been perused. A statement in one of them that the solution to challenges in downtown circulation will not include a single magic bullet rings true. The process will consist of a series of complementary and mutually supportive measures which will require cooperation and goodwill from all stakeholders, public and private. The conversation about this occurs in Section Two of this study.

Table 1-1
TRAFFIC SURVEY LOCATIONS
Nantucket Downtown Circulation and Ferry Access Study

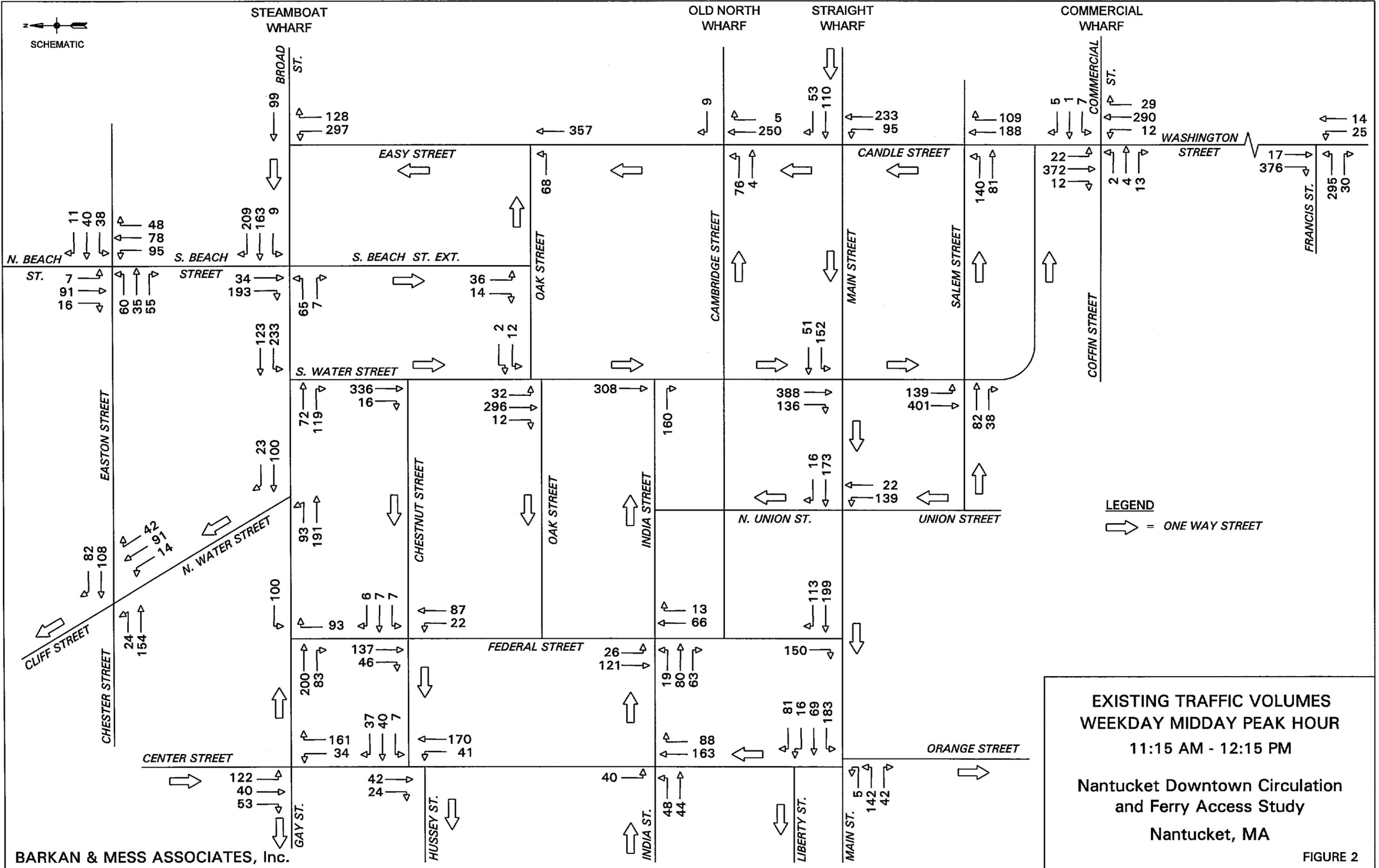
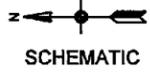
INTERSECTION ID	LOCATION
1	North Water, Cliff, Chester and Easton Streets
2	South Beach, North Beach and Easton Streets (bike count location)
3	Center, Broad and Gay Streets
4	Broad and North Water Streets
5	Broad Street, South Beach Street and South Beach Street Extension
6	Broad and Easy Streets
7	Center, Chestnut and Hussey Streets (bike count location)
8	Federal and Chestnut Streets
9	South Water and Oak Streets
10	Center and India Streets
11	Federal and India Streets
12	Easy and Cambridge Streets
13	Main, Orange, Center and Liberty Streets
14	Main, Union and North Union Streets
15	Main, Candle and Easy Streets
16	Salem and Washington Streets
17	Washington, Coffin and Commercial Streets (bike count location)
18	Washington and Francis Streets
INTERPOLATED LOCATIONS	
INTERSECTION ID	LOCATION
A	Federal and Broad Streets
B	Broad and South Water Streets
C	South Water and Chestnut Streets
D	Oak and Easy Streets
E	South Water and India Streets
F	Main and Federal Streets
G	Main and South Water Streets
H	Salem and Candle Streets

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BARKAN & MESS ASSOCIATES, Inc.

TRAFFIC SURVEY LOCATIONS
 Nantucket Downtown Circulation
 and Ferry Access Study
 Nantucket, MA
 FIGURE 1

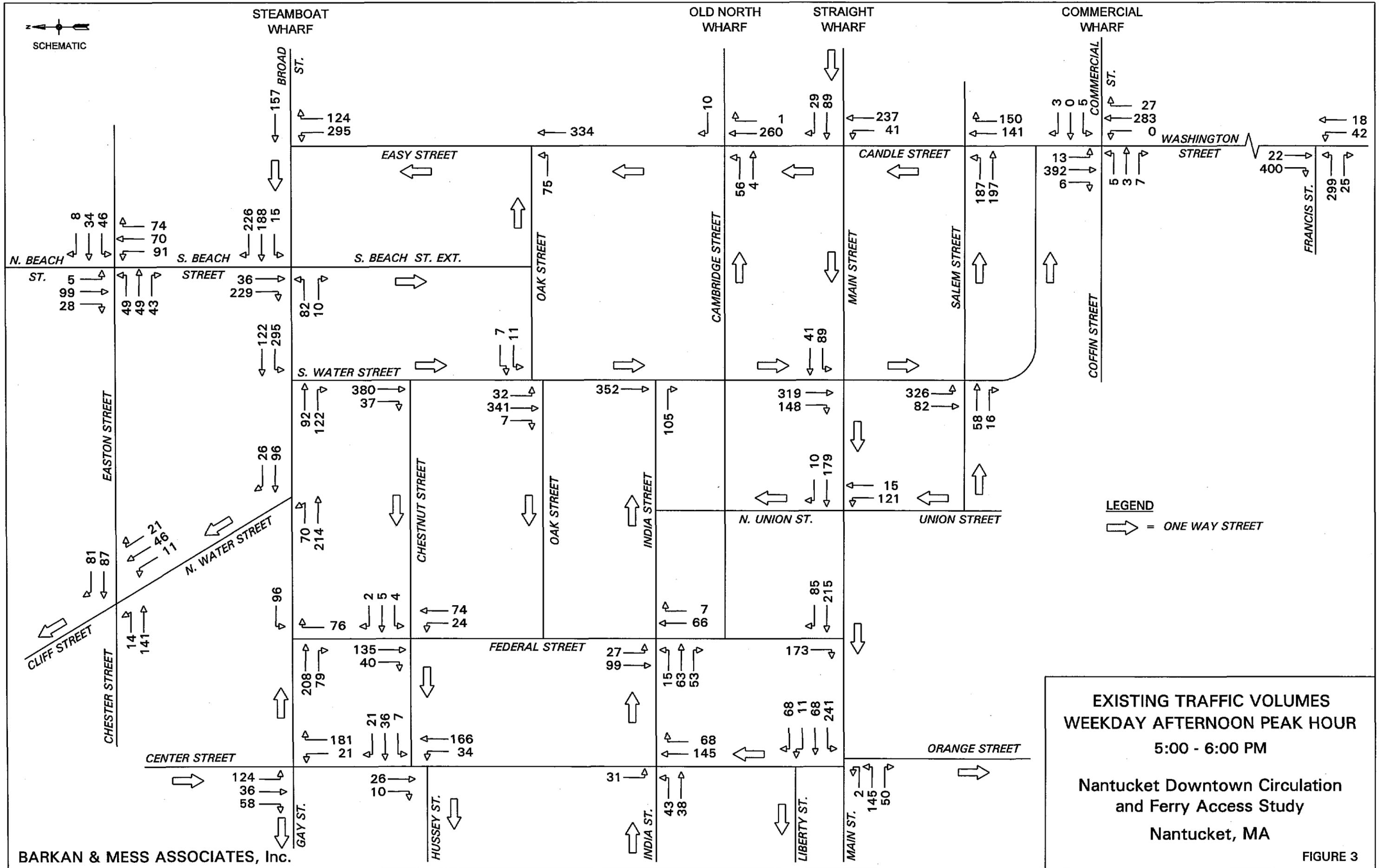


**EXISTING TRAFFIC VOLUMES
 WEEKDAY MIDDAY PEAK HOUR
 11:15 AM - 12:15 PM**

**Nantucket Downtown Circulation
 and Ferry Access Study**

Nantucket, MA

FIGURE 2



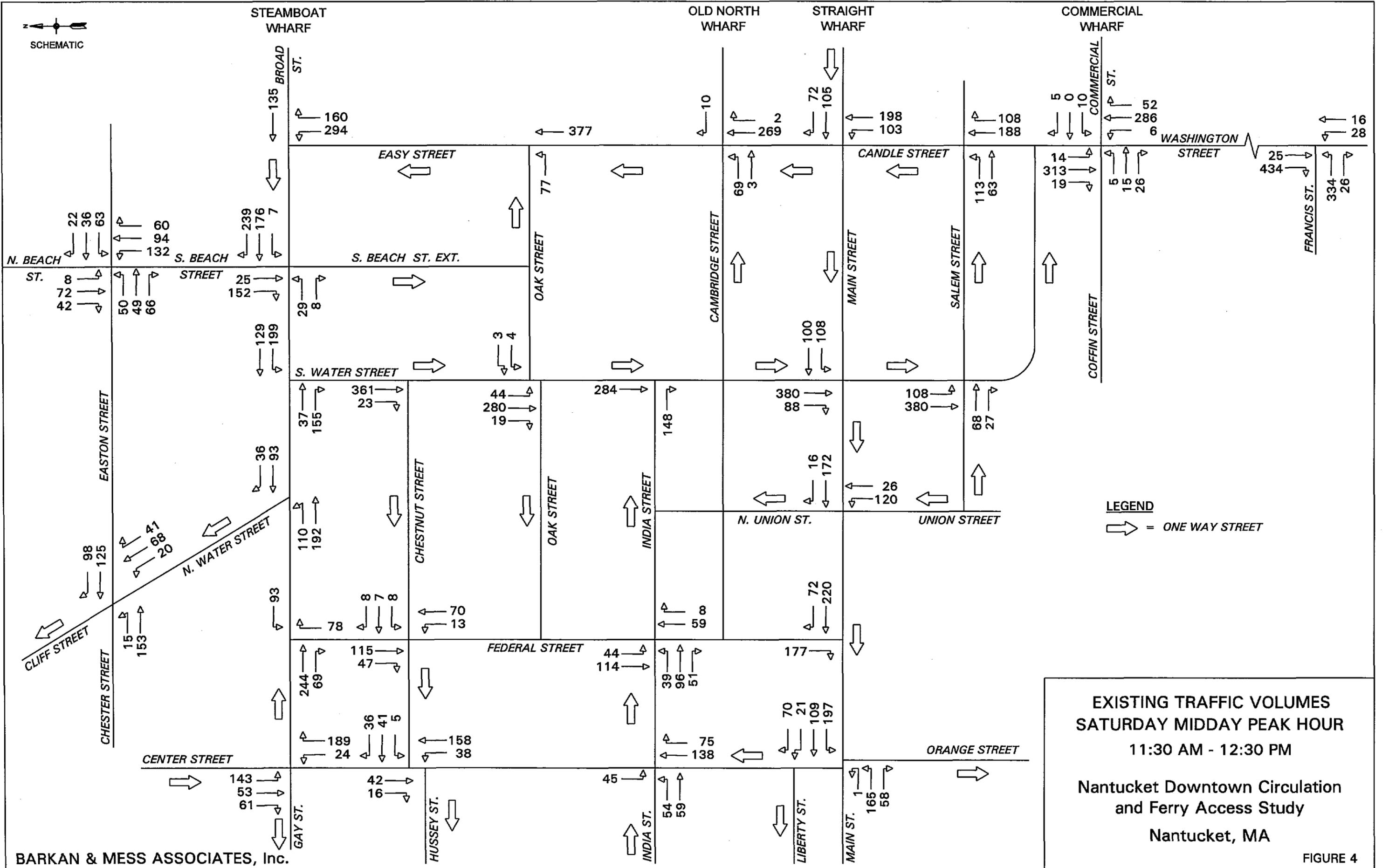
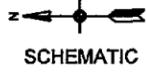


Table 2-1
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
North Water, Cliff, Chester and Easton Streets

	APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>					
	North Water Street northbound	A	0.22	8.9	N/A
	Chester Street eastbound	A	0.26	9.1	N/A
	Easton Street westbound	A	0.26	8.7	N/A
<i>Weekday P.M.</i>					
	North Water Street northbound	A	0.12	8.1	N/A
	Chester Street eastbound	A	0.21	8.4	N/A
	Easton Street westbound	A	0.21	8.1	N/A
<i>Saturday Midday</i>					
	North Water Street northbound	A	0.19	8.8	N/A
	Chester Street eastbound	A	0.24	8.9	N/A
	Easton Street westbound	A	0.30	8.9	N/A

Table 2-2
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
North Beach, South Beach and Easton Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Beach Street northbound	A	0.32	9.9	N/A
North Beach Street southbound	A	0.18	8.8	N/A
Easton Street eastbound	A	0.23	9.2	N/A
Easton Street westbound	A	0.15	8.9	N/A
<i>Weekday P.M.</i>				
South Beach Street northbound	A	0.34	9.9	N/A
North Beach Street southbound	A	0.20	8.9	N/A
Easton Street eastbound	A	0.22	9.2	N/A
Easton Street westbound	A	0.15	9.0	N/A
<i>Saturday Midday</i>				
South Beach Street northbound	B	0.43	11.5	N/A
North Beach Street southbound	A	0.19	9.1	N/A
Easton Street eastbound	A	0.26	9.8	N/A
Easton Street westbound	A	0.20	9.6	N/A

Table 2-3
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Center, Broad and Gay Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Center Street northbound	A	0.03	1.5	2
Center Street southbound	A	0.10	5.0	9
<i>Weekday P.M.</i>				
Center Street northbound	A	0.02	0.9	1
Center Street southbound	A	0.11	5.1	9
<i>Saturday Midday</i>				
Center Street northbound	A	0.02	1.0	2
Center Street southbound	A	0.13	5.1	11

Table 2-4
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Broad and North Water Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Broad Street eastbound	A	0.08	3.1	6
Broad Street westbound	A	0.08	0.0	0
<i>Weekday P.M.</i>				
Broad Street eastbound	A	0.06	2.4	5
Broad Street westbound	A	0.08	0.0	0
<i>Saturday Midday</i>				
Broad Street eastbound	A	0.09	3.5	8
Broad Street westbound	A	0.08	0.0	0

Table 2-5
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions

Broad Street, South Beach Street and South Beach Street Extension

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Beach Street southbound	F	1.42	270.7	381
Broad Street eastbound	B	0.11	10.0	9
Broad Street westbound	A	0.01	0.3	1
<i>Weekday P.M.</i>				
South Beach Street	F	1.77	420.8	522
Broad Street eastbound	B	0.14	10.4	12
Broad Street westbound	A	0.02	0.5	1
<i>Saturday Midday</i>				
South Beach Street	F	1.11	155.0	244
Broad Street eastbound	A	0.05	8.6	4
Broad Street westbound	A	0.01	0.2	1

Table 2-5a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
(With two-way operation of Oak Street)
Broad Street, South Beach Street and South Beach Street Extension

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Beach Street southbound	F	1.28	208.9	340
Broad Street eastbound	A	0.10	9.7	8
Broad Street westbound	A	0.01	0.3	1
<i>Weekday P.M.</i>				
South Beach Street	F	1.59	334.9	475
Broad Street eastbound	A	0.13	9.9	11
Broad Street westbound	A	0.02	0.6	1
<i>Saturday Midday</i>				
South Beach Street	F	1.01	119.4	216
Broad Street eastbound	A	0.05	8.4	4
Broad Street westbound	A	0.01	0.3	1

Table 2-6
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Broad and Easy Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Easy Street northbound left	B	0.41	12.8	51
Easy Street northbound right	A	0.15	9.4	13
<i>Weekday P.M.</i>				
Easy Street northbound left	B	0.45	14.0	58
Easy Street northbound right	A	0.14	9.4	12
<i>Saturday Midday</i>				
Easy Street northbound left	B	0.43	13.5	54
Easy Street northbound right	A	0.18	9.6	17

Table 2-6a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
(With two-way operation of Oak Street)
Broad and Easy Streets

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Easy Street northbound left	B	0.31	11.7	34
Easy Street northbound right	A	0.15	9.4	13
<i>Weekday P.M.</i>				
Easy Street northbound left	B	0.33	12.5	36
Easy Street northbound right	A	0.14	9.4	12
<i>Saturday Midday</i>				
Easy Street northbound left	B	0.34	12.3	37
Easy Street northbound right	A	0.18	9.6	17

Table 2-7
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Center, Chestnut and Hussey Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Center Street northbound	A	0.04	1.8	.
Center Street southbound	A	0.04	0.0	0
Chestnut Street westbound	C	0.24	17.2	23
<i>Weekday P.M.</i>				
Center Street northbound	A	0.03	1.6	2
Center Street southbound	A	0.02	0.0	0
Chestnut Street westbound	C	0.18	16.3	16
<i>Saturday Midday</i>				
Center Street northbound	A	0.03	1.8	3
Center Street southbound	A	0.04	0.0	0
Chestnut Street westbound	B	0.13	14.4	11

Table 2-8
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Federal and Chestnut Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Federal Street northbound	A	0.02	1.7	1
Federal Street southbound	A	0.12	0.0	0
Chestnut Street westbound	B	0.05	13.2	4
<i>Weekday P.M.</i>				
Federal Street northbound	A	0.02	2.1	2
Federal Street southbound	A	0.11	0.0	0
Chestnut Street westbound	B	0.03	13.2	2
<i>Saturday Midday</i>				
Federal Street northbound	A	0.01	1.3	1
Federal Street southbound	A	0.10	0.0	0
Chestnut Street westbound	B	0.05	12.5	4

Table 2-9
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
South Water and Oak Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Water Street southbound	A	0.02	0.9	2
Oak Street westbound	B	0.03	11.7	2
<i>Weekday P.M.</i>				
South Water Street southbound	A	0.02	0.8	2
Oak Street westbound	B	0.04	12.4	3
<i>Saturday Midday</i>				
South Water Street southbound	A	0.03	1.2	2
Oak Street westbound	B	0.01	11.9	1

Table 2-9a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
(With two-way operation of Oak Street)
South Water and Oak Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Water Street southbound	A	0.02	1.0	2
Oak Street westbound	B	0.15	11.8	13
<i>Weekday P.M.</i>				
South Water Street southbound	A	0.02	0.9	2
Oak Street westbound	B	0.17	12.5	16
<i>Saturday Midday</i>				
South Water Street southbound	A	0.03	1.4	2
Oak Street westbound	B	0.13	11.9	11

Table 2-10
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Center and India Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Middy</i>				
Center Street northbound	A	0.16	0.0	0
Center Street southbound left	A	0.04	8.6	3
India Street eastbound	C	0.32	22.1	34
<i>Weekday P.M.</i>				
Center Street northbound	A	0.14	0.0	0
Center Street southbound left	A	0.03	8.4	2
India Street eastbound	C	0.26	19.4	26
<i>Saturday Middy</i>				
Center Street northbound	A	0.14	0.0	0
Center Street southbound left	A	0.05	8.5	4
India Street eastbound	C	0.38	23.0	43

**Table 2-11
 INTERSECTION CAPACITY AND QUEUE ANALYSIS
 Nantucket Downtown Circulation and Ferry Access Study
 2007 Existing Conditions
 Federal and India Streets**

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Federal Street northbound	A	0.05	0.0	0
Federal Street southbound	A	0.02	1.6	2
India Street eastbound	C	0.43	20.0	52
<i>Weekday P.M.</i>				
Federal Street northbound	A	0.05	0.0	0
Federal Street southbound	A	0.02	1.9	2
India Street eastbound	C	0.33	17.4	36
<i>Saturday Midday</i>				
Federal Street northbound	A	0.04	0.0	0
Federal Street southbound	A	0.04	2.5	3
India Street eastbound	C	0.53	24.8	75

Table 2-12
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Easy and Cambridge Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
East Street northbound	A	0.16	0.0	0
Cambridge Street eastbound	B	0.19	14.7	17
Cambridge Street (Wharf) westbound	B	0.02	11.2	1
<i>Weekday P.M.</i>				
East Street northbound	A	0.17	0.0	0
Cambridge Street eastbound	B	0.14	14.3	13
Cambridge Street (Wharf) westbound	B	0.02	11.1	1
<i>Saturday Midday</i>				
East Street northbound	A	0.17	0.0	0
Cambridge Street eastbound	B	0.18	14.8	16
Cambridge Street (Wharf) westbound	B	0.02	11.4	1

Table 2-13
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Main, Center, Orange and Liberty Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Main Street eastbound	A	N/A	5.4	19
Main Street westbound	A	N/A	2.2	56
<i>Weekday P.M.</i>				
Main Street eastbound	A	N/A	7.5	34
Main Street westbound	A	N/A	2.4	69
<i>Saturday Midday</i>				
Main Street eastbound	C	N/A	18.3	80
Main Street westbound	A	N/A	2.4	123

Table 2-14
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Main, Union and North Union Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday MIDDAY</i>				
Main Street westbound	A	0.12	0.0	0
North Union Street northbound	C	0.33	15.1	36
<i>Weekday P.M.</i>				
Main Street westbound	A	0.12	0.0	0
North Union Street northbound	C	0.28	14.4	28
<i>Saturday MIDDAY</i>				
Main Street westbound	A	0.12	0.0	0
North Union Street northbound	C	0.38	18.6	43

**Table 2-15
 INTERSECTION CAPACITY AND QUEUE ANALYSIS
 Nantucket Downtown Circulation and Ferry Access Study
 2007 Existing Conditions
 Main, Easy and Candle Streets**

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Candle Street northbound	A	0.06	2.5	5
Main Street (Wharf) westbound	C	0.34	15.4	37
<i>Weekday P.M.</i>				
Candle Street northbound	A	0.03	1.3	2
Main Street (Wharf) westbound	B	0.21	12.6	20
<i>Saturday Midday</i>				
Candle Street northbound	A	0.07	2.9	6
Main Street (Wharf) westbound	B	0.35	14.9	39

Table 2-16
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Salem and Washington Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Washington Street southbound	A	0.09	2.6	8
Salem Street eastbound	C	0.36	20.4	40
<i>Weekday P.M.</i>				
Washington Street southbound	A	0.22	6.6	21
Salem Street eastbound	C	0.27	21.8	27
<i>Saturday Midday</i>				
Washington Street southbound	A	0.07	2.2	6
Salem Street eastbound	C	0.26	17.0	25

Table 2-17
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Washington, Coffin and Commercial Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Washington Street northbound	A	0.02	0.7	2
Washington Street southbound	A	0.01	0.4	1
Coffin Street eastbound	C	0.06	16.1	5
Commercial Street westbound	C	0.06	20.2	4
<i>Weekday P.M.</i>				
Washington Street northbound	A	0.1	0.4	1
Washington Street southbound	A	0.0	0.0	0
Coffin Street eastbound	C	0.05	17.8	4
Commercial Street westbound	C	0.03	18.8	2
<i>Saturday Midday</i>				
Washington Street northbound	A	0.01	0.5	1
Washington Street southbound	A	0.01	0.2	0
Coffin Street eastbound	C	0.14	16.9	12
Commercial Street westbound	C	0.07	20.5	5

**Table 2-18
 INTERSECTION CAPACITY AND QUEUE ANALYSIS
 Nantucket Downtown Circulation and Ferry Access Study
 2007 Existing Conditions
 Washington and Francis Streets**

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i> Washington Street northbound Washington Street southbound Francis Street	B A A	N/A N/A N/A	12.5 1.9 6.4	
<i>Weekday P.M.</i> Washington Street northbound Washington Street southbound Francis Street	B A A	N/A N/A N/A	10.7 2.0 7.5	
<i>Saturday Midday</i> Washington Street northbound Washington Street southbound Francis Street	B A A	N/A N/A N/A	11.6 2.2 8.2	

Table 2-18a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
With Improvements
Washington and Francis Streets

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Washington Street northbound	A	0.07	9.0	
Washington Street southbound	B	0.52	12.1	
Francis Street	B	0.51	13.3	
<i>Weekday P.M.</i>				
Washington Street northbound	A	0.10	9.4	
Washington Street southbound	B	0.51	13.3	
Francis Street	B	0.52	14.0	
<i>Saturday Midday</i>				
Washington Street northbound	A	0.08	9.4	
Washington Street southbound	C	0.64	15.3	
Francis Street	C	0.59	15.8	

Table 2-19
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Broad and Federal Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Federal Street northbound	B	0.17	12.2	15
Broad Street eastbound	A	0.18	0.0	0
Broad Street westbound left	A	0.10	8.5	8
<i>Weekday P.M.</i>				
Federal Street northbound	B	0.12	11.1	10
Broad Street eastbound	A	0.18	0.0	0
Broad Street westbound left	A	0.09	8.5	8
<i>Saturday Midday</i>				
Federal Street northbound	B	0.13	11.4	11
Broad Street eastbound	A	0.20	0.0	0
Broad Street westbound left	A	0.09	8.6	8

Table 2-20
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Broad and South Water Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday MIDDAY</i>				
Broad Street eastbound	A	0.12	0.0	0
Broad Street westbound	A	0.19	6.0	17
<i>Weekday P.M.</i>				
Broad Street eastbound	A	0.14	0.0	0
Broad Street westbound	A	0.24	6.7	24
<i>Saturday MIDDAY</i>				
Broad Street eastbound	A	0.12	0.0	0
Broad Street westbound	A	0.16	5.5	14

Table 2-20a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
(With two-way operation of Oak Street)
Broad and South Water Streets

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Broad Street eastbound	A	0.12	0.0	0
Broad Street westbound	A	0.13	5.1	11
<i>Weekday P.M.</i>				
Broad Street eastbound	A	0.14	0.0	0
Broad Street westbound	A	0.18	5.9	16
<i>Saturday Midday</i>				
Broad Street eastbound	A	0.12	0.0	0
Broad Street westbound	A	0.11	4.5	9

Table 2-21
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Easy and Oak Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Easy Street northbound	A	0.23	0.0	0
Oak Street eastbound left	B	0.12	11.6	10
<i>Weekday P.M.</i>				
Easy Street northbound	A	0.21	0.0	0
Oak Street eastbound left	B	0.13	11.5	10
<i>Saturday Midday</i>				
Easy Street northbound	A	0.24	0.0	0
Oak Street eastbound left	B	0.14	12.0	12

Table 2-21a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
(With two-way operation of Oak Street)
Easy and Oak Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday MIDDAY</i>				
Easy Street northbound	A	0.05	1.8	4
Oak Street eastbound left	B	0.14	12.9	12
<i>Weekday P.M.</i>				
Easy Street northbound	A	0.05	2.0	4
Oak Street eastbound left	B	0.15	12.8	13
<i>Saturday MIDDAY</i>				
Easy Street northbound	A	0.04	1.5	3
Oak Street eastbound left	B	0.16	13.2	14

Table 2-22
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
South Water and India Streets

APPROACH	LEVEL OF SERVICE	VOLUME/CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
South Water Street southbound	A	0.20	0.0	0
India Street right eastbound	B	0.32	14.7	34
<i>Weekday P.M.</i>				
South Water Street southbound	A	0.23	0.0	2
India Street right eastbound	B	0.22	14.0	21
<i>Saturday Midday</i>				
South Water Street southbound	A	0.18	13.9	0
India Street right eastbound	B	0.29	14.0	29

Table 2-23
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Main and Federal Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Main Street westbound	A	0.20	0.0	0
Federal Street southbound right	C	0.36	17.5	41
<i>Weekday P.M.</i>				
Main Street westbound	A	0.19	0.0	0
Federal Street southbound right	C	0.42	18.7	51
<i>Saturday Midday</i>				
Main Street westbound	A	0.19	0.0	0
Federal Street southbound right	C	0.43	18.8	53

Table 2-24
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
2007 Existing Conditions
Main and South Water Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Main Street westbound				
South Water Street	D	0.65	33.4	108
southbound right	A	0.09	0.0	0
southbound through	A	0.25	0.0	0
<i>Weekday P.M.</i>				
Main Street westbound				
South Water Street	E	0.57	37.7	81
southbound right	A	0.09	0.0	0
southbound through	A	0.20	0.0	0
<i>Saturday Midday</i>				
Main Street westbound				
South Water Street	F	0.94	87.9	209
southbound right	A	0.06	0.0	0
southbound through	A	0.24	0.0	0

**Table 2-25
 INTERSECTION CAPACITY AND QUEUE ANALYSIS
 Nantucket Downtown Circulation and Ferry Access Study
 2007 Existing Conditions
 Candle and Salem Streets**

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i> Candle Street northbound Salem Street eastbound	C A	0.54 0.09	17.7 5.0	80 8
<i>Weekday P.M.</i> Candle Street northbound Salem Street eastbound	C A	0.63 0.13	23.7 4.2	108 11
<i>Saturday Midday</i> Candle Street northbound Salem Street eastbound	C A	0.49 0.08	15.5 5.0	67 6

Table 2-25a
INTERSECTION CAPACITY AND QUEUE ANALYSIS
Nantucket Downtown Circulation and Ferry Access Study
With Improvements
Candle and Salem Streets

APPROACH	LEVEL OF SERVICE	VOLUME/ CAPACITY RATIO	DELAY (SECONDS)	QUEUE (FEET)
<i>Weekday Midday</i>				
Candle Street northbound	B	0.39	10.1	--
Salem Street eastbound	B	0.32	10.1	--
<i>Weekday P.M.</i>				
Candle Street northbound	B	0.41	11.0	--
Salem Street eastbound	B	0.56	13.6	--
<i>Saturday Midday</i>				
Candle Street northbound	A	0.38	9.7	--
Salem Street eastbound	A	0.25	9.4	--

Review of Traffic Accidents in Downtown Nantucket

Traffic accident statistics were obtained from the Massachusetts Registry of Motor Vehicles (RMV) for the period from January 1, 2003 to December 31, 2005. During this three-year period, 75 accidents occurred in downtown Nantucket. The locations of accidents are given in Figure 5.

Based upon a review of the available accident data for the years 2003 to 2005, most of the accidents involved property damage only, with only one resulting in an injury. The most common types of accidents were side swipes and angle collisions. The majority of accidents took place during the day in fair weather on dry pavement. Further examination of the statistics resulted in the following observations:

1. The only injury reported was in an angle collision at the intersection of Broad and South Beach Streets. This accident took place during rainy weather. No other specific contributing factors were identified.
2. Three accidents involved collisions with bicycles. These took place at the intersections of Washington and Francis Streets, Washington and Candle Streets, and North Beach Street and Whalers Lane.
3. One accident involved a collision with a pedestrian. This took place on Broad Street, the specific location not identified. This accident took place at night with Broad Street illuminated. Records indicate that the pedestrian was not injured, but the vehicle suffered property damage.
4. Twenty-three accidents (31 percent of the total) were reported as collisions where at least one of the vehicles was parked, attempting to park, or attempting to exit a parking space. The locations with greatest numbers of this type of accident were:

Main Street - 5
Federal Street - 5
Broad Street - 4
Center Street - 3
India Street - 3
Union Street - 3

Note: Accidents occurred in other places as well. These numbers total 23 because an event at a corner was counted for both streets.

5. Clusters of accidents were noted in several places:
- a. Intersection of Washington and Francis Streets
 - b. Intersection of Broad and Federal Streets
 - c. Intersection of Washington, Candle, and Salem Streets
 - d. Along India Street

The limited data allows only general inferences about these locations. Accidents at Washington and Francis Streets appear related to turning movements at the corner. Accidents in the Washington/Candle/Salem Streets area were not related to parking maneuvers, while many of those along India Street were. Accidents at the intersection of Broad and Federal Streets show no particular pattern.

In conclusion, accident experience downtown does not appear to be extensive or highly destructive. Review of the data suggests that when considering improvements attention might be given to parking locations and maneuvers, traffic signs and controls at key locations, and interactions between vehicles, bicycles, and pedestrians. Nearly half (36 out of 75; 48 percent) of the accidents occurred in the summer months of June, July, and August. Thus, accidents were three times as frequent per unit of time in the summer as the rest of the year.



Legend

Crash Locations

- Bicycle Involved
- Pedestrian Involved
- Single Vehicle Crash
- Parked Vehicle Involved
- Moving Vehicle Involved
- Unknown

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**Downtown Circulation and Ferry Access
Improvement Study**

LOCATION:
Nantucket, MA

MMI#: 2967-04
MXD: H:study_area.mxd
SOURCE: DEP Bulletin No.40



**2003-2005 Crash
Locations Map**

DATE:
October 2007

SCALE:
1:7,000

SHEET:
Figure 5

Existing Ferry User Survey and Analysis

In an attempt to better understand how the current ferry travelers, or users, travel to and from the ferry terminals, a person-to-person interview, or pedestrian survey, was conducted with passengers during both a typical peak season weekday and weekend scenario. This survey technique included both preset questions as well as conversational dialogue.

Sample preset questionnaire:

Please circle date: Wednesday, August 6th Thursday, August 8th Friday, August 10th Saturday, August 11th

Please circle terminal: SSA Nantucket SSA Hyannis Hy-Line Nantucket Hy-Line Hyannis

Nantucket Ferry User Survey

The Town of Nantucket is performing a study to improve the circulation of traffic (vehicular, truck, bicycle and pedestrian) to and from the ferry service terminals. Your input is vital to the study by allowing us to understand how you actually get to and from the terminal. Please take a moment to fill out the form below.

Your time and cooperation are greatly appreciated!

	How many people are you traveling with (including yourself)?	How did you arrive at the ferry terminal today?								Are you vacationing on the island?	Are you commuting to/from work? If commuting, how many times per week do you ride the ferry?	Are you an island resident?
		I was dropped off by a friend/relative	I parked my car near the ferry.	I am taking my car on the ferry	I took a taxi.	I used a hotel/resort van.	I took the bus (NRTA shuttle).	I walked.	I am taking my bike on the ferry.			
EXAMPLE	2		X							NO	YES/3	YES
1												
2												
3												
4												
5												
6												
7												
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22												

NRTA - Nantucket Regional Transit Authority

2007-01-01/007-04

Summary of Comments and Suggestions From Ferry Passenger Surveys

The passenger ferry surveys yielded numerous comments and suggestions as well as basic data about travel patterns. The picture that emerges is a group familiar with Nantucket and the operations of its transportation system. They have evolved strategies to cope with the foibles of the system and work around them - from keeping cars only for use on the island, traveling at off-peak times, designated meeting and pickup locations, "secret" parking places, and others. Comments and suggestions show a diversity of perspectives, from complaints about serious congestion to indications that it is "not that bad." There is also a recognition that some problems occur only during peak times. The comments and suggestions can be summarized by general subject (with some overlap) as follows:

Ferry Access

1. Designate a pickup and drop-off area for general passengers, especially at the Hy-Line ferry. Designated areas presently exist for taxis, reserved vehicles, and hotel cars/vans but not for the general public. Passengers spoke of a "circle and wait" strategy when picking up arriving passengers.
2. Provide a centralized bus/taxi area for both ferries, perhaps at the midpoint between the two wharves.
3. NRTA service should get closer to the terminals and be well marked.
4. Access for handicapped persons needs to be improved.
5. Build another ferry pier away from downtown.

Traffic and Circulation

1. Recent one-way redirection "seems to be working."
2. Close Main Street to cars.
3. Need more taxis.

4. Police directing traffic at Broad Street "make the problem worse" - suggest simply merging by alternating is better.
5. Congestion delaying taxis approaching the ferry terminal results in "jump and run" in order to catch the ferry.
6. Contractors, truck drivers, and other people who do not know their way around often get lost and make congestion worse. This suggests more education, training, and information distribution.
7. Provide downtown trolley service.
8. Congestion is worse in bad weather.

Parking

1. More parking is needed downtown, preferably in a garage.
2. Provide satellite parking areas and shuttle service.

Policies

1. Limit the number of vehicles on the island. One passenger commented that the feasibility of this is linked to the amount and cost of parking on the mainland, suggesting that if parking at Hyannis were more abundant and cheaper, fewer people would bring their cars across.
2. Limit the size and number of "large sightseeing buses."
3. Limit the number of cars downtown during peak hours.
4. Ban "big SUVs" from downtown.

Wayfinding

1. People disembarking often do not know where to go. Several remarked that they just "followed the crowd." There should be more signs or information kiosks to direct people to landmarks, bicycle rentals, taxi stand, NRTA bus stops, etc.
2. Information about Nantucket and how to get around should be available on the ferries as people have time to read while traveling. Several travelers remarked that the plastic information holders on the ferry are often empty. One suggested that a "Welcome to Nantucket" video could be playing continuously.
3. Several people remarked about the lack of signs for bicycle routes and paths.

NRTA Bus Service

1. Buses should serve ferry terminals directly (several responses).
2. Provide shuttle service to satellite parking areas.
3. Increase frequency of service on the Sconset Route.
4. Extend service "all the way" along Cliff Road.
5. More frequent service and expanded coverage area.
6. System needs more publicity.
7. Put "Mass Transit Center" at current site of Pacific National.
8. Buses should be "better equipped to handle beachgoers."

Bicycle Facilities

1. Some folks were deterred from renting bikes by the difficulty in finding bike routes into town after reaching the in-town end of the bike paths. They did not feel comfortable.
2. Others felt that traffic congestion compromised safety for cyclists.
3. Extend and connect bike paths into a network.
4. Comment: "Expert or avid road bikers will avoid the bike trails because of the fear of crashing into a family of bikers with small children weaving all over the place."

Summary

Please see Figure 6.

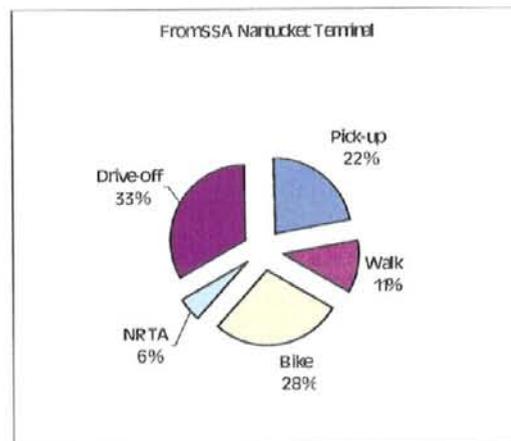
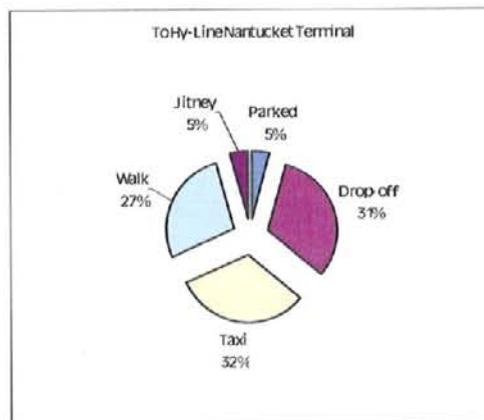
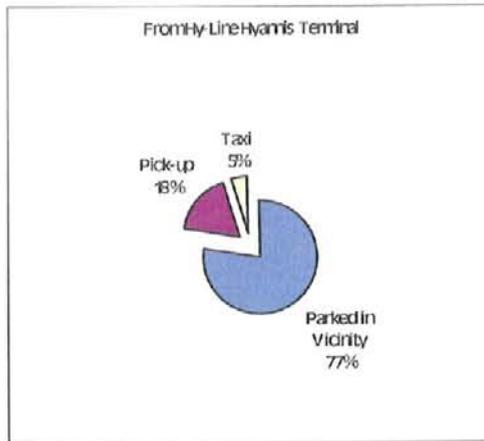
Like many surveys, this one has produced a variety of ideas and suggestions, some potentially practical, others less so, some contradicting others. Some reflect misunderstandings or not knowing about recent changes. There seem to be two common overall themes in particular:

1. Many ferry users have ultimate origins/destinations away from downtown (and little interest in stopping downtown on the way). Many suggestions relate to expediting these folks to their destinations without interacting with downtown traffic. This should be borne in mind.
2. Many comments relate to a lack of information, signs, and indications of where to go for what. This suggests that some serious attention to wayfinding would be useful.

The comments and suggestions from the survey as well as the data on travel patterns will be utilized in the next stage of the study when alternative improvement schemes are developed.

2967-04-mr2508-1-rpt.doc

Figure 6
Summary of Ferry Survey Data



2967-04-mr2508-1-rpt.doc

**SECTION TWO: ANALYSIS AND RECOMMENDATIONS (OCTOBER 2007 –
FEBRUARY 2008)**

RECOMMENDED SHORT-TERM IMPROVEMENTS

Introduction

Ideas and concepts for improvements to traffic circulation and ferry access have been developed from observations and analysis, surveys of ferry passengers, discussions with service providers, and interaction with numerous stakeholders. A preliminary list was developed and refined in discussions and meetings with stakeholders.

The recommendations below have been developed with several considerations in mind.

1. They can be implemented reasonably quickly at modest cost with little or no undesirable impacts.
2. They provide elements of synergy with benefits for traffic, public transportation, pedestrians, and bicycle facilities.
3. They are robust and compatible with other improvements pending in the downtown area, including the new transportation hub, the proposed development of National Grid's Candle Street property, and redevelopment of the Steamship Authority terminal.
4. They will encourage new patterns of pedestrian, bicycle, and traffic movements, which will not only be helpful but will also provide a new perspective from which to consider additional improvements in the future.

The recommendations are grouped by general type and illustrated in the enclosed figures. It is hoped that these will offer immediate relief to some problems while the dialogue about long-term needs and improvements continues.

Traffic and Circulation

1. Implement two-way traffic flow on Oak Street between South Beach Street Extension and Easy Street. This will remove traffic from the Broad/Easy Street intersection and other key locations. Converting the short section of Oak Street between South Beach Street Extension and Easy Street to two-way operation would permit northbound vehicles on Easy Street to make a left turn onto Oak Street for direct access to South Water Street. These vehicles would thus be removed from three intersections on Broad Street – at Easy Street, South Beach Street, and South Water Street. In conjunction with this change, the nine parking places along the north side of Oak Street should be moved to the south side.

It is estimated that approximately 50 to 70 vehicles (17 percent to 23 percent of traffic turning left from Easy Street onto Broad Street) would make this turn in each of the three peak hours. This estimate was made based on the proportions of vehicles making turns at each of the intersections where vehicles currently travel. For example, vehicles traveling north on Easy Street can turn east toward the ferry terminal or west onto Broad Street; a certain proportion turns west. At South Beach Street, vehicles can turn west or east or continue south; a certain proportion turns west. At Broad and South Water Street, vehicles can turn south or continue west; a certain proportion turns south. These compound proportions were applied to traffic passing Oak Street on Easy Street. Traffic was reassigned for the purposes of analysis, and the resulting traffic conditions are summarized in Tables 2-5a, 2-6a, 2-9a, 2-20a, and 2-21a.

Conditions on the three intersections along Broad Street show improvement with reduced levels of delay and shorter vehicle queues. In particular, delays on South Beach Street are reduced by up to 30 percent and vehicle queues by more than 10 percent. The

intersections of Oak Street with Easy Street and South Water Street have also been analyzed and are expected to operate at good levels of service. The queue of westbound vehicles on Oak Street would be longer than at present but can be accommodated within the length of this section of Oak Street. In summary, this change would be expected to improve conditions overall. In the interim, the town should consider changing Oak Street traffic flow to one way westbound from Easy Street to South Water Street with on-street parking preserved at existing locations.

2. Install a STOP sign at the eastbound approach of Salem Street to Candle Street. This is expected to reduce the queuing along Candle Street. Traffic operations at this intersection are summarized for existing conditions and with the addition of the proposed STOP sign in Tables 2-25 and 2-25a, respectively. The revised control scheme is expected to result in an improvement in the Levels of Service (LOS) on the Candle Street approach from LOS C to LOS B on weekdays and LOS A in the Saturday midday period. The volume/capacity ratios and delays on this approach are also expected to be reduced and would be comparable on each approach.
3. Install a STOP sign at the southbound approach of Washington Street to Francis Street. This is anticipated to improve safety at this location. Traffic operations at this intersection are summarized for existing conditions and with the addition of the proposed STOP sign in Tables 2-18 and 2-18a, respectively. Operation as an all-way stop is expected to result in levels of delay more balanced among approaches. The intersection would operate at LOS B during weekday peak periods and at LOS C during Saturday midday.
4. Install a bulb-out with DO NOT ENTER sign along the north side of Broad Street west of the restricted parking spaces at the intersection of Federal Street. This should be implemented to complement the parallel parking configuration along Broad Street.

5. Undertake a future detailed study of the impacts of closing the section of Main Street between Union Street and Orange Street and along Federal Street from Main Street to Cambridge Street to vehicular traffic.

Parking

1. Designate individual on-street parking spaces within the core parking district.
2. Undertake a future study of downtown parking inventory, regulations, utilization, and future demand. Study of future demand should take into account existing land uses, Master Plan land use designations, population and employment forecasts, planned and anticipated development, economic climate, and walking time between parking areas and destinations.

Public Transportation

1. NRTA – Provide storage area at destination stops for beach carry-on items. Replacement vehicles that provide beach service should consider the provision of additional storage space for carry-on items.
2. NRTA – Work with ferry operators to make bus route and schedule information available on ferries.
3. NRTA – Develop the planned new downtown transportation hub for NRTA.

Bicycle Facilities

1. Add bike route stencil to roadway along inbound and outbound bike routes. While the samples of acceptable roadway signage painted symbols are included in the upcoming text and in Figure 7, the 11 proposed locations are illustrated in Figure 8.

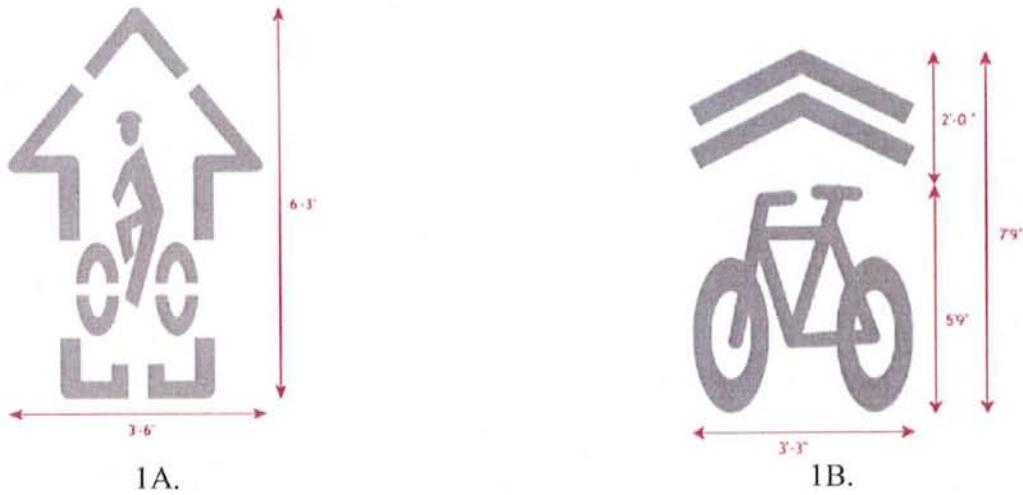


Shown above: Acceptable "Share the Road" signage should be installed where a concentration of bike traffic will be directed to utilize a vehicular roadway.

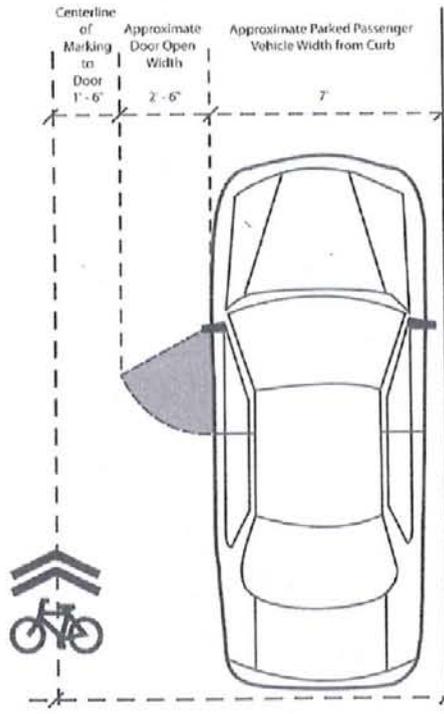


Shown above: Painted bike symbol on the vehicular roadway travel path. It is important to install this symbol so that it is in the travel path and highly visible for both bicycles and vehicles. Do not install the symbol along the side of the road where it is more likely to be covered by a parked car or accumulated road sand.

FIGURE 7



Shown above: General dimensional criteria for typical bike symbol pavement markings.



Shown above: General dimensional criteria for the location of painted bike symbol on roadway with on-street parking.

2. Add bike route signage along Center Street at the intersection of Chestnut Street to direct bicycle traffic to Broad Street.
3. Implement the conceptual design for the In-town Bike Route from the new bus terminal to the Milestone Rotary. This is illustrated in Figure 9.
4. Implement the conceptual design for extension of the Cliff Road Bike Path. This is illustrated in Figure 10.
5. Work with ferry operators to provide information on bike rules and safety.

 **Bike Route Symbol**



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**Downtown Circulation and Ferry Access
Improvement Study**

LOCATION:
Nantucket, MA

MMI#: 2967-04
MXD: H:study_area.mxd
SOURCE: DEP Bulletin No.40



**Bike Route Symbol Stencil
Location Map**

DATE:
January 2008
SCALE:
1" = 300'

SHEET:
Figure 8

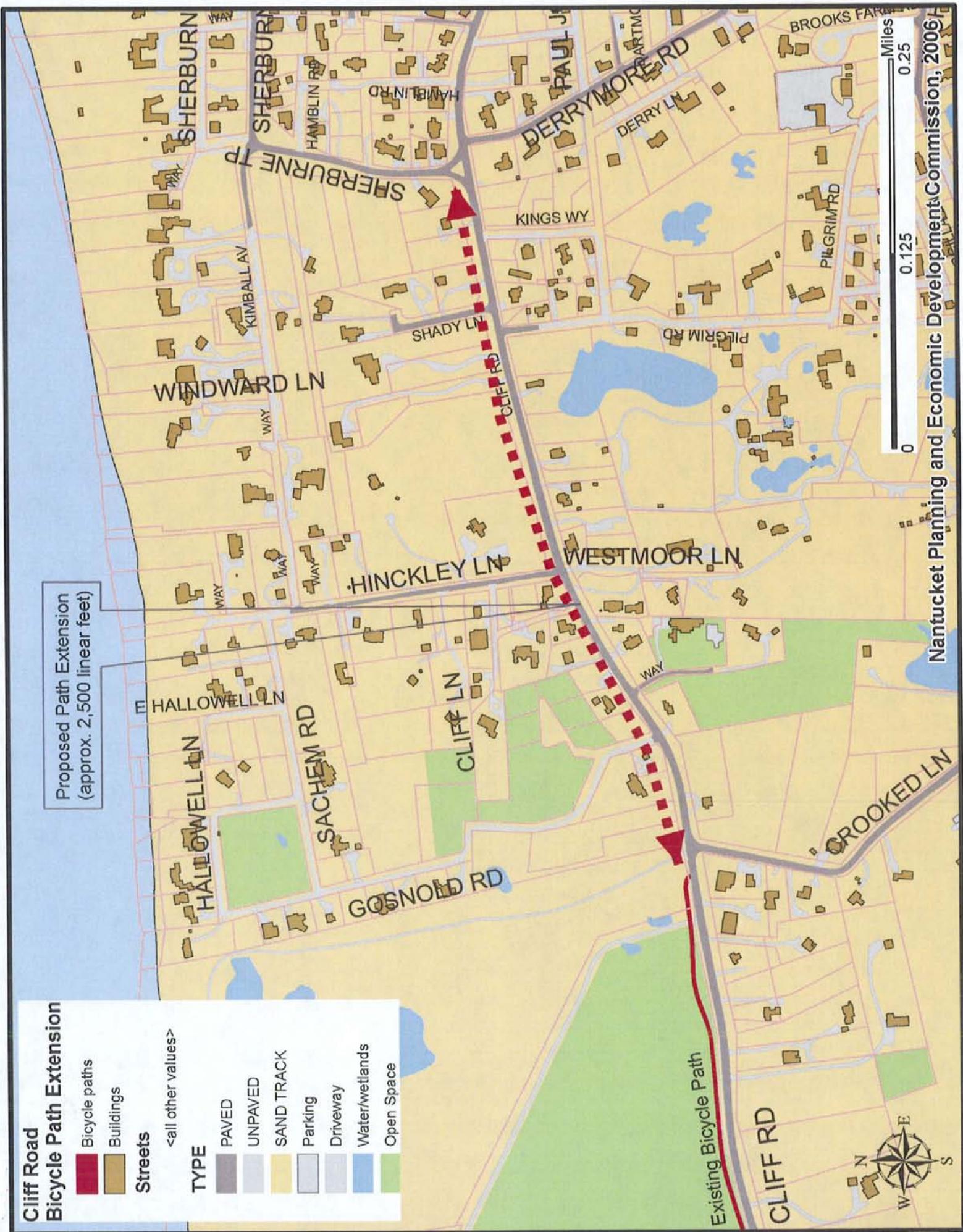


Figure 10

Pedestrian Facilities

A coordinated effort of the town, the Commission on Disability, or local advocates for accessibility could potentially inventory and study the improvements required to provide preferred safe routes of travel for all abilities within the downtown area. This effort should primarily include uniform handicap access ramps at all downtown crossings not already so equipped.

1. Add painted crosswalks along both sides of Salem Street at Washington and Candle Streets.
2. Replace existing brick crosswalks along the truck route with alternative material or installation detail (see Figures 19 and 20) for better structural stability and limited damage from truck operations.
3. Widen sidewalks at the following locations:
 - a. Along the north side of Straight Wharf by three feet;
 - b. Along the south side of Broad Street from South Beach to Easy Streets by three feet; and
 - c. Along Easy Street from Straight Wharf to Broad Street by a variable width to provide a minimum seven-foot wide sidewalk and 15-foot travel lane along the north side of lower Main Street and in front of the Pacific Club; realign crosswalk along South Water Street.
4. Provide pedestrian access/walkway from Broad Street to Easton Street via the waterfront walkway along the Nantucket Yacht Club property, the Children's Beach park, and Harbor View Way.

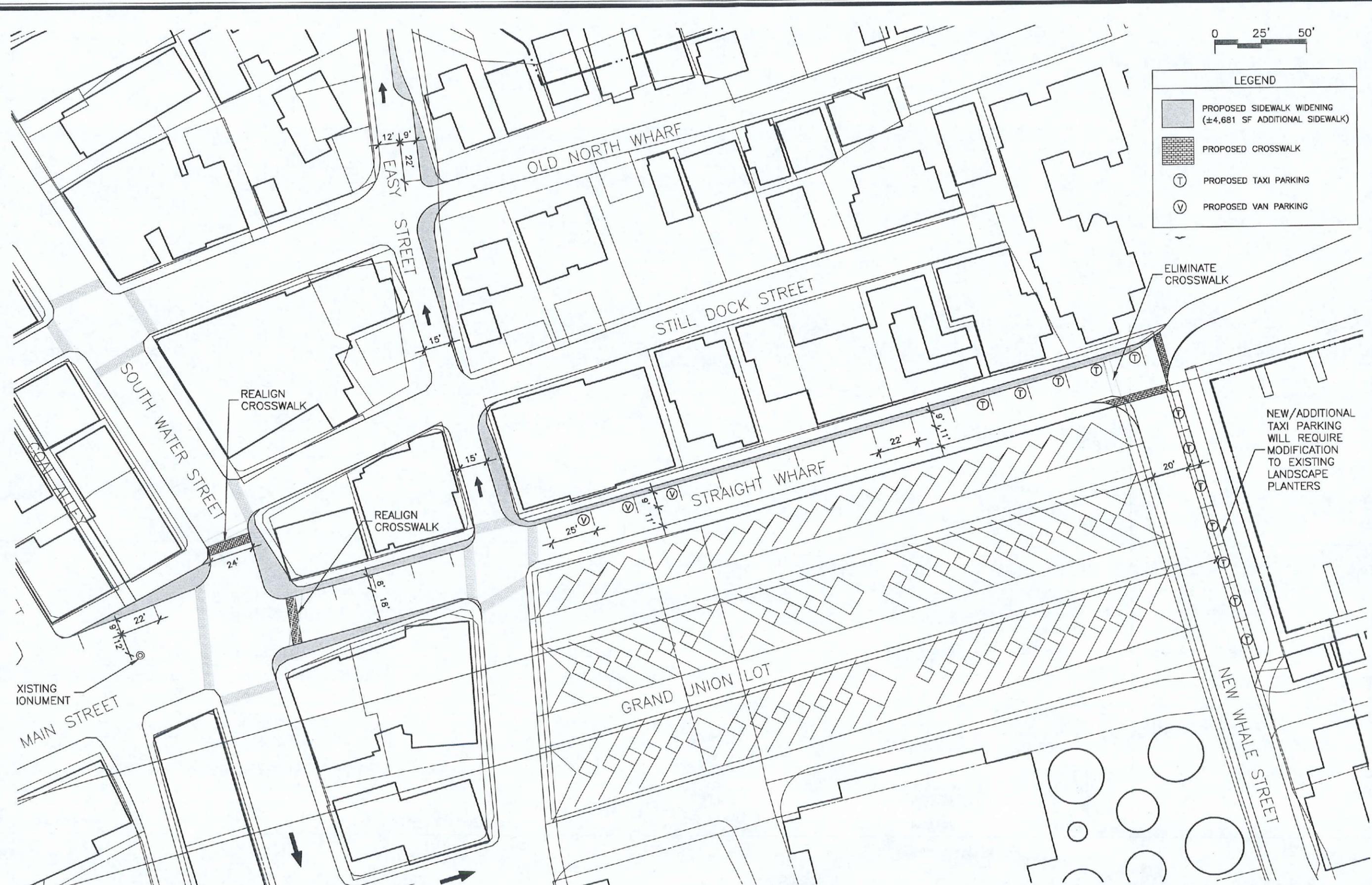
(Refer to Figures 11, 12, 13, and 14.)

Ferry Service and Intermodal Connections

It is noted that restriping improvements were implemented at the Steamship Authority terminal prior to the 2007 summer season to achieve better traffic flow through the property.

1. Provide two additional public parking spaces along Straight Wharf by redelineating and removing unused tour van spaces near the intersection of Easy Street as illustrated in Figure 11.
2. Create five additional pickup and drop-off spaces along New Whale Street by removing the existing landscaped buffer between the roadway and sidewalk and moving the curb by approximately 7.5 feet as illustrated in Figure 11. It will be necessary to evaluate current deed restrictions pertaining to the landscape and memorial elements of the right-of-way, as well as appropriate replacement landscaping, before implementation.
3. Provide multimedia information on ferries concerning:
 - a. Downtown facilities and attractions;
 - b. Directions and downtown navigation;
 - c. Bicycle rentals; and
 - d. Bus routes and schedules.
4. Provide robust pedestrian connection between ferry terminals via sidewalk along Easy Street waterfront as illustrated in Figures 11 and 13.
5. Allow and improve access from the Steamship Authority terminal to Harbor View Way via the Nantucket Yacht Club and Children's Beach (see Figure 14).

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 Printed by: 1003M On the date: Thu, 28 Jan 2008 April 3 - 10:07am



LEGEND	
	PROPOSED SIDEWALK WIDENING (±4,681 SF ADDITIONAL SIDEWALK)
	PROPOSED CROSSWALK
	PROPOSED TAXI PARKING
	PROPOSED VAN PARKING

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REVISIONS
FEB. 18, 2008
MARCH 27, 2008

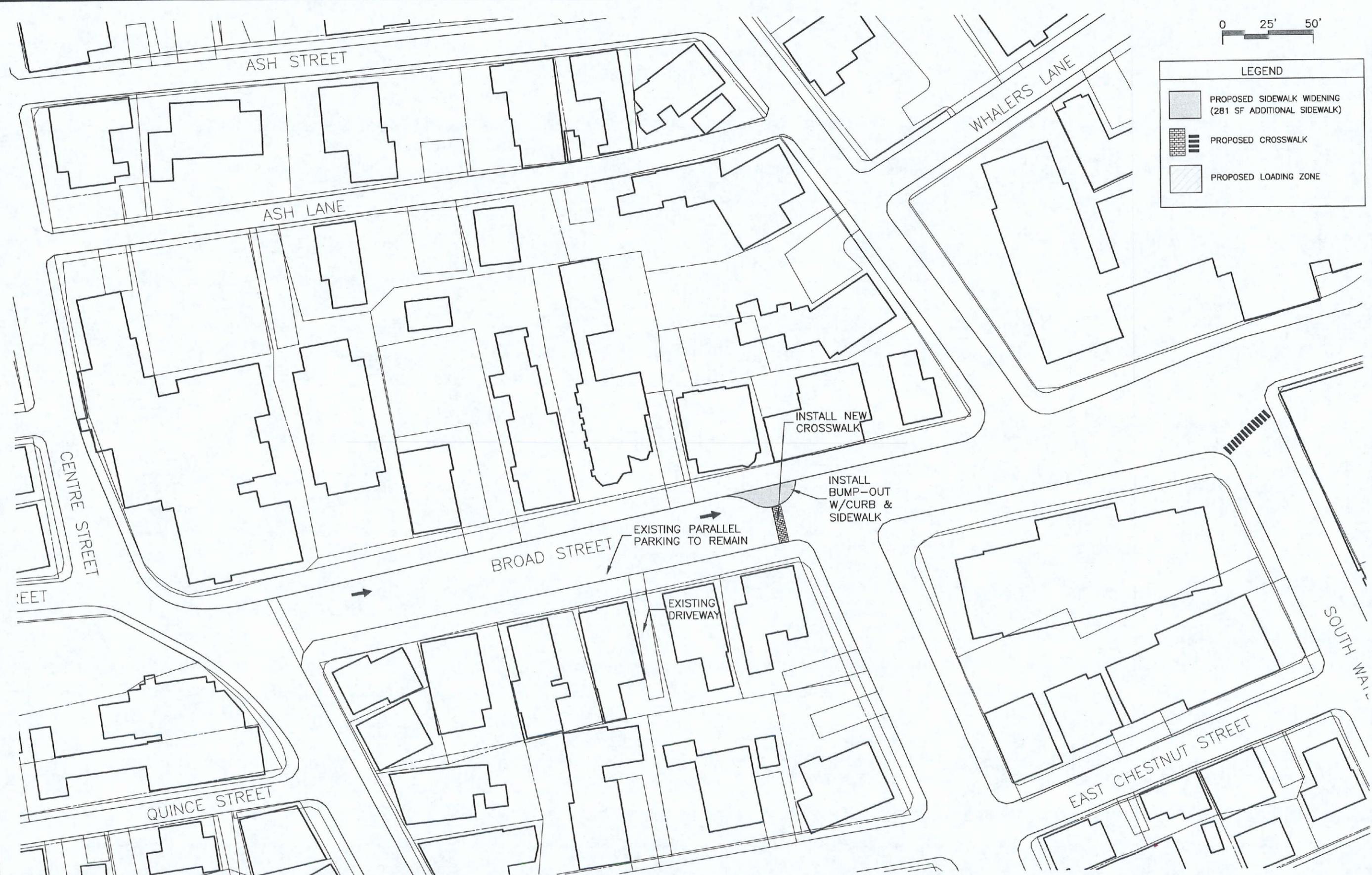
ROADWAY IMPROVEMENTS @ STRAIGHT WHARF & NEW WHALE STREET
 DOWNTOWN CIRCULATION AND FERRY
 ACCESS IMPROVEMENT STUDY
 NANTUCKET, MASSACHUSETTS

MRA DESIGNED	TMM DRAWN	MRA CHECKED
SCALE 1" = 50'		
DATE JAN. 29, 2008		
PROJECT NO. 2967-04		

FIG.-11

Drawing: H1-2967-04-DWG-CURRENT LAYOUT.DWG Layout: Tab: 12

Printed by: TDDM On this date: Wed, 29 Jan 2008 4:52:53pm



LEGEND

-  PROPOSED SIDEWALK WIDENING (281 SF ADDITIONAL SIDEWALK)
-  PROPOSED CROSSWALK
-  PROPOSED LOADING ZONE



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NO.	DATE	DESCRIPTION
1	FEB. 18, 2008	
2	MARCH 27, 2008	

ROADWAY IMPROVEMENTS @ BROAD STREET
 DOWNTOWN CIRCULATION AND FERRY ACCESS IMPROVEMENT STUDY
 NANTUCKET, MASSACHUSETTS

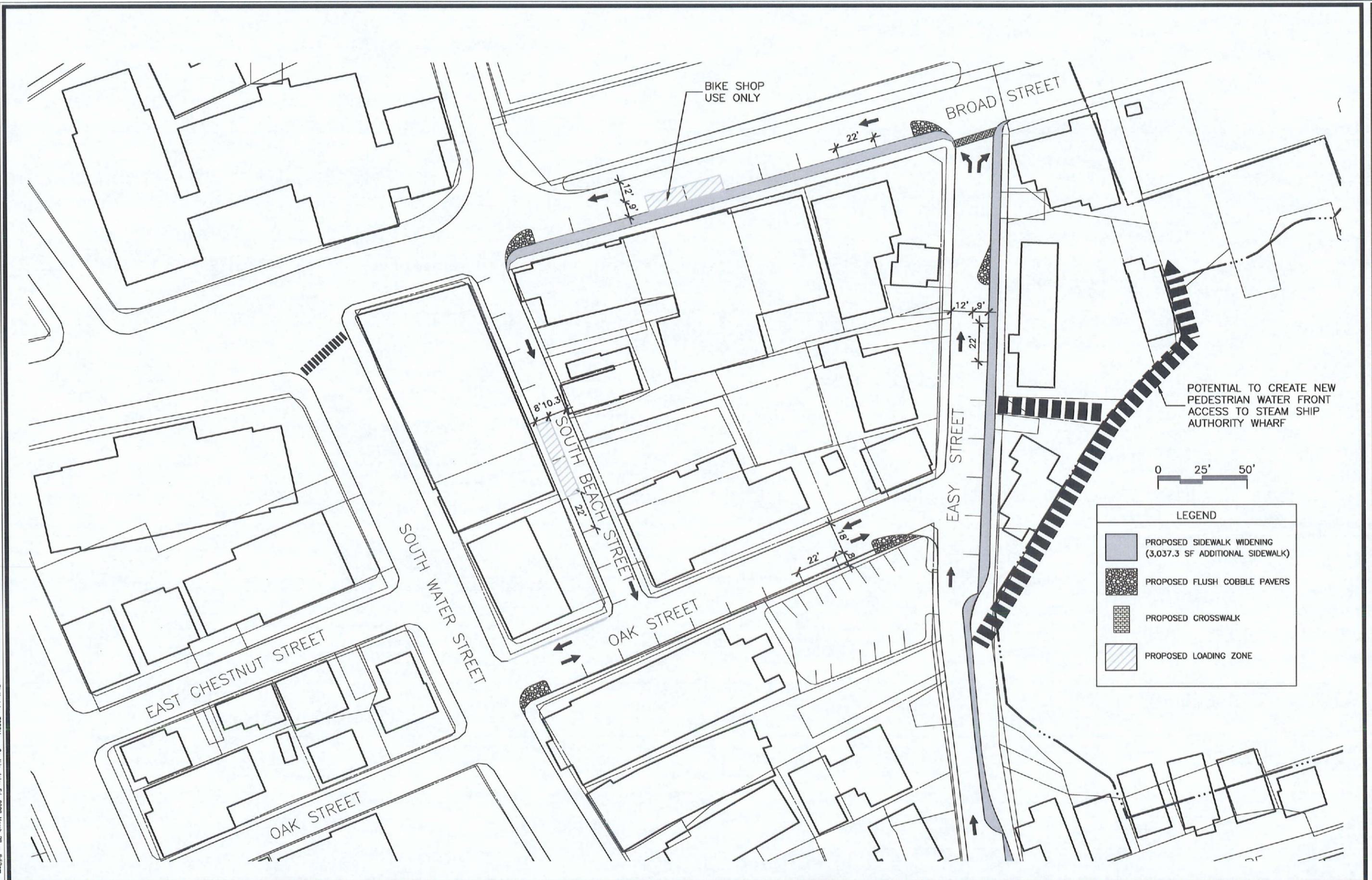
MRA DESIGNED	TMM DRAWN	MRA CHECKED

SCALE: 1" = 50'
 DATE: JAN. 29, 2008
 PROJECT NO.: 2967-04

FIG.-12
 SHEET NO.

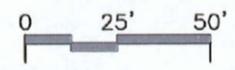
Drawing: H:\2967-04\DWG\CURRENT\LA\OUT\DWG Layout Title

Plotted by: TDDUW On this date: Fri, 2008 March 28 - 8:38am



LEGEND

-  PROPOSED SIDEWALK WIDENING (3,037.3 SF ADDITIONAL SIDEWALK)
-  PROPOSED FLUSH COBBLE PAVERS
-  PROPOSED CROSSWALK
-  PROPOSED LOADING ZONE



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NO.	DATE	DESCRIPTION
1	FEB. 18, 2008	
2	MARCH 27, 2008	

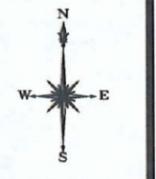
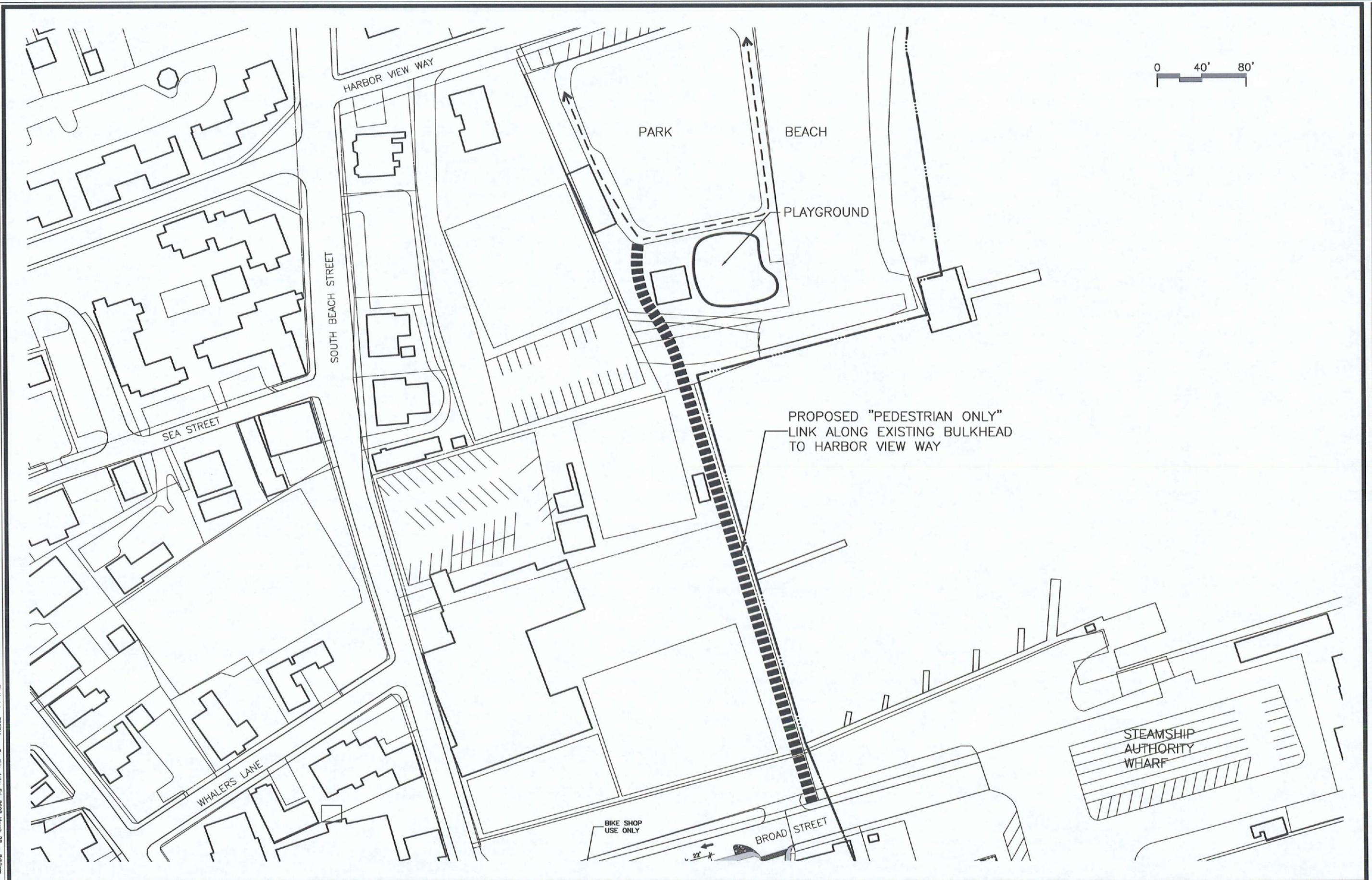
ROADWAY IMPROVEMENTS @ BROAD, EASY AND SOUTH BEACH STREET
 DOWNTOWN CIRCULATION AND FERRY
 ACCESS IMPROVEMENT STUDY
 NANTUCKET, MASSACHUSETTS

MRA	TMM	MRA
DESIGNED	DRAWN	CHECKED
SCALE 1" = 50'		
DATE JAN. 29, 2008		
PROJECT NO. 2967-04		

FIG.-13
 SHEET NO.

Drawing: H:\2967-04\DWG\CURRENT_LAYOUT\DWG Layout_T014.dwg

Plotted by: T0004 On this date: Fri, 2008 March 28 - 8:59am



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REVISIONS

PEDESTRIAN ONLY CONNECTION - BROAD STREET TO HARBOR VIEW WAY

DOWNTOWN CIRCULATION AND FERRY
ACCESS IMPROVEMENT STUDY

NANTUCKET, MASSACHUSETTS

MRA DESIGNED	TMM DRAWN	MRA CHECKED
SCALE 1" = 80'		
DATE FEB. 18, 2008		
PROJECT NO. 2967-04		

FIG.-14

SHEET NO.

Wayfinding and Gateways

1. Provide public information for visitors to and from Nantucket on ferries as discussed above.
2. Provide satellite downtown information center/map kiosk at key points of entry and exit to ferry terminals.
3. Provide downtown information/map kiosk at future transportation hub.
4. Consider downtown gateway elements at key road intersections.
5. Formalize in conjunction with the Historic District Commission a unified landscape/streetscape theme throughout the downtown area.
6. Formalize in conjunction with the Historic District Commission a unified signage design, implementation, and installation program.

Graphics and Figures

The following graphic section is intended to provide a series of existing conditions photographs and simulated conceptual illustrations that depict many of the recommendations for improvements that were discussed earlier in this report. It should be understood that these illustrations are conceptual illustrations and have been prepared for informational purposes only. The installation of these design elements would require detailed design documents, regulatory approvals, and may potentially require further studies, analysis, and property access or acquisition agreements.



Figure 15

Shown above Figure 15: Existing conditions leaving steamboat wharf traveling onto Broad Street include abnormally large vehicular travel lanes, a highly visible and unattractive Steamship Authority trailer and equipment loading/storage area (to the right), approximately 10 trash cans, large and highly visible utility transformers, various types of sidewalk paving materials (concrete, bituminous, brick, etc.), and no visible pedestrian crosswalk locations.



Figure 16

Shown in Figure 16: Existing Conditions pulling out of Easy Street at the intersection of Broad Street and the beginning of the steamboat wharf. This is one of the last views that many Nantucket visitors see as they leave the island. Much like the previous photo above, the line of sight is directed into the highly visible and unattractive Steamship Authority trailer and equipment loading/storage area.

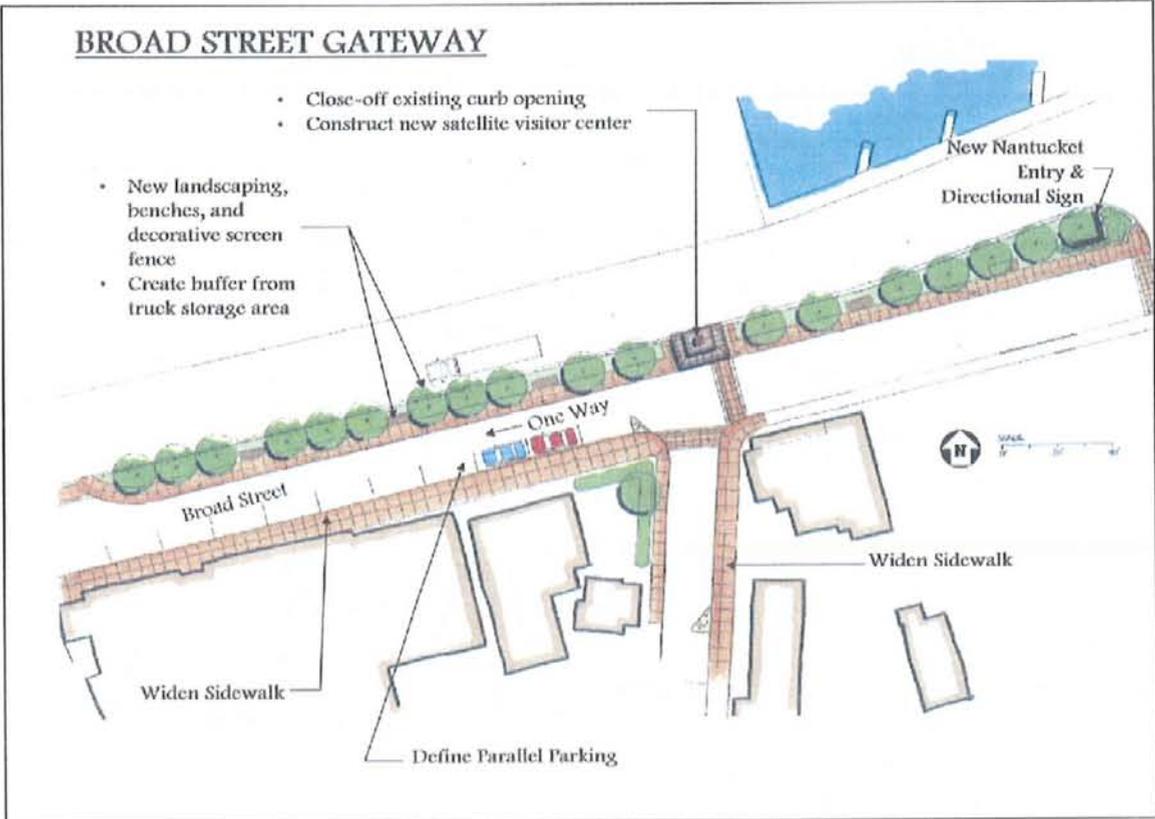


Figure 17 – Conceptual schematic site plan depicting potential lower Broad Street streetscape improvements and gateway.



Figure 18 – Conceptual illustrative sketch depicting potential lower Broad Street streetscape improvements and gateway.

Shown in Figures 17 and 18: Proposed conceptual illustration of a "Gateway to Nantucket" leaving steamboat wharf and traveling onto Broad Street. This is the first impression that many visitors to the island will see and the last image they see as they leave. Note the widened sidewalks, new paver crosswalks, new Nantucket Visitors' Information Building, and general streetscape enhancements including a decorative screen fence, landscape areas, benches, and bike racks to screen the Steamship Authority tractor trailer and equipment storage loading area. Locating a satellite visitors' center in this location will provide an immediate destination for new island visitors to plan for transportation, activities, tours, lodging, etc. and avoid the "wandering pedestrian dilemma" that oftentimes leads to congestion and dangerous situations when considering the extreme interaction of vehicles and pedestrians in this area. A revamped and enhanced streetscape is shown along the southern side of Broad Street that provides a better sense of organization and an important visual screen from the immediately adjacent trailer storage area. New paver crosswalks are also shown at Broad and Easy Streets to provide a sense of arrival to the island. These crosswalks will provide a clear and safe pedestrian crossing route and can be installed to withstand the vehicular and truck traffic that occurs in the downtown area.

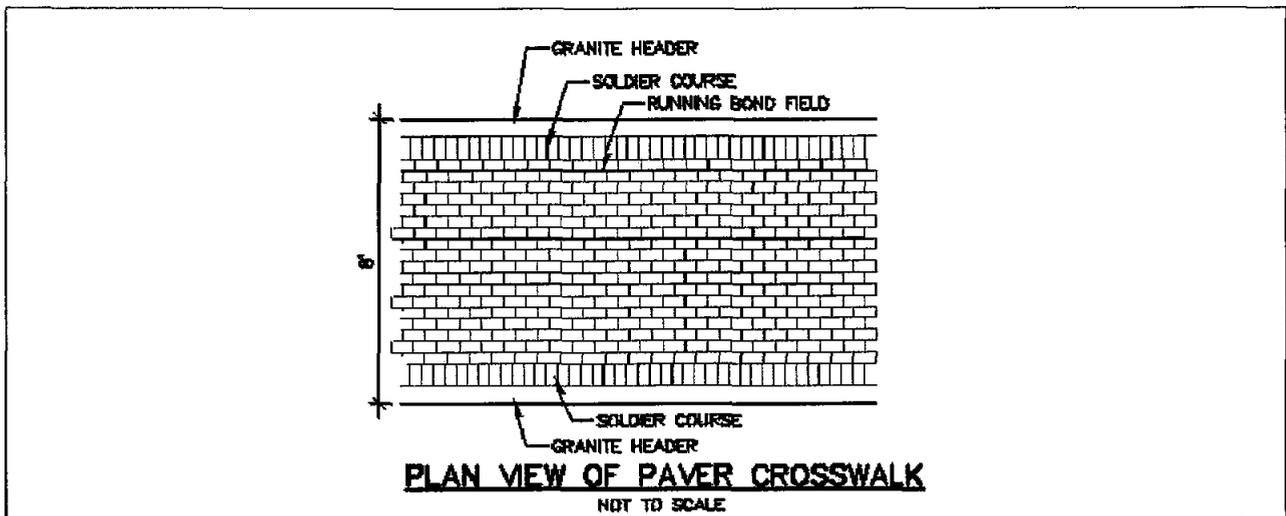


Fig 19

Shown above Figure 19: A design detail that can be installed to match the style of the existing brick crosswalk of the area and function as an accessible crosswalk. This detail can be used in areas where a simple painted crosswalk would not provide the aesthetic streetscape element desired for the downtown village area.

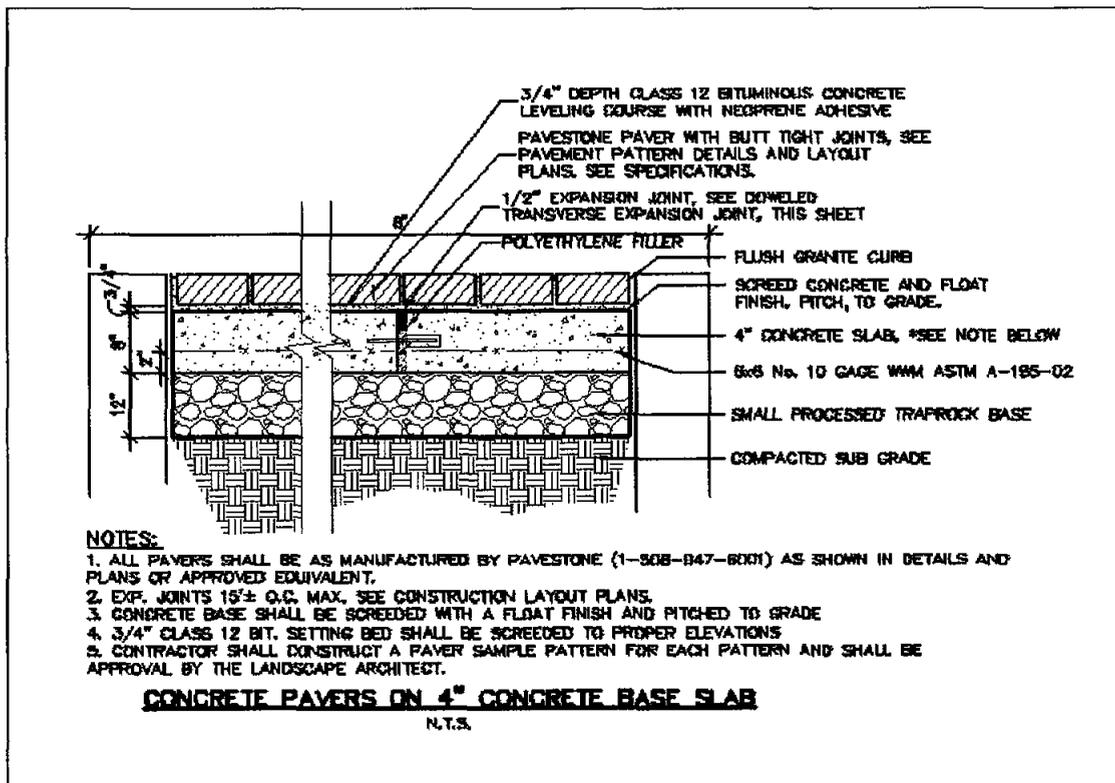


Figure 20

Shown in Figure 20: A design detail cross section that should be utilized in areas of high vehicle and heavy load truck traffic. The paver crosswalk is set on a 12" compacted processed aggregate base and a 4" concrete slab for increased structural stability.



Figure 21

Shown in Figures 21 and 22: Existing conditions on Straight Wharf traveling toward New Whale Street. This area is rich in character and includes large expanses of brick paving, cobble, and wood boardwalk. The large expanses of brick pavers lead to a large variation in the route of travel that each group or cluster of pedestrians chooses to use. Although the character of the area is attractive and unique to Nantucket, the lack of defined pedestrian versus vehicular areas coupled with a visitor's sense of "Where am I?" lead to congestion in and around the ferry arrival area.



Figure 22



Figure 23 – Conceptual schematic site plan depicting potential Straight Wharf visitors' center and improved gateway.

Shown in Figure 23: Proposed conceptual illustration of a "Gateway to Nantucket" leaving Straight Wharf and traveling into the downtown area. Similar to the Steamship Wharf, this is the first impression that many visitors to the island will see and their last image as they leave. Note the new Nantucket Visitors' Information Building and gateway structure. Locating of a satellite visitors' center here will provide an immediate destination for new island visitors to plan for transportation, activities, tours, lodging, etc. and avoid the "wandering pedestrian dilemma" that oftentimes leads to congestion and dangerous situations due to the extreme interaction of vehicles and pedestrians in this area. Widened sidewalks along the south side of Straight Wharf roadway will provide a safer and more manageable route for pedestrians traveling to and from the ferry dock.

RECOMMENDED LONG-RANGE IMPROVEMENTS

These items, also grouped by general subject, build on the improvement philosophy discussed in the short-term improvements and are suggested for further evaluation in terms of practicality, feasibility, impacts on stakeholders and property owners, and political acceptability.

Traffic and Circulation

1. Study possible closure of a portion of Main Street, between Union Street and Orange Street, and Federal Street, between Main Street and Cambridge Street, to create a pedestrian only environment.
2. Review circulation patterns after implementation of short-term recommendations for parking, bicycle, and pedestrian facilities to note new patterns and consider further improvements.
3. Designate preferred routes for all traffic (not just trucks) from ferry terminals to the north, south, southwest, and south (inbound and outbound) and identify them with road

signs and maps. The purpose of this is to separate and disperse traffic with no origin or destination downtown as much as possible.

4. Improve education of truck drivers concerning the existing truck route.
5. Establish park and ride lots at the edges of downtown and provide circulator bus service specifically to the Steamship terminal, or both ferry terminals, and possibly the Nantucket Memorial Airport.
6. Encourage taxi operators and tour operators to work collectively concerning dispatching and share pickup and drop-off spaces. Consider relocating some spaces to improve circulation or increase general parking.
7. Examine whether improvements are possible in scheduling freight deliveries at off-peak times.

Parking

1. Evaluate how the substantial addition to downtown parking supply represented by the proposed development of National Grid's Candle Street property can effectively complement existing parking facilities, and establish parking regulations/fees accordingly.
2. Consider extending parking regulations into the evening.
3. Designate some on-street parking spaces for use by carpools.

Public Transportation

1. Continue to expand service and reduce headways as market development and opportunities allow.
2. Provide more shelters and benches at designated stops.
3. Provide circulator service from park and ride lots.

Bicycle Facilities

1. Investigate provision of an off-street location for moped and bike training.
2. Produce educational pamphlets for infrequent riders about "rules of the road."
3. Evaluate downtown bicycle operations after short-term improvements are implemented.

Pedestrian Facilities

1. Evaluate downtown pedestrian circulation after short-term improvements are implemented and identify any gaps in pedestrian facilities.
2. Strengthen pedestrian path between ferry terminals. It should be well marked and possibly covered.
3. Complete the process of making downtown crosswalks handicapped accessible.
4. Consider appropriate sidewalk features (such as benches and landscaping) to discourage jaywalking and channel pedestrians to appropriate crossings.

Ferry Service and Intermodal Connections

1. Work with the Steamship Authority to encourage synergy between the planned redevelopment of the ferry terminal and other downtown improvements.
2. Review pickup and drop-off operations at the Hy-Line terminal after short-term recommendations are implemented.
3. Designate with signs path to NRTA bus stops.

Wayfinding and Gateways

1. Monitor public experience, collect feedback and suggestions, and expand upon recommendations in the short-term program.

ACKNOWLEDGMENTS AND REFERENCES

This report was completed with many thanks and appreciation for the assistance from the Town of Nantucket Planning & Economic Development Commission, various Town of Nantucket boards and commissions, Nantucket Planning staff, the Steamship Authority, The Hy-Line Ferry, the Nantucket Regional Transit Authority (NRTA), and the Nantucket Public Library.

1977 Nantucket Central Business District Circulation and Parking Study, Town of Nantucket Planning & Economic Development Commission

December 1993 Planning and Implementation for Downtown Parking and Traffic Circulation, Mullin Associates

1996 Downtown Traffic Circulation Analysis, R. A. Cataldo Engineering

1998 A Strategy to Address Parking and Traffic Congestion in Downtown Nantucket, Downtown Parking and Congestion Work Group

2005 (May) Evaluation of Some Bicycle Facilities and Programs in Massachusetts Communities, John S. Allen

2004 February, San Francisco's Shared Lane Markings: Improving Bicycle Safety, San Francisco Department of Parking & Traffic, Alta Planning & Design

2967-04-mr2508-2-rpt.doc

APPENDIX

MINUTES OF MEETINGS

PROJECT NO.: 2967-04

PROJECT NAME: Nantucket Circulation and Ferry Access Study

DATE OF MEETING: June 4 and June 5, 2007

SUBJECT OF MEETING: Project Kick-Off Meeting
Stakeholders and Public Meetings

LOCATION OF MEETING: Nantucket, Massachusetts

ATTENDEES: Mark Arigoni, Milone & MacBroom, Inc.
Vincent McDermott, Milone & MacBroom, Inc.
(see below for others)

The following are paraphrases of the discussion topics heard at the specified meetings and should not be considered verbatim.

Town Staff Meeting (9:00 a.m. Town Planning Office)

Andrew Vorce – Planning Director (not present).

Mike Burns (Transportation Planner) and Leslie Woods (Senior Planner).

Town Planners Comments and Discussion Topics

- Logistics and islands are different/don't compare with Martha's Vineyard.
- Traffic queuing down Easy Street is a problem.
- Grand Union lot is a private parking lot and is owned by private entity. It is used by public, with no overnight parking.
- Handicap accessible access to Hyline Ferry is a problem ('96 start of high speed ferry at Hyline).
- Wayne Lamson – Steamship Authority General Manager
- Flint Ranney – SSA Board member.
- Nat Lowell – Port Council member
- Nantucket Planning Board – 5 members.
- Nantucket Planning Commission – 12 members.
- Freight trucks are Cape Cod Express/Stop & Shop/Fed Ex./UPS
- Yates Gas – propane - trucks

- WB-45 (largest truck on island)
- Francis & Washington Street intersection needs improvements.
- U.S. Foods performs break of bulk on island.
- Cab service is very competitive/pay by zone, not a time based fare.
- Public transportation – park & ride lots are located throughout island.
- NRTA Policy?
- Kate Hamilton – Visitor services.
- Rotary – Important Node.
- Sparks & Pleasant Street – new roundabout under construction.
- WB-45 is preferable/WB-60 is not cost effective.
- Size restriction on buses.
- Two historical districts exist in Town: 1 – Zoning (?) driven, 1 – Historic District Commission.
- Preservation Institute of Nantucket
- Tracy Bakalar – Chamber of Commerce

June 4 Meeting Schedule Update

1:00 p.m. – SSA

3:00 p.m. – 6:00 p.m. (Atheneum) stakeholder's meeting

7:00 p.m. – 9:00 p.m. public

Steamship Authority Meeting (SSA)

SSA Comments:

Saukaty & Gayhead – containment services/separate carrier.

No published schedule – get schedule?

No - jitney service bus service.

Queuing along Francis Street is a problem.

Would like to see Town buy the corner restaurant parcel open up the area for improved circulation.

(Review with Andrew)

Move the SSA terminal closer to street.

Only barge access (delivery of stone and large bulk) on island is to the rear of building (SSA terminal).

There is currently an overlap in ferry services (arrivals & departures).

We need designated taxi pick-up and drop-off areas.

Need NRTA (Nantucket Regional Transit Authority) stop at terminal.

Would like to pursue a wider or cantilevered walk for pedestrian access to Easy Street (Bill Klien, 1st town/previous Town Planner had visions of this concept).

Dreamland Theater – proposal for redevelopment causes concern (adds congestion along Easy Street)

Oak Street access as bypass to traffic congestion (review as possibility)

Beach Street extension/alleyway – utilized as a service area.

Food trucks in early A.M. – do deliveries and get right back on the next available - Ferry off the island.

Francis & Union Street – bad intersection – locals signal, visitors do not. It is a main route.

Standby is a #card issued and check back via phone or internet.

Hyannis is a vehicle storage issue/Nantucket is a vehicle/pedestrian congestion issue due to volume during ferry's arrival.

Potential drop-off (two fairgrounds property) with shuttle service will need a partnership to work.

Lack of sidewalks and connection to town.

SSA employees (10 - 12 spaces) It will be a Union issue if the parking is not close to terminal.

Separate planning consultant for SSA is looking into expansion of terminal.

This study will need to be coordinated with the SSA study.

Security – screening of vehicles/checking of bags within covered areas at fast and slow boats.

Delivery trucks downtown – don't allow trucks after 12 noon. How do we do that?

Goal to reduce trucks/trips to 1997 levels.

6:00 a.m. is earliest ferry.

"This is Nantucket" is a phrase you will hear over and over, and it is true. (Funny)

Nat Lowell General Comments:

6:00 a.m. (leaves Hyannis) freight in at 8:00 a.m. (arrives Nantucket) 90% freight/food – if trucks aren't loaded fully (Sysco, U.S. Food, Sid Wayner) pup trailers with core district deliveries front/rear of the trailer you will get a slow down of deliveries.

-Trash and gas/oil done between 5:30 a.m. to 6:00 a.m.

-Food and people coming to work at 8:00 a.m.

Utilizing yellow lines and hydrants (in front of Richard Glidden's office) works well for loading zone.

Don't take any more parking spaces out.

#21 Federal needs a space for ramp.

Broad Street works as one-way. Nantucket has the "Once here nobody else can have one" mindset.

Truck agreement – only one-way to get boat in at 6:00 a.m. is to leave from New Bedford (this is not feasible as it will take 5 hours and 1,700 gallons of fuel).

Nantucket Solution – "truck route only."

Tiny easements and larger curb clearance radius will fix problems along truck route.

"Slicin' and dicin' – turn corner."

Moving utility poles is a major headache to deal with utility company.

Break down of freight on island – First, it won't work. Only 27 miles to Hyannis – not that far; it can be done in one day. We need to meet DOT compliance of 14 hour work day – Bermuda?

SunTrans CC Express – day freight – 5 to 6 hr deliveries.

Stop & Shop and concrete can come later – as they are on the island less time.

UPS Works – trucks at night break down on island facility.

Widening/lengthening/scheduling/capitalist private companies.

Fair/Pine/Orange Streets – it works, why "Nantucket?"

Existing public – 305 spaces in on street parallel parking spaces (not counting the Grand Union lot.)

Limiting cars on island has been taken off-warrant. Satellite parking and separate cab areas will cause cab drivers to worry about business.

P & B Bus Service/private - off island.

NRTA bus schedule runs too far into fall. (some say not long enough).

First Stakeholder Meeting 3:00 to 6:00 p.m. (Atheneum)

Young's Bike Shop owner - Harvey Young.

Steamboat Wharf: 500 -- 1,000 bikes on ramp - estimate - need actual data.

Traffic studies neglect town bikes and pedestrians.

Can we count bicycle traffic at intersections or is not feasible? (may be feasible?)

25,000 to 30,000 bikes on island during summer months. Est. need data from SSA.

Bike paths are a mile out from town center. Existing 10' paved trail.

Everybody sends bicyclists out Washington Street (jammed up) -- conflicts with truck route. Move bikes out Pleasant Street.

Painting designated bike lines on street? But don't only limit bikes to that area?

"Yack On" is a local talk show that has discussed bikes in the past.

Old rail bed potential for an in-town bike-way.

Polpus Road has bike path but some bikers stay on the road.

Bicycle education is needed.

Center/Main/Broad Street is downtown core 1/4 mile from post office = 800 spaces.

A resident parking sticker. Program much like "Georgetown" may work.

How many employees? Survey merchants, restaurants, Chamber of Commerce.

People who work in downtown can't park in downtown. Police are cracking down on employee parking on Main Street and is pushing the parking problem to other neighborhoods where its not enforced.

No employee parking from June 15 to September 15? Not in parking districts.

Local merchants need to enforce parking w/ their employees. "Self parking."

Potential to put employees in commuter or satellite lots with bus service.

"21E" lease and clean up at parking garage site.

Can ferry's stop pedestrians for 5 minutes to let trucks get through first? At SSA terminal?

How is the Broad Street switch working out? Trucks seem to like it.

How can the town put the truck and deliveries before the town's people? It is backwards.

India-Main-Center Street-Block = Designed for loading zones are being used for employee parking.

Better coordination of delivery trucks on ferry schedule is needed.

First Stakeholder Meeting 3:00 to 6:00 p.m. – Atheneum (continued)

21 Federal (42 employees in July) park before 6:00 – stop ticketing at 7:00 p.m., thus the employees avoid ticket and take up parking spaces – the employee "shuffle."

Parking enforcement until 8:00 p.m. needs to be reinstated.

Potential for airport to have oil tanks off-shore that would have single point mooring – one super tanker yearly – the existing tank farm/yard needs to be moved; safety reasons/aesthetic.

Parking garage concept – would a mixed-use building erase the benefit of additional parking created for a garage?

Should we just pave the parking garage area or actually build a structure? What is the net benefit?

Affordable, safe, convenient parking – municipal facility (not supported by town government), not public-private partnership.

Business improvement tax (DIF or TIF).

10,000 – 12,000 parking tickets nets town \$350,000 - \$400,000 annually?

Do we actually need a parking garage?

NRTA – Should they run a bus every 15 minutes in/out of town from a satellite parking facility.

Specialized bus to/from ferry service?

Inns are on the decline from 1,200 to under 1,000 rooms are available.

People are renting homes and avoiding taxes.

Ferry reservations are easier to get now than a couple of years ago.

NRTA comments – unless you're going to the Whaling Museum, they (buses) are not convenient. You need to take two buses to get to Stop & Shop. Why?

Make NRTA free – no money, like Vail, Colorado.

One-way Broad & Chestnut – good. What happened to making Center Street one-way all the way through?

Bus service stops at 11:45 p.m. – can't take bus home from late night or restaurant worker.

\$250,000 ridership on NRTA buses. Madaket ridership route is lower – how do we fix?

\$200,000 annual revenue from Steamship Authority went to additional police enforcement for summer.

Achieve additional parking – show with yellow lines for parking.

Allow tandem parking – allow homeowners to block their own driveways. Not supported.

Hussy/Gay/India – No parking but people park on the sidewalks. Are roads wide enough? Parking on sidewalks ruins sidewalks.

First Stakeholder Meeting 3:00 to 6:00 p.m. – Atheneum (continued)

Private owners maintain sidewalks in front of property, not the town – it is expensive.

Maintenance of cobblestone streets is expensive.

Upper Main Street – awful sidewalk conditions.

Will a parking garage solve the problem or will other fixes solve the problem and save money?

Trade "tank yard" for parking – in a minute.

Zoning Board waivers for new buildings are too often not required – this can't happen.

Zoning permits uses – for economic development purposes only.

Impact fee – not really but "in favor"/"in lieu of ...equals" too many variances – we need to look at zoning by laws.

Where does "national grid" stand on parking garage concept? They don't want to sell it.

Cars on sidewalk are a problem on Cliff Road.

Limited amount of rental cars, but they didn't limit the size – cars are getting bigger.

Town can only regulate parking in 15 to 60 minute intervals. 90 minutes hard to enforce, while 60 minutes isn't enough time to eat.

Needs better marking of actual parking spaces? Smaller parking sizes needed so larger vehicles won't fit.

Potential circulator system – "trolley"?

Parking garage at town lot on Washington exists, but it is ½ mile away and people won't walk that far.

Public Meeting 7:00 p.m. to 9:00 p.m.

Circulation – parking – public transportation – bicycle/pedestrian circulation-commercial vehicles/deliveries-ferry terminals-gateways (sense of arrivals) "Nantucket Way" – not city solutions/not mainland solutions.

Francis Street corner "I know what the problem is but you can't have a 21st century solution for an 18th century village.

Some things should be left alone. Certain things should remain.

Trucks are key. Used to go up Crooked Lane – it can't work.

Existing truck route works, but would work more efficiently with a few small Nantucket fixes.

Compact car consideration/encourage small car usage.

Public Meeting 7:00 p.m. to 9:00 p.m. (continued)

Utilize parking garage to eliminate poor parking stalls that cause more congestion. Opportunities exist for wider sidewalks.

Upper Broad Street could have angled parking much like Main Street.

India or Liberty? Make small/compact car parking only.

Can you get more spaces with smaller spaces? Only make parallel spaces with mark on curb not a full line on pavement.

People slam on breaks on Sconset Road at bike crossings going 50 mph.

Mopeds inefficiently using parallel car parking spaces.

Cars not pulling up to marked lines, inefficient use of spaces.

Data collection concern online in two months summer – don't want summer fixes to change character of Town.

Safety concern is that the bicycles and trucks take same route out of town.

Mopeds – employees use them – positive/good; alternate mode of transportation – good.

Mopeds – rentals come with issues/accidents but are a source of income. Off-island workers using town lot on Washington to park.

Mopeds use in town is fine/mopeds out of town is bad; they go 20 mph, speed limit is 40 mph.

Once per day – medi-vac mopeds out to the mainland. Need to check on this.

Take two different time snapshots in summer and winter; Federal and Main Streets are bad in the winter and the summer. Compare similarities – there are several issues other than July and August. (Consider)

Whole picture – contractor's trucks happen all year; island is busy all year.

With grand kids – you need big cars; it's a part of life.

We will not get rid of big vehicles – dirt roads/beach access. You actually need them.

Ferry traffic – currently policeman help move traffic; move along at Easy/Broad/Main/Water. Could work at Sparks and Surfside intersection too.

Tough to train summer cops to direct traffic efficiently.

Hordes of pedestrians you can't control no jaywalking by law.

High speed ferry's are an in town airport; only had high speed ferry service for 10 years – we only need small solutions to fix problems.

Public Meeting 7:00 p.m. to 9:00 p.m. (continued)

Think about that poor Sysco driver who had a COD customer not there to pay so he had to wait and everyone is stuck behind him.

Why? A tandem pup trailer is actually 4' longer and more maneuverable than a straight trailer.

"Parking shuffle" – it happens and town employees know the best spots to avoid tickets.

Any changes that are made to the core will effect areas outside of the core – needs to be understood.

Nantucket "dichotomy" is that it's everybody else's problem.

The merchants pay employees tickets – tax write-off.

Livery vans? Shuttles for employees back to where they live?

Use town funds to enhance shuttle that the state won't fund.

Make real estate company downtown have two to three cars designated for employee use – avoid 14 employee cars on the street.

Town parking lot should be for fishermen, contractors and employees.

Police in April ticketing is as bad as a bus service in November.

Doubling the size of the town lot with deck is good but watch out for views of neighbors.

Transportation center? Has this been discussed at the garage site? Article at Special Town Meeting.

Bus staging zone – leave buses running; exhaust is awful.

Hyline taxis – there is only one actual parking space but 5 to 6 taxis park there. This has changed.

(NRTA) Schedules of buses need to be alternated or staggered schedules/they are not staggered right now and buses just sit and wait; all of them in a line. If you make buses free -- more people will use them.

Answer the question: How fast can we get you from A to B?

Survey from employees and employers is needed to complete understanding of employee needs.

Distinction between daytime and evening employees. When you do your merchants survey?

Employees will give better idea of what they do.

Employees are the locals that park and use up valuable parking spaces.

Summer employees aren't the problem; they have don't have cars. Some don't.

Land bank parking lot is lost – now 2 hour parking – it was no limit parking in the past.

Fact: There are more cars on the island now so that information saying it's the same old problem is not accurate.

Public Meeting 7:00 p.m. to 9:00 p.m. (continued)

16,000 registered vehicles.

Demand hasn't increased – in reality the movie theater has closed and opened up parking.

Continue to educate the town through public forums and website.

NRTA Meeting June 5

Paula Leary – NRTA/8:00 a.m. on East Chestnut.

Work closer with Martha's Vineyard – good friends in trade areas "dump the pump."

New marketing brochure.

Not keen on getting shuttle closer to SSA – as it would result in too much traffic.

Airport doesn't fund their co-op anymore.

Program is \$4 million under-funded anything "transit authorized is difficult" and is legislatively tied to money. There are bigger fish to fry.

Proud of 3 million riders since 1995/route design. 4,000 riders per day July and August.

Transportation hub – "spoke" or "mid-island hub" – is not a good idea. Why take people out of town to bring them back in?

No idle law – when parked downtown, EPA 5 minute idle law. Maintenance is a nightmare when considering shutting engines down and restarting.

It's a hard thing – bus system raved about by all, but people want more.

Limited marketing brochures and maps – on boats and SSA mainly.

Wheels, heels & pedals.com is an informative website.

Three to five private tour bus agencies exist on the island – all varying size.

R.S. Walters, Cape Cod – advertisers

More visitors know about routes services than islanders.

Term rides with emergency ride home and get reimbursed from taxi services.

Year round residents tend to be the complainers.

Current commuter solutions – is to offer discount to employers for employees to use.

If money were no object, we wouldn't miss the second shift – midnight, restaurant worker – eater.

Service to Tom Nevers – increase frequency (need to be on it) extend season – second shift workers.

Concerns – turning radii with newer buses.

NRTA Meeting (continued)

Current ADA van service – door to door service – two vans.

Two fairgrounds Road property as park and ride.

"Nantucket Way" – proximity to everything, but why would you shuttle people from ferry?

Circulator trolley – doesn't make any sense.

Downtown bus stop – wanted map on bench tops – HDC did not allow.

No bus shelters – because HDC won't allow.

Traffic Safety Work Group Meeting 10:00 a.m. June 5, 2007

Chestnut Street – losing spaces with police station.

New shift goes to 3:00 a.m. in morning with ATV's.

Parking enforcement at Broad and Strip in evening.

Traffic cops moving traffic – works well together.

Paid parking – parking medallions - previous study committee.

- Controlling cars into downtown.

- One medallion per household.

- One sticker period.

People complain about tickets -- can't do it without commercial plates.

Permit, not permit commercial trucks parking downtown.

Parking on sidewalks? Problem?

10 streets were picked for no parking.

Cliff Road – you don't need to park on the sidewalk.

Dover Street – parking on sidewalk is required.

Stripe Main Street with pilot striping program and other spaces.

The type of parking on Main Street causes parking congestion.

Think circulation of Quince, India, Ash Lane, Ash Road changes outside of box method.

Lost something as part of Center Street shift.

Choke points – Easy/Broad.

Truck route – works but needs minor improvements to fix radii, etc.

Pedestrian access in Easy Street to and from the SSA.

Traffic Board Meeting 10:00 a.m. June 5, 2007 (continued)

South Water and Main added bollards – they didn't work.

Pacific Club – storm drain.

It is a big intersection. People cut across because the sidewalk is so narrow – needs to be widened. Move storm drain and benches to block crossing.

Increased cab queuing at Hyline Ferry would eliminate landscaped islands in Grand Union lot.

Washington and Salem Street intersection – no crosswalk – people wander all over. Buses are right there but you can't see them. Not really a great place for buses or people right now.

Ferry User Survey Summary
Town of Nantucket, Massachusetts

Hyannis – Nantucket (Hyline Highspeed) Thursday, August 9, 2007 @ 3:15 p.m.:

1 Person – Parked at the terminal – family rents a house for the summer, he commutes on Friday afternoons to the island and back home on Sunday nights for the work week in Boston. Comments: Grand Union "A&P" parking lot is pain in the neck, what needs to be done is to designate more spaces in the lot for drop off/pick up of passengers at peak times only.

1 Person – Dropped off at the terminal by a friend and will get picked up in Nantucket by family – visiting family on the island for the weekend. Comments: You need to limit the number of vehicles on the island, it is getting out of control. You need more parking downtown – build a "pretty" parking garage.

2 People – Parked at the terminal and will get picked up by family at the terminal in Nantucket – visiting family on the island for the week. Comments: It is extremely difficult to find your bags in the carts, it is too congested and there is no room at the Hyline terminal in Nantucket. They need more people helping you to find your bags and instruct where to go from there. They always see people wandering around following the masses hoping they are going the right way. I think they need "information directors" or very noticeable people on podiums or dressed with "big hats" providing directions, getting people cabs, on buses, to the bike rentals, etc. More education should be given about the NRTA (Nantucket Regional Transit Authority) on the ferry and in the terminals and more people will use it. She uses the buses but thinks that a lot of people don't use it because its not the chic thing to do, they are "snobby," it's a fact. One bus to Sconset per hour is not enough. NRTA needs to be closer to the terminals. Site seeing buses are too big for the downtown area and should not be allowed there. Thought should be given not to the limiting of cars on the island but just the number of cars downtown during the peak hours, say 10 a.m. to 2 p.m. A satellite parking area and shuttle service to terminal should be developed? The parking lot (Grand Union) is a mess, jammed up when ferries overlap, and they do on occasion overlap quite a bit. They use the Hyline because of the people (nice) and that it is much easier to park in Hyannis at Hyline (as opposed to the SSA [Steamship Authority]).

2 People – Parked at the terminal – island residents. Comments: Owners of Nantucket Island Rent-a- Car. Problems are at the rotary, high school, Old South Road, and the Five Corners. Work hours are from 7:00 a.m. to 3:30 p.m. and the off-island workers stop at 2:30. The recent one-way redirection seems to be working. They (the Town) should look into satellite parking lots with shuttles to terminals and drop-off/pick-up areas. NRTA doesn't provide service all the way on Cliff Road (it only goes to Liberty), that is why I don't use it.

3 People – Parked at the terminal – vacation and renting for eight days.

1 Person – Dropped off at the terminal by a friend – visiting family on the island.
Comments: The congestion is part of the essence of the island. It is not that bad, it works.

2 People – Parked near the terminal – island residents.

3 People – Parked at the terminal – weekend visitors/vacationers.

2 People – Dropped off by relatives at terminal – island residents (summer only).

1 Person – Parked car at the terminal – vacationing for the weekend. Comments: The traffic is pretty bad downtown.

1 Person – Took another boat to the terminal – works on the island for the summer.
Comments: There is no issue during off hours (during the week or mid-day) when the ferries aren't as full, the morning and evening are bad.

2 People – Parked car near the terminal – vacationing on the island.

2 People – Parked car at the terminal – vacationing.

1 Person – Dropped off at the terminal – family stays on the island for the summer (resident). Comments: (Hyannis) Ocean Street traffic light doesn't stay green long enough, timing should be adjusted when traffic is busy. There is no rhyme or reason to how bags are found, no numbers on the baggage carts, it is a free for all.

1 Person – Took a taxi to terminal – vacationing. Comments: Not enough bathrooms at Hyannis terminal.

1 Person – Dropped off at the terminal – vacationing for one night.

1 Person – Parked near the ferry – vacationing (annual trip).

2 People – Parked car near the terminal at relative's house – vacationing.

1 Person – Parked car at the terminal – vacationing/resident for the week. Comments: Don't travel on Friday-Sunday to avoid traffic. Route 132 by the bridge is big issue – normal commuters, not ferry users, get stuck in the traffic all the time, there should be a separation.

2 People – Parked car near the terminal – vacation on weekends regularly.

4 People – Parked car near the terminal – vacationing. The family will get picked up on the island by a friend/relative doing the "circle and wait, circle and wait" at the Grand Union lot and downtown roads.

Nantucket – Hyannis (Hyline Highspeed) Friday, August 10, 2007 @ 7:45 a.m.:

3 People – Will get picked up at the ferry (Hyannis) – took a taxi to Nantucket terminal, all island residents/workers. They do not have cars on the island to get around town. Comments: They are just getting off the island, once a month.

2 People – Parked near the ferry at a friends house "secret lot" (Hyannis) – long-term renters (spent summers on the island for last 35 years) returning to the mainland for the weekend. They have car to get around town. Comments: Will only use the Hyline ferry, the people are very nice and helpful. The SSA is off schedule a lot. It is difficult to get to the Hyline terminal with their handicapped mother. The traffic at Sparks and the high school is awful. Need to propose another pier away from downtown to relieve traffic, but that won't happen in our lifetime.

1 Person – Island resident/business owner, parked car near the terminal (Nantucket) and is assuming he will get ticket, but it is worth it, has two cars on the island – returning to the mainland for the day. Comments: Need more taxis on the island, there is no excuse for that. Hyannis public transportation is efficient. The Hyline employees are very pleasant and will bend over backwards to help you.

2 People – Dropped off at the ferry (Nantucket) – island resident (20 years), will get picked up at the terminal by friends (Hyannis) returning to the mainland for the weekend. They have two cars to get around town. Comments: They need to stop the police from directing traffic at Broad Street because it causes more traffic and makes the problem worse. It would work better as a merge with the "you go – then I go mentality."

4 People – Parked near the ferry (Hyannis) – took a taxi to the terminal (Nantucket) returning to the mainland from vacation. Comments: There are way too many big SUV's on the island, they should only be used for the beaches and dunes, not allowed downtown. They wanted to ride bikes more but found it very difficult to find the marked bike trail route in town, the bike trails are great but the directions fall apart once you get onto the local roads. They were not comfortable walking or riding their bikes downtown with their kids.

2 People – Parked near the ferry (Hyannis) – took the INN shuttle to the terminal (Nantucket) returning to the mainland from vacation.

2 People – Took a taxi to the ferry (Nantucket) – island residents, they will get picked up at the terminal by friends (Hyannis), returning to the mainland for the weekend. Comments: If you want to limit the number of cars on the island, they need to provide more/cheaper parking on the mainland (Hyannis). It costs \$75.00 to park your car for few days, \$300.00 to rent car for few days vs. \$200.00 to get your car off the island and another \$200.00 to get it back on and you need a reservation well before hand, what would you do, park your car and then rent one? Right? As a business owner, we only have three months to make up our \$100K lease/rent fee, it is hard, thus we want people to get on and off the island as easy as possible. Will really only use the Hyline, the SSA is unreliable when the weather changes.

1 Person – Island resident took a taxi to ferry (Nantucket) – will take a taxi when in Hyannis.

1 Person – Dropped off at the ferry (Nantucket) – parked near the terminal in Hyannis, returning home from vacation, stayed with family (residents) on the island and used their car to get around town.

2 People – Walked to the terminal (Nantucket) and parked near the ferry (Hyannis) – returning to the mainland from vacation.

Hyannis – Nantucket (SSA Eagle - Traditional) Friday, August 10, 2007 @ 9:15 a.m.

2 People – Car on ferry and two bikes on ferry – family rents a house twice a summer for a week at a time. Comments: Bike path is good but the master plan needs work, a more connected bike trail around the entire island would be better and safer, i.e., there is no bike path to Madaket. The NRTA would be used more with better advertisement, use Aspen Co. as an example, the ease of use is amazing out there. The bus needs to be made a part of life or a "mindset" in order for it to thrive. A better bus schedule and expanded bus service areas are needed. Bus should be free for certain times, the charge for other times. Limiting the cars on the island will not work. Historical/traditional driving techniques will work better than traffic signals and police directing traffic.

2 People – Parked car at the terminal (Hyannis) – will rent bikes on the island to get around – daytrip only.

4 People – Parked at the terminal and will get picked up by family at the terminal in Nantucket – visiting family on the island for the week.

2 People – Car on ferry - vacationing for the weekend on the island.

3 People – Parked at the terminal (lot #2) and will rent bikes in Nantucket – vacation.

3 People – Parked at the terminal and will take the bus, if they can find it, they heard that the bus is hard to find in Nantucket – daytrip only. Comments: There are no brochures about public transportation on the boat, nothing. Where do we go when we get off the boat, where is the introduction video I can watch "Welcome to Nantucket," this is how you can get around, this is what you can see, this is where you should go...etc., they have video screens and video games, why can't they have a "Nantucket Video," we have the modern technology and it should be pretty inexpensive.

2 People – Dropped at the terminal and will walk from the terminal in Nantucket to my house – I have a car at house for use. Island resident/vacationing full time for the summer. Comments: Move Pacific National and put a Mass Transit Center there, you would then use

Washington loop and centralize all buses. Cars have only been on the island since 1920, before them it was trains. What about a trolley system? It is difficult to use the bus to get to the beach, buses need to be better equipped to handle beach goers. We got a bus to the airport, why can't we have bus go directly to the ferry terminal.

3 People – Car on ferry and three bikes on ferry, vacationing for the month on the island at a family house on the island.

3 People – Parked car at the terminal (Hyannis) – will walk around downtown or take a tour bus on the island – daytrip only.

4 People – Car on ferry and three bikes on ferry, vacationing for the week on the island at rental house on the island. Comments: We generally avoid the downtown so the traffic doesn't really concern us, we come for the beaches, not the downtown.

3 People – Two adults, one baby, have a car on the ferry. Vacationing for eight days. Comments: We don't worry about the traffic, we try to avoid it.

2 People and Dog – Parked car at the terminal (Hyannis) and will get picked up at the ferry by the friends whose home they are staying with for the week. Comments: There should be less cars allowed on the island, need better public transportation or better bus stations/pick-up areas that out-of-towners can easily see, not just places that you need to study the NRTA routes maps to find. Need to find or show a better way to get the bicyclers out of downtown. Thinks that a satellite parking area other than the SSA terminal and the Grand Union lot, with shuttle downtown would work, but it will take a while to get used to. Expert or avid road bikers will avoid the bike trails because of the fear of crashing into a family of bikers with small children weaving all over the place.

5 People – Car on ferry, vacationing for two week vacation on the island at rental house. Comments: We generally avoid the downtown area so the traffic doesn't really concern us, we come for the beaches, not the downtown.

1 Person – Parked a little ways from the terminal (Hyannis) – rode bike to terminal and have bike on the ferry, will use bike or bus to get around, staying for the weekend only.

3 People – Parked near the ferry in Hyannis, brought kayak on boat, two will get picked up by relative at terminal (Nantucket) and one will boat to house on the island. They are long-term renters and have bikes already on the island.

4 People – Parked car near the ferry and plan on renting bikes on the island for a daytrip only. Comments: Come over quite often and would like to see a centralized bus/taxi area for both ferries, maybe some mid-point between the two wharfs?

2 People – Parked car near the ferry and plan on renting bikes or mopeds on the island for the next 96 hours. Comments: You can't see, it's all very confusing. They don't have these problems in Holland or Sweden. They should close Main Street to cars, provide additional satellite parking lots outside of downtown and trolley people in an out.

45 Kids (Boy Scouts) 30 Adults (Chaperones) – Parked cars at the terminal (Hyannis) and all have bikes. They have one box truck that has camping equipment and bikes packed on ferry and another truck packed on the next ferry over. They are camping for the weekend and going back on Sunday.

General Comments: There were no brochures available on the ferry, all mounted holders were empty. Interesting that the ferry has video games and a TV screen but no information about Nantucket, the NRTA, and where to go and what to do when you arrive. It seems like there is an opportunity to better educate people on the boats on where and how best to get around once you arrive on the island.

Nantucket – Hyannis (Hyline Highspeed) Friday, August 10, 2007 @ 3:15 p.m.:

3 People – Parked near the ferry (Hyannis) – vacationing, not a resident. They used the tour bus and walked around town. Comments: There are no signs or directions when you get off the ferry, they just followed the crowds.

1 Person – Parked car at the terminal (Hyannis) – returning from vacationing/rental house for the week. They brought one car over on the car ferry and used that all week. Comments: The weather makes the whole ferry travel idea worse.

3 People – Parked near the ferry (Hyannis) – returning from vacationing, not a resident. They used mopeds and bikes to get around town. Comments: This was their sixth vacation; they had no issues at all but feel that they know the island.

2 People – Parked near the ferry (Hyannis) – it was long walk to the ferry though – returning from vacationing, stayed with island residents. They used the resident's car to get around town. Comments: The people that they stayed with on the island have lived there for 19 years and have no problem with Nantucket, but Hyannis is congested and brutal in bad weather, traffic, confusion, etc.

2 People – Will get picked up at the ferry (Hyannis) – island residents from May-October. They have a car on island to get around town. Comments: They avoid the ferries at difficult times. Avoid the ferries during bad weather, the traffic is worse. They usually use the Hyline, but weather and running out of time forced them to take the SSA. Intersection of Quaker Road (dump) is difficult. There are more cars on the island thus parking is worse. Friendship Lane has bad parking problems. He has learned what areas to avoid, i.e., avoid the high school intersection and Grand Union at all costs. The contractors are a big problem to congestion during the week. If you don't know your way around, you will make congestion worse and you

will get lost. The Marine Home Center and five corners intersection is busy and always has congestion problems. People used to use his driveway to turn around in when they got lost and that was quite often. The rain/weather definitely increases traffic problems.

3 People – Parked near the ferry (Hyannis) – dropped off at the ferry (Nantucket) – returning from a day trip. They wanted to rent bikes but got rained out and just walked to get around town. Comments: The people that they stayed with on the island have lived there for 19 years and have no problem with Nantucket, but Hyannis is congested and brutal in bad weather, traffic, confusion, etc.

1 Person – Parked near the ferry (Hyannis) – walked to the ferry from hotel (Nantucket) – returning from three-day vacation, not a resident.

2 People – Parked near the ferry (Hyannis) – dropped off at the ferry (Nantucket) – returning from vacation, stayed with island residents. They used the resident's car to get around town. Comments: They did rent bikes or mopeds because it just didn't look safe.

2 People – Parked near the ferry (Hyannis) – took a taxi to the ferry (Nantucket) – returning from vacation, stayed with island resident. They used the resident's car to get around town. Comments: Absolute disaster trying to get to the terminal, taxi got stuck in traffic a half mile from the terminal, got out of car (taxi) with a newborn baby and ran down the street in the rain to get to terminal to catch the ferry. Strongly feels that the ferries shouldn't be right downtown or something has to happen to keep the traffic out of downtown so that ferry users can actually get to the ferry.

4 People – Parked near the ferry (Hyannis) – dropped off at the ferry (Nantucket) – returning from eight-day vacation, rented a house. They brought their bikes and used a friend's/island resident's car to get around town.

7 People – Parked near the ferry (Hyannis) – took taxis to terminal (Nantucket) – returning from two-week vacation, rental property. They rented bikes and used the NRTA shuttle to get around.

2 People – Parked near the ferry (Hyannis) – dropped off at the ferry (Nantucket) – returning from three-day vacation. Stayed with friends/residents.

3 People – Parked near the ferry (Hyannis) – took taxi to the ferry (Nantucket) – returning from vacation, rented a house. They rented bikes and mopeds to get around town.

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