

**FERRIES IN THE REGION:
CHALLENGES AND OPPORTUNITIES**

**A Discussion Paper Prepared for
the Working Forum on Ferries
November 6, 2006**

by Regional Plan Association

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Prologue

This paper was written by Regional Plan Association (RPA) as a means of generating discussion among public and private sector entities concerning ferry service in the tri-state New York – New Jersey – Connecticut region (Region). The paper is intended to stimulate discussion at a half-day working forum of “ferry stakeholders” to be hosted by RPA on November 6, 2006, where a series of issues will be raised and then discussed by the attendees in breakout sessions. These discussions can help target the problems facing the ferry network in the Region today and identify ways to work cooperatively toward solutions to these problems to ensure that ferries are an important part of the transportation system in the Region. These discussions can also work to establish the context of the upcoming interagency study of ferry ridership and route potential that is being initiated by the Port Authority of New York and New Jersey (the Port Authority) this fall.

To assist in the preparation of this paper many of these stakeholders were interviewed to gain an understanding of their role and their positions on issues pertaining to existing ferry service and its future role as part of the Region’s transportation system. The list of interviewees is provided in the Appendix A.

Jeffrey Zupan
Senior Fellow for Transportation
Regional Plan Association
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INTRODUCTION

Today, our transportation systems are becoming increasingly crowded. Roadway delays are growing with bottlenecks at the water crossings expanding beyond the usual commuter periods. Many links in the transit system are at or beyond capacity, including subway, commuter rail and bus entries to Manhattan. Commuter rail parking facilities are oversubscribed at many locations. Travel within and between suburbs is growing still faster. Our Region is expected to grow, adding 4 million more people and 3 million more jobs by 2030.

Given New York's natural harbor, the Hudson and East rivers, Long Island Sound and hundreds of miles of waterfront in the New York Region, it is unsurprising that there is considerable interest in ferry transportation. Yet, there is widespread concern that the future growth of passenger ferries¹ is capped, and that most of the markets where ferries can be successful have been found. Even the existing ferry services are in trouble as higher costs endanger their continuation.

Ferries can provide an option where ground options are slow and crowded. Ferries can be a catalyst for development and redevelopment along the Region's underused waterfront. And ferries can be used in emergencies and offer redundancy in cases where ground modes are disabled, as happened on 9/11. If we believe that ferries offer both a choice for many travelers and a can assist in meeting the Region's growth needs, then it is imperative to work towards retaining and expanding the ferry network in the Region.

It is with this goal in mind that this paper first briefly sketches the recent history and current status of ferry services in the Region and what it teaches us, and then focuses on the barriers that now limit the potential for growth of ferry services, suggesting the directions to be taken to overcome these barriers.

The Nineteenth Century to 1960s: From Essential to Non-Existent

¹ This paper does not discuss ferry services related to tourism and recreation, although the paper does recognize that it can be an integral part of the cost structure of ferry operations, particularly to the extent that tourism-related ferries often can cross-subsidize passenger ferries intended to meet travel needs. This paper does not discuss the role of waterborne freight transportation.

For much of the 19th Century ferries were the prime means of crossing the East and Hudson rivers into Manhattan, with dozens of routes linked to Manhattan Island. Beginning in 1883 with the opening of the Brooklyn Bridge and continuing to just before World War II, a series of highway bridges and tunnels, and rail transit and commuter rail tunnels, were constructed connecting Manhattan to points both to the east in Brooklyn and Queens and to the west in New Jersey. In that period seven motor vehicle crossings, 12 rapid transit tunnels and one commuter rail (LIRR) crossing were built over or under the East River. To the west, three rail tunnels – 2 Hudson and Manhattan Railroad (now PATH) and the Pennsylvania Railroad tunnel – and three motor vehicle crossings connecting the two sides of the Hudson River were constructed.

The impact on ferries was dramatic; ferry routes disappeared in close correlation with the opening of close-by roadways and transit crossings. The three trans-Hudson rail tunnels siphoned ferry traffic from the rail commuters who transferred at the Hudson River's western shore since all of the rail lines before 1910 terminated there. The combined effect of new rail and highway crossings was dramatic. For example, in 1925 just after the opening of the Holland Tunnel in 1922, 295,000 trips were made across the Hudson on an average weekday. In 1929, this number held steady at 297,000, but then began to decline, initially because of the Great Depression; by 1949, with the Lincoln Tunnel's third tube in place the ferry volume had declined to 113,500 a day; by 1967 the last two ferries across the Hudson -- both primarily to carry rail passengers transferring in Jersey City and Hoboken to complete their trip to Lower Manhattan -- were gone.

Across the East River the last ferry ceased operation earlier, in 1942. The last subway under the East River had been completed in 1938.

Throughout this period, the Staten Island to Battery ferry remained in operation as the only form of public transit between Staten Island and Manhattan, although the ferry route

between St. George and Brooklyn at 69th Street survived until that ferry was discontinued in 1964 simultaneous with the opening of the Verrazano-Narrows Bridge.²

From Rebirth to 9/11

In the 1980s three events began to signal the rebirth of ferries. Arthur E. Imperatore, Sr. had purchased 380 acres of largely inaccessible property from the New York Central Railroad in Weehawken and West New York, with ambitious development plans there. He saw the institution of ferry service as the means of increasing its development value, and began ferry operations late in 1986 under the name of Arcorp (now New York Waterway) between his New Jersey property and property he owned in Manhattan on the Hudson River at 38th Street. Over time road access was improved and a park and ride lot was expanded. At his request NJ TRANSIT added bus service to the site. In Manhattan, NY Waterway added their own buses and series of routes that distributed riders from the pier location at 38th Street and West Street on the far west side of Midtown Manhattan. Within a year on an average weekday about 1,500 trips were made on this ferry route.

Farther south in the Highlands of Monmouth County, New Jersey, in a part of the county where the trip by existing transit or by automobile was particularly circuitous (about 45 miles by automobile or by rail to the World Trade Center compared to only 21 miles by ferry), Harbor Commuter Company began to operate a ferry service to Pier 11 on the East River, a short walk to the heart of the Wall Street financial district in Lower Manhattan. By the summer of 1989 weekday ridership averaged over 700.

At about the same time, the Port Authority faced increasingly serious peak period crowding on its PATH Hoboken to Lower Manhattan service; the option of extending station platforms so that trains could be lengthened was costly leading to the consideration of ferries for less costly relief. The Port Authority also owned land along the Hoboken waterfront that could benefit from ferry services. They issued requests for proposals to operate ferry service from Hoboken to the World Financial Center

² The Staten Island ferry today is a special case among ferries, long being essential to meet the mobility needs of Staten Island. This venerable institution is not in danger of discontinuance and will not be focused on in this paper.

expanding west of West Street in Battery Park City. New York Waterway won the rights to this service and began service in October 1989; the Port Authority invested a limited amount of capital in temporary dock facilities on both sides of the Hudson, with the promise of substantial investments in permanent facilities later. Within a year the number of weekday trips on this service climbed to 5,000.

These three services – Weehawken to 38th Street, Hoboken to Battery Park City, and Highlands to Pier 11 – were hardly the only ferry services during this period. From 1987 to August 2001 a total of 47 ferry services were started up. By the end of this period only 20 were still in place carrying 35,700 passengers on an average weekday. Some of failed after only a few months. The data for these are displayed in Table 1.

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35,700 passengers on an average weekday.

Of 47 routes, all but one served Manhattan directly, and of these 29 linked to Lower Manhattan, either at the World Financial Center, Pier 11 or one of a number of ferry slips at the Battery. Midtown locations included eight routes at East 34th Street, three at West 38th Street at Pier 78, and one at west 44th Street. Three routes made stops only in Manhattan, and one each connected LaGuardia Airport with East 62nd and East 90th to complete the Manhattan picture. The only non-Manhattan service was the trans-Hudson Haverstraw to Ossining feeder ferry to Metro North's Hudson Line.

Other than generally lower ridership, what distinguishes those that remain and those that were dropped? Twenty-three of the 27 discontinued fell into the following groupings:

- From Brooklyn, Queens or Long Island to Lower Manhattan – 5 routes
- Upper NY Harbor (Elizabeth, Bayonne, Staten Island) to Lower Manhattan – 3 routes

Table 1 - Status of the Forty-six Ferry Routes Started Before 9/11

A. Opened Before 9/11 and Still in Operation - 15 Routes				Highest Month		
Service	Opening Date	Open Now or Close Date	Continuous?	Month	Daily Riders	July 2006 Weekday Average
Weehawken - W. 38	Dec. 1986	Yes	Yes	Oct. 2001	13,164	6,506
Port Liberte - Pier 11 / Slip 5	Aug. 1987	Yes	No	Sept. 2003	917	569
Highlands - Pier 11	Jan. 1987	Yes	Yes	June, 2002	1,901	1,449
Bkln Army Term./ 69th St. - Pier 11	Feb. 1988	Yes	No	Sept. 2002	2,015	247
Liberty Harbor - Pier 11	May, 1988	Yes	No	Sept. 2003	1,878	917
Lincoln Harbor - W. 38	Oct. 1988	Yes	Yes	July, 2006	3,080	3,080
Hoboken - WFC	Oct. 1989	Yes	No	June, 2001	10,921	4,018
Atlantic Highlands - Pier 11	June, 1990	Yes	Yes	July, 2004	1,043	908
Colgate - WFC	June, 1994	Yes	Yes	Oct. 2001	4,620	2,469
Highlands - E. 34	Oct. 1994	Yes	No	June, 2002	1024	780
Liberty Landing - WFC	March, 1999	Yes	Yes	July, 2003	948	690
Atlantic Highlands - E. 34	Jan. 1999	Yes	Yes	July, 2004	561	488
Weehawken - Pier 11	Jan. 2000	Yes	Yes	Oct. 2001	2,029	1,243
Haverstraw - Ossining	Sept. 2000	Yes	Yes	June, 2006	524	512
Hoboken No. - W. 38	April, 2001	Yes	Yes	Sept. 2003	2,235	2,016

B. Opened Before 9/11 and Closed Since 9/11 - Four Routes						
Keyport - Pier 11	Feb. 1987	Nov. 2002	Yes	Feb, 2002	629	0
Glen Cove - Pier 11	March, 1989	Oct. 2002	No	July, 2001	353	0
Hunters Pt. - E. 34	Oct. 1994	Dec. 2005	No	Aug. 2005	236	0
Harborside - Battery (Pier A)	June, 1998	Nov. 2003	Yes	Sept. 2003	3769	0

C. Opened Before 9/11 and Closed Before 9/11 - 27 Routes						
Rockaway - Pier 11	March, 1987	Oct. 1989	Yes	Aug. 1988	321	0
Elizabeth - Pier 11	April, 1987	April, 1988	Yes	Aug. 1987	71	0
Fulton Landing - Pier 11	May, 1987	Sept. 1989	Yes	Sept. 1987	199	0
Bayonne - Pier 11	June, 1987	May, 1998	No	Nov. 1987	387	0
Keansburg - Pier 11	July, 1987	Sept. 1987	Yes	Aug. 1987	115	0
LaGuardia - Pier 11	Aug. 1987	Dec. 2000	Yes	June, 1988	165	0
Weehawken - Battery (Slip 6)	Sept. 1987	Nov. 1999	Yes	Sept. 1998	90	0
Pavonia - Pier 11	Dec. 1987	Oct. 1988	Yes	Dec. 1987	59	0
Williamsburg - Pier 11	June, 1988	June, 1988	Yes	June, 1988	9	0
Sheepshead Bay - Pier 11	June, 1988	Oct. 1988	Yes	June, 1988	15	0
Lincoln Harbor - Battery	July, 1988	Dec. 1997	Yes	Oct. 1988	681	0
LaGuardia - E. 34	July, 1988	Dec. 2000	Yes	Sept. 1988	101	0
Port Liberte - E. 34	March, 1989	Oct. 1989	Yes	June, 1989	24	0
Manhattan Shuttle - 4 stops	March, 1989	Oct. 1989	Yes	May, 1989	74	0
Glen Cove - E. 34	April, 1989	May, 1989	Yes	May, 1989	3	0
Inwood, LI - Pier 11	April, 1990	Aug. 1990	Yes	July, 1990	195	0
Inwood, LI - E. 34	April, 1990	Aug. 1990	Yes	Aug. 1990	49	0
Lincoln Harbor - Pier 84	Jan. 1991	March, 1991	Yes	March, 1991	41	0
LaGuardia - WFC	Oct. 1992	Dec. 1992	Yes	Nov. 1992	17	0
South Street Seaport - WFC	May, 1996	Sept. 1996	Yes	Aug. 1996	159	0
Mariner's Harbor - Pier 11	May, 1996	May, 1998	Yes	May, 1996	54	0
Manhattan Shuttle II - 3 stops	Sept. 1996	Oct. 1996	Yes	Sept. 1996	584	0
St. George - E. 34	Jan. 1997	Aug. 1998	Yes	March, 1997	1,605	0
Liberty State Park - WFC	Oct. 1997	Dec. 1999	Yes	July, 1998	1,017	0
LaGuardia - 62nd St.	May, 1998	Nov. 2000	Yes	June, 1998	62	0
LaGuardia - 90th St.	May, 1998	Dec. 1999	Yes	June, 1998	5	0
Pavonia - WFC	Aug. 1998	Dec. 1999	Yes	July, 1999	303	0

Riders on These Routes = 25,892

* Combined with Pier 11 data
 italics indicate estimates by splitting total ridership to Pier 11 and East 34th Street

- Northern Hudson County to Lower Manhattan – 3 routes
- LaGuardia Airport to five Manhattan locations – 5 routes
- Intra-Manhattan only – 3 routes
- Various locations to East 34th Street – 4 routes

With one exception – St. George to East 34th Street – none of these routes ever averaged more than 600 passengers on an average weekday. In contrast, among the surviving routes only two currently average less than 600 passengers.

From 9/11 to Today

The tragic events of 9/11 altered the ferry picture overnight. Ferries had performed admirably, even heroically, to evacuate Lower Manhattan on 9/11, with ferries being the only means to leave Manhattan to points west in the hours after the attacks. The limitations on vehicular traffic in the months following, and the destruction of the World Trade Center PATH station (resulting in the closing of PATH's World Trade Center line from Exchange Place in Jersey City) threatened Lower Manhattan's economy. This led to a flurry of activity to rapidly expand ferry services to fill the gaps.

Twenty ferry services were started on the Hudson in the months after the attacks, with 15 directly or indirectly tied to giving better access to Lower Manhattan. Of the 15 all but one was begun by New York Waterway, which expanded their ferry fleet rapidly to provide the needed capacity. The Hoboken and Colgate services were expanded to Pier 11 almost immediately. Pier A at the Battery was constructed quickly by the Port Authority to receive ferries, and service from Hoboken and Pavonia began by the end of 2001. Pavonia to West 38th Street also started then. Ferry service interconnecting points within Manhattan in various combinations were also tried, involving Battery Park City, Pier A, Pier 11 and West 38th Street. Later, other services were added in an attempt to make these many services more of a network – Weehawken to Battery Park City in August 2002, Hoboken North to Battery Park City in May 2003, and Harborside to Pier 11 and to West 38th Street in December 2003.

In October 2002 the peak average weekday ridership for a month was reached – 69,700 on 30 routes, or 95 percent more riders than just before 9/11.

As it became clearer which service attracted significant ridership, those that didn't were discontinued. The intra-Manhattan services were dropped first. Many of the others continued to carry large numbers of riders, but when the PATH World Trade Center service re-opened in December 2003 substantial ridership declines set in. Three other services were dropped almost immediately, three more somewhat later and two were eventually combined by converting point-to-point service into a multi-stop service in New Jersey before crossing the Hudson. Today, only four of these services born post-9/11 survive intact: the Hoboken and Pavonia ferries to Pier 11, the Colgate service to West 38th Street, and the Hunters Point service to Pier 11.

Since 2001 other ferry operations have been tried with mixed success. In Monmouth County a new ferry from Belford to Pier 11 opened and continues to hold and even grow its ridership levels. Up the Hudson a ferry service to feed the Beacon rail station from Newburgh was begun in November 2005. An East River shuttle has been off-again, on-again, having just been revived this past May with stops at Hunters Point in Long Island City, East 34th Street, Pier 11, with an additional stop added in August at Schaefer Landing in Williamsburg to serve new residential development there. Two other ferries have started and have been suspended – from South Amboy and from Keyport. The South Amboy operation may begin again soon. Glen Cove to Pier 11 began in 2001 and lasted just over one year before folding. A multi-stop Manhattan operation from Fulton Landing in Brooklyn to West 44th Street survived for three years before closing in October 2005. Details of the post-9/11 ferries are shown in Table 2.

Today there are 24 separate private ferry services carrying 37,000 riders per average weekday as of July 2006, or 3.8 percent more than in August 2001, but 47 percent fewer than rode in October 2002. These routes are shown in Figure 1 and can be summarized as follows.

Table 2 - Ferry Routes Opened After 9/11

Service	Opening Date	Open Now or Close Date	Continuous?	Highest Month		July 2006 Average Weekday Riders
				Month	Riders	
Hoboken - Pier 11	Oct. 2001	Open	Yes	Oct. 2003	7,340	4,381
Colgate - Pier 11	Nov. 2001	Open	Yes	Nov. 2001	4,971	2,339
Colgate - W. 38	Oct. 2001	Open	Yes	Nov. 2001	2,348	515
Hunters Pt. - Pier 11	Sept. 2002	Open	No	Sept. 2002	507	238

B. Related to 9/11 and Since Combined for Survival - Two Routes

Weehawken - WFC	Aug. 2002	Open	Yes	Oct. 2002	702	528
Hoboken No. - WFC	May, 2003	Open	Yes	Nov. 2003	440	*

C. Related to 9/11 and Since Closed - Nine Routes

Pier A - Pier 11	Nov. 2001	March, 2002	Yes	Nov. 2001	1,795	0
W. 38th - WFC	Nov. 2001	Jan. 2002	Yes	Nov., 2001	315	0
Pavonia - Battery	Dec. 2001	Dec. 2003	Yes	June, 2002	2,865	0
Pavonia - W. 38	Dec. 2001	March, 2005	Yes	Sept. 2002	1,499	0
Hoboken - Battery	Jan. 2002	Dec. 2003	Yes	Jan. 2002	18,056	0
BPC - Pier 11	March, 2002	July, 2002	Yes	June, 2002	81	0
South Amboy - Pier 11	March, 2002	June, 2006	Yes	Feb. 2006	615	0
Harborside - W. 38	Nov. 2003	March, 2005	Yes	Dec. 2003	292	0
Harborside - Pier 11	Dec. 2003	May, 2004	Yes	Jan. 2004	1,330	0

D. Unrelated to 9/11 and Still Open - Three Routes

East River Shuttle	Oct. 2001	Yes	No	July, 2006	543	543
Belford - Pier 11	Oct. 2002	Yes	Yes	Sept. 2003	2,346	2,259
Newburgh - Beacon	Nov, 2005	Yes	Yes	July, 2006	326	326

E. Unrelated to 9/11 and Since Closed- Two Routes

South Amboy - E. 34	March, 2002	Nov. 2005	Yes	NA	NA	0
Fulton Landing - 4 Manh. Stops	Sept. 2002	Oct. 2005	Yes	July, 2005	464	0
Riders on These Routes =						11,129

* Ridership shown within routes they were combined with.

1. Ten routes converge on Pier 11 on the East River with eight of these having their other end in New Jersey; of these eight, five are located in Hudson County and carry 9,500 riders per weekday, and the other three are from Monmouth County on Raritan Bay and carry 4,700 riders to Pier 11 and another 1,300 to East 34th Street. The two non-New Jersey ferries originate at the Brooklyn Army Terminal and at Hunters Point in Queens and carry less than 500 riders combined. The ten routes combine for 15,800 riders per weekday.
2. Four routes converge on the World Financial Center and originate at Hoboken and Jersey City locations. They carry 7,700 riders on an average weekday.
3. Taken together the Pier 11 and WFC ferries carry 22,200 riders on 14 routes to and from Lower Manhattan.
4. Five routes, including those that have been combined, are from Hudson County and converge on the West 38th Street ferry facility in midtown, and carry another 12,100 riders per weekday.
5. Of the remaining five routes, two are from Monmouth County to East 34th Street and carry about 1,300 riders, and two cross the Hudson River far to the north and carry about 400 people (800 trips) to Metro North rail stations. Finally, the multiple stop East River shuttle carries about 500 riders.

The vast majority of the 37,000 riders have either one end of their trip in the three main terminals in Manhattan at Pier 11, the World Financial Center, or West 38th Street, or in Hudson County either in Weehawken or NJ TRANSIT's Hoboken Rail Terminal. The only exceptions are the two trans-Hudson routes far to the north. Only the five Monmouth County routes and combinations to Pier 11 (21 miles) and East 34th Street (23 miles) exceed four miles in length.

In addition to the ferry services shown in Tables 1 and 2, in August the new service from Williamsburg in Brooklyn to Pier 11 began. It is operated by New York Water Taxi and carries about 60 riders a day. The site is at Schaefer Landing, a new condominium housing development. The developer and New York Water Taxi have negotiated an agreement for support of the ferry service with incentive for their use by condominium owners, with the condominium association paying a yearly fee for five years.

There has now been twenty years of experience with ferries in the New York Region. During this time there has been widespread experimentation with routes – 70 of them. Some lasted only a matter of months, while others have remained. Many began in the immediate aftermath of 9/11. As of mid-2006, 26 remain and are shown in Map 1..

These ferry services fall into six fairly well defined but sometimes overlapping categories.

1. Ferry services that are part of the transit network and directly complement it. The Hoboken to Lower Manhattan services that act as a load shedder for the parallel and overcrowded PATH, and the two upper Hudson commuter rail feeders fall into this category.
2. Ferry services to Lower Manhattan. The proximity of job concentrations to the water's edge in Lower Manhattan make ferries an attractive choice for many commuters, particularly if their job locations are within a short walk of the water's edge.
3. Ferry services from New Jersey to West Midtown. Although job concentrations in Midtown are further from the water's edge, the extensive connecting bus to west Midtown provides an option for commuters and others traveling across the Hudson River.
4. Ferry services that fill a void for commuting because of poor ground transit alternatives. The Monmouth County services that are faster and more direct than rail and auto alternatives and the Weehawken to Midtown service, where bus and auto options face severe road congestion to reach Midtown, fall into this category. So does the prospective Edgewater ferry service. The Monmouth County service as been helped by the high incomes in large portions of their commuter shed, with tolerance for the necessarily high fares.³

³ For example, the 2000 annual median family income in the nearby communities of Rumson and Little Silver was over \$140,000 and \$104,000, respectively; in contrast, the Monmouth County median family income was \$67,800.

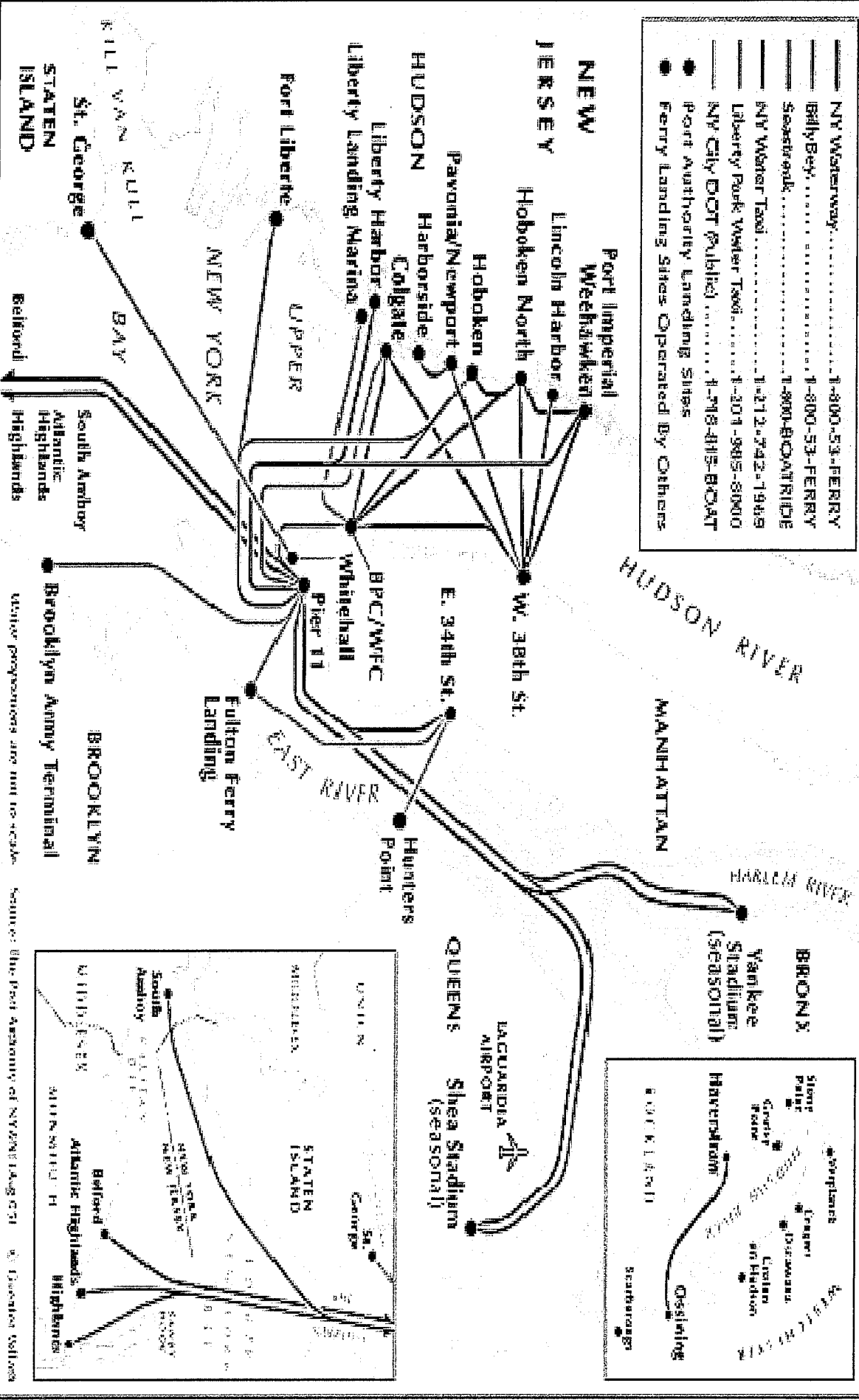
Map 1

South Amboy Route & Harborside no longer operating
 Colgate - WFC now Billybey

NEW YORK HARBOR COMMUTER FERRY ROUTES

NY Waterway	1-800-53-FERRY
Billybey	1-800-53-FERRY
Seastruck	1-800-BOATRIDE
NY Water Taxi	1-212-742-1949
Liberty Park Water Taxi	1-201-985-8000
NY City DOT (Public)	1-212-415-BOAT

● Port Authority Landing Sites
 ● Ferry Landing Sites Operated By Others



Other properties are not to scale. Source: The Port Authority of NY&NJ, Aug. 01

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5. Ferry services whose purpose is to create accessibility in areas with poor access to create opportunities for new or expanded development.
6. Hudson County fit this description with respect to residential development, including Port Liberte, Liberty Harbor, and Hoboken North. The new Williamsburg ferry in Brooklyn does as well. Colgate and Lincoln Harbor ferries work in a similar fashion for non-residential development.
7. Ferry services that interconnect multiple locations. The East River shuttle operated by New York Water Taxi fits this description.

In addition there are many tourist and recreational ferry services including the Liberty and Ellis Island ferries, service to Yankee and Shea Stadiums and to the Gateway National Recreational Areas among others.

In sum, the role of ferries in the Region over the last 100 years or more has gone from essential to non-existent (with the exception of the Staten Island ferry) and then in the last twenty years to a role that might best be described as “niched.” These niches include ferry services that are either part of intermodal connections or in other ways complement existing transit modes, services that provide better options than the existing ground modes, and services that can open up new development opportunities. When searching for additional ferry service opportunities, it is these characteristics to be kept in mind.

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Potential New Ferry Services

Beyond what is in place today, two services are scheduled to start in the coming months, with at least one other likely. In November a ferry service to be operated by New York Waterway will begin from Edgewater, New Jersey just south of the George Washington

Bridge and run to Pier 79. It can be expected to capture some of the Weehawken market, although it will suffer from limited parking. The Port Authority contributed \$8 million for docking facilities and Edgewater used Greenacre funds and their own resources to contribute as well.

A New York Water Taxi weekday service is also scheduled to begin from Yonkers to Battery Park City next May. It is hoped that it will capture riders destined for the west side of Lower Manhattan who today use Metro North to Grand Central Terminal and use the overcrowded Lexington Avenue subway line to reach lower Manhattan, and then must walk to the west. The fare is to be \$400 per month and it is hoped that it will attract 400 riders per day. An extension to the north to Haverstraw is possible later, but the longer distance (and higher fare) and the currently competing ferry alternative from Haverstraw to Ossining may be barriers to the success of this extension. The Yonkers service is being supported by a grant of \$4.2 million from LMDC which is designed to cover deficits for two years. Capital for docking facilities has been contributed by the Port Authority (\$2 million), the federal government through congressional earmarks (\$3.2 million which also includes funds for Haverstraw), and the Yonkers Parking Authority (\$1.5 million).

A docking facility in southern Staten Island is being established with \$6 million of Port Authority funds, with the land to be purchased by New York City. It would make way for a new service to Lower Manhattan with one or more of the Monmouth County ferries stopping there. The idea is to capture the market in the south half of the island that today must use express buses or a combination of the Staten Island Rapid Transit line and St. George ferry to reach Lower Manhattan. But the Monmouth County operators will have to weigh any deterioration in the service for their current customers against the potential for new riders.

Although it is not the intent of this paper to analyze the potential success of these or other potential ferry services, it is useful to lay out some of the other ideas that have emerged through the interview process or in the course of the research for this paper that should be considered in the upcoming Port Authority study of ferry ridership and route potential.

First, at least some of the ferry services that failed over the years deserve another look. Their failure could have been the result of many things, some correctible. A good example of this is the ferry service from the Rockaways which stopped at both 116th Street and Breezy Point in the Rockaways and then traveled to Pier 11; in the late 1980s it carried at its maximum over 300 riders per weekday. Since then there have been at least three studies of the potential for ferry service from the Jamaica Bay / Rockaway area. But it has not been tried again. The Rockaways and the southern portions of Brooklyn and Queens near Jamaica Bay have either long slow subway service to Manhattan or none at all, which augurs well for ferries. Possible future landing points include Jacob Riis Park in Rockaway, Floyd Bennett Field or Dead Horse Bay along Flatbush Avenue and locations along the Belt Parkway. While the studies concluded that there is a sizable potential market, but one inhibited by the high fares necessary to realize a profit. Moving forward in this sector has gained considerable impetus with the availability of federal earmarked funds of \$15 million secured by Congressman Anthony Weiner.

There are likely to be other ferry opportunities that fall in this category – ridership too light because of high fares to turn a profit, yet able to capture a sizable ridership if subsidies could keep fares lower.

Other failed ferries that deserve another look based on the volumes of passengers they achieved earlier include Glen Cove to Pier 11 in operation off and on for 13 years (350 riders at maximum), Bayonne to Pier 11 (11 years, 390 riders), Inwood, Nassau County (3 months, 190 riders), and St. George to East 34th St. (1½ years, 1,600 riders). Others may be warranted as well. A 2000 NJDOT report suggests that Perth Amboy and Elizabeth may have sufficient ridership too. There is new interest in Elizabeth in Newark Bay, where a developer is contemplating a mixed-used complex, which is also close to Newark-Liberty International Airport and to a major shopping mall.

The Long Island Sound Ferry Coalition created by NYMTC to study ferry opportunities for Long Island Sound concluded that Glen Cove, Stamford and Bridgeport service to

Lower Manhattan were the only viable possibilities. Stamford and Bridgeport are not unlike Yonkers in that they are competing directly with Metro North, but hope to capture the market destined for Lower Manhattan who could avoid the crowded Lexington Avenue subway line if a ferry existed. However, Stamford and especially Bridgeport are a considerably longer ferry trip to Lower Manhattan than Yonkers is, so the necessarily high ferry fare to cover fuel costs may work against them, particularly with the competition of the nearby New Haven line of Metro North. The concept of initiating a ferry from Randalls Island has been raised; the idea would be to intercept drivers from Long Island using the Triborough Bridge. Other New York City-based services that might deserve exploration are in navigable waterways such as Newtown Creek and Gowanus Canal.

The New Jersey DOT has funding for ferry facilities in Carteret and Long Branch, which could be used for ferry services to Lower Manhattan. The volume of riders each of these might attract is not fully understood. In the Long Branch case, the interest in ferries may be as attraction *to* that municipality rather than as a commuter operation.

As the ferry system has now developed there are three locations that stand out because of the many ferry routes that use them – Pier 11, Battery Park City and Pier 79 at 39th Street on the Hudson River. These locations would serve as a “Union Station” for ferry operations. The potential for coordinating service at these places to allow for connections between two ferry routes should not be discounted. Examples of trips that could benefit include Yonkers to Lincoln Harbor via Pier 11, Yonkers to Colgate via Battery Park City and various Brooklyn to west of Hudson locations using Pier 11. Where it is applicable coordination between ferry operators who currently compete more often than they cooperate would need to occur.

In the early planning for ferries at the Battery the idea of using the pier area east of the Staten Island ferry terminal as a Union Station was entertained. This could only work today if much of the Pier 11 operations were moved there. The advantage: better access to connecting subways. The disadvantage: disrupting the ferry use patterns built up over time, especially for trips destined close to Pier 11.

Opportunities based on new development are many. New York City's strategic plan (currently in preparation) is geared to accommodating one million more residents over the next generation. By making areas at the water's edge far from subway service in Brooklyn and Queens more accessible by using ferries a portion of this growth can be served. These areas include Bayside, Red Hook, North Williamsburg in Brooklyn, and Queens West/North Hunter's Point in Queens. The NYC Economic Development Corporation has just issued an RFP for ferry service at these locations and others on the East River. Other opportunities may exist in the South Bronx near Hunts Point or in conjunction with redevelopment spurred along the Bronx River Greenway.

By making areas at the water's edge far from subway service in Brooklyn and Queens more accessible by using ferries a portion of this growth can be served.

Finally, the Port Authority continues to examine airport access by ferry as part of its effort to expand ground access options and service reliability as airport passenger volumes grow and traffic conditions worsen to their three airports. Current plans to call for a service to LaGuardia Airport to be reinstated that is similar to the suspended ferry service that ran from 1987 to 2000 and carried at its maximum over 200 riders a day to and from Pier 11 and East 34th Street and the LGA Marine Air Terminal, with a bus shuttle to other points on the airport. At JFK there may be the possibility of a service to Bergen Basin, about 1,000 feet from the AirTrain station, with the Rockaways / Jamaica Bay service which might be tied in with the Jamaica Bay service discussed above.

Threats to Success

By far the most important barrier to a thriving and growing ferry network is the increased costs of fuel, which has eaten into profits and pushed up fares. It is especially true on longer routes where higher speeds, so necessary to compete with other modes, leads to higher fuel consumption rates. To some extent vessel design using double-hull catamarans can mitigate against this.

Pro formas for ferry operations are not available for this paper; the evidence for the effect of fuel costs on the bottom line is therefore anecdotal, but highly credible to anyone passing a gas station these days, notwithstanding the temporary drop in fuel costs experienced lately. The ferry operators continue to search for the “sweet spot” for their operations, where lower fuel consumption through slower speeds can be realized without jeopardizing the attractiveness of their service. However, the possibility of doing this exists mostly for short ferry trips where a minute or two time loss is less noticed.

To a much lesser extent rising insurance costs have pushed the cost of operating ferries higher; the message from the operators is more mixed here, however.

The cost of paying for the financing of the expanded ferry fleet after 2001 cannot be discounted. The financial difficulties experienced by New York Waterway and now Billybey can in large part be traced to this cost element.

There are a number of other threats to either the start up or continuation of ferries. In Nyack in Rockland County, where ferry service to Lower Manhattan or to Tarrytown across the Hudson for connections to Metro North appeared to be attractive possibilities, fierce opposition emerged to vehicular traffic and the garage on the waterfront needed for the ferry riders. On Long Island, several proposals died because of local opposition to traffic; the Glen Cove ferry was opposed by some local residents.

Community concerns about air pollution from diesel exhausts, noise from vessels, and high wakes each have arisen in a number of places. But more nuanced operations, better vessel design and in some cases relocation of docking facilities have helped to quell or overcome opposition.

The initiation of ferry operations, including the use of new docking facilities, requires a number of permits from various levels of government. Slow processing of applications, in large part because of low staffing levels, most notably at the Army Corps of Engineers and at New York State Department of Environmental Protection, has been raised as a

barrier to prompt ferry start-ups. The lost time, which often converts to monetary loss, is an issue that should be addressed.

Beyond these obstacles, what emerges as more critical and one that cannot be avoided is the question of public subsidies in some form, either to carry new ferry services through early growing pains, or even permanently. More discussion on this will come later in this paper.

The Ferry Operators

During the twenty years since ferries have been reinstated there have been at least 22 distinct ferry operators, not including those that just changed their names. Some lasted only a matter of weeks. Others have lasted over most or all of the twenty years. The full list is presented in Appendix B.

What is clear is that staying in the ferry business requires persistence. Most persistent has been New York Waterway, which began as Arcorp and started the Weehawken to west Midtown and the Hoboken to World Financial Center ferries in the 1980s. However, under the burden of the high cost of operating complementary bus service and the costs associated with the expansion of their fleet and services after 9/11, New York Waterway faced severe financial stress. In February 2005 they entered into an agreement with Billybey Ferry Company whereby Billybey took ownership of a portion of New York Waterway's service in exchange for assumption of \$19 million of New York Waterway debt incurred in purchasing and leasing their expanded fleet. Today, Billybey controls the Hoboken operations and those from Liberty Harbor (at Morris Canal in Jersey City) and Port Liberte which combine to carry 9,900 riders, with New York Waterway operating these services for Billybey. Meanwhile, New York Waterway retained ownership of the Weehawken routes, including all the routes to Pier 79 (opened in 2005 to replace its West 38th Street Pier 78), the Belford service and the two commuter rail feeder routes across the Hudson to the north, which taken together carry 19,500 riders.

Billybey Ferry also faces financial problems. The mortgage payments they assumed on the New York Waterway vessels have become a huge burden, and the excursion and commuter business from Pier A at the Battery intended to offset the debt has not as yet panned out.

The routes from Highlands and Atlantic Highlands are operated by Seastreak and carry another 3,600 riders; it has been reported that Seastreak is interested in selling their ferry business. The recent announcement of Chapter 11 filing by their parent company may also foretell financial difficulties although service is continuing.

New York Water Taxi carries 3,400 riders on four routes, and also operates many other services in the New York Harbor for tourists, which offsets losses in the commuter markets. The fifth operator is Liberty Park Water Taxi, which runs the route connecting Liberty State Park and the World Financial Center.

The Public Players

The Port Authority of New York and New Jersey is the bi-state quasi-governmental agency that operates the six Hudson River vehicle crossings, PATH, the three major airports in the Region plus Teterboro Airport, and Port Newark and Port Elizabeth. They first became interested in ferry services in the 1980s as a potential alternative to an expensive capacity expansion of an overcrowded PATH system. Since then they have been involved in planning for ferry services, particularly as it relates to their trans-Hudson transportation responsibilities, and have taken the lead in coordinating the implementation of numerous ferry services. The Port Authority has been the source for major capital investments in ferry facilities in Hoboken and the World Financial Center and more recently on the East River, Yonkers, Edgewater and Staten Island.

The New York City Economic Development Corporation (NYCEDC) and the New York City Department of Transportation (NYCDOT) share responsibilities with respect to ferries in New York City. EDC's job is to develop ferry facility projects and it is the NYCDOT's job to build and maintain them; the latter role NYCEDC cannot do since it is not a formal NYC department but a separate corporation. NYCDOT is now in charge of

Pier 11, 90th Street, 34th Street, Brooklyn Army Terminal, Battery Marine Terminal and Yankee Stadium, and the two termini of the Staten Island ferry. Landing fees at these locations go to maintain the facilities. They provide licenses for the use of “slots” at these locations, but do not regulate operations or fares. They do not provide operating subsidies.

The New York State Department of Transportation (NYSDOT) manages ferry-related grants from the federal government. These include discretionary grants that are funded through the federal transportation legislation and earmarked projects by Members of Congress. They have worked jointly with Metro North in the development of the two trans-Hudson ferries in the Hudson Valley, working with local officials, developers and the ferry operator; they have provided limited operating and capital funding for these services, and they manage the funds from NYSDOT sources. They do not regulate ferry services.

The New Jersey Department of Transportation also manages ferry-related grants from the federal government. Like New York, these include discretionary grants that are funded through the federal transportation legislation and earmarked projects by Members of Congress, and they do not serve a regulatory function with regard to ferries.

The New York Metropolitan Transportation Council (NYMTC) is the designated metropolitan transportation organization covering ten counties in New York, including the five New York City counties. It is the agency that serves as the pass-through for federal transportation funds, including those for ferries. Capital projects requiring federal funds are included in the Transportation Improvement program that they develop, including the setting of priorities by their Board of Commissioners, which includes representatives of the non-New York City counties, the New York Departments of Transportation and City Planning, New York State Department of Transportation and a number of other agencies. Under their auspices the Long Island Sound Ferry Coalition was created to investigate the potential for ferry services in Long Island Sound.

NYMTC's counterpart in the 13 counties of northern New Jersey is the North Jersey Transportation Planning Authority (NJTPA), and it serves the same set of functions there.

The Metropolitan Transportation Authority (MTA) operates the New York City subway and bus systems, the Long Island Rail Road, Metro North, Long Island Bus and the tolled bridges and tunnels connecting the five boroughs and a number of other city toll facilities. The MTA's focus on ferries to date has been confined to two areas. First, the agency has been interested in the two trans-Hudson River ferries in the Hudson Valley that serve as feeders to Metro North stations, where they have indirectly provided some capital funding. Second, the agency has provided connecting bus services in Manhattan to ferries, most notably at East 34th Street in Midtown. The MTA remains concerned about potential ferry services that compete with their rail lines.

NJ TRANSIT is the statewide transit agency, operating the commuter rail and light rail network in the state and most of its bus operations. Their responsibilities for serving interstate riders between New Jersey and New York effectively have fueled their interest in an effective transit network that includes ferries. This has led them to support capital projects for ferries in Weehawken and Hoboken. They have not supported ferries with operating funds, but have supported New York Waterway by allowing the piggybacking of fuel contracts and by joint-ticketing arrangements. Recent New Jersey legislative action gives NJT the authority to acquire and operate passenger ferries and to construct ferry capital facilities, opening up future possibilities. However, for now, like the MTA, they are concerned with ferry services that compete with their rail system.

The Lower Manhattan Development Corporation (LMDC), created by Governor Pataki after 9/11, coordinates long-term planning and short-term actions for the World Trade Center site and the surrounding neighborhood of Lower Manhattan. Recognizing the importance of transit accessibility towards the recovery and rebuilding of Lower Manhattan, LMDC has allocated up to \$4.2 million in U.S. Department of Housing and Urban Development funds to help subsidize the new ferry service between Yonkers and Lower Manhattan that will begin in the Spring, 2007. LMDC is being currently being phased out of existence.

There are four units of United States government involved in ferry matters – United States Coast Guard (USCG), which is part of the Department of Homeland Security, and three agencies of the United States Department of Transportation – the Maritime Administration (MARAD), the Federal Transportation Administration (FTA), and the Federal Highway Administration (FHWA).

The USCG is a branch of the United States armed forces and is responsible for law enforcement, safety, rescue, and environmental protection in America's coasts, ports, and inland waterways, and in international waters. MARAD is responsible for promoting the development and maintenance of the Nation's domestic waterborne commerce and a substantial portion of its waterborne foreign commerce, and to ensure the United States maintains adequate shipbuilding, efficient ports, effective intermodal water and land transportation systems, and reserve shipping capacity for use in time of national emergency. The FTA's role is to determine recipients for federal grants for ferry service. They have been the designee for the pass-through of federal funds related to ferry services after 9/11. The FHWA administers federal funds for vessels and docking facilities.

The Role of the Public and Private Sectors

Public investment in ferries can come in either the form of capital investments for docking facilities or in the form of operating assistance. With the exception of NYSDOT and LMDC and then in limited instances, the agencies are emphatic about drawing the line against public operating subsidies. Since the beginning of the reinstatement of ferry service in the Region, public entities have invested in excess of \$350 million in ferry docking facilities. Most of these funds have been or are currently being spent in four locations – Hoboken, Weehawken, the World Financial Center, and at Pier 79. The public sources for these facilities have been pieced together from many agencies, including the Port Authority of New York and New Jersey, NJ TRANSIT, the Federal Transit Administration (post 9/11 recovery funds), the Federal Highway Administration, the Metropolitan Transportation Authority, New York City Economic Development Corporation, the New York City Council, the New York State Department of

Transportation, the New York State Energy Research and Development Authority, and the Empire State Development Corporation. The funding model has largely been divided with the public sector providing the docking facilities and the private operator providing the vessels.

As can be surmised from the descriptions of public agency responsibilities, while much has been done regarding public investment in capital, little has been contributed for operations. In only two cases has the public sector covered deficits: the Haverstraw-Ossining and Newburgh-Beacon ferries (by NYSDOT) and prospectively for the Yonkers to World Financial Center ferry (by the Lower Manhattan Development Corporation) to begin next spring. Instead, the private ferry operator as an entrepreneur has taken the risk either because he hopes to turn a profit or in some cases to benefit from the accrual of value to properties made more accessible by the ferry service.

In only two cases has the public sector covered deficits.

The ferry operators have made limited capital investments at the docking facilities. Other private entities have in some cases made such investments, most notably Goldman Sachs at Colgate (\$2 million), Hartz Mountain at Lincoln Harbor, and to a lesser degree the residential developer at Haverstraw. In only one case to date (Williamsburg) has a developer contributed to cover operations, and then only for a limited time frame of five years.

In sum, the current model for the support of ferry services has consisted of public sector support largely in the form of a financial commitment of “patient” capital investments, i.e. a durable source of funds not captive to an immediate return on investments. The public sector has facilitated ferries in other ways best suited to their capabilities -- planning new services, clearing the regulatory barriers, acquiring land for docking facilities, and coordinating ground transportation systems operations and investments with the ferry services. Meanwhile, for the most part ferry operators has been left with the full responsibility of acquiring the fleet and covering their operating costs, while

seeking to realize a profit. Land developers benefiting from ferries have contributed in a few instances to both operations and capital investments. In some cases the ferry operator and the land developer are the same. In those cases an operating loss might be tolerated if the incremental value to land is realized by the presence of the ferries to offset the loss. The result of this model is the roughly two dozen routes in place today, with a handful of other possibilities on the horizon.

Both the retention of the existing ferry network and its potential for expansion may be in jeopardy should the current model for supporting ferries remain in place. Rising fuel costs, and to a lesser extent insurance costs, are compromising the financial attractiveness to the private sector of operating ferries as a transportation service (in contrast to tourist services). This suggests that if we believe in the value of ferries, then other models should be discussed.

Public Subsidies

Public operating subsidies is fundamental to any discussion of the future of ferries. It is clear that most ferry services today are finding it difficult to clear a profit; if these services are to continue, then subsidies may be necessary. Further, a number of potential new services or ones that were tried but failed in the past would require subsidies if they are to capture a market large enough to establish themselves. The absence of subsidies in advance inhibits these services from getting started.

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The public agenciesare understandably reluctant to go down the direct subsidy path

The public agencies – except in a few limited instances -- are understandably reluctant to go down the direct subsidy path, given their larger existing financial responsibilities. The public sector has supported ferries in other ways with substantial investments in landing sites, well over \$350 million and counting.

Other means of support have been tried in some limited instances, including the provision of feeder services to ferries, coordinated ticketing and piggybacking of fuel purchases, but operating subsidies have mostly been off limits. One line of reasoning is that these measures are about all that can be expected from a public sector with its own budget difficulties. Another argument for subsidies is that the other transportation systems are now all subsidized so why then should ferries be treated differently? And if we object that ferry operators are entrepreneurial and are in business to seek a profit, we should be reminded that all the public transportation modes of the past started as private and eventually became public entities when the private sector no longer saw a profit in them. Whether ferries eventually head down that path is unclear, but if we believe that there are ferry services that are in the public interest as implied by the public capital investments to date, then perhaps we must also believe it is rational to subsidize them. Then we must ask ourselves in what particular circumstances is it in the public interest for the public sector to pay for ferry operations, i.e. what constitutes the public interest?

All the public transportation modes of the past started as private and eventually became public entities when the private sector no longer saw a profit in them.

One might define the public interest by adding up all the benefits to the public sector and subtracting the disbenefits if a ferry service is added (or kept), considering the following:

- The operating cost reductions possible for the ground transit mode alternative as a result of ridership diversion to ferries;
- The reduction in fare revenues on ground transit modes as a result of diversion to ferries as may be the case for the upcoming Yonkers to Battery Park City service;
- Relief of overcrowding on ground transit modes as a result of diversion to ferries such as happened on PATH when the Hoboken to Battery Park City ferry service began and the future possibility of relief on the NYC subways with some Brooklyn to Lower Manhattan ferry services;

- Relief of highway congestion as a result of diversion to ferries (possible on the New Jersey Turnpike and Lincoln and Holland tunnels resulting from the Highlands and Atlantic Highlands ferries);
- The increase of fare revenues on existing transit systems as a result of ferries acting as a connector to commuter rail as in the case of Haverstraw to Ossining;
- The amount of peak period capacity added in a corridor (as was done parallel to PATH with the Hoboken to Battery Park City ferry);
- The amount of economic development made possible by the existence of the ferry service (at Port Liberte, in Weehawken, and prospectively on the Brooklyn and Queens waterfronts);
- More generally, the extent to which the service is an integral part of the transportation network;
- The ability for the rider constituency to pay higher fares in the absence of subsidies without resulting in the loss of significant ridership;
- The amount of travel time saved by ferry riders; and
- The ferry service could provide redundancy if existing transit service is disabled either in a short-term emergency or for an extended period of time.

One might define the public interest by adding up all the benefits to the public sector and subtracting the disbenefits if a ferry service is added (or kept).....

Even if we could accurately calculate these factors it may not be possible to develop a single formula to decide if and how much subsidy is warranted. Some say that is not necessary because reasonable and rational people can gather together to come up with the right answer on whether and how much of a subsidy is warranted. But, when dealing with large sums of money this may be a somewhat optimistic outlook. And it leaves other questions unanswered. When is a subsidy too much to support? Shouldn't the ferry service first be subject to the same process that transit operators go through of looking at the financial picture or individual routes and decide when they need pruning or even abandonment? Is it possible to do the benefits analysis to an acceptable level of

accuracy? Who does the research? Who decides? Which agency among the many existing ones today pays the subsidy if it is decided there should be one or is it a new agency established in part for this purpose? How do you determine if the ferry deficits are a result of bad management, where subsidies are just “bailing out” the operator? Is there a time limit placed on the subsidy until the service can establish itself or is the subsidy permanent? Is there a point when you pull the plug and how do you decide when that is?

Moreover, some of these benefits are for the larger public interest but others accrue to the individual traveler – travel time savings, more comfort, fewer transfers, less crowding – and might rightfully be covered by higher fares to pay for the higher level of service rather than public subsidies. And subsidies also may benefit the private land developer; how is his contribution to be decided?

Developer Support

There is also a role for direct support from the private land developer, whose property gains in value from a ferry service. The initiation of many of the ferry services had as a major motivation this increment – Arcorp in Weehawken, the Port Authority in Hoboken, Port Liberte and Jersey City, and more recently Schaefer Landing in Williamsburg and in the Ginsberg properties in Haverstraw. In these and similar cases, especially where ferry services can make inaccessible properties accessible, the developer’s contribution to support ferries is appropriate. Since both parties are private – ferry operator and developer – the level of support might best be left to negotiations. Yet in some cases the public interest may make the public the third party, raising all the same questions discussed in the previous paragraph.

Where ferry services can make inaccessible properties accessible, the developer’s contribution to support ferries is appropriate.

Who's in Charge?

The ferry business in the Region may be entrepreneurial but the public sector has been most definitely involved; at least seven state or regional agencies and a number of localities (most notably New York City) have planned ferry services and contributed capital. And a wide variety of financial sources have been tapped. All of this has a piecemeal feel to it. This might be fine, but there are instances where disconnects continue to occur and the benefits of coordinated planning, shared resources and knowledge, and coordination of services are missing.

Perhaps there should be one entity in charge of planning and coordinating ferry services. This entity could be put in charge of creating a ferry plan for the Region and possibly operating failed operations that are deemed to be in the public interest. Understandably, today there is little interest in establishing a new agency with another government layer for this purpose. The Port Authority, the two state DOTs, New York City, and the two major transit operators each are too limited in their jurisdiction to be that one agency. The Port Authority is closest to cover the entire Region, but they are not a natural fit for involvement in ferry operations totally within New York State, especially those within New York City except where it involves airport access. And their geographic scope does not include Connecticut.

Under Port Authority leadership, an interagency Technical Advisory Committee has been established to steer the upcoming regional study of potential ferry services. While not a formal agency this consortium of agencies may be the most likely approach for creating a regional ferry plan, and act as a forum for planning, coordination, and information sharing. It might be a forum for resolving disputes among ferry operators, which are often counterproductive in an industry that is working so close to the margin.

....this consortium of agencies may be the most likely approach for creating a regional ferry plan, and act as a forum for planning, coordination, and information sharing.

As for actually taking over commuter related ferry operations, the most logical approach may to use the model of the shift from private to public control that has been the historical norm for the last fifty years. In practice this would mean that over time NJ TRANSIT and the MTA would each create a ferry operation to control ferries in their respective jurisdictions, although an argument could be made that for interstate service between New York and New Jersey the Port Authority would be more appropriate than NJ TRANSIT. But then again, NJT currently operates trans-Hudson trains and buses.

Discussion Questions

Under separate cover a set of questions will be distributed to the Working Forum attendees prior to the November 6 event.

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Louis Berger Group, Inc. submitted to Lower Manhattan Development Corporation, Ridership and Revenue Analysis for a Proposed Ferry Service to Lower Manhattan, July 26, 2006.

New York City Economic Development Corporation, Development and Operation of East River Ferry / Water Taxi Services: Request for Proposals, September 2006.

APPENDIX A

Interviewees (in order of interview)

Lower Manhattan Development Corporation Philip Plotch	New York Water Taxi Tom Fox
Billybey Ferry Company William Wachtel, Paul Goodman	Metropolitan Waterfront Alliance Carter Craft
New York Metropolitan Transportation Council Kevin Wolford	Port Authority of New York and New Jersey Will Chabrier, Janet Cox, Lou Venech
North Jersey Transportation Planning Authority David Stein, Chris Hrones, Richard Felsing, Mary Ameen	New York Waterway Arthur E. Imperatore, Sr.
Metropolitan Transportation Authority Ted Orosz, Jack Dean, Daniel O'Connell, Joseph Chiarmonite	Goldman, Sachs and Company Anthony D'Auria
New Jersey Department of Transportation Michael Riley	NJ TRANSIT George Warrington, Charles Wedel, Kenneth Snapp
New York City Economic Development Corporation Paul Januszewski	New York City Department of Transportation Alan Olmsted
New York State Department of Transportation Alan Warde, David Markowitz	Lower Manhattan Construction Command Center Charles Maikish

APPENDIX B

Ferry Companies Since 1986

1. Arcorp Properties >> Port Imperial Ferry >> NY Waterway *
2. Harbor Commuter >> Harbor Shuttle
3. Regency Fishing
4. Tradebase International
5. Steven Sloan Marine Corp
6. Coastal Marine Transport Lines
7. Manhattan Express Marine Service
8. S. K. Paul Inc.
9. TNT Hydrolines >> Express Navigation >> Seastreak *
10. Arcorp / Hartz
11. Metro Marine Express
12. Gold Coast Marine
13. Royce Marine
14. Hoverspeed
15. Chris's Bay Bus
16. New York Fast Ferry
17. Ft .Lauderdale Water Taxi
18. Prospect Fast Ferry
19. Liberty Landing Marina >> Liberty Park Water Taxi *
20. Fox Navigation
21. New York Water Taxi *
22. Billybey Ferry *

* Currently operating