Albemarle RPO Board Meetings

Wednesday, April 25, 2018 Albemarle Commission 512 South Church Street Hertford NC 27944

Rural Technical Coordinating Committee: Starts at 10:00 AM

1. Call to Order	Rhett White, RTCC Chair
2. Roll Call	Rhett White, RTCC Chair
3. Agenda Approval	Rhett White, RTCC Chair
4. Approval/ Adoption of Minutes from October 25, 2017 meeting	Rhett White, RTCC Chair
5. ARPO Mini-grants	
Approval	Rhett White, RTCC Chair
6. Local input Methodology scores and Regional local input points approval	
Approval	Rhett White, RTCC Chair
7. Harbor Town ferry project	
Consideration	Rhett White, RTCC Chair
8. Public Comments	Rhett White, RTCC Chair
9. Adjournment	Rhett White, RTCC Chair

Presentations

NCDOT update
TPD update
Ferry Division update
ARPO update – Title VI training

Rural Transportation Advisory Committee: Starts at 11:00 AM

1. Call to Order	Lloyd Griffin, RTAC Chair
2. Roll Call	Lloyd Griffin, RTAC Chair
3. Agenda Approval	Lloyd Griffin, RTAC Chair
4. Approval/ Adoption of Minutes from Last Meeting	Lloyd Griffin, RTAC Chair
5. ARPO Mini-grants	
Approval	Lloyd Griffin, RTAC Chair
6. Local input Methodology scores and Regional local input points approval	
Approval	Lloyd Griffin, RTAC Chair
7. Harbor Town ferry project	
Consideration	Lloyd Griffin, RTAC Chair
8. Public Comments	Lloyd Griffin, RTAC Chair
9. Adjournment	Lloyd Griffin, RTAC Chair

Minutes of the Rural Technical Coordinating Committee (RTCC) Meeting
October 25, 2017
11:00 a.m.

Call to Order
The October 25, 2017 RTCC meeting was held at the Albemarle Commission Building, in Hertford, NC and was opened and called to order by RTCC Chairman Rhett White at 11:05 a.m.

Roll Call
It was determined a quorum was present with the following TCC members in attendance: Chairman Rhett White, Town of Columbia; Dan Scanlon, Currituck County; Shelley Cox, Pasquotank County; Kevin Howard, Gates County; Andy Stewart, Town of Kitty Hawk; Donna Creef, Dare County; Bill Rich, Hyde County; Melissa Dickerson, Town of Manteo; Frank Heath Perquimans County; Elizabeth Bryant, Town of Edenton; Wes Haskett, Town of Southern Shores; Joe Heard, Town of Duck; Natalie Rountree, Gates County; Andy Garman, Town of Nags Head; Curtis Potter, Washington County; Jerry Jennings, NCDOT Division 1; Mark Eatman, NCDOT-TPB; Gretchen Byrum, NCDOT-Division 1.

Agenda Approval
Chairman White called for a motion to approve the agenda with the addition of another item, the Hyde County Pedestrian Planning Application. A motion to approve the agenda with the addition of one item was made by Natalie Rountree and seconded by Shelley Cox, and unanimously carried.

Approval of July 26, 2017 RTCC Minutes
Chairman White called for a motion to accept the minutes as presented. It was noted that Shelley Cox, Pasquotank County was at the meeting but not listed as attending. A motion to approve the minutes with the addition of Shelley Cox as attending was made by Bill Rich; his motion was seconded by Donna Creef, and unanimously carried.

Alternate Criteria
The ARPO Director shared information regarding the Alternate Criteria. The ARPO Director stated that Division 1 and 4 met to discuss the possibility of adopting alternative criteria for the regional and division funding for P 5.0. It was noted that Chairman Griffin sent a letter to the Strategic Prioritization Office at the end of August regarding the fact the ARPO Boards would be notified of the criteria change. A motion was made by Bill Rich to approve the Region and Division Alternate Criteria; his motion was seconded by Natalie Rountree, and unanimously carried.

City of Elizabeth City Pedestrian Planning Grant Resolution
Chairman White stated that the City of Elizabeth City is applying for a Pedestrian Plan Grant from NCDOT. He noted that the process requires approval from the RPO RTAC Board. City of Elizabeth City officials in attendance stated that the funds will be used to identify pedestrian walkways throughout the city. A motion was made by Shelley Cox to approve the application; her motion was seconded by Andy Stewart, and unanimously carried.

2018 Legislative Agenda
The ARPO Director provided the Board with 2017 Legislative Priorities. After discussion the RTCC agreed to the following wording/changes to one of the six items:

- Ensure funding for future interstate I-87 from the Hampton Roads region in Virginia to Raleigh, NC.

A motion was made by Joe Heard proposing that the changes be presented to the legislature; his motion was seconded by Dan Scanlon and unanimously carried.

NCDOT Travel and Meal Policy
Chairman White introduced the item noting in late June, the NCDOT Transportation Planning Branch stated that MPOs and RPOs must now follow the NCDOT travel, per diem hotel and per diem meal policy. After discussion, it was recommended that a letter be sent to the DOT Chief Deputy Secretary Howard stating concerns with this change as follows:

1. The current NCDOT travel policy does not make sense as COG's do not have a fleet of vehicles at our disposal to use instead of our private vehicles.
2. The policy negatively affects RPO's. In rural areas, some RPO Directors can drive over 100 miles per day just to and from a meeting in their own region.
3. Although we receive state funds, we are not state employees. We are employees of the COG we are sited under and must follow their travel policy and per diem policy. The attached NCDOT "consultants" per diem policy makes more sense to apply to us.
4. Rural areas do not have the availability of 24-hour rental car businesses.
5. If we have to attend a meeting overnight, blocks of hotel rooms are reserved by the person putting on the meeting. If the hotel does not offer state rates, RPO Directors will be forced to pay the difference out of pocket.

A motion was made by Donna Creef to send a letter to the Deputy Secretary; her motion was seconded by Curtis Potter and unanimously carried.

Hyde County Bicycle Planning Grant Resolution
Chairman White stated that Hyde County is applying for a Pedestrian Plan Grant from NCDOT. He noted that the process requires approval from the RPO RTAC Board. It was noted that funds would be used to develop a comprehensive Pedestrian Plan for Ocracoke Village that expands upon the Hyde County Comprehensive Transportation Plan of 2012. A motion was made by Donna Creef to approve the application; her motion was seconded by Shelley Cox, and unanimously carried.

Public Comments
Chairman White opened the floor for public comments and there being no public comments closed the floor.

Adjournment
With no further business to discuss, Chairman White adjourned the meeting at 11:47 pm.

Lunch and Presentations

NCDOT Update – Discussion/Presentation
TPB Update
ARPO Update

Minutes of the Rural Technical Coordinating Committee (RTAC) Meeting
April 26, 2017
1:00 pm

Call to Order
The October 25, 2017 RTAC meeting was held at the Albemarle Commission Building, in Hertford, NC and was opened and called to order by RTAC Vice-Chairman Leroy Spivey at 12:55 p.m.

Roll Call
It was determined a quorum was present with the following RTAC members in attendance: Vice-Chairman Leroy Spivey, Jeff Smith, Chowan County; Bill Sexton, Washington County; Paul Beaumont, Currituck County; Tom White, Camden County; Wally Overman, Dare County; and Allan Moran, NCDOT BOT.

RTAC Non-Voting members in attendance: John Ratzenberger, Town of Nags Head; Lynne McClean, Town of Kitty Hawk.

Alternates in attendance: Patti Kersey, Chowan County;

Agenda Approval
Vice-Chairman Spivey called for a motion to approve the agenda with the addition of another item, the Hyde County Pedestrian Planning Application. A motion to approve the agenda with the addition of one item was made by Jeff Smith and seconded by Tom White, and unanimously carried.

Approval of July 26, 2017 RTCC Minutes
Vice-Chairman Spivey called for a motion to accept the minutes as presented. It was noted that Lynne McClean was at the July meeting but not listed as attending. A motion to approve the minutes with the addition of Lynne McClean as attending was made by Tom White; his motion was seconded by Bill Sexton, and unanimously carried.

Alternate Criteria
The ARPO Director shared information regarding the Alternate Criteria. The ARPO Director stated that Division 1 and 4 met to discuss the possibility of adopting alternative criteria for the regional and division funding for P 5.0. It was noted that Chairman Griffin sent a letter to the Strategic Prioritization Office at the end of August regarding the fact the ARPO Boards would be notified of the criteria change. A motion was made by Tom White to approve the Region and Division Alternate Criteria; his motion was seconded by Patti Kersey, and unanimously carried.

City of Elizabeth City Pedestrian Planning Grant Resolution
Vice-Chairman Spivey stated that the City of Elizabeth City is applying for a Pedestrian Plan Grant from NCDOT. He noted that the process requires approval from the RPO RTAC Board. City of Elizabeth City officials in attendance stated that the funds will be used to improve pedestrian walkways throughout the city. A motion was made by Wally Overman to approve the application; his motion was seconded by Bill Sexton, and unanimously carried.

2018 Legislative Agenda
The ARPO Director provided the Board with 2017 Legislative Priorities. After discussion the RTAC agreed to the following wording/changes to one of the six items:

- Ensure funding for future interstate I-87 from the Hampton Roads region in Virginia to Raleigh, NC.

A motion was made by Paul Beaumont proposing that the changes be presented to the legislature; his motion was seconded by Tom White and unanimously carried.

NCDOT Travel and Meal Policy
The ARPO Director introduced the item noting that after the in June, the NCDOT Transportation Planning Board stated that MPOs and RPOs must now follow the NCDOT travel, per diem hotel and per diem meal policy. After discussion, it was recommended that a letter be sent to the DOT Chief Deputy Secretary Howard stating concerns with this change as follows:

1. The current NCDOT travel policy does not make sense as COG's do not have a fleet of vehicles at our disposal to use instead of our private vehicles.
2. The policy negatively affects RPO's. In rural areas, some RPO Directors can drive over 100 miles per day just to and from a meeting in their own region.
3. Although we receive state funds, we are not state employees. We are employees of the COG we are sited under and must follow their travel policy and per diem policy. The attached NCDOT "consultants" per diem policy makes more sense to apply to us.
4. Rural areas do not have the availability of 24-hour rental car businesses.
5. If we have to attend a meeting overnight, blocks of hotel rooms are reserved by the person putting on the meeting. If the hotel does not offer state rates, RPO Directors will be forced to pay the difference out of pocket.

A motion was made by Wally Overman to send a letter to the Deputy Secretary; his motion was seconded by Jeff Smith and unanimously carried.

Hyde County Bicycle Planning Grant Resolution
Vice-Chairman Spivey stated that Hyde County is applying for a Pedestrian Plan Grant from NCDOT. He noted that the process requires approval from the RPO RTCC Board. It was noted that funds would be used to develop a comprehensive Pedestrian Plan for Ocracoke Village that expands upon the Hyde County Comprehensive Transportation Plan of 2012. A motion was made by Bill Sexton to approve the application; his motion was seconded by Tom White, and unanimously carried.

Public Comments
Mr. Griffin opened the floor for public comments. John Ratzenberger noted that he is not running for re-election and stated what a pleasure it was to serve on the RTAC Board. Vice-Chairman Spivey thanked Mr. Ratzenberger for his service to the Region.

Adjournment
With no further business to discuss, Vice-Chairman Leroy Spivey adjourned the meeting at 1:17 pm.

Respectfully Submitted,

Sandra Powers
Albemarle Commission
Program Administrative Coordinator

For
Angela Welsh, Secretary
ARPO Director

Minutes of the Rural Technical Coordinating Committee (RTCC) Meeting
February 21st, 2018
10:00 a.m.

Call to Order
The February 21st, 2018 RTCC meeting was held at the Albemarle Commission Building, in Hertford, North Carolina. The meeting was opened and called to order by RTCC Chairman Rhett White at 10:10 a.m.

Roll Call
It was determined a quorum was not present with the following RTCC members in attendance: Kaitlen Alcock, City of Elizabeth City, Brooks Braswell, NCDOT-1, Donna Creef, Dare County, Phil Geary, NCDOT, Frank Heath, Perquimans County, Wes Haskett, Town of Southern Shores, Kevin Howard, Chowan County, Curtis Potter, Washington County, Dan Scanlon, Currituck County and Chairman Rhett White, Town of Columbia.

Agenda
Chairman White stated no motions could be made to approve the agenda due to the lack of quorum. Chairman White thanked NCDOT for their outstanding work during the above average snow falls the region had recently received.

Breakfast and Presentations

NCDOT Update – Discussion/Presentation
TPB Update
Ferry Division Update
ARPO Update

Minutes of the Rural Technical Coordinating Committee (RTAC) Meeting
February 21st, 2018
11:00 am

Call to Order
The February 21st, 2018 RTAC meeting was held at the Albemarle Commission Building, in Hertford, North Carolina. The meeting was opened and called to order by RTAC Vice-Chairman Leroy Spivey at 11:45 a.m.

Roll Call
It was determined a quorum was present with the following RTAC members in attendance:

Paul Beaumont, Currituck County, Linda Hofler, Gates County, Edward Muzzulin, Perquimans County, Bill Sexton, Washington County, Jack Shea, Dare County, Jeff Smith, Chowan County, Vice-Chair Leroy Spivey, Tyrell County and Tom White, Camden County.

RTAC Non-Voting members in attendance: Tom Bennett, Town of Southern Shores and James Cahoon, Town of Columbia.

RTAC Alternate Voting members in attendance: Wally Overman, Dare County and Patty Kersey, Chowan County

Agenda Approval
Vice-Chairman Spivey called for a motion to approve the agenda. A motion to approve the agenda was made by Bill Sexton and seconded by Edward Muzzulin and unanimously carried.

Approval of October 25th, 2017 RTCC Minutes
Vice-Chairman Spivey called for a motion to accept the minutes as presented. A motion to approve the minutes was made by Jeff Smith. His motion was seconded by Jack Shea and unanimously carried.

Planning Work Program
The ARPO Director shared information regarding the Planning Working Program (PWP). The ARPO Director explained the PWP was a contract with the Department of Transportation that included the work the ARPO would complete for the following fiscal year. The ARPO Director explained two of the major projects the ARPO would be involved in. The major projects were the Eastern North Carolina Freight Mobility Plan and the second was to continue working on the Bicycle website. Dan Scanlon recommend Virginia be involved in the Freight plan as their priorities might not be in a line with the priorities of North Carolina. The ARPO Director stated all the funds for the projects did not require additional funding by the ARPO member counties. A motion was made by Jack Shea to approve the Planning Work Program; his motion was seconded by Tom White and unanimously carried.

Local Input Methodology
The ARPO Director explained to the committee they had approved the the local input methodology before them in July of 2017. She went on to say, the changes to the methodology were not changes regarding how the ARPO scored projects but were housekeeping changes required by the SPOT office of all RPO's and MPO's. The changes in the Methodology pertained to formatting the document, adding more information as to where the public can find Prioritization 5.0 information on the ARPO website, and ensuring the dates listed in our Methodology were correct and the changes to the ARPO Methodology did not involve the actual criteria we use to score our projects. A motion was made by Jack Shea to approve the local input methodology; his motion was seconded by Jeff Smith, and unanimously carried.

Ferry Naming Resolution
The ARPO Director presented a proposed resolution in support of renaming the North Carolina Ferry MV Baum the Rodanthe. The resolution was requested by the Ferry Division. A motion was made by Tom White to support the resolution; his motion was seconded by Jack Shae and unanimously carried.

PED Ferry Report

The ARPO Director state the Joint Legislative Program Evaluation Oversight Committee's 2015–17 Work Plan directed the Program Evaluation Division to review the ferry system with a focus on operations, savings, and fee structure optimization. The report was released in October but the ARPO was not made aware of it until about three weeks prior to the RTAC meeting. The report proposes reducing ferry runs on some routes and increasing ferry tolls on tolled routes. The ARPO Director went on to state Hyde County has discussed the report and passed a resolution opposing any decrease in ferry runs as well as an increase on fares for tolled routes. After discussion with members of the ferry Division, RTAC members decided the issue should be tabled until the ARPO Director could work with the Ferry Division to ensure the resolution focuses on the Ferry Divisions concerns once they are released to the public. A motion was made by Jack Shea to table the resolution; his motion was seconded by Tom White and unanimously carried.

Public Comments

There were no public comments. Vice-Chairman Spivey thanked the Department of Transportation for their hard work during the recent snow storms throughout the region. The next RTAC Board meeting will be held April 25th, 2018 beginning at 10:00 a.m. at Albemarle Commission in Hertford, North Carolina.

Adjournment

With no further business to discuss, Vice-Chairman Leroy Spivey asked for a motion to adjourn. A motion to adjourn was made by Edward Muzzulin; his motion was seconded by Bill Sexton and unanimously carried. The meeting adjourned at 12:05 p.m.

Respectfully Submitted,

Laura M Rollinson
Albemarle Commission
Program Administrative Coordinator

For
Angela Welsh, Secretary
ARPO Director

Agenda Item No. 5

Item Title: Mini-grant applications

Item Summary: The ARPO recently offered a mini grant opportunity to member counties and municipalities as we have done for the past two years. The purpose of the mini grant is to enable local governments, within the ARPO jurisdiction, to pay for the printing and purchase of local bicycle and/or pedestrian maps and bicycle and/or pedestrian safety materials such as posters, pamphlets and handouts in support of local bicycle and pedestrian safety efforts as well as in support of The Albemarle Regional Bicycle Plan. The Albemarle RPO has $21,738.00 available for the mini grant out of the RPO special projects line item.

Specific action requested: Consideration of grant applications

Number of attachments: 3

The City of Elizabeth City, the Town of Duck, and the Town of Manteo applied for the grant.

The Town of Manteo is seeking $1,457.72 to print 5000 copies of the Town of Manteo bicycle and pedestrian map completed by the ARPO with the help of Alta Planning and Design.

The Town of Duck is seeking $5,330.00 to print 30,000 copies of their brochure which features maps of the Duck Trail multi-use path, Duck Soundside boardwalk, as well as other bicycle and pedestrian facilities.

The City of Elizabeth City is seeking a total of $1,813.68. $1,520.00 of the funds will be used to print 2000 copies of the City of Elizabeth City bicycle and pedestrian map completed by the ARPO with the help of Alta Planning and Design. $293.56 of the funds will be used to print a pamphlet of canoeing, kayak and paddleboats trails as well as safe boating practices.

The Town of Manteo, Town of Duck, and City of Elizabeth City applications are attached for your review. The ARPO does have the ability to fund all three of the grant applications in full, however, we have been informed the $293.56 the City of Elizabeth City is requesting for their paddle boat, canoeing, and kayaking pamphlet would not be supported by Federal Highways as the grant application states it a bicycle and/or pedestrian grant.

Mini Grant Application

1 Applying Organization: ___**Town of Duck**_____

2 Contact Person:_____**Joe Heard, Director of Community Development**_____

3 Mailing Address:_____**P.O. Box 8369, Duck, NC 27949**_____

4 Phone __**252.255.1234**_____ Fax __**252.255.1236**_____

5 Email:___**jheard@townofduck.com**_____

6 Amount of Grant Requested: ___**$5,330**_____

a. List the requested expenses and amounts that will be covered by this grant

i. ___**Design/printing of brochure**__ Amount $___**$5,330**_____

ii. _____ Amount $_____

iii. _____ Amount $_____

Iv. _____ Amount $_____

v. _____ Amount $_____

Description of purpose, needs assessment and intended results of purchased materials. Attach additional sheets if necessary.

The Town of Duck is seeking to produce and distribute 30,000 copies of a brochure featuring maps of the Duck Trail multi-use path, Duck Soundside Boardwalk, and other pedestrian/bicycle facilities throughout the Town. The brochure will also contain information about Town events and other safety

advice (such as beach safety and hurricane preparedness). A copy of the draft brochure is attached for your information.

Town staff has completed the initial design and layout of the brochure. Printing company Vista Graphics has submitted an invoice in the amount of **$6,663** to complete the final design and printing of 30,000 copies of the color brochure. The Town of Duck is seeking a grant of **$5,330** from the ARPO to match the Town's 20% contribution of **$1,333** to produce the brochures. Once completed, the brochures will be distributed to residents and visitors through local and regional visitor centers, rental realty companies, Outer Banks businesses, racks at Duck Town Hall, and over seventy Town events throughout the summer. The brochure will also be available on the Town of Duck's website.

With a population estimated at over 25,000 and an active commercial district in a relatively dense, walkable community, the Town of Duck faces similar transportation challenges to many urban areas during the summer months. In an effort to improve safety for pedestrian, bicycle, and vehicular traffic, the Town seeks to educate a population (largely comprised of tourists) that changes from week to week. The purpose of the brochure is to educate residents and visitors about traffic safety for all modes of travel by encouraging safe travel practices and reducing conflicts between pedestrians, cyclists, and vehicles. Maps in the brochure are intended to show visitors alternative routes of travel (such as the Duck Soundside Boardwalk) and the location of destinations (such as public facilities, parks, and shopping areas) to minimize the amount of time and distance that pedestrians walk or bike along the high traffic corridor of Duck Road (N.C. Highway 12).

Return completed application to: Angela Welsh Albemarle RPO Planning Director PO Box 646 Hertford, NC 27944 Or via email at awelsh@accog.org

TOWN PARK AND BOARDWALK

THE DUCK TOWN PARK features 11 acres of natural beauty including trails through the maritime forest and willow swamp, open green space, soundside views and access to the Duck Boardwalk. Park amenities include an amphitheater, public kayak/canoe launch, playground, dog-friendly water fountain, picnic shelter and Town Green.

The Duck Boardwalk can be accessed from the park and other locations throughout the commercial Village. Please see the map below for details. The Duck Boardwalk extends nearly a mile along the Currituck Sound. Enjoy beautiful views, a variety of wildlife, visit our unique retail establishments and restaurants, or just enjoy the serenity.

Please enjoy the town park and boardwalk responsibly.

PARK & BOARDWALK OPERATING HOURS
PARK: dawn until dusk.
BOARDWALK: dawn until 1:00 a.m.

BOARDWALK AND PARK RULES

- Bicycles must be walked or left at bicycle racks.
- Skateboards, roller blades, and motorized vehicles are prohibited.
- Pets must be on a leash. Owners must clean up after their pet; special receptacles are located in the park and on the boardwalk.
- Smoking is not permitted on the boardwalk, in the park or at any town facilities.
- Fish and crab in designated areas only. A North Carolina fishing license is required.
- Swimming, wading, diving or otherwise entering the Currituck Sound from the shoreline, boardwalk, or boat pier that is not related to the launching, docking, or rescuing of authorized watercraft, is prohibited.
- Watercraft may be tied to the public boat slips for short-period use, not to exceed four hours. The public boat slips are located at the north and south ends of the boardwalk.
- The launch area in the park should only be used for canoes, kayaks, and stand up paddleboards.
- Hunting, chasing, feeding or otherwise harassing wildlife in the park and along the boardwalk is prohibited.
- Open fires and the use of grills or other cooking devices is prohibited.
- Footwear is required.
- Boardwalk system is designed for passive use and cannot be reserved. Town-sponsored events take precedence over all other uses.
- Town park and boardwalk areas may not be reserved for weddings.

For a complete list of rules, visit townofduck.com.

TOWN OF DUCK

1200 Duck Road
P.O. Box 8369, Duck, NC 27949
Office Hours:
9:00 a.m. – 5:00 p.m. Monday - Friday
Town Hall: 252.255.1234

Events & Info: 252.255.1286
Police Department: 252.261.1112
Fire Department: 252.261.3929
24-Hour Dare Central Dispatch
Non-Emergency: 252.473.3444
Emergencies: Dial 911

info@townofduck.com
townofduck.com

COVER PHOTO: Julien Devisse, APTIM
Coastal Planning & Engineering of North Carolina

TOWN of DUCK
NORTH CAROLINA

BOARDWALK
BOARDWALK CONNECTION
DUCK TRAIL
TOWN GREEN
AMPHITHEATER
FISHING/CRABBING
KAYAK LAUNCH
OVERLOOK
PICNIC
PICNIC SHELTER
PLAYGROUND
RESTROOMS
PARKING

BOARDWALK ACCESS
1 Soundview
2 South Boat Slips
3 Christopher Drive
4 Amphitheater
5 Kayak Launch
6 Crabbing Area
7 Church
8 Wee Winks
9 Water Tower
10 North Boat Slips
Access

Town of Duck | DuckOBX | #DuckNC | DuckPR | Town of Duck | townofduck.com | Events & Info 252.255.1286

TOWNOFDUCK.COM

THROUGHOUT TOWN

FIRE SAFETY : BEACH FIRES, FIREWORKS, AND BONFIRES ARE NOT PERMITTED. Grilling on decks or near vegetation is highly discouraged. Properly maintain grills and ensure charcoal ashes are cool before disposal. The use of all fireworks (including sparklers) is prohibited and punishable by a fine and mandatory court appearance.

HURRICANE PREPAREDNESS: The Atlantic Hurricane Season is from June 1 to November 30. Be prepared: know the evacuation route; ensure your vehicle is fueled; if you're a visitor, take all of your belongings as there is no way to predict when re-entry will be allowed. Check the town's website and social media page as well as other local media for weather and evacuation information. For more emergency preparedness tips visit townofduck.com.

OCEAN/SOUND ACCESS: There are no public beach access points or soundside beaches in Duck. Public sound access is in the Town Park for launching kayaks and canoes, and at the day-use boat piers located at the north and south ends of the boardwalk.

PERSONAL WATERCRAFT: Landing and launching is prohibited on the town's ocean beach, but watercraft may be used in the sound between 9:00 a.m. and 6:00 p.m., and must be at least 900 feet from the shore. There are no public motorized boat ramps in Duck.

TRAFFIC & PERSONAL SAFETY: Obey all posted speed limits, and use extreme caution as Duck has heavy pedestrian and bicycle traffic along Duck Trail and Duck Road (NC 12). Use caution when turning onto side streets. Remember: don't drink and drive; remove personal items from vehicles; and lock vehicles and residences.

TRASH: Curbside pick-up is offered for both:
Solid waste: Monday & Friday from May 1 to September 30; Mondays, October 1 to April 30 and
Recycling: Every Monday from May 1 to October 31; first & third Mondays November 1 to April 30
Containers should be curbside by 5:00 a.m. on the day of pick-up. Trash left outside of containers will not be picked up. Report missed collections immediately to 252.255.1234 prior to 10 a.m.

PETS: Dogs are required to be vaccinated for rabies, collared with proper identification, and controlled by a leash or restraint throughout the town, including the park, boardwalk, and Duck Trail.

DUCK TRAIL USAGE AND SAFETY

The Duck Trail is a six-mile long, multi-use path that traverses the entire length of town. The trail is primarily located on the east side of Duck Road (ocean side). Through the commercial Village of Duck, located between Four Seasons Lane and the Duck Post Office, the trail continues on the west side of Duck Road (NC 12) as part of the wide shoulder. From Scarborough Lane to north of Marlin Drive, both a dedicated sidewalk and bike lane are located on the east side of Duck Road. For safety, pedestrians are urged to use crosswalks. Pedestrians, bicyclists, and in-line skaters share the Duck Trail. Motorized vehicles such as golf carts, mopeds and Segways are prohibited on the trail. The Duck Boardwalk, which has access points throughout the Village, is another safe and scenic walking route.

PLEASE OBSERVE THE FOLLOWING SAFETY GUIDELINES AT ALL TIMES:

WHILE USING THE TRAIL

- Use marked crosswalks.
- Pedestrians always have the right-of-way, but stay alert for vehicles.
- Watch for cars entering and exiting from Duck Road (NC 12), side streets, and parking areas.
- Markers for each half-mile are located on the trail.
- Pedestrians should slow down when being passed.
- Cyclists should always pass on the left and alert those who are being passed.
- Clean up after your pet as a courtesy to trail users.
- Dogs must be on a leash.
- Follow all posted rules.

WHILE USING THE TRAIL IN THE VILLAGE

In addition to guidelines above, for your safety:

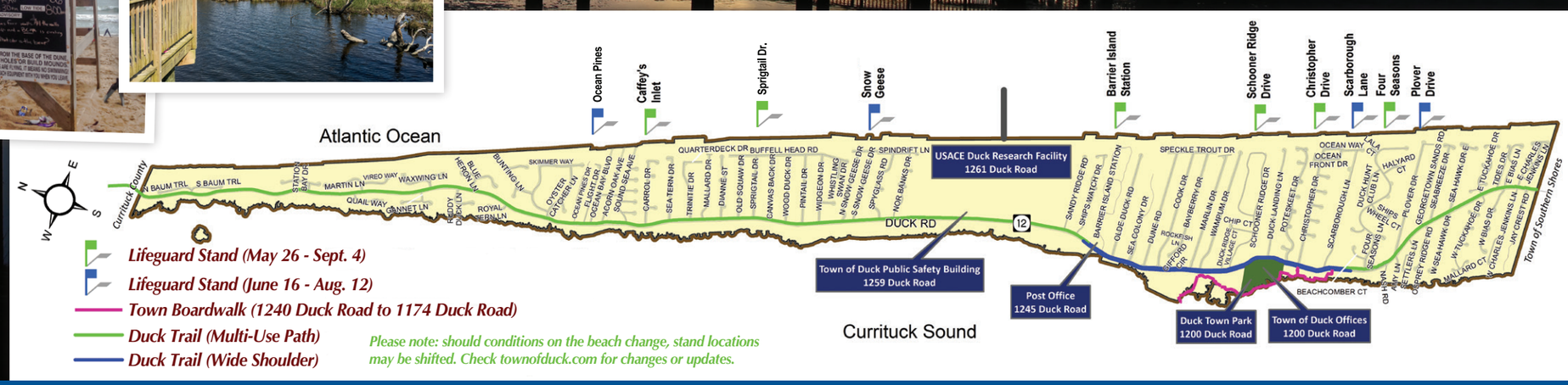
- Pedestrians should walk/run facing oncoming traffic.
- Cyclists should ride with traffic.
- Wear bright clothing and use lights at night.

Beach Rules

TOWN of DUCK NORTH CAROLINA

- Pets welcome under the control and watchful eye of owner. Keep beaches clean - please pick up after your pet.
- Remove all unattended personal items by 5 p.m. daily or they will be removed as litter.
- Please monitor and refill all beach holes to avoid injury.
- Swim near a lifeguard! Lifeguards are available for: beach safety tips, rip current info, reports of stranded sea life, turtle nests, shipwrecks, or rule violations.
- Stay out of the water when red flag is flying.
- Keep at least 15' between beach dune and tents for emergency access.
- Maintain 15' perimeter around lifeguard stands for rescue vehicle access.
- Do not tie tents together and keep 10' minimum between tents.
- Fireworks and bonfires are not permitted.
- Use walkways and designated beach accesses.
- DUNES ARE FRAGILE! Do not walk, climb, dig, slide, jump or rappel off dunes.
- Vehicles are not permitted on our beach between May 1 and September 30. There is no public vehicular access. Vehicles of residents and renters are permitted off-season using designated private vehicular access points.
- Lifeguards are on duty from 10:00 a.m. to 6:00 p.m. between May 1 to October 31.

RESPECT THE OCEAN: IF CONDITIONS EXCEED YOUR CAPABILITIES, STAY OUT OF THE WATER!



Please note: should conditions on the beach change, stand locations may be shifted. Check townofduck.com for changes or updates.

April 6, 2018

Ms. Angela Welsh
Albemarle RPO Planning Director
PO Box 646
Herford, NC 27944

Dear Ms. Welsh:

The Town of Manteo is pleased to submit an application for the Albemarle Rural Planning Organization's Mini Grant Program to print 5,000 bicycle and pedestrian maps. Last year, we printed 1,000 maps and were able to distribute them within a couple of weeks of printing which is why we are increasing our request this year.

These maps have been very well received and are incredibly popular with our visitors in Downtown Manteo. We plan to distribute the maps at locations across Manteo including; Town Hall, Roanoke Island Maritime Museum, Roanoke Marshes Lighthouse and the Visitor's Bureau. We will also gladly distribute them to groups planning to visit the area.

Enclosed you will find the Town's application and a quote for printing 5,000 bicycle/pedestrian maps from Coastal Impressions in Nags Head, North Carolina.

Thank you for your consideration and please do not hesitate to contact me should you have any questions or concerns.

Sincerely,

Melissa M. Dickerson

Enclosure(s)

407 Budleigh Street • P.O. Box 246 • Manteo, North Carolina 27954 • 252-473-2133
Fax: 252-473-2135 Website: townofmanteo.com email: info@townofmanteo.com

Mini Grant Application

1. Applying Organization: Town of Manteo
2. Contact Person: Melissa Dickerson
3. Mailing Address: PO Box 246 Manteo, NC 27954
4. Phone 252-473-4112 Fax 252-473-2135
5. Email: dickerson@townofmanteo.com
6. Amount of Grant Requested: _____
   a. List the requested expenses and amounts that will be covered by this grant
      i. bike ped map printing Amount $ 1,457.72
      ii. _____ Amount $_____
      iii. _____ Amount $_____
      iv. _____ Amount $_____
      v. _____ Amount $_____

Description of purpose, needs assessment and intended results of purchased materials. Attach additional sheets if necessary.

See enclosed letter

Subject: Coastal Impressions: Estimate #2278
From: ashley@coastalimpressions.com
Date: 3/5/2018 6:08 PM
To: dickerson@townofmanteo.com
CC: ashley@coastalimpressions.com

Hello Melissa,

Please see attached estimate for printing the Walking & Biking Map Brochures.

Let us know how you would like to proceed, and we can get it into the production queue right away.

Feel free to call with any questions, we would be happy to assist you.

Thank You,

Coastal Impression, Inc.
Phone (252) 480-1717
Mailing Address P.O. Box 1055, Nags Head, NC 27959
Office Location 3022 S. Croatan Hwy., Nags Head, NC 27959

Attachments:

Estimate #2278.pdf	154 KB

Coastal impressions

Coastal Impressions Inc.
P.O. Box 1055
Nags Head, NC 27959
Pirates Quay Shoppes | MP 11
252.480.1717

Estimate

No: **2278**

Map Brochure

Date: 3/5/18
Customer PO:
Account Number: 1703

Melissa Dickerson
Town of Manteo
P.O. Box 246
Manteo NC 27954
Phone: 252-473-4112
Fax:
E-Mail dickerson@townofmanteo.com

Terms: Due Net 30 days

Quantity	Description	Amount
2,500	Planning Department | Walking & Biking Map Brochures	$ 1,365.55

Here are some additional quantities that may provide significant savings.

Quantity	Planning Department | Walking & Biking Map Brochures	Unit Price	Price p/M	Sell Price
5,000		0.340	340.10	$ 1,700.50
10,000		0.216	216.08	$ 2,160.85

Wanted: Mon 3/5/18

Taken by: Amanda

SUBTOTAL	$ 1,365.55
TAX	$ 92.17
SHIPPING	$ 0.00
TOTAL	$ 1,457.72

Mini Grant Application

1. Applying Organization: City of Elizabeth City
2. Contact Person: Dawn Harris
3. Mailing Address: PO Box 347, Elizabeth City, NC 27909
4. Phone 252-337-6672 Fax 252-331-1291
5. Email: dharris@cityofec.com
6. Amount of Grant Requested:
   a. List the requested expenses and amounts that will be covered by this grant
      i. Bicycle Map/brochure(2,000/qty) Amount $ 1,520.12
      ii. _____ Amount $_____
      iii. _____ Amount $_____
      iv. _____ Amount $_____

Description of purpose, needs assessment and intended results of purchased materials. Attach additional sheets if necessary.

Last year the City of Elizabeth City received a mini grant to have the Elizabeth City Walking & Bicycling Map printed. We received 2,000 prints. As mentioned last year, this brochure helps to generate awareness of the Bike Trails program among locals and visitors. There has been much success in the dissemination of the last run of brochures. The City of Elizabeth City would like to continue distribution through the Elizabeth City/Pasquotank County Parks and Recreation Department as well as a continued partnership with the Convention & Vistors Bureau. F&H Print Sign Design LLC (aka: Flowers Printing) has agreed to do the next run of 2,000 for $1,520.12(including tax). Please see attached estimate.

Return completed application to:

Angela Welsh

Albemarle RPO Planning Director

PO Box 646

Hertford, NC 27944

Or via email at awelsh@accog.org

F&H PRINT SIGN DESIGN LLC

1725 CITY CENTER BLVD
ELIZABETH CITY, NC 27909

Phone # 252-335-0181 & ... carol@fhprintsign.com
Fax # 252-335-0111 www.fhprintsign.com

Estimate

Date	Estimate #
4/4/2018	113

Name / Address
Albemarle Commission

Project

Description	Qty	Rate	Total
2000 maps	1	1,424.00	1,424.00T

Subtotal	$1,424.00
Sales Tax (6.75%)	$96.12
Total	$1,520.12

Mini Grant Application

1. Applying Organization: City of Elizabeth City
2. Contact Person: Dawn Harris
3. Mailing Address: PO Box 347, Elizabeth City, NC 27909
4. Phone 252-337-6672 Fax 252-331-1291
5. Email: dharris@cityofec.com
6. Amount of Grant Requested:
   a. List the requested expenses and amounts that will be covered by this grant
      i. Coast Guard Park Pamphlet (1,000/copies) Amount $ 293.56
      ii. _____ Amount $_____
      iii. _____ Amount $_____
      iv. _____ Amount $_____
      v. _____ Amount $_____

Description of purpose, needs assessment and intended results of purchased materials. Attach additional sheets if necessary.

The City of Elizabeth City/Pasquotank County Parks and Recreation Department is proposing the development of a pamphlet for Coast Guard Park. This pamphlet highlights the parks "coming soon" features, as well as a map showing Parks and Recreation's preferred safe boating routes in the Pasquotank River and Charles Creek for kayaks, canoes and paddle boats. This pamphlet will provide publicity for potential water access activities and boating safety guidelines for residents and visitors alike.

F&H Print Sign Design LLC (aka: Flowers Printing) has submitted the attached estimate.

Return completed application to:

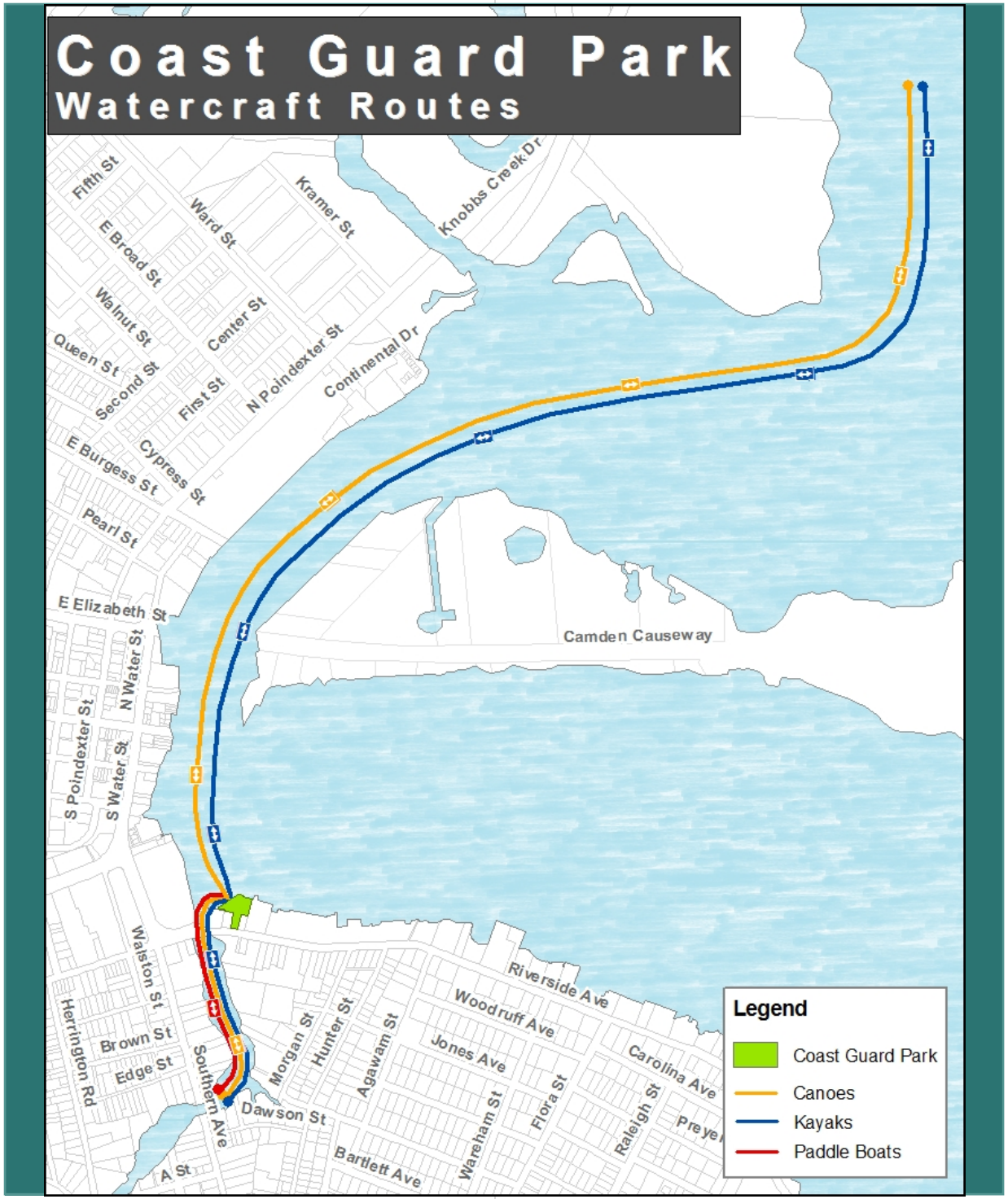
Angela Welsh

Albemarle RPO Planning Director

PO Box 646

Hertford, NC 27944

Or via email at awelsh@accog.org



COMING SOON!!

Coast Guard Park will soon be opening to the public offering boating opportunities for citizens and travelers a like!

At Coast Guard Park...

We can give Elizabeth City residents and visitors alike, the opportunity to explore up close the natural beauty that our river and its tributaries offer.

What's happening at Coast Guard Park?

We see signs of activity, but we just don't know what is happening there on the water front! Give us the scoop!

What we plan to offer

We all know that improvements take time and preparation in order to offer a valuable product for Elizabeth City residents and visitors. Some fun watercrafts to be unveiled first will be:

- Canoes
- Kayaks
- Paddle Boats

Each watercraft above will be available for rent. Time limits will

"We had such a great time canoeing today. We plan on coming back soon with our kids! Loved the sights!"
-valued customer

Also to be offered:

- Paddling lessons
- Paddling camps
- Paddling excursions

During lessons and camps participants will learn hands-on skills from instructors on how to properly operate, maneuver, and care for various paddle craft. Also available will be daylong excursions where skills will be necessary and demonstrated at the highest level. Prior registration will be necessary.

A look in to the future...

Program expansion.... The opportunity for stand-up paddleboards and dinghy-class sailing vessels are a possible venture at Coast Guard Park!

See you on the River!

KNOW THE RULES OF THE RIVER!

1. All paddlers must wear and remain wearing a PFD.
2. All paddlers must carry with them a throwable flotation device
3. When underway, paddlers must remain seated in their vessel.
4. Any reckless actions will be grounds for dismissal and removal.
5. Paddlers will refrain from littering.
6. Paddlers will follow the rules of the water and abide by channel markers and navigational aids.
7. Paddlers must always adhere to right of way rules and procedures.
8. Paddle with care. Pass with care. Signal for assistance.

Contact Us

Coast Guard Park
708 Riverside Avenue
Elizabeth City, NC 27909
(252) 335-1424

nraby@cityofec.com

F&H PRINT SIGN DESIGN LLC

1725 CITY CENTER BLVD
ELIZABETH CITY, NC 27909

Phone # 252-335-0181 & ... carol@fhprintsign.com
Fax # 252-335-0111 www.fhprintsign.com

Estimate

Date	Estimate #
4/5/2018	119

Name / Address
Albemarle Commission

Project

Description	Qty	Rate	Total
1000 4/4 8.5 x 11 brochures on 100# text gloss; folded; digital camera ready	1	275.00	275.00T

Subtotal	$275.00
Sales Tax (6.75%)	$18.56
Total	$293.56

Agenda Item No. 6

Item Title: Regional impact local input scores and Regional impact local input points

Item Summary: We will need to approve our Regional impact local input methodology scores as well as place our allotted local input points on apply our local input points to our Regional impact projects.

Specific action requested: Approve Regional impact Methodology scores and assign local input points to Regional impact highway projects

Number of attachments: 2

In 2016, during the SPOT 4.0 process, the RTAC Board asked that staff work with the Division and forward recommendations to the RTCC and RTAC Boards in the P 5.0 process rather than Board members placing points on projects during the meeting. The attached list of project scores shows the local input point recommendations as requested.

Project scores were released by the SPOT office on April 2, 2018 and one highway project, in the ARPO region, was funded at the Statewide Mobility tier. The project is SPOT ID H090230 TIP # R-3419 US 158 (Croatan Highway) from the Eastern end of the Wright Memorial Bridge to US 64-NC 12. The primary purpose of the project is to improve the mobility and function of the corridor and the DRAFT construction date is 2027. The NCDOT is in the process of completing a feasibility study on this project which will include recommendations. At this time, there is no design work completed showing what the project will entail and local governments, along the corridor, will be involved with the design work once it commences.

At this time, we will only be placing our local input points on Regional impact projects. In September, we will place our allotted local input points on Division Needs projects once the funded Regional impact projects are released by the SPOT office.

Based on our previously adopted Methodology, which is also attached, please note the following:

- We are only approving the ARPO Methodology scores then assigning local input points. Division 1 scores are included to show you what those scores were and how the final score was determined, but we do not approve the Division 1 scores.
- The ARPO receives 1300 local input points (100 points each from 13 projects or the points can be split amongst more projects)
- We can deviate from our methodology provided a majority of the RTCC and a majority of the RTAC agree to do so. Any deviation from our adopted point assignments will be disclosed to the public and reason(s) why will be published on the ARPO website.

The ARPO adopted Methodology is attached for reference.

512 South Church Street P.O. Box 646 Hertford, NC 27944 Phone: 252-426-5775 Fax: 252-426-5435 www.albemarlecommission.org
Proudly serving Northeastern NC Counties: Camden, Chowan, Currituck, Dare, Gates, Hyde, Pasquotank, Perquimans, Tyrrell and Washington

SPOT ID	TIP	Project Category	Route	From / Cross Street	To	Description	County(s)	Safety score	Transporation Plan Consistency	Economic Decvelopment/Employment Access	Multimodal elements	Existing deficiency	Roadway and shoulder width	Evacuation	ARPO Total Regional score (out of 15 points)	SPOT score (out of 70 points)	Regional local input points (1300 total allocated to the ARPO) RED= Div.and RPO BLUE= RPO	Reason for placing local input points on project
H090099-B	R-2507B	Statewide Mobility	US 13	US 158 Bypass in Tarheel	SR 1202 (Eure Road/Gates School Road)	Widen to Multi-Lanes.	Gates	5	15	5	0	10	15	0	7.5	28.66		
H090099-C	R-2507C	Statewide Mobility	US 13	SR 1202 (Eure Road/Gates School Road)	Virginia State Line	Widen to Multi-Lanes.	Gates	10	15	5	0	10	15	0	8.25	34.71	100	High quantitative score and high RPO local input score
H090124-A	R-2544A	Statewide Mobility	US 64	East of SR 1153 (Old Ferry Landing Road)	West of SR 1102 (East Lake Road)	Widen to Multi-Lanes.	Dare	5	15	5	0	10	5	15	8.25	20.46		
H090124-B	R-2544B	Statewide Mobility	US 64	West of SR 1102 (East Lake Road)	East of Dare County Landfill	Widen to Multi-Lanes.	Dare	5	15	5	0	10	5	15	8.25	25.47		
H090139	R-2574	Statewide Mobility	US 158 (Shortcut Road)	East of NC 34 at Belcross in Camden County	NC 168 in Currituck County	Widen to Multi-Lanes.	Currituck, Camden	15	15	10	0	10	15	15	12	42.84	100	High quantitative score and high RPO and Div. local input score
H090145		Statewide Mobility	US 158	US 13	NC 32 in Sunbury	Widen to Multi-Lanes.	Gates	10	15	5	0	10	5	15	9	33.33		
H090146	R-2579	Statewide Mobility	US 158	NC 32 in Sunbury in Gates County	US 17 at Morgan's Corner in Pasquotank County	Widen to Multi-Lanes.	Pasquotank, Gates	10	15	5	0	10	5	15	9	33.14		
H090284	R-4457	Statewide Mobility	US 158	NC 12		Improve intersection	Dare	10	15	10	0	10	15	15	11.25	42.69	100	High quantitative score and high RPO local input score
H090285	R-4458	Statewide Mobility	I-87, US 17	SR 1300 (New Hope Road)		Convert at-Grade intersection to an interchange	Perquimans	5	15	5	0	10	15	15	9.75	28.98	100	Corridor continuity
H090286	R-4459	Statewide Mobility	I-87, US 17	SR 1336 (Harvey Point Road) and SR 1338 (Wayne Fork Road)		Convert at-Grade intersection to An interchange	Perquimans	10	15	5	0	10	15	15	10.5	39.64	100	High quantitative score and high RPO and Div. local input score
H090399		Regional Impact	NC 94 (Soundside Road)	NC 32	US 17 Bypass	NC 32 to US 17 Bypass. Two Lanes on New Location.	Chowan	5	15	5	0	10	15	0	7.5	20.7		
H090442	U-3815	Statewide Mobility	US 64	US 64 Business/NC 345		US 64-US 64 Bypass-NC 345. Improve intersection.	Dare	5	15	5	0	10	5	15	8.25	18.93		
H090868		Regional Impact	NC 32	NC 37 (Gliden Road)	Virginia State Line	Widen pavement to include 12' lanes, 2' Paved shoulders, 4' earthen shoulders. Replace concrete box culverts.	Gates, Chowan	5	15	5	0	10	15	0	7.5	32.82		

H090869	R-5807	Regional Impact	NC 343	US 158 in Camden	SR 1119 (Trotman Road) in Shiloh	Upgrade Roadway with Wider Shoulders and New Culvert(s), curve alignment, intersection improvements (Seymour Drive), and 2 bridge replacements (#18 & #17)	Camden	10	15	5	0	10	15	0	8.25	15.91		
H111225		Statewide Mobility	US 158	Proposed Mid Currituck Bridge	Dare County Line	Upgrade the Existing 5-Lane Boulevard to a 4-Lane Divided Boulevard from the proposed Mid-Currituck Bridge to the Dare County Line.	Currituck	10	15	5	0	10	15	15	10.5	36.17	100	High quantitative score and high RPO and Div. local input score
H111227		Statewide Mobility	NC 168	Virginia Line	US 158	Upgrade the Existing 5-Lane Major Thoroughfare to a 4-Lane Divided Boulevard from the Virginia Line to US 158	Currituck	10	15	5	0	10	15	15	10.5	29.2		
H129070-AA	R-2545AA	Statewide Mobility	US 64	East of Columbia	West of SR 1229 (Old US 64) at Alligator River	Widen to Multi-Lanes.	Tyrrell	5	15	5	0	10	5	15	8.25	34.1	100	Corridor continuity
H129070-AB	R-2545AB	Statewide Mobility	US 64	West of SR 1229 (Old US 64) at Alligator River	West of Alligator River	Widen to Multi-Lanes.	Tyrrell	5	15	5	0	10	5	15	8.25	25.17		
H129070-B	R-2545B	Statewide Mobility	US 64	West of Alligator River	East of SR 1153 (Old Ferry Landing Road)	Widen to Multi-Lanes and construct new Multi-Lane bridge	Tyrrell, Dare	10	15	5	0	10	5	15	9	25.8		
H141869	R-5731	Statewide Mobility	I-87, US 17 (Edenton Bypass)	South end of Chowan River Bridge	US 17 Business (North) in Edenton (Broad Street)	Upgrade freeway to interstate standards	Chowan, Bertie	5	15	5	0	10	15	15	9.75	26.81		
H141880		Statewide Mobility	I-87, US 17 (Elizabeth City Bypass)	SR 1100 / 1140 (Okisko Road)	US 17/158 north of Elizabeth City (North Road Street)	Upgrade freeway to interstate standards	Pasquotank	5	15	5	0	10	5	15	8.25	27.1		
H141929		Statewide Mobility	I-87, US 17	US 17 Business (North) in Edenton (Broad Street)	SR 1100 / 1140 (Okisko Road)	Upgrade roadway to Interstate	Perquimans, Chowan, Pasquotank	10	15	5	0	10	15	15	10.5	42.31	100	High quantitative score and high RPO local input score
H141931	R-5856	Statewide Mobility	I-87, US 17	US 17/158 north of Elizabeth City (North Road Street)	Virginia State LIne	Upgrade roadway to Interstate	Camden, Pasquotank	10	15	5	0	10	15	15	10.5	39.3	100	High quantitative score and high RPO and Div. local input score
H150612		Regional Impact	NC 37	NC 32		Revise existing intersection configuration to improve safety.	Chowan	5	15	5	0	10	15	0	7.5	18.88		
H150678		Regional Impact	NC 12	Slash creek bridge near Eagle Pass Road	Slash Creek bridge near Islington Court	Modernize roadway between the Slash Creek bridges	Dare	0	15	5	15	10	5	15	9.75	15.38		
H150679		Regional Impact	NC 94	US 64	Hyde County line	Widen paved and unpaved shoulders on existing 2 lane facility	Tyrrell	10	15	5	0	10	5	0	6.75	23.42		
H170917	B-2500C	Regional Impact	NC 12	Just South of Oregon Inlet Bridge	Rodanthe	Relocate roadway and/or bridge portion	Dare	5	15	5	0	10	15	15	9.75	26.05	100	High quantitative score and high RPO and Div. local input score

H171802		Statewide Mobility	US 64	End 4 lanes in Columbia	Alligator River Bridge	Widen existing pavement to provide 5 foot paved shoulders and 4-6' earthen shoulder	Tyrrell	5	15	5	0	10	15	15	9.75	28.15		
H172170		Statewide Mobility	I-87, US 17	South End of Elizabeth City Bypass	Hertford Bridge	Upgrade existing 4-Lane divided highway to Interstate Standards	Perquimans, Pasquotank	10	15	5	0	10	5	15	9	40.11	**100**	High quantitative score and high RPO and Div. local input score
H172179		Statewide Mobility	I-87, US 17	North End of Chowan River Bridge	NC 37	Upgrade existing 4-lane divided highway to interstate standards	Chowan, Perquimans	10	15	5	0	10	5	15	9	38.74	**100**	High quantitative score and high RPO local input score

Project Category	Route / Facility Name	Project Description	Primary Purpose	County(ies)	Estimated Total Project Cost	Safety score	Transporation Plan Consistency	Economic Decvelopment/Employment Access	Multimodal elements	Existing deficiency	Roadway and shoulder width	Evacuation	ARPO Total Regional score (out of 15 points)	SPOT score (out of 70 points)	Regional local input points (1300 total allocated to the ARPO) RED= Div.and RPO	Reason for placing local input points on project
Regional Impact	Hatteras - South Dock	Add Additional Passenger Ferry to travel the Hatteras to Silver Lake Route & parking lot at Hatteras	Additional Passenger Ferry needed to transport people as indicated in the Passenger Ferry Feasibility Study	Dare, Hyde	$ 6,500,000	0	15	5	15	10	0	15	9	52.55	100	High quantitative score and high RPO and Div. local input score

Basic Info and Scores													Point Assignments		
SPOT ID	Eligible for Regional Local Input Points	Eligible for Division Needs Local Input Points	Mode	TIP	Project Category	Route	From / Cross Street	To / Cross Street	Description	Specific Improvement Type	MPO(s) / RPO(s)	County(s)	REGIONAL IMPACT Local Input Scores	REGIONAL IMPACT PRELIMINARY Local Input Points (out of 100 - 15% of total score)	Comments - Regional Impact (Use this section to note deviations from methodology, changes in preliminary vs. final, etc.)
H090139	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2574	Statewide Mobility	US 158 (Shortcut Road)	East of NC 34 at Belcross in Camden County	NC 168 in Currituck County	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Currituck, Camden	1.60	100	
H090284	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-4457	Statewide Mobility	US 158	NC 12		Improve intersection	7 - Upgrade At-grade Intersection to Interchange or Grade Separation	Albemarle RPO	Dare	1.60		
H129676-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5311B	Statewide Mobility	US 13, NC 11	NC 11/NC 561 Near Ahoskie	US 158/NC 45 Near Winton	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Peanut Belt RPO	Hertford	1.40	100	
H090286	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5869A	Statewide Mobility	I-87, US 17	SR 1336 (Harvey Point Road) and SR 1338 (Wayne Fork Road)		Convert at-Grade intersection to An interchange	7 - Upgrade At-grade Intersection to Interchange or Grade Separation	Albemarle RPO	Perquimans	1.40	100	
H141880	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17 (Elizabeth City Bypass)	SR 1100 / 1140 (Okisko Road)	US 17/158 north of Elizabeth City (North Road Street)	Upgrade freeway to interstate standards	17 - Upgrade Freeway to Interstate Standards	Albemarle RPO	Pasquotank	1.40		
H170812	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	US 13, US 17	Main St in Williamston		Improve intersection for safety. Open to suggestions from congestion management.	10 - Improve Intersection	Mid-East RPO	Martin	1.40	100	
F172163	Yes	TBD - Depends on Final Regional Impact Scoring	Ferry		Regional Impact	Hatteras - South Dock			Add Additional Passenger Ferry to travel the Hatteras to Silver Lake Route & parking lot at Hatteras	6 - New River Class Vessel (to increase capacity)	Albemarle RPO	Dare, Hyde	1.25	100	
H150898	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5796	Statewide Mobility	US 13 (Memorial Drive), NC 42 (Memorial Drive), NC 561 (Memorial Drive)	Peachtree Street	NC 42 (Academy Street)	Widen existing facility to multi-lane facility. Sidewalk and bicycle accommodations recommended along entire length of project.	1 - Widen Existing Roadway	Peanut Belt RPO	Hertford	1.20	100	
H090099-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2507B	Statewide Mobility	US 13	US 158 Bypass in Tarheel	SR 1202 (Eure Road/Gates School Road)	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Gates	1.20		
H090099-C	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2507C	Statewide Mobility	US 13	SR 1202 (Eure Road/Gates School Road)	Virginia State Line	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Gates	1.20		
H090145	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	US 158	US 13	NC 32 in Sunbury	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Gates	1.20		
H090146	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2579	Statewide Mobility	US 158	NC 32 in Sunbury in Gates County	US 17 at Morgan's Corner in Pasquotank County	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Pasquotank, Gates	1.20		
H090149-A	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2584A	Statewide Mobility	US 158	SR 1333 (Mt. Caramel Road-Severn Road) East of Jackson	East of SR 1500 (Zion Church Road)	Widen to Multi-Lanes, Part on New Location.	1 - Widen Existing Roadway	Peanut Belt RPO	Northampton	1.20		
H090149-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2584B	Statewide Mobility	US 158	East of SR 1500 (Zion Church Road)	East of SR 1365 (Phillips Hill Road)	Widen to Multi-Lanes, Part on New Location.	6 - Widen Existing Roadway and Construct Part on New Location	Peanut Belt RPO	Northampton	1.20		

H090149-C	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2584C	Statewide Mobility	US 158	East of SR 1365 (Phillips Hill Rd)	Murfreesboro Bypass	Widen to Multi-Lanes, Part on New Location.	1 - Widen Existing Roadway	Peanut Belt RPO	Northampton	1.20		
H090285	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5869B	Statewide Mobility	I-87, US 17	SR 1300 (New Hope Road)		Convert at-Grade intersection to an interchange	7 - Upgrade At-grade Intersection to Interchange or Grade Separation	Albemarle RPO	Perquimans	1.20	100	Corridor Continuity
H129112-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2582B	Statewide Mobility	US 158, NC 46	SR 1312 (St. John Church Road)	SR 1333 (Mt. Carmel Road) East of Jackson	Widen to Multi-Lanes with Bypass of Jackson, Part on New Location.	6 - Widen Existing Roadway and Construct Part on New Location	Peanut Belt RPO	Northampton	1.20	100	Corridor Continuity
H141869	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5731	Statewide Mobility	I-87, US 17 (Edenton Bypass)	South end of Chowan River Bridge	US 17 Business (North) in Edenton (Broad Street)	Upgrade freeway to interstate standards	17 - Upgrade Freeway to Interstate Standards	Albemarle RPO, Peanut Belt RPO	Chowan, Bertie	1.20		
H150679	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 94	US 64	Hyde County line	Widen paved and unpaved shoulders on existing 2 lane facility	16 - Modernize Roadway	Albemarle RPO	Tyrrell	1.20		
H172179	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	North End of Chowan River Bridge	NC 37	Upgrade existing 4-lane divided highway to interstate standards	2 - Upgrade Arterial to Freeway/Expressway	Albemarle RPO	Chowan, Perquimans	1.20		
H090124-A	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2544A	Statewide Mobility	US 64	East of SR 1153 (Old Ferry Landing Road)	West of SR 1102 (East Lake Road)	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Dare	1.00		
H090124-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2544B	Statewide Mobility	US 64	West of SR 1102 (East Lake Road)	East of Dare County Landfill	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Dare	1.00		
H090442	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	U-3815	Statewide Mobility	US 64	US 64 Business/NC 345		US 64-US 64 Bypass-NC 345. Improve intersection.	10 - Improve Intersection	Albemarle RPO	Dare	1.00		
H111225	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	US 158	Proposed Mid Currituck Bridge	Dare County Line	Upgrade the Existing 5-Lane Boulevard to a 4-Lane Divided Boulevard from the proposed Mid-Currituck Bridge to the Dare County Line.	11 - Access Management	Albemarle RPO	Currituck	1.00	100	
H111227	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	NC 168	Virginia Line	US 158	Upgrade the Existing 5-Lane Major Thoroughfare to a 4-Lane Divided Boulevard from the Virginia Line to US 158	11 - Access Management	Albemarle RPO	Currituck	1.00		
H129070-AB	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2545AB	Statewide Mobility	US 64	West of SR 1229 (Old US 64) at Alligator River	West of Alligator River	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Tyrrell	1.00		
H141929	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	US 17 Business (North) in Edenton (Broad Street)	SR 1100 / 1140 (Okisko Road)	Upgrade roadway to Interstate	2 - Upgrade Arterial to Freeway/Expressway	Albemarle RPO	Perquimans, Chowan, Pasquotank	1.00		
H141931	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5856	Statewide Mobility	I-87, US 17	US 17/158 north of Elizabeth City (North Road Street)	Virginia State LIne	Upgrade roadway to Interstate	2 - Upgrade Arterial to Freeway/Expressway	Albemarle RPO	Camden, Pasquotank	1.00	100	
H150678	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 12	Slash creek bridge near Eagle Pass Road	Slash Creek bridge near Islington Court	Modernize roadway between the Slash Creek bridges	16 - Modernize Roadway	Albemarle RPO	Dare	1.00		
H170898	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	US 158 (Murfressboro Bypass)	Just east of US 158 Busness	Northampton County	Convert multi lane divided section to superstreet concept to match other segments.	4 - Upgrade Arterial to Superstreet	Peanut Belt RPO	Hertford	1.00		Recieving Safety Funds
H170917	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	B-2500C	Regional Impact	NC 12	Just South of Oregon Inlet Bridge	Rodanthe	Relocate roadway and/or bridge portion	6 - Widen Existing Roadway and Construct Part on New Location	Albemarle RPO	Dare	1.00	100	

H171803	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	US 64	Roanoke River Bridge	Upgrade Arterial to Interstate Standards	2 - Upgrade Arterial to Freeway/Expressway	Mid-East RPO	Martin	1.00	100	
H172170	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	South End of Elizabeth City Bypass	Hertford Bridge	Upgrade existing 4-Lane divided highway to Interstate Standards	2 - Upgrade Arterial to Freeway/Expressway	Albemarle RPO	Perquimans, Pasquotank	1.00	100	
H090055	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2205	Statewide Mobility	US 13	NC 42 at Powellsville. in Bertie County	US 13 Bypass North of Ahoskie in Hertford County	Construct Multi-Lanes with Bypass of Ahoskie on New Location.	1 - Widen Existing Roadway	Peanut Belt RPO	Bertie, Hertford	0.80		
H090098	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2506	Statewide Mobility	US 13	US 13 Business North of Windsor	NC 42	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Peanut Belt RPO	Bertie	0.80		
H090182	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2700	Regional Impact	NC 11	US 64 Relocation North of Bethel	NC 903	Widen to Four Lanes with a Bypass of Oak City on New Location.	6 - Widen Existing Roadway and Construct Part on New Location	Mid-East RPO, Upper Coastal Plain RPO	Martin, Edgecombe	0.80		
H090201	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2900	Regional Impact	NC 11	NC 903 in Martin County	US 13 Bypass North of Ahoskie in Hertford County	Widen to Multi-Lanes	1 - Widen Existing Roadway	Peanut Belt RPO, Mid-East RPO	Bertie, Hertford, Martin	0.80		
H090399	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 94 (Soundside Road)	NC 32	US 17 Bypass	NC 32 to US 17 Bypass. Two Lanes on New Location.	5 - Construct Roadway on New Location	Albemarle RPO	Chowan	0.80		
H129070-AA	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2545AA	Statewide Mobility	US 64	East of Columbia	West of SR 1229 (Old US 64) at Alligator River	Widen to Multi-Lanes.	1 - Widen Existing Roadway	Albemarle RPO	Tyrrell	0.80	100	Corridor Continuity
H129208	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-95	Halifax/Northampton County Line	Virginia State Line	Widen Roadway to 6 Lanes.	1 - Widen Existing Roadway	Peanut Belt RPO	Northampton	0.80		
H141724	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	US 64 at Williamston	US 13 North at Windsor	Upgrade roadway to Interstate	2 - Upgrade Arterial to Freeway/Expressway	Peanut Belt RPO, Mid-East RPO	Bertie, Martin	0.80		
H141739	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17	US 17A East of Windsor	South end of Chowan River Bridge	Upgrade roadway to Interstate	2 - Upgrade Arterial to Freeway/Expressway	Peanut Belt RPO	Bertie	0.80		
H141863	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 17 (Windsor Bypass)	US 13 North at Windsor	US 17A East of Windsor	Upgrade freeway to interstate standards	17 - Upgrade Freeway to Interstate Standards	Peanut Belt RPO	Bertie	0.80		
H150612	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 37	NC 32		Revise existing intersection configuration to improve safety.	10 - Improve Intersection	Albemarle RPO	Chowan	0.80		
H150622	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 48	NC 46	1 mile North	Improve Intersection @ NC 48/NC 46, widen existing 2 lane road and improve access at Kipp School	16 - Modernize Roadway	Peanut Belt RPO	Northampton	0.80		
H171801	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	I-87, US 64	Edgecombe County Line	US 17	Upgrade existing freeway to Interstate Standards. To include ITS and Signing Improvements, existing ramps (Exits 502,505, 507, 512, & 514) widen to 16' lane width.	17 - Upgrade Freeway to Interstate Standards	Mid-East RPO	Martin	0.80	100	Corridor Continuity
H171802	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Statewide Mobility	US 64	End 4 lanes in Columbia	Alligator River Bridge	Widen existing pavement to provide 5 foot paved shoulders and 4-6' earthen shoulder	16 - Modernize Roadway	Albemarle RPO	Tyrrell	0.80		
H090868	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 32	NC 37 (Gliden Road)	Virginia State Line	Widen pavement to include 12' lanes, 2' Paved shoulders, 4' earthen shoulders. Replace concrete box culverts.	16 - Modernize Roadway	Albemarle RPO	Gates, Chowan	0.60		

H090869	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-5807	Regional Impact	NC 343	US 158 in Camden	SR 1119 (Trotman Road) in Shiloh	Upgrade Roadway with Wider Shoulders and New Culvert(s), curve alignment, intersection improvements (Seymour Drive), and 2 bridge replacements (#18 & #17)	16 - Modernize Roadway	Albemarle RPO	Camden	0.60		
H129070-B	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	R-2545B	Statewide Mobility	US 64	West of Alligator River	East of SR 1153 (Old Ferry Landing Road)	Widen to Multi-Lanes and construct new Multi-Lane bridge	1 - Widen Existing Roadway	Albemarle RPO	Tyrrell, Dare	0.60		
H141662	Yes	TBD - Depends on Final Regional Impact Scoring	Highway		Regional Impact	NC 35	Hertford County Line	Virginia State Line	Upgrade the existing facility to 24 feet w/ paved shoulders and turn lanes at all major intersections; while also modifying curves in some sections.	16 - Modernize Roadway	Peanut Belt RPO	Northampton	0.60		
H090329	Yes	TBD - Depends on Final Regional Impact Scoring	Highway	U-2419	Regional Impact	NC 48	Roanoke Avenue in Halifax County	NC 46 in Northampton County	Roanoke Avenue in Halifax County to NC 46 in Gaston in Northampton County. Widen to Multi-Lanes.	1 - Widen Existing Roadway	Peanut Belt RPO	Northampton, Halifax	0.40		
T130072	Yes	TBD - Depends on Final Regional Impact Scoring	Transit	TA-6684	Regional Impact	CPTA fy20 expansion vehicle			Purpose of expanding routes for employment, education, and/or medical purposes. Etc.	4 - Demand Response	Peanut Belt RPO	Northampton	0.25		

#

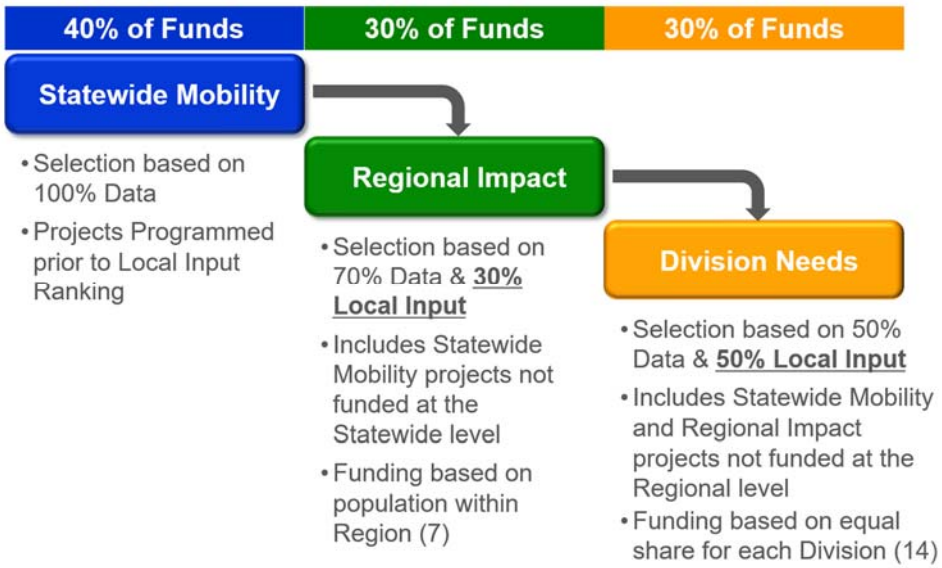
ARPO Prioritization 5.0 Methodology

Introduction:

The Strategic Transportation Investments (STI) law (GS 136-189.10 and .11), enacted in 2013, directs NCDOT to select and fund major capital improvement projects using a data-driven prioritization process in combination with local input. Under STI, all major capital mobility/expansion and modernization projects across all six modes of transportation compete for funding. Each project is classified into one of three funding categories – Statewide Mobility, Regional Impact, or Division Needs – where it competes for funds with other eligible projects.

Statewide Mobility eligible projects compete against all other projects in this category across the state, and project selection is based 100% on the data-driven quantitative score. Regional Impact projects compete against all other projects in this category within the same funding region (consisting of two NCDOT Transportation Divisions), and selection is based 70% on the quantitative score and 30% on local input (15% MPO/RPO priority and 15% NCDOT Division Engineer priority). Division Needs projects compete against all other projects within the same NCDOT Transportation Division, and selection is based 50% on quantitative score and 50% on local input (25% MPO/RPO priority and 25% NCDOT Division Engineer priority).

The STI law includes an innovative component known as cascading, where projects not funded in the Statewide Mobility category are eligible for funding in the Regional Impact category. Similarly, projects not funded in the Regional Impact category are eligible for Division Needs funds. Projects that cascade down are then subject to the scoring criteria and local input for the respective funding category.



Project eligibility for each STI category, as defined in law, is shown below.

STI Project Eligibility			
Mode	**Statewide Mobility**	**Regional Impact**	**Division Needs**
Highway	• Interstates (existing & future) • NHS routes (as of July 1, 2012) • STRAHNET Routes • ADHS Routes • Uncompleted Intrastate projects • Designated Toll Facilities	Other US and NC Routes	All County (SR) Routes
Aviation	Large Commercial Service Airports ($500K cap)	Other Commercial Service Airports not in Statewide ($300K cap)	All Airports without Commercial Service ($18.5M cap)
Bicycle-Pedestrian	N/A	N/A	All projects ($0 state funds)
Public Transportation	N/A	Service spanning two or more counties (10% cap)	All other service, including terminals, stations, and facilities
Ferry	N/A	Ferry expansion	Replacement vessels
Rail	Freight Capacity Service on Class I Railroad Corridors	Rail service spanning two or more counties not Statewide	Rail service not included on Statewide or Regional

MPOs/RPOs and Divisions indicate priority by applying local input points to projects. Each organization receives a baseline of 1,000 local input points, with additional points (up to 2,500) based on population. The Albemarle RPO has a total of 1300 points to apply to projects in the Regional Impact category and a total of 1300 points to apply to projects in the Division Needs category. State law requires NCDOT to approve how each organization will assign points to projects, in a document known as their Local Input Point Methodology.

Description of Criteria and Weights:

Following are the descriptions of the criteria the Albemarle Rural planning Organization will be using to score projects in the Regional Impact and Division Needs categories.

Regional level criteria (Highways and Transit)

Criteria	O points	5 points	10 points	15 points
Safety score	0-25	26-49	50-74	75-100
	Calculation based on the crash frequency and severity along sections of a particular roadway. This score is generated in the quantitative scoring process.			
Transportation Plan consistency	Project is not in STIP, CTP, or other locally adopted plan	Project will be incorporated into CTP or other locally adopted plan.		Project is in STIP, CTP, or other locally adopted plan.
	Is the proposed project part of an existing, or proposed, adopted Plan?			
Economic Development/ Employment access		Provides direct access within a 20 mile radius of an existing or proposed employment center* with more than 20 employees.	Provides direct access within a 15 mile radius of an existing or proposed employment center* with more than 100 employees.	Provides direct access within a 10 mile radius of an active industrial/business park or proposed new employment center* with more than 100 employees.
	Does the project provide connection to a downtown district, business district, government center, educational center healthcare center, military base, prison, or agricultural center? Must meet both distance and employment criteria to be eligible to receive points.			
Multimodal elements	Project does not incorporate or connect to facilities of another mode			Project incorporates or connects to facilities of another mode
	Does the project incorporate other modes of transportation (a sidewalk along a road etc.)?			
Existing deficiency	Existing facility/service available		Existing facility/service available, but contains gap with lower level of service/intermittent service	No existing facility/service available,
	Does the project address an existing gap in the transportation system?			
Roadway and shoulder width	Currently exceeds NCDOT minimum standards	Currently meets NCDOT standards		Currently does not meet NCDOT standards
	Does the current condition not meet, meet or exceed NCDOT minimum standards?			
Evacuation	The project is not an official NCDOT evacuation route			The project is an official NCDOT evacuation route
	Is the project part of an official NCDOT evacuation route?			

*An employment center is defined as a downtown district, business district, government center, educational center healthcare center, prison, military base, or agricultural center

Division Level criteria (Highways and ferries)

Criteria	O points	5 points	10 points	15 points
Safety score	0-25	26-49	50-74	75-100
	Calculation based on the crash frequency and severity along sections of a particular roadway. This score is generated in the quantitative scoring process.			
Transportation Plan consistency	Project is not in STIP, CTP, or other locally adopted plan	Project will be incorporated into CTP or other locally adopted plan.		Project is in STIP, CTP, or other locally adopted plan.
	Is the proposed project part of an existing, or proposed, adopted Plan?			
Economic Development/ Employment access		Provides access within a 20 mile radius of an existing or proposed employment center* with 20 or more employees.	Provides access within a 15 mile radius of an existing or proposed employment center* with 100 or more employees.	Provides access within a 10 mile radius of an active industrial/business park or proposed new employment center* with more than 100 employees.
	Does the project provide ~~direct~~ connection to a downtown district, business district, government center, educational center healthcare center, and prison, military base or agricultural center? Must meet bot h distance and employment criteria to be eligible to receive points.			
Multimodal elements	Project does not incorporate or connect to facilities of another mode			Project incorporates or connects to facilities of another mode
	Does the project incorporate other modes of transportation (a sidewalk along a road etc.)?			
Existing deficiency	Existing facility/service available		Existing facility/service available, but contains gap with lower level of service/intermittent service	No existing facility/service available.
	Does the project address an existing gap in the transportation system? (i.e. increase ferry service hours, multi-lane an existing project)			
Roadway and shoulder width	Currently exceeds NCDOT minimum standards	Currently meets NCDOT standards		Currently does not meet NCDOT standards
	Does the current condition not meet, meet or exceed NCDOT minimum standards?			
Evacuation	The project is not an official NCDOT evacuation route			The project is an official NCDOT evacuation route
	Is the project part of an official NCDOT evacuation route?			

*An employment center is defined as a downtown district, business district, government center, educational center healthcare center, prison, military base, or agricultural center.

Division Level criteria (bicycle and pedestrian transportation, transit, aviation)

Criteria	O points	5 points	15 points	25 points
Transportation Plan consistency	Project is not in STIP, CTP, LCP, CTSP, ALP or other locally adopted plan	Project will be incorporated into CTP or other locally adopted plan. .		Project is in STIP, CTP, LCP, CTSP, ALP or other locally adopted plan.
	Is the proposed project part of an existing, or proposed, adopted Plan?			
Economic Development/ Employment access		Provides access within a 3 mile radius of a proposed or existing employment center* with more than 20 employees.	Provides access within a 2 mile radius of an existing or proposed employment center* with more than 100 employees.	Provides ~~direct~~ access within 1 mile radius of an active industrial/business park or proposed new employment center* with more than 100 employees.
	Does the project provide direct connection to a downtown district, business district, government center, educational center healthcare center, prison, or agricultural center?			
Multimodal elements	Project does not incorporate or connect to facilities of another mode			Project incorporates or connects to facilities of another mode
	Does the project incorporate other modes of transportation (a sidewalk along a road etc.)?			
Existing deficiency	Existing facility/service available		Existing facility/service available, but contains gap with lower level of service/intermittent service	No existing facility/service available.
	Does the project address an existing gap in the transportation system? (i.e. add a multi-use path where none existed, increase service for on demand transit)			

*An employment center is defined as a downtown district, business district, government center, educational center, healthcare center, and prison, military base or agricultural center.

Total Score and Project Ranking Approach:

Regional level (NC Routes)

Projects involving NC routes are evaluated at the Regional level and the Albemarle Rural Planning Organization also receives 1300 local input points for these projects. Once all projects are scored using the methodology described below, the ARPO staff will develop a ranked list of projects within each county and within the RPO as a whole based on the outcome of the criteria below. This ranked list will be used to develop the recommended point assignments that are presented to the public for comment and to the RTCC and RTAC for approval. The top scoring Division level project, within each county will be allocated 100 points to reach the ARPO's total allocation of 1300 points provided their quantitative score exceeds 10 points in the Regional needs category. This promotes geographic equity of projects. In the event that any counties do not have at least one Regional level project, which meets the criteria above, one project~~s~~ from each mode which quantitative score exceeds 10 points in the Regional needs category will be selected from the top of the list of remaining projects within the RPO as a whole in order to reach the ARPO's allocation of 1300 points. Should two or more projects of the same or different modes tie, the Strategic Prioritization Office of Transportation quantitative score will

be used as the tie-breaker. Since funding in the Division category is limited, Statewide or Regional projects, that cost over $20,000,000, that cascade down to the Division level will not be considered for Division qualitative points.

Division level

Projects involving SR routes, bicycle and pedestrian transportation, transit, airports and ferry vessels are evaluated at the Division level. The Albemarle Rural Planning Organization receives 1300 local allocation points at the Division level. Once all projects are scored using the methodology described below, the ARPO staff will develop a ranked list of projects within each county and within the RPO as a whole based on the outcome of the scoring. This ranked list will be used to develop the recommended point assignments that are presented to the public for comment and to the RTCC and RTAC for approval. The top scoring Division level project, within each county will be allocated 100 points to reach the ARPO's total allocation of 1300 points provided their quantitative score exceeds 10 points in the Division needs category. This promotes geographic equity of projects. In the event that any counties do not have at least one Division level project, which meets the criteria above, one project from each mode which quantitative score exceeds 10 points in the Division needs category will be selected from the list of remaining projects within the RPO as a whole in order to reach the ARPO's allocation of 1300 points. Projects will be selected in the following order, Highway, Aviation, Ferry, Transit and Bike and Ped. Should two or more projects of the same or different modes tie, the Strategic Prioritization Office of Transportation quantitative score will be used as the tie-breaker. Since funding in the Division category is limited, Statewide or Regional projects, that cost more than $20,000,000, that cascade down to the Division level will not be considered for Division qualitative points.

Schedule and Public Outreach:

This methodology will be tentatively approved by the RTCC and RTAC at their February 2018 meeting. Once approved by the RTAC, the RPO will release the draft methodology for a 30-day public comment period. This comment period will be advertised on the RPO website at http://www.albemarlecommission.org/planning/sti-project-information/ and via local media. The results of the public comment period will be presented to the RTCC and RTAC at their April 2018 meeting where the public will also be able to submit comments. All public comments will be documented and reasonable edits to the methodology may be made prior to RTAC approval and submittal to the SPOT office. All public comments will be documented, filed by the RPO and distributed to local entities to consider for future prioritization processes and transportation plans. No new projects will be added to the Prioritization 5.0 list due to the fact the NCDOT deadline for submitting new projects will have passed. Following is a timeline for project solicitation, project ranking process and ARPO point assignment. These dates are subject to change as we work through this process.

Time Frame	Description	Action
March- Mid-April 2017	Solicit new projects. If new projects exceed SPOT's cap for new projects, the RTCC will make a recommendation to the RTAC at the July 26 meeting.	RPO Staff
April 26, 2017	RTAC finalizes and tentatively approves project list	RTCC/RTAC
May 1- May 31	Project list released for 30 day public comment period.	RPO Staff
July 26, 2017	Public Hearing- approval of project list and final approval of Local Input Methodology	RTCC/RTAC
September 2017	Projects entered into SPOT On!ine	RPO Staff
December 2017	Score Regional and Division projects based on Local Input methodology	RPO Staff
February 21, 2018	RTAC finalizes and approves ARPO Local Input Methodology	RTCC/RTAC
March 2018	TIP Unit programs Statewide projects	NCDOT
April 25, 2018	Public Hearing- Final approval local input methodology project scores and assigns local input points to regional projects.	RTAC
May 2018	Regional local input points entered into SPOT On!ine	RPO Staff
September 26, 2018	Review regional scores with RTAC and assign final Division local input points.	RTAC
October 2018	Division scores entered into SPOT On!ine	RPO Staff
January 2019	Draft STIP released	NCDOT

During the months of March and April of 2017, the ARPO started soliciting projects from local government Managers and Planners who, in turn, solicited projects from organizations and the public in their respective communities.

On April 26, 2017, the results of the project solicitation will be reviewed by the Rural Technical Coordinating Committee (RTCC) and then presented to the Rural Technical Advisory Committee (RTAC) for tentative approval. If new projects exceed the maximum number allowed, the RTAC will choose which projects to submit based on recommendations from NCDOT Division 1, RTCC, and RPO staff. The process and point assignment methods will also be reviewed by the RTCC and presented to the RTAC, for tentative approval, at their April 26, 2017meeting. The methods described herein are subject to change based on the public comment process described later in this document.

The project list will be released for a 30 day public comment period in May of 2017 and a Public Hearing for final approval of the project list will be held on July 26, 2017. In September of 2017, ARPO staff will submit new projects to NCDOT through the SPOT On!ine system.

In February of 2018, RTAC members will meet and approve the ARPO Local Input Methodology. In April of 2018, the RTAC will hold a Public hearing for final approval of the local input methodology Regional and Division scores and will assign local input points to Regional projects.

In September of 2018, the RTAC will meet to discuss the finalized quantitative Regional scores and assign final Division local input points to projects. In January of 2019, the NCDOT will release the Draft STIP.

The RPO will present the project scores of all projects to the RTCC and RTAC at their January 2018 meetings. Once approved by the RTAC, the RPO will release the project scores for a 30-day public comment period. This comment period will be advertised on the RPO website http://www.albemarlecommission.org/planning/sti-project-information/ and via local media. The results of the public comment period will be presented to the RTCC and RTAC at their April 2018 meetings where the public will also be able to submit comments and all public comments will be documented. In April 2018, the RTAC will take any public comments into account and be asked to approve the project list and scores. Once complete, the list and project scores will be available on the ARPO SSTI project information website located at http://www.albemarlecommission.org/planning/sti-project-information/.

Point assignment process:

Any justification/rationale for local point assignment deviation from the RTAC adopted and SPOT office approved Methodology by the RTAC will be posted on the ARPO website for public inspection. Special consideration to deviate from the approved Methodology includes, but is not limited to, projects not being competitive in their respective categories, projects that are not far enough along in the planning process to warrant funding, projects that have strong local government support, and projects that have strong public support. Any deviation from the approved Methodology must be agreed upon by a majority of RTCC and RTAC members as outlined in the ARPO Bylaws. This allowance is envisioned as a safety net to provide local oversight to the data-driven process and to compensate for any peculiar scores where the prioritization methodology fails to operate as expected. Any local point assignment deviation from the methodology will be fully disclosed to the public and reason(s) why placed on the ARPO STI/Project information page located here: http://www.albemarlecommission.org/planning/sti-project-information/.

Materials sharing:

This ARPO STI project information webpage, located at http://www.albemarlecommission.org/planning/sti-project-information/, provides an overview of the STI process as well as public notices for the former and current Prioritization processes. All public comment periods, materials approved by the RTAC and preliminary and final local input point assignments will be available within one week of approval of the ARPO RTAC Board and will be grouped under the heading “Prioritization 5.0”.

Agenda Item No. 7

Item Title: Harbor Town ferry project

Item Summary: Professor Nicholas Didow, of the UNC-Chapel Hill Kenan-Flagler Business School, recently presented a water transportation project concept in the Albemarle Sound to local officials and the business community in Pasquotank County

Specific action requested: This item has been presented for discussion and possible action by the RTAC Board.

Number of attachments: 6

In March, Nicholas Didow presented the Harbor Town Ferry project to local officials and the business community in Pasquotank County, as well as the Joint Legislative Program Evaluation Oversight Committee of the North Carolina legislature. At the time of his first presentation, in mid-March, Professor Didow was seeking support from five of our member counties (Chowan, Perquimans, Pasquotank, Washington, and Tyrrell) to apply for $7.5 million in Golden Leaf grant funds ($1.5 million each County) to fund the first phase of the project. However, those five counties were already in the process of working on their Golden Leaf project submittals for other projects in their respective counties. As presented, the project would be overseen by a body called the IBX Authority which member counties and municipalities would each have a seat on.

When Staff found out about this project, and after a discussion with ARPO RTAC Chairman Lloyd Griffin, Staff sent the RTCC and RTAC Boards an email to inform that the ARPO was aware of the project and it would be a discussion item at our April 25, 2018 RTCC and RTAC Board meetings. We requested Professor Didow provide us the feasibility study for the project, as well as information regarding where the funds for the five ferries as outlined in the project, would come from. Professor Didow sent us the feasibility study but we are still unsure how the five ferries he proposes would be needed for the project, would be funded.

In late March, professor Didow presented the Harbor Town ferry project to the Joint Legislative Program Evaluation Oversight Committee of the North Carolina legislature. This presentation was done in concert with the Program Evaluation Division ferry study report presentation of which the Joint Legislative Program Evaluation Oversight Committee did not agree the recommendations were needed. If you recall, the Boards discussed the PED study in February and tabled action on it until the Ferry Divisions agency response was made public.

A couple of members counties question if the funding for the ferries would be requested to come out of the STI where they would have to compete with highway, current ferry system, new, and ferry replacements, bicycle and pedestrian projects, transit projects, and aviation projects. After discussion with Sterling Baker, the STI law allows for new “passenger” ferries for the NCDOT ferry system, to be funded out of the Regional Impact category, however, at the time the law was drafted, “passenger” ferry meant the vehicle ferries as there were no walk on only ferries in the state system. At the Division Needs level of funding, only replacement ferries for the NCDOT ferry system can be funded.

Staff has received resolutions, regarding the Harbor Town ferry project from the Town of Hertford, the City of Elizabeth City and Pasquotank County and they are attached as information. Staff has also attached the 1994 feasibility study for the project, the IBX Authority presentation, and the Harbor Town ferry presentation.

As you will recall, this topic was discussed at our meeting in January 2017 when it was proposed that this project be paid with through county occupancy taxes. At that time, Albemarle Commission Executive Director Cathy Davison drafted a letter, and forwarded to member counties at the request of the RTAC, when the initial IBX authority report was released and the report suggested using occupancy taxes for the project. A copy of this letter is attached for your consideration.

May 94

A PRELIMINARY ANALYSIS OF THE FEASIBILITY OF OPERATING HIGH-SPEED PASSENGER FERRIES ON THE RIVERS AND SOUNDS OF NORTHEASTERN NORTH CAROLINA

OUR BRIDGES CROSS OCEANS

16

CHARLES D. MILLER AND ASSOCIATES

TRANSPORTATION CONSULTANTS

VIRGINIA BEACH, VIRGINIA
(804) 499-8091

EXECUTIVE SUMMARY

This Report entitled, ***A Preliminary Analysis Of The Feasibility Of Operating High Speed Passenger Ferries On The Rivers And Sounds Of Northeastern North Carolina***, was commissioned by Bunny Sanders, Director, Office of Tourism Development, Northeastern North Carolina Economic Development Commission. Its purpose is four fold, namely to:

1) Provide the Office of Tourism Development and the Commission with an overview of current international fast ferry designs and technology;

2) Describe examples of existing fast ferry operations and the nature of services provided in the U.S. and abroad;

3) Determine if it would be technically and operationally feasible to utilize this type of high-speed vessel in support of the Office of Tourism's proposed regional Water-Based Tourism and Economic Development (Regional Harbor) Strategy for the 16 counties of Northeastern North Carolina; and,

4) Provide insights as to the type of vessels deemed most suitable for the proposed service together with order-of-magnitude financial estimates concerning required investment for acquisition of fast ferries and vessel operating costs.

High performance vessel (fast ferry) technology is broad in scope and advancing rapidly in an evolutionary manner. By definition, a "fast ferry" is a vessel transporting 50 or more passengers at 25 knots speed (28.75 mph) or better. There are many different types of fast ferry designs. Fast ferry design and performance is very route specific and safety is a basic design/regulatory requirement. Proper matching of vessel performance characteristics and route seakeeping requirements is of critical importance in vessel selection. Passenger comfort, vessel speed in average sea and load conditions, and operating economics are extremely important considerations in the selection process. Most new high speed passenger ferries are between 75 and 131 feet (23-40 meters) in length with passenger capacities from about 100 to over 400 persons. The 40 meter catamarans on the front cover, built by Austal Ships of Henderson Australia, are representative of this new breed of craft. An increasing number of high-speed ferries carry automobiles (and trucks as well) at cruising speeds of 40 to 46 miles per hour (35-40 knots). Multihulls--predominantly planing catamarans of various types, are the most popular design world-wide, and normally operate in semi-sheltered or short coastwise routes. Some very large third generation multihulls currently under construction are designed to carry up to 1500 passengers and 375 cars at speeds at or near 50 miles an hour.

There are fast ferry operations all over the world. The 1993 **Fast Ferry International Operators Directory** listed 186 companies operating 718 high-speed ferries of every description. Many of the most highly publicized operations are found in the U.K., Northern Europe, Scandinavia and the Baltic, and in the Far East. In the U.S. there are fast ferry companies operating in New York Harbor, the Great Lakes, Pacific Northwest and California. Use of ferries in the U.S. has not kept pace with the rest of the world; however, new operations are planned or coming on stream in Florida, New York, Seattle and San Francisco. The sleek, fast, safe and comfortable high speed ferry is becoming a

popular and often preferred mode of travel for the commuter and tourist alike. There are currently several Coast Guard approved designs available to U.S. operators and licensing agreements with American shipyards are increasing the number of service-tested international designs which may soon be built in this Country. However, only designs currently certified by the Coast Guard and in operation in the United States were considered in this evaluation.

On-site evaluations of harbor facilities at the eleven Regional Harbors plus New Bern, and study of nautical charts, revealed that it would be feasible and safe to operate shoal draft passenger ferries with loaded draft of four to five feet in most areas of the Sounds and in small town harbors. Moreover, it was found that dock facilities at all of the so-called *regional harbors*, excepting Hertford which has only a small boat pier, were basically suitable for handling the size of vessels contemplated without major modification or improvements to the wharves.

A conceptual route system linking all 12 regional harbors was devised with *primary routes* serving existing major tourism centers having well-developed tourist attractions, and *secondary routes* connecting the smaller, less developed harbors. Whereas the Water-Based Tourism Strategy presented to the Legislature was likened to the "shopping mall" concept, the proposed route system is similar to the "hub and spoke" systems of the airlines and may be viewed in the Route Map included in the back cover of this Report. The latter provides for Manteo as the Hub and interline point for the Albemarle and Pamlico ferry stems with Ocracoke as the secondary Hub linking Pamlico and Neuse River routes with Manteo. Likewise, Edenton and Swan Quarter serve as *satellite* hubs for the smaller harbor towns of Plymouth, Columbia, Hertford (Albemarle Plantation) and Belhaven, Bath, Washington, respectively. Although not at the geographic center of the Sounds, Manteo was chosen as the Hub due to its excellent harbor and proximity to other major tourist attractions on Roanoke Island and the Outer Banks. These factors plus a new bus service linking Manteo with tourist-based population centers in Nags Head and Kitty Hawk, made Manteo the logical choice as a connection point. Public transportation between ferry terminals and tourism centers is deemed vital to the success of a passenger only ferry service. Ferry service to New Bern was included as it is seen as a major tourism "gateway" that would benefit from a direct service to Ocracoke while serving as the southern terminus of the inter-Sound system.

It was determined that a fleet of seven vessels consisting of five 35 knot (40+ mph) catamaran ferries of which two are 250 passenger and three are 150 passenger, and (2) 30 knot (34.5 mph) 50 passenger, foil-assisted catamaran feeder vessels ("water buses") could provide adequate levels and frequency of service to all destinations. With only sketchy tourism traffic data and no prior ferry operating history available, vessel capacities are "nominal" sizes deemed adequate for starting up a new system. Representative travel times between major centers include: New Bern/Ocracoke 1hr 55m; Ocracoke Manteo 1hr 51m; Swan Quarter/Ocracoke 50 minutes; Manteo/Elizabeth City 1hr 13m, and Elizabeth City/Edenton 1hr 34m. Hypothetical ferry schedules developed permit a traveler entering the system at any of the regional harbors to travel to any other destination within the system in one or two day's time. Thus, a tourist boarding an early departure of Ferry No. 1 in Manteo could spend the morning in Elizabeth City, perhaps with lunch at a quiet waterside restaurant, ride fast ferry No. 2 to Edenton for an afternoon walk through the historic waterfront district, take the late afternoon "Water Bus" to Plymouth or Columbia for dinner and either stay over at one of these small towns or return to Edenton for a direct "flight" back to Manteo on Ferry No. 1 the following afternoon. Alternatively, a visitor to Elizabeth City could opt for a leisurely day's "cruise on the Sounds" leaving Elizabeth City for Manteo at 1148, arriving 1:01pm in time to visit the shops at the Ferry Terminal--or the Elizabeth II across from the ferry landing, before catching the 2:22pm departure of Ferry No. 4 for Ocracoke where one could either decide to switch to Ferry No. 7 for a late afternoon exploration of Pamlico River Harbor Cities arriving Washington 8:25pm, or catch the 6:50 departure of Ferry No. 5 for New Bern, arriving in that historic city at 8:45pm. These are but a few of the many travel options possible utilizing the system envisioned.

Purchase price of the seven vessel ferry fleet is estimated to cost about 15.1 million. Associated acquisition costs including spares, interest during construction, owner's outfit etc., could easily raise the total to 16.5 to 17 million dollars. Average annual Direct Operating Cost of the ferries assuming 100% financing of the purchase price at 9% interest over ten years, is estimated to run about $8.34 million a year. The latter includes expenses such as manning costs, fuel, insurance, maintenance and depreciation but excludes Indirect Operating Costs associated with administrative and operating management, traffic and terminal expenses, marketing, etc. Corresponding costs per seat-mile range from $0.113 for the 250 passenger ferries to $0.205 per seat mile for the 50 passenger feeder ferry. These are approximate cost figures based on average annual load factors of 60%. Operating 300 days a year, 7 days a week, 12 hours a day, the ferry system defined in this conceptual model could transport between 3,800 and 7,800 persons a day (1.2 to 2.3 million passengers a year) at 50% and 100% of capacity utilization, respectively.

The recommendation is made to establish a Northeastern North Carolina Ferry Authority for the purpose of obtaining State and Federal funds necessary for further development of a comprehensive tourism-based fast ferry system business plan, and implementation of this imaginative and much needed economic development tool.

-End-

A PRELIMINARY ANALYSIS OF THE FEASIBILITY OF OPERATING HIGH-SPEED PASSENGER FERRIES ON THE RIVERS AND SOUNDS OF NORTHEASTERN NORTH CAROLINA

Final Report

For

Ms Bunny Sanders
Director
Office of Tourism Development
Northeastern North Carolina Economic Development Commission
Elizabeth City, North Carolina

May 20, 1994

By:

CHARLES D. MILLER AND ASSOCIATES
5317 PRINCESS ANNE ROAD
VIRGINIA BEACH, VIRGINIA 23462

TELEPHONE (804) 499-8091
460-0971
FACSIMILIE 499-8091

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

A PRELIMINARY ANALYSIS OF THE FEASIBILITY OF OPERATING HIGH-SPEED PASSENGER FERRIES ON THE RIVERS AND SOUNDS OF NORTHEASTERN NORTH CAROLINA

I INTRODUCTION

High Speed passenger vessels have been around for a long while. The transatlantic speed record of just under 36 knots was set by the former Luxury Liner SS United States in 1952, then the world's fastest merchant ship. A record it held for 38 years. Interestingly, the current transatlantic speed record of 36.6 knots was won by a fast ferry, the *Hoverspeed Great Britain*, (Fig. 1) in 1990. The latter, a 74 meter long Wave Piercer Design, was originally denied the coveted Hale Trophy on technical grounds, but that is another story.[1]

Aside from speed however, these ships have little in common. By way of contrast, the SS United States has a length overall of 301.4m (990 ft), a beam of 32.5m (106.5 ft), and is a full dis- placement, steel monohull whose steam turbines produced a total of 240,000 HP.[2] Typical of most modern fast ferries, the 74.3 m long (243.8 ft), 26 m wide (85.3 ft) catamaran, *Hoverspeed Great Britain*, is built of aluminum, has no staterooms and is powered by four 5000 horsepower diesel engines driving four direct connected waterjets. The vessel carries approximately 450 passengers and 84 cars, has a maximum design speed of 45 knots and a service speed of 37 knots.[3] As a historical note, the *Hoverspeed Great Britain*, was the first of a series of 74 meter auto/passenger ferries designed and built to operate in higher seas than possible with existing (and aging) SRN Mark III hovercrafts in English Channel service. A move designed to help ferry operators compete with the "Chunnel," the soon to be completed (..in 1994) Euro rail tunnel connecting Britain and France.[4]

As with automobiles, ships and aircraft, high-speed vessel technology is an evolving process which has had its share of "teeth cutting" problems. However, the present generation of sleek, fast ferries reflect cumulative improvements in such things as the availability of reliable and relatively light-weight, high-horsepower diesel engines, small light-weight gas turbines, efficient waterjets and advances in surface piercing propellers, use of aluminum and very strong fiberglass

---

[1] "New Breed of Bigger Wave-Piercers," Marine Log (September 1990): p 20.

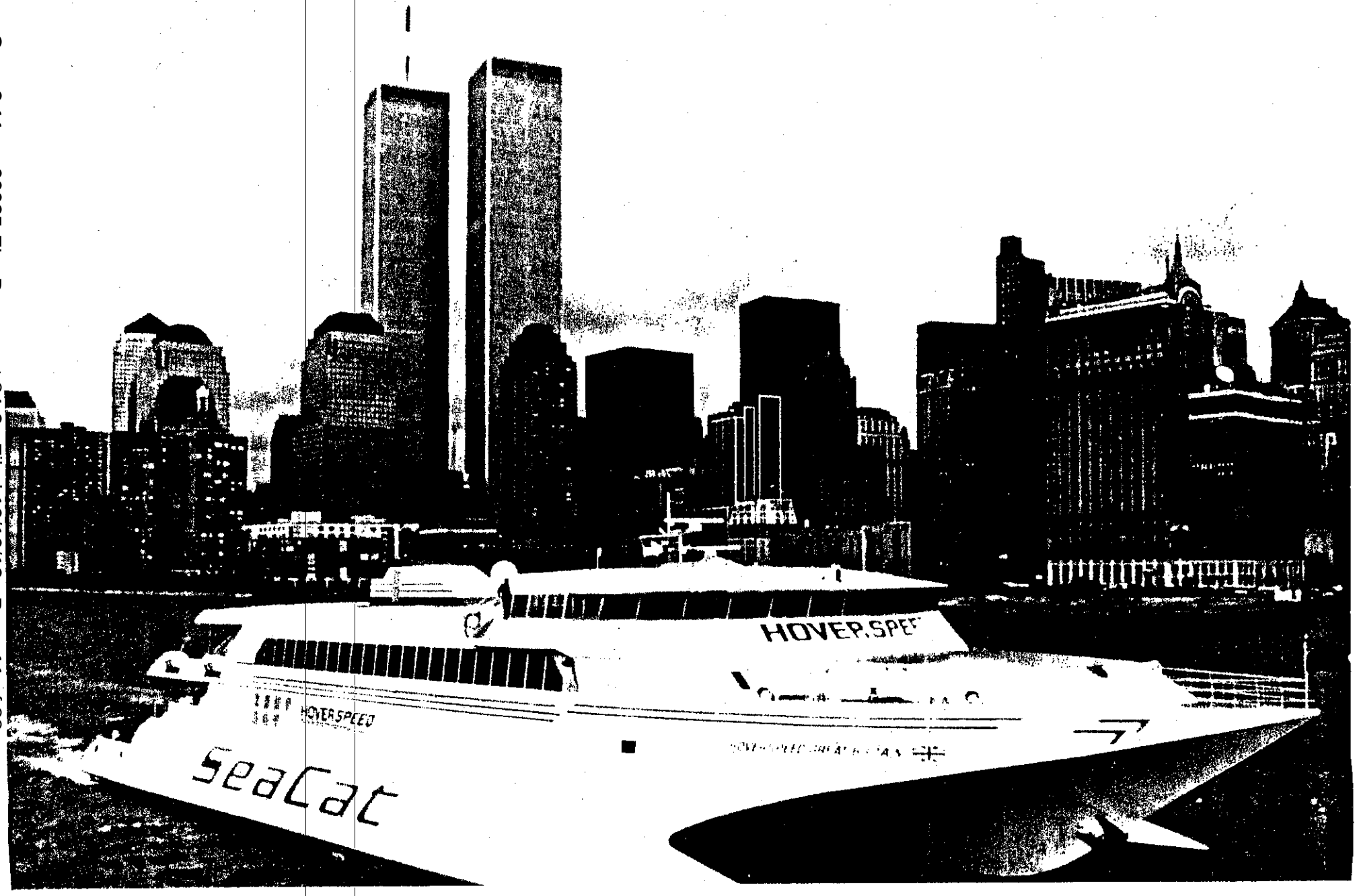
[2] Abe Dane, "Fast Ferry," Popular Mechanics (December 1990): 32.

3 "Specification Sheet, 74 Meter Wave Piercer Car Ferry," International Catamaran Designs Pty. Ltd.

4 Ibid., p. 31.


CATALINA CHANNEL EXPRESS
JET CAT EXPRESS

FIGURE 1



composite hull materials, the development of ride control systems and the optimization of structures through modern engineering and manufacturing techniques. Suffice it to say, high-performance vessel (fast ferry) technology is broad in scope and advancing rapidly. Moreover, the industry is now well-established and growing world wide.

A. Fast Ferry Types and Technology

A generally accepted definition of "fast ferry" is a vessel carrying a minimum of 50 passengers at a full load speed of 25 knots.[5] For the most part, fast ferries are of light displacement, built of aluminum or composite fiberglass material, are relatively shoal draft, diesel and/or gas turbine powered, and are frequently outfitted with waterjet propulsion systems. Common vessel types include:

- Planing mono hulls and multi-hulls, e.g., slender deep "vee" monohulls, catamarans, trimarans and quadrimarans;
- Wave Piercers (hybrid wave piercing planing catamarans);
- Fast displacement vessels: SWATH (small waterplane area twin hull);
- SES (surface effect ships);
- Hovercraft (air cushion vehicles);
- Jetfoils and Hydrofoils - foil supported monohulls;
- Catfoils - foil augmented catamarans.

Fast ferry design and performance is very route specific. Safety is a basic design/regulatory requirement. Proper matching of vessel performance characteristics and route requirements is of critical importance in vessel selection. Comfort, speed in average sea and load conditions, and operating economics are critical factors in the selection process; however, passenger comfort (and safety) must be paramount.

1. Passenger Vessels

The majority of new fast passenger ferries are between 23 and 40 meters in length (75-131 ft) with the greatest number being built in the 30 to 40 meter range. Passenger capacities range from around 100 to over 400 persons. Catamarans, planing monohulls and SES (surface effect ships) are the most popular types of vessels of which catamarans are, by far, the most numerous, followed by, in order, monohulls and SES vessels. Although there are two large SRN Mark III hovercraft (capacity 390 passengers and 55 cars at 55 knots) built in the mid-60's[6]

---

5 Fast Ferry International Operators Directory 1993, Page 3

6 David G. Benson, Vice President Sea Containers Ferries, "Operating Fast Ferries Around the World," Paper presented at 10th Annual Fast Ferry International Conference, London, (February 22, 1994):

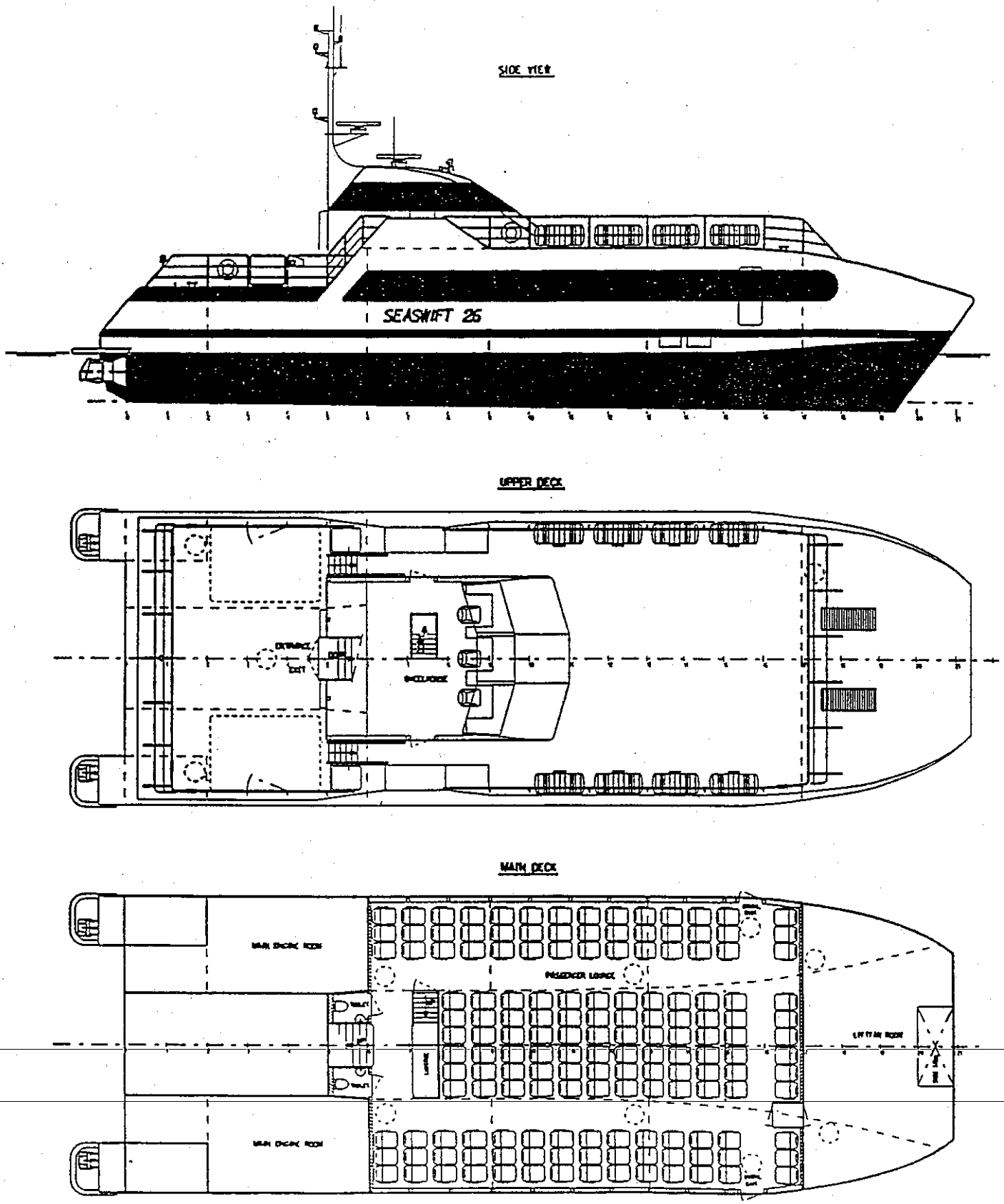


FIGURE 2

156 PASSENGER SEA SWIFT 26
SURFACE EFFECT SHIP

still operating in the rugged cross (English) channel service, and many smaller hovercraft and hydrofoils in operation world wide, these vessels are being replaced by their more efficient modern counterparts mentioned above.

Service speeds (fully loaded) for these newer craft range from 25 knots to as high as 50 knots. Generally speaking, service speeds for monohulls tend to top out in the 30 to 32 knot range, whereas catamarans and other multi-hulls typically peak at speeds of between 35 and 40 knots with most vessels operating at or near the lower figure. Until the advent of the latest generation of multihulls which are pushing into the 45-50 knot range, service speeds of 45 knots or greater have been the province of SES vessels, jetfoils and modern hovercraft (air cushion vehicles); however, the latter have come to be considered special mission amphibious craft and, for the most part, are not normally employed in conventional ferry services. Again, these are "service speeds" and not maximum speeds lightly loaded. As a point of clarification, the surface effect ship (SES) is an "air-supported craft with catamaran style, rigid side hulls. (... To reduce vessel draft), the SES uses a cushion of air trapped between the side hulls and flexible bow and stern seals. This reduces drag while producing greater efficiency and higher speeds. A portion of the side hulls remain in the water, as do the propellers, aiding in maneuverability and stability of the craft. This makes the SES more tolerant of heavy seas than conventional boats and opens up opportunities unavailable to displacement and planing hulls."[7] A modern Dutch designed 26 meter (85.3 ft) SES and a popular Australian designed 40 meter "Austal" catamaran are shown in Figures 2 and 3 respectively.

2. Auto/Passenger Ferries

The development of second generation high-speed auto/passenger vessels is a recent and remarkable success story for the fast ferry industry. Generally speaking, these vessels are larger versions of the hull types used for passengers discussed above. However, the most prominent of these is the Incat 74 meter Wave Piercer of which the *Hoverspeed Great Britain* was the first. Outfitted with sophisticated ride control systems which dampen vertical accelerations to acceptable levels--reducing the probability of seasickness to under 10% over a 2 hour cross-channel run in significant head seas of 2.5 meters (8.2 ft),[8] these vessels are capable of carrying 400 plus passengers and 90 cars at service speeds of 36-38 knots in 3.5 meter (11.5 ft) seas. Larger wave piercing types with capacities of over 100 cars and 600 passengers are currently under

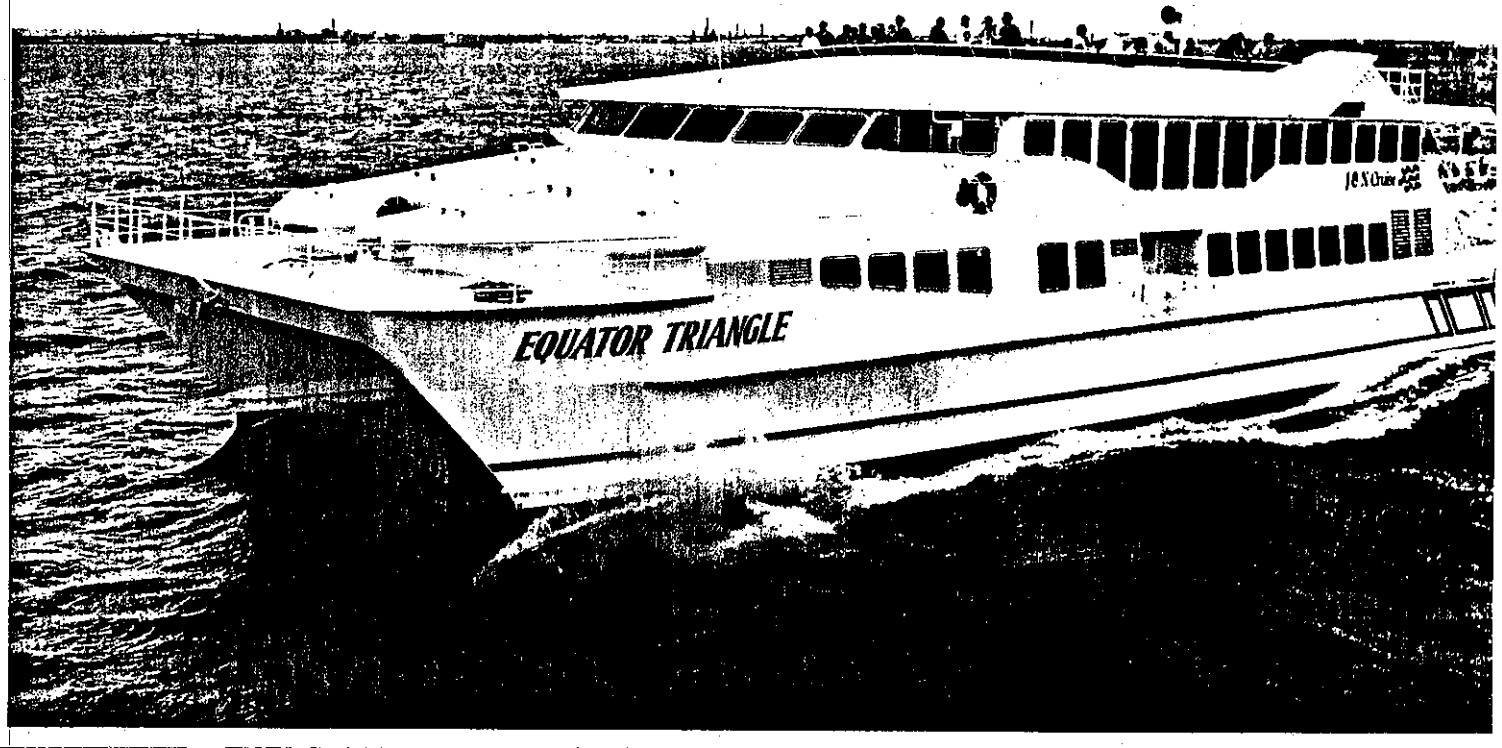
7 "Technology Shaping The Future," Textron Marine Systems Booklet: p. 10.

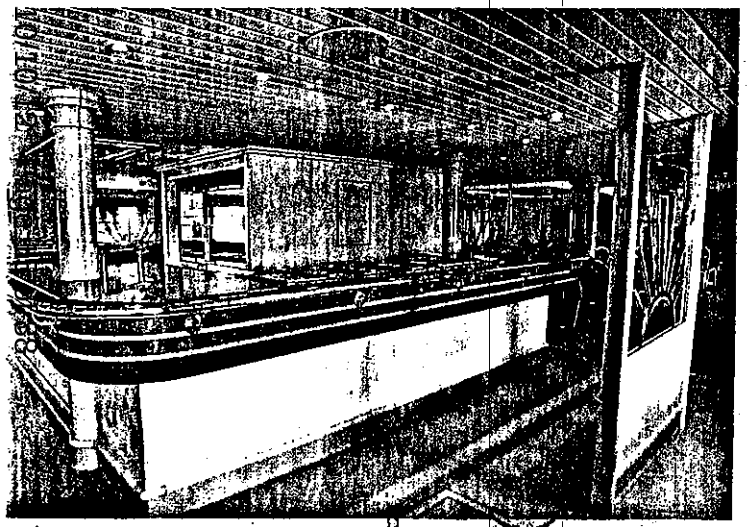
8 A.R. White, Andrew Way, J.D. Adams, Condor Ltd., "Condor....Success by Innovation," Paper presented 10th International Fast Ferry Conference, London (February 22-24, 1994): p. 7.

AUSTRALIAN EXCELLENCE IN ALUMINIUM

BRILLIANT TECHNOLOGY
SUPERB SKILLS

40m PASSENGER CATAMARAN





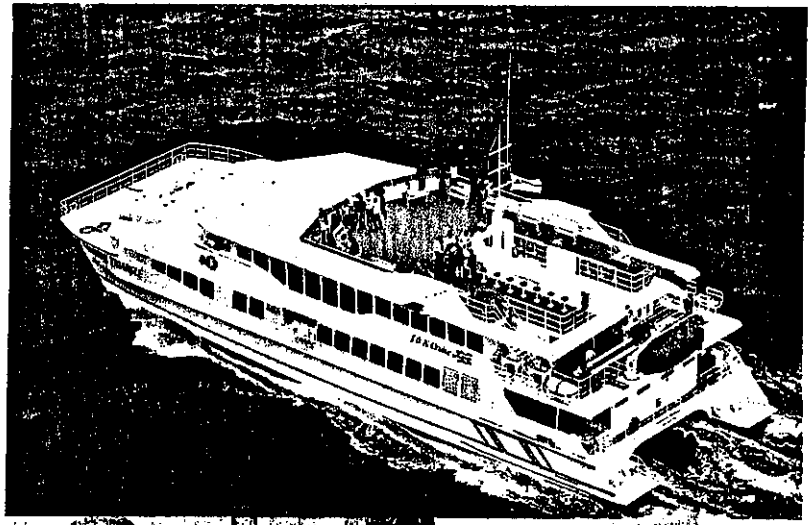


FIGURE 3
AUSTAL SHIPS
40 METER CATAMARAN

AUSTAL

construction by Incat of Tasmania and other builders. At least two large and very fast third generation, steel-hulled planning monohull auto/passenger ferries are presently operating in the Mediterranean. The first of these, the 101.75m (334 ft) *Aquastrada Guizzo* (Fig. 4) carries about 450 passengers and 150 cars. It is powered by two diesels and one gas turbine producing approximately 37,000 horse-power which give the waterjet propelled vessel a service speed in excess of 40 knots[9] which is over 46 miles per hour.

Another truly 3rd generation auto/passenger fast ferry is the futuristic 124m (407 ft) Stena HSS (Highspeed Sea Service) catamaran two of which are currently under construction by Finnyards Ltd in Finland. When completed in 1995 and '96 respectively, these remarkable ocean going vessels will be the world's largest aluminum catamarans capable of carrying 1500 passengers and 375 cars (or 50 trucks and 100 cars) at speeds of 35-40 knots. Together they represent an investment of over $195 million by Stena, AB, an established conventional ferry operating company with vessel operations in Scandinavia and the UK.[10] Several other European and Australian ferry builders have similar large auto/passenger ferry designs for both monohulls and catamaran/swath type vessels. Clearly, competition for fast auto/passenger ferry orders is intense and there appears to be no end to technological developments in this field.

B. International and U.S. Fast Ferry Operating Companies

There are fast ferry operations virtually all over the world. The 10th annual publication of the Fast Ferry Operators Directory 1993[11] lists 186 companies operating 718 high-speed vessels of every description. Some of these companies have successfully operated fast ferries since the early 1960s demonstrating the viability of the technology and the market's acceptance of high speed transport services.

1. Overseas Ferry Markets and Operating Companies

Some of the most highly publicized ferry markets are those in the United Kingdom and Northern Europe, Scandinavia and the Baltic, and in the Far East, notably between Hong Kong and Macao. More recently, the Peoples Republic of China has become a large market in itself.

One of the long-term U.K. (Isle of Guernsey) companies is Condor Ltd who, since its formation in 1963, has operated a total of six hydrofoils, two conven-tional catamarans and two

---

9 "Rodriquez Aquastrada Fast Monohull Car Ferry," Company Brochure, Rodriquez Cantieri Navali SpA, Messina, Italy.

10 "Dramatic Changes Herald Revolution," Lloyd's List (October 4th 1993):

11 "Fast Ferry International Operators Directory 1993," Fast Ferry International: 3.

wavepiercing catamarans. All of these craft were built of aluminum and operate at speeds in excess of 34 knots in sea states which--with the addition of "Condor 10," have now increased to a significant wave height of 3.5 meters (11.5 ft).[12] Condor Ltd. provides English Channel ferry services to the Channel Islands which is an area known for rough seas and violent weather. During the 1991 and 1992 seasons, "Condor 9," a 49m (160.8 ft) Incat Wavepiercer, alone carried 525,000 passengers.[13]

Another prominent and long-term operator is Sea Containers Ferries which acquired Hoverspeed in 1986.[14] The latter was established in 1981 and currently operates (2) SRN Mark III hovercraft, (4) 74 meter SeaCats (auto/passenger wave piercers), all in cross-channel service, and (2) 28 meter passenger-only Incat catamarans between ports on the Isle of Wight. The two 28 meter Incats operate on short routes making over 14,000 trips a year. The Company has also operated fast ferries between such places as Sardinia and Italy, Portsmouth, England and Cherbourg, and Dover and Boulogne. Additionally, Sea Containers has operated between Buenos Aires and Colonia in South America and across the Bass Strait between Welshpool in Victoria and Georgetown in Northern Tasmania. All told, in 1993 the Company's fast ferries carried over 8 million passengers and 1.6 million vehicles system wide.[15] An impressive record by any standard.

Not to be omitted is Hovertravel, the oldest commercial hovercraft operator in the world. This British company introduced its first SRN6 hovercraft on its Solent route in 1965 and operated this type of craft until 1983 when they were replaced by BHC AP.1-88/80 hovercrafts.[16] As of November 1993, Hovertravel carried its 13 millionth passenger on its Ryde-Southsea route.[17]

2. U.S. Fast Ferry Operations

Relatively speaking, the development of fast ferry operations in the U.S. and North America

---

12 A.R. White, Andrew Way, J.D. Adams, Condor Ltd. "Condor...Success by Innovation," Paper presented to The 10th Fast Ferry International Conference, London (February 22-24 1994): p. 2.

13 Ibid., p. 8.

14 Fast Ferry International Operators Directory 1993, Fast Ferry International: p. 28.

15 David G. Benson, Vice President - Sea Containers Ferries, "Operating Fast Ferries Around the World," 10th Fast Ferry International Conference (February 22, 1994)

16 Fast Ferry International Operators Directory 1993: 28.

17 "Hovertravel Carries 13th Millionth Passenger," Fast Ferry International (January-February 1994): 19.

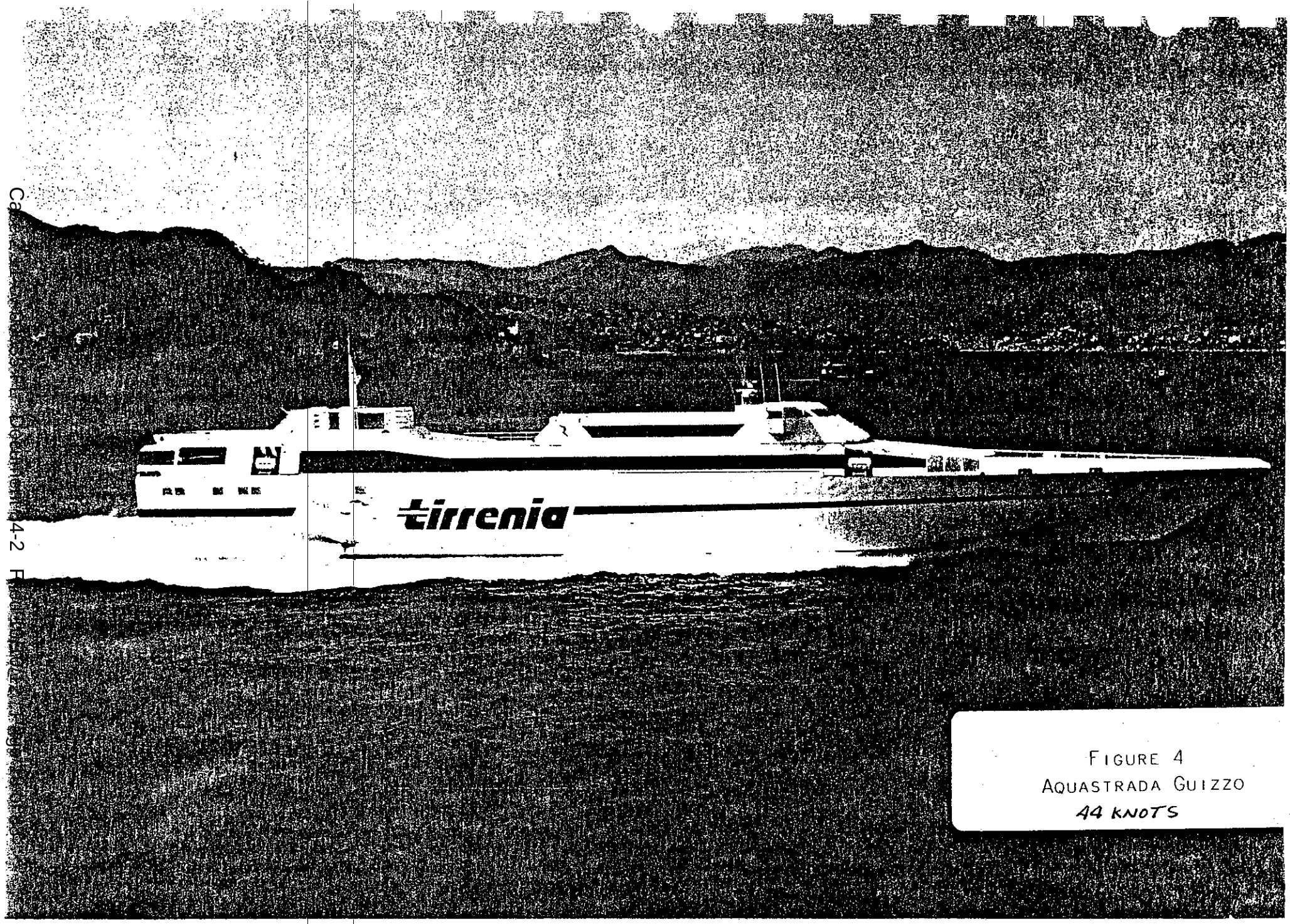


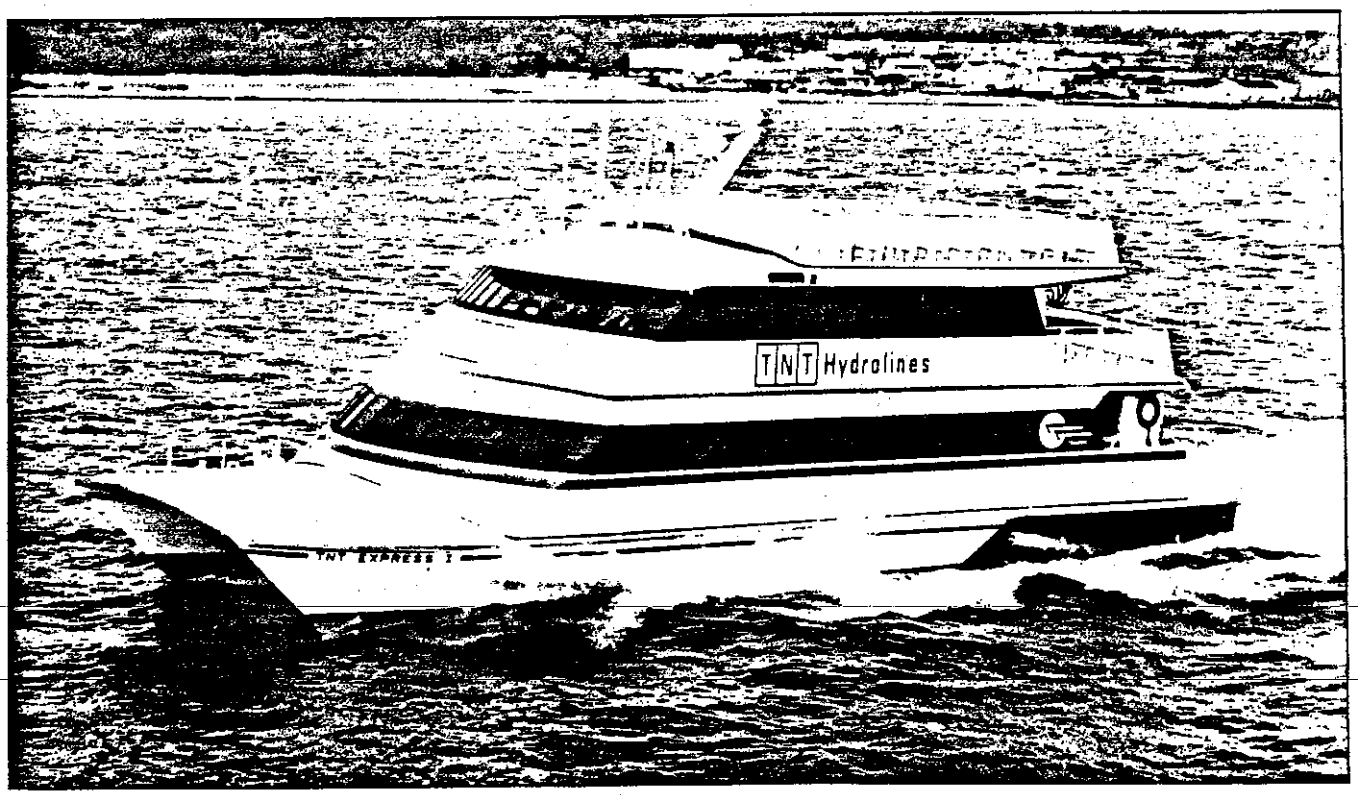
FIGURE 4
AQUASTRADA GUIZZO
44 KNOTS

FIGURE 5

Catamarans

TNT Express I & II, two 82-foot International Catamarans operated by TNT Hydrolines, Inc., in year-round daily commuter service from the Bay Shore area of New Jersey to New York's Wall Street.

WALL STREET DISPATCH



in general, has not kept pace with the rest of the world. Some of the largest fast ferry operations are found in California and the State of Washington. These will soon be joined by New York who in 1993 launched a joint New York City/State program to create new fast ferry routes as a means of reducing automobile traffic and pollution and facilitating access to the greater New York City area.[18] In addition to their use as adjuncts to mass transit systems, fast ferries are also employed in a growing number of tourist-related markets combining transport functions with excursion-type cruise roles. A few examples of both type systems follows:

New York realizing it did not have the financial resources to fix rapidly deteriorating roads and transportation infrastructure or to build new roads and bridges into Manhattan and the Greater New York area, turned to water transport as an alternative. The State joined forces with the City in acting as a catalyst for development by encouraging (and franchising) private, unsubsidized ferry services which could reduce the number of cars entering Manhattan, enhance the development of the City's waterfront and could be easily integrated into the existing transportation system. The same issue of Workboat magazine reported that business and government decision-makers in Florida, the Great Lakes region, and Hawaii were also finalizing plans for establishing new ferry routes and the enhancement of existing ferry services.[19]

At the moment the only fast ferry company in New York is TNT Hydrolines who started service in 1989. TNT operates two 24 meter Incat Catamarans (see Figure 5) on a 25-mile commuter route between Highlands, New Jersey and lower Manhattan. These vessels carry approximately 260 people at speeds in the range of 28-30 knots. Interior seating--a more accurate measure of capacity for vessels operating year-round in northern climes, is around 218. Additionally, the Company provides ferry service between the 69th Street Pier in Brooklyn and the same terminal located in the Wall Street area. As of September 1990, the line was carrying an average of 1043 people a day on its commuter routes.[20] According to TNT, commuter services are considered their "bread and butter" while off-peak excursions over the same routes (and others) for people wishing to visit New York City for leisure and entertainment purposes, are the "gravy."[21]

Another major New York ferry operator is Arcorp whose Port Imperial Ferry Corp (PIF)

---

18 "Ferries Speed Ahead for 1993," Workboat (January/ February 1993): 33

19 Ibid., p. 32

20 "Return of the 'Mosquito Fleet'?", Marine Log (September 1990): 21

21 Mark J. Stanisci, Gary R. Dunzelman, TNT Hydrolines, "Operating a Commuter Ferry Service in New York," Paper presented to The 10th Fast Ferry International Conference, London, (February 22-24, 1994).

operates a fleet of modern 300+ passenger 18 knot ferries between the PATH Terminal in Hoboken and the World Trade Center and a service to mid-town Manhattan from Weehawken, New Jersey. PIF is the largest privately owned ferry operator (currently carrying approximately 10,000 persons a day) in the port of New York and was recently awarded a franchise to operate two or more fast ferries between lower Manhattan, Yonkers, New York and the Tappan Zee area on the Hudson. The New York State Thruway Authority is expected to spend between $5 million to $10 million to develop needed ferry terminals and landings including road access, parking and lights.[22] Port Imperial Ferry was formed amid much public skepticism by Mr. Imperatore, the owner, in 1986 for the purpose of bringing people to his real estate developments on the Jersey side of the River. The real estate projects were halted by the recession but the ferry system continues to prosper. To quote Mr. Imperatore, "when I started (the ferry operation), they called it Arthur's folly, but it has proved not to be joke, it is quite profitable now." PIF contemplates operating up to five 350 passenger 30 knot high speed ferries on the new routes costing approximately $3.2 million each.[23] The new Hudson River routes are just two of several proposed fast ferry services being considered by New York City and private operators.

Seattle is home to one of the most successful ferry systems in the United States. Operated by the State's Washington State Ferries since 1950, ridership is high and still averages a 5% growth rate per year. In 1989 the ferry system carried 20.2 million passengers and 8.7 million cars, mostly across the Kitsap Peninsula.[24] Mainstay on this route are the double-ended 210 car, 2000 passenger monohull ferries. As of 1991 Seattle's public ferry system consisted of 11 routes--two passenger only, 9 passenger/car ferries and two passenger-only vessels. At the time, four new passenger-only routes had been identified for development.[25] New private operators have been franchised to operate "premium" service high speed ferries on longer routes and are were not deemed a threat to the State run system. Interest in high speed passenger transport continues and a recent report by the Washington State Transportation Commission focussing on passenger only ferry service in Puget Sound concluded that, ultimately, the area should purchase 12 new 350 passenger, 30-knot catamaran type passenger ferries. The report was created to develop a plan for expanded and improved passenger services in Puget Sound between Seattle and four outlying areas. Implementation of the plan would be in two phases. The first for purchase of

---

22 "T.A. Going Down the River," The Herald Statesman (August 3, 1993): 17A

23 "Fast Boat to Manhattan May Sail From Yonkers," The New York Times (December 5, 1993).

24 "Return of the 'Mosquito Fleet?" Marine Log (September 1990).

25 "Ferries: Funding Still a Critical Issue," Marine Log (June 1991): 46

7 new vessels and the retention of an existing 319 passenger, 23-knot catamaran built by Nichols Brothers for $ 2.5 million. Phase two included the purchase of an additional five vessels. Projected cost of Phase I is $60.5 million including vessel acquisition costs of $34.3 million. The Plan has yet to be presented to the Washington State Legislature for approval and funding.[26] An update to the foregoing reports that the catamarans would cost $5.6 million each, or 1/12th the price of a jumbo car ferry, and cut commuting time in half. If approved by the Legislature in 1995, Phase I of the project could begin in 1997. Cross Puget Sound runs from Vashon Island and Bremerton to Seattle are currently served by two large passenger ferries. The Plan would double the number of cities presently served by the Washington State Ferry System.[27]

To the south, the San Francisco Bay area is host to a growing number of high speed passenger ferry services and several conventional ferry operations. Three companies operate four fast ferries on four routes. Golden Gate Bridge, Highway and Transportation District--a public authority, currently operates conventional monohulls on two routes in the Greater San Francisco Bay area. An average of 3651 passengers a day are carried on its Larkspur route and 1537 passengers on its Sausalito route. The Red & White Fleet, a private company, operates two 26m (85.3 ft) Incat Catamarans on routes between San Francisco, Tiburon (six miles), and Vallejo (25 miles) California. Another private company, Blue & Gold Fleet, operates a 22m (72.2 ft) Incat Catamaran--certified to carry 212 passengers, between Oakland, Alameda and San Francisco, a six-mile route. It is being replaced this year by a 29m (95.2 ft) 250-passenger "Z-Bow" Incat Catamaran with a full load speed of 30 knots (34.5 mph).[28]

The Golden Gate Bridge District, a public authority, operates ferries to Larkspur and Vallejo, eleven and twenty-six miles from San Francisco respectively. A 1993 WORKBOAT article reported the District was seeking a combination of State and Intermodal Surface Transportation Efficiency Act (ISTEA) funds for financing the purchase of (3) 350-passenger catamaran ferries with 37 knot (42+ mph) capability budgeted at $5 million each. A Regional Ferry Plan completed in 1991 calls for the acquisition of a total of five such vessels, constructing terminal improvements and improving feeder bus services to all ferry terminals. Two of these vessels are to be ordered by Golden Gate District this year and two have already been ordered by the companies providing

26 "Study: Washington State Should Buy 12 New Vessels," Maritime Reporter/Engineering News (February 1994): 14.

27 "Ferries Plan on Hold," WorkBoat (March/April 1994): 12.

28 Fast Ferry International Operators Directory 1993: Page 10 & 47.

Alameda/San Francisco service.[29] Most recent development in the Bay area was the delivery of the Harbor Bay Express (Fig. 17) to the City of Alameda. A 19.8m (65 foot) foil-assisted catamaran, the vessel carries 147 passengers and has a loaded service speed of 30 knots (34.5 mph). It will be used to ferry passengers between Alameda and San Francisco, a distance of about 6 miles.[30]

Still farther to the south are the fast ferry services linking San Pedro, Long Beach and San Diego with Santa Catalina Island. A popular island resort on which no automobiles are allowed, Catalina is about twenty some odd miles south of Los Angeles harbor. Catalina Channel Express Lines is the largest ferry company serving the Island and carries around 400,000 passengers a year. Although in business for 13 years, it acquired its first fast ferry in 1986, a 27.4m (89.9 ft) Westport 90 25-knot monohull. Catalina Channel Express currently operates two 28-knot Westport 95's (monohulls) which are limited to 149 passengers due to Coast Guard restrictions on vessels built entirely of grp composite (fiberglass) materials. The "Jet Cat Express," a 290-passenger 31 meter (101.7 ft) 30+ knot Incat Catamaran was added to the fleet in 1991. Although the latter has performed well--and is the largest and fastest boat in the fleet, the catamaran is being sold on account of the high incidence of sea sickness experienced under certain weather conditions. The "Jet Cat Express" is being replaced by two Westport 100 monohulls which are equipped with foil stabilizing systems and which have a loaded cruise speed of 30 knots. Another company, Catalina Passenger Service, operates the "Catalina Flyer," a 36m (118 ft) 26-knot, 600 passenger Incat Catamaran which is the largest non-wavepiercing Incat designed vessel built to date. The 1993 fare for the roughly one hour ride to Avalon was $32.50 round-trip. The company claims they have never had to cancel a voyage on account of weather but have been denied landing on the island due to rough seas. Santa Catalina is served by a third company, Seajet Cruise Lines out of San Diego, which operates the "Sea Jet I," a 37m (121.4 ft) Incat WavePiercer, which makes one round-trip a day on the 67 mile long ocean run.[31] The latter vessel was built as the "Nantucket Spray" for service between Boston and Nantucket but was withdrawn from the service and sold due to the high incidence of sea sickness on the route. Pointing up, again, the need to closely match route operating conditions with vessel operating characteristics.

On the Great Lakes, Put-in-Bay Boat Line operates two high speed Incat Catamarans on a

---

29"Ferries Speed Ahead for 1993," Workboat (January/February 1993): 36.

30

31"Monohulls and Catamarans Dominate Catalina Market," Fast Ferry International (November 1993): Pages 22-26.

seasonal 12-mile route between Port Clinton, Ohio and Put-in-Bay, a town on South Bass Island in Lake Erie. The 28m *(93') Jet Express* regularly carries 300 or more passengers at speeds in the mid-30s and the newer 29m (95.2') *Jet Express II* cruises at 32 knots (36.8 mph) carrying 395 passengers.[32] Arnold Transit, based on Mackinac Island, Michigan operates two slightly smaller 24m (78.75') Incats in a similar service on Lake Huron. Success with the first fast ferry, the 27-knot *Mackinac Express*, on its first year of operation (1987) led to an order for the second vessel, the 31-knot, 300 passenger, *Island Express, the following year.* Each vessel makes 12 round-trips a day on the 7 mile route between the mainland and Mackinac Island.[33]

Finally, a new fast ferry operation between Port Everglades, Florida and Port Lucaya, Grand Bahamas is scheduled to begin service in August of this year. A custom design $11.6 million Super-4000 Class Swath Ocean passenger/cruise ferry will make two round-trips a day on the 82 nautical mile route with a scheduled trip time of three hours. The owners, Party Line Cruise Company, plan to introduce a new sister vessel in August 1966 for a 5 1/2 hour, Monday through Thursday, fast ferry service between Miami and Key West. Plans are to operate the vessel out of Key West on weekends.[34] The Super-4000 Class SWATH (small waterplane area twin hull) ferry is 37.2m (122 ft) long, 18m (59 ft) wide and have a loaded draft of 3.5m (12 ft). Powered by gas turbines, the vessels have a loaded speed of 28 knots (32.2 mph) which they are able to maintain in relatively severe sea states without passenger discomfort. A somewhat unique design, the SWATH gives up truly high speed calm water performance for excellent rough water seakeeping and comfort. The Bahamas ferry has a passenger/crew capacity of 385-450 persons plus 1.25 metric tons of high-value cargo in temperature controlled spaces. Two other non-SWATH ferry services, one using a catamaran and the other a hydrofoil, have previously failed on this route[35] due in part to rough sea conditions in the Gulf Stream and passenger sea sickness enroute.

In summary, it can be seen that the fast ferry industry is well-established internationally with increasing emphasis on the development of very large and fast passenger/vehicle vessel designs. The U.S. Market, while still in its infancy, is already quite large and appears to be set for much faster growth in the very near future. As a consequence, overseas designers are licensing American builders with the result that today's buyer has a choice of several proven fast ferry

---

32"Express Delivery," Workboat Magazine, (November/December 1992): Pages 55-59.

33"Jet Express II," Product Brochure, Gladding-Hearn Shipbuilding, The Duclos Corporation.

34Press Release, Party Line Cruise Company, February 1994.

35"Swath Ocean Wins Major Orders," Marine Log, (December 1992) Page 44.

designs and not just the Australian International Catamarans Design (INCAT), which have been so popular here and abroad for many years.

C. Utilization of Fast Ferries for the Implementation of a Regional Water-Based Tourism Development Strategy

Legislation creating the Northeastern North Carolina Regional Economic Development Commission and its Office of Tourism Development[36] mandated the development of a regional water-based tourism strategy. The Office of Tourism Development considers transportation to be the most *critical* element for the success of its regional tourism strategy. It sees high-speed ferries as an attractive and cost-effective means of creating a "critical mass" of otherwise widely separated existing and future tourist centers and in serving as a catalyst for economic development and revitalization of regional harbor towns, most of which are located on navigable waterways.

The water-based strategy presented to the General Assembly for adoption is described as analogous to the "mall concept" in which *anchor* stores serve as destinations for consumers who then shop at smaller stores within the complex. In the case at hand, it is envisioned that a high-speed passenger ferry system will be established to provide access to the so-called "anchor" tourist centers such as Elizabeth City, Edenton, Manteo, Ocracoke, Washington and New Bern, with connections to smaller, developing tourism centers such as Plymouth, Columbia, Belhaven, Bath, etc. Given the existence of a fast, pleasant and safe ferry ride by water and good connecting public land transportation at terminal cities, a visitor to the Outer Banks (or Sound-side *anchor city)* may be inclined to visit an historic Edenton, or Washington, perhaps with exploratory side trips, for example, to a Columbia or Belhaven which otherwise they probably would not do. It is expected the fast (40mph), sleek ferries and amenities offered would become tourist attractions in themselves. Fully implemented, operation of the fast ferry *system* would be very similar to that of a small, regional airline with central marketing, administrative and operational management, computerized reservations, integrated vessel scheduling, and terminal operations.

A detailed description of preliminary routes chosen and how it is envisioned the system would work is contained in Parts II and III of this report. It should be noted, however, that in addition to carrying tourists, the fast ferry system would be capable of performing other transport roles including the delivery of high value, low density freight, ferrying commuters to and from places of employment, and for public service missions such as emergency and medical evacuations of

36General Assembly Legislative Action 93ECD-S200

personnel and for use as fire boats.

As will be noted in Part III, the use of high-speed car carrying vessels have not been factored into this preliminary feasibility analysis. Due to their size, special terminal requirements, draft and cost, these craft could only be employed advantageously on high density traffic routes where trip times provide a considerable saving over driving time, such as might develop, for example, between New Bern and Ocracoke or, perhaps Washington (or Swan Quarter) and Ocracoke. Although we think it is operationally feasible to utilize an existing high-speed passenger/car ferry design on some of these routes, this type of vessel has not yet been built in the United States and is, therefore, outside the purview of this Report.

II DEVELOPMENT OF OPERATING SYSTEM REQUIREMENTS

A. Review of Existing Tourism Traffic Data.

Unlike a typical ferry or freight transport operation with known and/or quantifiable transport requirements, the proposed fast ferry system's primary role is to enhance economic development by facilitating the development of a regional water-based tourism industry. With the exception of the proposed Ocracoke/Swan Quarter passenger run which would parallel the NCDOT auto-passenger ferry service to Ocracoke, there are currently no ferry services on any of the recommended routes and, therefore, there is no historical traffic data on which to plan the size and required number of fast ferries to be used or the frequency of service. Nevertheless, historical statistical tourism data for the regional harbors and Outer Banks would be useful for establishing "baseline" criteria to be used in the conceptual design of the system.

Historical tourism traffic data for Outer Banks and other *anchor* city destinations received from the Office of Tourism Development and Elizabeth City State University, were of limited value. No data was available as to how many tourists visit specific destination cities such as Manteo, Ocracoke, Elizabeth City, Edenton, New Bern etc., or where they come from. Similarly, no data was available concerning attendance at major attractions like the North Carolina Aquarium on Roanoke Island or National Parks on the Outer Banks. Moreover, available statistics for the Outer Banks appear, for the most part, to be extrapolations of data obtained by the Dismal Swamp Canal Visitor/Welcome Center based on seasonal visitor counts at the South Mills Center.

The above mentioned NCSU analysis estimated 6 million visitors annually to the Outer Banks including approximately 414,000 travelers to Currituck County. Using seasonality factors contained in the NCSU data, an order-of-magnitude estimate of existing potential passenger ferry traffic was made and is shown in Table I. The latter assumes 10% of the visitors listed for Currituck County go to destinations other than the Outer Banks. Other equally arbitrary

assumptions include: 65% of all Outer Banks visitors come from origin points which would be tributary to the Albemarle ferry system i.e., via Routes 158 and 64, and 35% from origin points tributary to the proposed Neuse River/Pamlico Sound ferry system. The latter including the existing NCDOT ferry service between Cedar Island/Ocracoke and Swan Quarter/Ocracoke. According to 1992 DOT Ferry Traffic compilations, these two ferry routes carried about 250,000 persons or roughly 12% of the assumed 2,100,000 visitor (35% of Outer Banks total) Pamlico System traffic base. A final assumption was that between 5% and 10% of Outer Banks visitors might utilize the high-speed ferry system. The foregoing assumptions result in projections of average daily summer ridership ranging from a low of 1,360 to a high of 2720 passengers per day for the combined Albemarle and Pamlico ferry systems. These numbers do not take into account additional tourist traffic which would be generated by implementation of the Regional Harbor Tourism concept.

Additional and more precise statistics are needed for forecasting base ridership; however, estimates from existing data shown in Table I suggests the use of smaller rather than larger passenger capacity vessels, at least initially.

B. Identification and Evaluation of Operational Constraints in Regional Harbors and Navigable Waters

Inspection visits were made to all of the *regional harbors* as well as some alternate sites to determine the type and condition of existing berthing facilities and to obtain local knowledge on water depths and other navigational factors. A description of docking facilities, together with photos and comments concerning use of these harbors is found in Appendix A.

Study of navigational charts and local input disclosed that vessels with a draft of 5 to 6 feet maximum, could enter all of the *regional harbors* without difficulty. However, it was determined early on that water depths on the western shore of the Outer Banks were generally too shallow for navigation and that extensive dredging would be required if new terminal sites were to be established in this area. With the exception of Hertford which does not have a large public wharf, all of the existing public and/or private docking facilities were deemed basically adequate for handling the size of vessels contemplated without dredging. However, in some instances relatively minor modification or existing pier and/or wharf structures would be necessary. Provision for handicap access to the ferries and shelters for boarding and disembarking passengers will be required at all terminals.

Similar analysis of deeper main navigational channels revealed no obstacles to high-speed ferry operations and relatively few physical or operational constraints along the proposed routes. However, in reviewing charts of Albemarle and Pamlico Sounds one is struck by the vastness of

TABLE I

OUTER BANKS VISITORS BY SEASON(1)
(Existing Ferry Traffic Potential)

Season		Winter	Spring	Summer	Fall	Annual
Months		Dec/Jan/Feb	Mar/Apr/May	Jun/Jul/Aug	Sep/Oct/Nov	
% of Total		12.80%	22.10%	44.80%	20.30%	100%
Days/Season		90	92	92	91	365
Estimated No. of Visitors						
Dare	5,333,184	682,648	1,178,634	2,389,266	1,082,636	5,333,184
Currituck (2)	372,144	47,634	82,244	166,720	75,545	372,144
Hyde	253,323	32,425	55,984	113,489	51,425	253,323
Outer Banks	5,958,651	762,707	1,316,862	2,669,476	1,209,606	5,958,651
Total Outer Banks	5,958,651	715,073	1,234,618	2,502,755	1,134,061	5,586,507
Avg Daily No. Visitors		7,945	13,420	27,204	12,462	15,305
% from North & West	0.65	5,164	8,723	17,683	8,100	39,670
% from South	0.35	2,781	4,697	9,521	4,362	21,361
Avg Daily Ferry Ridership			Number of Riders (Outer Banks Origin)			
Albemarle System						
5.0%	of Daily Tot.	258	436	884	405	
No. Riders Per Season		23,240	40,125	81,340	36,857	181,561
10.0%	of Daily Tot.	516	872	1,768	810	
No. Riders Per Season		46,480	80,250	162,679	73,714	363,123
Avg Daily Ferry Ridership						
Pamlico System			Number of Riders (Outer Banks Origin)			
5.0%	of Daily Tot.	139	235	476	218	
No. Riders Per Season		12,514	21,606	43,798	19,846	97,764
10.0%	of Daily Tot.	278	470	952	436	
No. Riders Per Season		25,028	43,212	87,596	39,692	195,528

Typical family up by 44 of persons

Notes:
1. NCSU Visitor Survey 1989
2. 413,500 total. Assumes 90% of visitors travel to outer barrier island, i.e., Duck, Corolla, etc.

Figure 11

ESTIMATED TRAVEL TIME--ALBEMARLE SOUND ROUTES

FROM	TO	APPROX. DIST.(sm)	TYPE VESSEL	PAX (1) CAP'Y	FERRY SPEED-Mph	TRAVEL TIME h:m (2)
Elizabeth City	Manteo	43	Catamaran	150	40.3	01:13
			SES	156	51.2	00:59
Manteo	Edenton	63	Catamaran	150	40.3	01:44
			SES	156	51.2	01:23
Edenton	Elizabeth City	57	Catamaran	150	40.3	01:34
			SES	156	51.2	01:16
Edenton	Plymouth	13	Water Bus	56	34.5	00:30
Plymouth	Columbia	29	Water Bus	56	34.5	00:59
Columbia	Edenton	24	Water Bus	56	34.5	00:49

ESTIMATED TRAVEL TIME--PAMLICO SOUND ROUTES

FROM	TO	APPROX. DIST.(sm)	TYPE VESSEL	PAX (1) CAP'Y	FERRY SPEED-Mph	TRAVEL TIME h:m (2)
Manteo	Ocracoke	67	Catamaran	250	40.3	01:51
			SES	156	51.2	01:29
Ocracoke	New Bern	69	Catamaran	250	40.3	01:55
			SES	156	51.2	01:32
Ocracoke	Swan Quarter	28	Catamaran	150	40.3	00:50
			SES	156	51.2	00:41
Swan Quarter	Belhaven	28	Catamaran	150	40.3	00:49
			Water Bus	56	34.6	00:56
Belhaven	Bath	26	Catamaran	150	40.3	00:46
			Water Bus	56	34.6	00:52
Bath	Washington	15	Catamaran	150	40.3	00:34
			Water Bus	56	34.5	00:37
Ocracoke	Washington	65	Catamaran	150	40.3	01:52
			SES	156	51.2	01:31

1. Passenger Capacity
2. Including allowances for weather and traffic delays but excludeing port time.

Note: (1) statute mile = approximately 0.87 nautical mile. One knot = approx. 1.15 mph.

the area and general lack of deep water. Only two areas have depths in excess of 22 feet with an average of around 16 feet along proposed fast ferry routes.

The vast and long open reaches of the Sounds, while often calm, have a reputation for short, steep (and nasty) seas in winter storms. This was confirmed by Captain Fulcher, NCDOT ferry skipper on the Swan Quarter/Ocracoke run, who reported maximum wave heights of 6 to 8 feet and wave periods of approximately 50 feet in the open reaches of the Sounds. Conditions which are well within the capabilities of the type of high speed craft contemplated, operationally as well as from the standpoint of rider comfort. Capt. Fulcher also described the Sounds as relatively safe waters with clearly marked channels and good visibility most of the year. Numerous pleasure and commercial fishing craft that ply the Sounds, especially in summer, do not pose an extreme navigational hazard but may cause occasional delays in trip time.

C. Development of Ferry Routes.

As a result of meetings with the Director of the Office of Tourism Development, town officials in Nags Head and Manteo, plus visits to all of the regional harbor towns identified by the Office of Tourism Development, and evaluation of waterway data, a conceptual system design evolved which included the following criteria and considerations:

1. Creation of an integrated high-speed passenger ferry system which, ultimately, could provide connecting transportation links with all waterfront anchor and secondary tourism centers;

2. Separate Albemarle and Pamlico Sound ferry routes and services extending from Elizabeth City on the north to New Bern in the south;

3. A "hub" common to both Albemarle and Pamlico ferry systems at Manteo and a Pamlico System hub at Ocracoke;

4. Development of *primary* routes which would derive the most economic benefit from existing tourist traffic to centers on the Outer Banks and Sound-side *anchor* harbors;

5. Use of *smaller feeder* vessels and satellite hubs such as Edenton and Swan Quarter to serve smaller towns like Columbia, Plymouth, Hertford on the Albemarle and Belhaven, Bath and Washington on the Pamlico River; and,

6. The use of shallow draft, low-wake (environmentally friendly) passenger ferry designs on all routes.

In line with the foregoing criteria, the following conceptual route systems were developed:

I Albemarle System

Primary Route: Manteo - Elizabeth City - Edenton - Manteo

Feeder Routes: Edenton - Plymouth
- Columbia
- Hertford (Albemarle Plantation)

II Pamlico System

Primary Routes: A. Manteo - Ocracoke - New Bern
Ocracoke - Manteo
B. Swan Quarter - Ocracoke - Swan Quarter

"String of Pearls"

Feeder Routes: Swan Quarter -Belhaven
- Bath
- Washington

III ECONOMICS

Although Manteo is not in the geographic center of the region, it is well-suited for the "hub" role. In addition to its protected harbor with good docking facilities, a new double-deck bus services links the Manteo terminal site with Nags Head, Kitty Hawk and major tourist attractions on Roanoke Island. This land transportation link with the resort community and tourist centers would be vital for a passenger only ferry service.

Elizabeth City and Edenton were included in the Albemarle Primary Route system as both are well developed tourism centers with waterside attractions and parking areas. They also have the potential for supporting the necessary land transportation links with the ferry terminal.

New Bern and Ocracoke were chosen as Primary Route cities for the same reasons. Both have highly developed tourism industries capable of supporting transportation links with a passenger only ferry terminal. The Swan Quarter/Ocracoke route was selected as a means of connecting Pamlico River harbor towns with the primary north-south passenger ferry routes. It would also enable travelers to leave their cars at Swan Quarter for a short, fast ferry ride to Ocracoke for a day's or weekend outing. Cape Hatteras was not included in this initial analysis as it is readily accessed by road and does not have a highly developed tourism infrastructure. It is also about ten miles by car from the ferry terminal at Hatteras to the Cape Hatteras Lighthouse area.

Edenton and Swan Quarter are seen as satellite hubs for feeder routes serviced by smaller ferries with lower capital and operating costs. Route schedules shown are for example as actual routing will be determined by traffic demand and/or economic policies not yet known. A Hypothetical System Route Map is shown in the modified 1992 North Carolina Coastal Boating

Guide attached as Appendix B. Tables of distances between *Regional Harbor* ports are given in Figures 6-9.

III EVALUATION OF HIGH SPEED PASSENGER FERRY DESIGNS

A. Vessel Capacity, Performance Characteristics and Production Status

As was indicated in the introductory section of this report, there are many proven international high speed ferry designs and many builders world-wide who specialize in this type of craft. However, only vessels built in the United States, certified for operation by the U.S. Coast Guard, and owned by U.S. citizens, may be employed in domestic trade. Accordingly, for purposes of this initial analysis we have limited consideration of fast ferry designs to those which are presently built in the U.S. (or are licensed to be built here), and for which there are production models or full-scale prototypes having a satisfactory track record of operation, here or abroad. A supplemental, partial list of suitable foreign vessel designs who have licensed U.S. builders but have not yet received Coast Guard certification, is included for future consideration.

Written requests for Outline Specifications and Budget Prices were submitted to a total of 11 U.S. and foreign builders of catamarans, surface effect ships, trimarans, quadrimarans, hovercrafts and high-speed monohulls. Design criteria included 35-knot (40 mph) loaded speed vessels with nominal (interior seating) capacity for 150 and 250 passengers, draft not to exceed 5 feet (4 ft preferred), waterjet propulsion (or ducted propeller design), low wake signatures, and the ability to maintain speed and passenger comfort in 6 foot seas.

Vessel data received is tabulated in Table III. Unless otherwise stated, the International Catamarans (Incat) designs of which there are some 29 vessels in operation in the U.S., were used as models for this report. This is not an endorsement of the Incat and, in fact, we strongly recommend that any future economic feasibility study consider other proven American and international fast ferry designs as well.

Based on the "budget" prices given in Tables III, the average price for a 120-149 passenger ferry is about $2.8 million, and about $3.33 million for vessels with capacities ranging from 150-250 passengers. Aside from price, however, there are many other factors and trade-offs to be considered in selecting a vessel including; design aesthetics, passenger capacity, seakeeping ability and passenger comfort, horsepower and make of engines, type of propulsion units, loaded draft, wake signature, interior outfit and layout, manning requirements, operating and maintenance costs, etc. Thus selection of the optimal vessel design for a particular route requires a thorough investigation and careful evaluation of required investment, design features, operating economics, and desired vessel performance. Table II compares approximate vessel first cost expressed in

FIGURE 7

APPROXIMATE DISTANCES

From: City Dock, Elizabeth City, North Carolina

TO DESTINATION CITY	DISTANCE BY WATER		DISTANCE BY LAND	MINIMUM WATER DEPTH	MINIMUM AIR DRAFT	NOTES
	n.m.	s.m.		ft.	ft.	See MANTEO Distances for NOTES Not Shown
Kitty Hawk	33	38	43	6	none	
Manteo	37.3	43	64	8	none	
Columbia	38.2	44	52	8	none	
Hertford	39.1	45	19	6	(*)	(*) See note Manteo Distances
Edenton	49.5	57	30	6	(*)	(*) Route 37 High-Rise Bridge
Plymouth	52.1	60	53	6	50	Ferry terminal at City Park or at Railroad Museum. 50 ft. Vert. Clearance Hwy 45 Bridge

FIGURE 6

APPROXIMATE DISTANCES

From: City Dock Manteo, North Carolina
Via North End of Roanoke Island

DESTINATION CITY	DISTANCE BY WATER		DISTANCE BY LAND	MINIMUM WATER DEPTH Ft.	MINIMUM AIR DRAFT Ft.	NOTES
	n.m.	s.m.				
Kitty Hawk	15.6	18	20	6 (?)	none	Vessel berth at The Promenade Pier just south of the Wright Memorial Bridge. Water depth to be checked by survey.
Duck	20.8	24	28	6	35	Assumes vessel berths at Barrier Island Station Dock. Note: maximum horizontal clearance of Wright Memoria Bridge is 40 feet.
Elizabeth City	37.3	43	64	8	none	Ferries moor at City-owned waterfront park.
Columbia	41.7	48	38	8	none	Vessels moor at existing City wharf.
Hertford	45.2	52	70	6	25	Assume vessels moor at City Park or Boat Ramp. Must pass thru a swing bridge with 50ft. horizontal clearance.
Edenton	54.7	63	65	6	(see note)	:Use of docking facilities at Town Park. Route 37 Swing Bridge reportely replaced by high-rise bridge with ample horizontal/vertical clearance.
Plymouth	59.1	68	70	6	50	Ferries moor at existing Park dock. No wake zone observed at Hwy 45 Bridge.

FIGURE 9

APPROXIMATE DISTANCES

Croatan Sound, Pamlico Sound and Neuse River

FROM	TO DESTINATION CITY	DISTANCE BY WATER		DISTANCE BY LAND	MINIMUM WATER DEPTH ft.	MINIMUM AIR DRAFT ft.	NOTES
		n.m.	s.m.				
New Bern	Ocracoke	60.8	70	77 + See Note	6	none	Note: The distance by road (Route 70) and ferry is 77 land miles to Cedar Island plus a ferry ride of 2 h ours and 15 Min..
New Bern	Swan Quarter	56.4	65	85	6	none	Road miles via Washington
New Bern	Manteo	110.	127	147	6	none	Road Miles From NC State Trans. Map
Swan Quarter	Ocracoke	23.4	27	163	8	none	
Manteo	Ocracoke	60.8	70	79 (See Note)	6	none	Note: Travel time included 79 road miles plus approximately 40 minutes to 1 hours for the Hatteras to Ocracoke Ferry.
Washington	Ocracoke	58.6	67.5	191 (See Note)	8	**	**Railroad Bridge--normally open Note: New Bern/Manteo distance plus 79 mil to Ocracoke, less New Bern/Washington Dist.
Washington	Swan Quarter	45.2	52	72.5	8	none	
	Belhaven	22.6	26	30	8	none	
	Bath	13	15	16	6	none	

FIGURE 8

APPROXIMATE DISTANCES

From: City Dock Edenton, North Carolina

DESTINATION CITY	DISTANCE BY WATER		DISTANCE BY LAND	MINIMUM WATER DEPTH Ft.	MINIMUM AIR DRAFT Ft.	NOTES See Manteo for Notes Not Shown
	n.m.	s.m.				
Plymouth	11.3	13	25	6	50	
Columbia (1)	20.8	24	28	8	none	
Hertford	34.7	40	13	6	25	
Kitty Hawk	48.6	56	73	6	none	
Elizabeth City	49.5	57	30	8	none	
Manteo	54.7	63	65	8	none	

NOTE (1) Columbia to Plymouth Distance = 27.8 n.m. (32 s.m.) by water: 34 s.m. by road.

Table III (Continued)

High-Speed Ferry Alternatives

Builder	Vessel Type Or Name	Designer	Passenger Capacity	Length LOA Feet (m)	Beam (Width) Feet (m)	Loaded Draft Feet	Cruise Spd Loaded Kts (mph)	Total HP	Wake At Speed Inches	Hull & Superstr. Material	Approx. Price (000) US$
II Foreign Designs with Licensed U.S. Builders--Not Yet Certified by U.S. Coast Guard											
Peterson Builders Inc	30M-Solent	FBM Mar. Hldgs-UK	120	103.4 (31.5)	32 (8.4)	3.6	35 (40.25)	2680	?	Aluminum	$2,900
Peterson Builders Inc	35M Tri-Cat	FBM Mar. Hldgs-UK	150	118.0 (36)	31.5 (9.6)	4.1	35 (40.25)	3500	?	Aluminum	$3,600
Peterson Builders Inc	Seaswift 26 SES	Royal Schelde Neth.	156	89.4 (27.25)	30.2 (9.2)	4.8/2.5 (1)	45 (51.75)	3428	~12"	Aluminum	$5,000
Atlantic Marine Inc.	Sea Lord 25-Cat	Batservice Hldgs-Nor.	149	82.7 (25.2)	27.6 (8.4)	5.0 (2)	31 (35.7)	1970	10"	Aluminum	$2,393
Atlantic Marine Inc.	Sea Lord 32-Cat	Batservice Hldgs-Nor.	250	105 (32)	30.3 (9.24)	5.0 (2)	35 (40.25)	3940	10"	Aluminum	$3,370

Notes:
1. The Seaswift 26 surface effect ship has a draft of 30 inches while on cushion.
2. Sea Lord designs have controllable pitch propellers installed in a proprietary "open water jet system."

--N.V. Beliard Polyship S.A., a Belgian builder of surface effect vessels did not respond to our inquiry. It was subsequently learned that the company is experiencing financial difficulties.

-- Baltimore Steam Packet Company, U.S. representative for Quadrimaran International, a French Company, quoted a list price of $3.5 million for a 300 passenger 40-knot (46 mph) Quadrimaran or $3.0 million for a 150-passenger 60-knot (69 mph) version of the same vessel which is believed to be a 40 meter (131 ft) Quadrimaran. As far as known, there are not yet any productiion models of the Quadrimaran--an interesting design, operating at the speeds quoted.

Table III

High-Speed Ferry Alternatives

Builder	Vessel Type Or Name	Designer	Passenger Capacity	Length LOA Feet (m)	Beam (Width) Feet (m)	Loaded Draft Feet	Cruise Spd Loaded Kts (mph)	Total HP	Wake At Speed Inches	Hull & Superstr. Material	Approx. Price (000) US$
I U.S. Coast Guard Certified Vessels											
Gladding-Hearn	Catamaran	INCAT (1)	149	72 (22)	28.5 (8.7)	3' 6"	35 (40 mph)	3000	15-18"	Aluminum	$2,300
Gladding-Hearn	Catamaran	INCAT	250	102.6 (31m)	28.5 (8.7)	3' 6"	35 (40 mph)	4000	15-18"	Aluminum	$3,500
USA Catamarans	Foil-Assisted Cat	USA Cat (2)	110	65 (19.8)	24 (7.31)	3.0	35 (40 mph)	2200	~9"	Aluminum	$1,490
USA Catamarans	Foil-Assisted Cat	USA Cat (2)	49	51 (15.5)	17 (5.2)	3.0	40 (46 mph)	850	9-12"	Aluminum	$588
Bollinger M. & S.Y.	Fast-1 Trimaran	J.W. Johnson	149	95 (29)	36 (11)	3.0/1.5**	35 (40 mph)	3000		Composite	$2,400
Bollinger M. & S.Y.	Fast-1 Trimaran	J.W. Johnson	250*	95 (29)	36 (11)	4.0/2.0**	35 (40 mph)	3300		Composite	$2,800
Textron Marine Sys.	C-7 Hovercraft	TMS	40	61.5 (18.7)	35.3 (10.8)	NA	45+ (51.75)	1370		Alum & GRF	(4)
Textron Marine Sys.	SES (3)	TMS	250	85 (25.9)	30 (9)	?	>30 kts			Alum or GR	(5)
Westport S.Y. Inc.	Mono-hulls	J.W. Sarin	149	100 (30.5)	22.8 (7)	?	30 (34.5)	4000	?	GRP & Alum	(6)

NOTES:

1. International Catamarans of Australia
2. USA Catamarans, Fort Lauderdale, Florida
3. Surface Effect Ship
4. Claimed proposal made to Office of Tourism Development. No prices submitted. WorkBoat Article Nov/Dec 1992, quoted price of between 2 & $2.5 million
5. Textron declined to submit a proposal claiming water depths of 4-5ft were too shallow for the SES.
6. Westport did not respond to our inquiry

(*) Certification in process

(**) With waterjets

Table II

COST PER SEAT vs TRANSPORT EFFICIENCY (TE)

Type of Vessel	Speed Loaded	# Seats	Cost/Seat	TE(*)
Incat Catamaran	35	149	$15,400	.128
Incat Catamaran	35	250	14,000	.161
USA Foil-Assisted Cat.	na	149	12,000	na
F.A.S.T-1 Trimaran	35	149	16,100	.128
F.A.S.T-1 Trimaran	35	250	11,200	.196
Textron C-7 Hovercraft	47	40	over 50,000	.101
30 Meter Solent-FBM	35	120	24,200	.106
35 Meter TriCat-FBM	35	150	24,000	.134
Sea Swift 26-SES	45	156	32,000	.151
Sea Lord 25 Catamaran	35	149	16,100	.173
Sea Lord 32 Catamaran	35	250	13,500	.164

(*) Note: Transport Efficiency is defined as:

$$TE = \frac{\text{(Passenger load) x (Speed of Vessel)}}{\text{Total Installed Horsepower}}$$

Where passenger load is in tons and speed is in knots.

terms of "cost per seat", with Transport Efficiency (or Effectiveness) Factor--two methods sometimes used for evaluating different ferry designs, for each of the vessels listed in Table III.

Data contained in Table II is shown graphically in Figure 10. It must be emphasized that all of the prices and specifications used in this analysis are approximate and preliminary in nature. Nevertheless, Figure 10 clearly shows the considerable variance in cost per seat and transport efficiency (TE) between the different designs. It is interesting to note that the two fastest vessels--the hovercraft and SES, have the highest cost per seat and that the hovercraft also has the lowest TE of all the vessels. The latter is not surprising considering the C-7 is an amphibious, special purpose craft. Conversely, two multihulls, a 250 passenger trimaran and 149 passenger Sea Lord 25 show the highest transport efficiencies. As indicated above, vessel selection is a complex issue requiring careful and critical analysis of designer claims versus actual operating performance data for the craft in question, and owner's required performance criteria. A process beyond the scope of this Report.

B. Environmental Considerations

Our analysis of water depths in the sounds and harbors revealed that the use of shoal draft vessels would extend the feasible operating area of the ferries and, at the same time, reduce or eliminate the need for dredging deeper channels or ferry landings, dredging having a major environmental impact. Thus, our specifications called for an operating draft not to exceed five feet with four feet preferred. Waterjet propulsion or alternatively surface piercing propellers were specified for the same reason. Similarly, considering the low lying marsh areas bordering many of the proposed *regional harbors* and the likelihood of small recreational boat traffic in these waters, low wake vessels were specified.

Our associate, Gary Greene, met with State Environmental and Wildlife officials in Raleigh to discuss the conceptual design of the proposed ferry system in order to obtain insights as to their particular concerns. A copy of Mr. Greene's letter report on the meeting is included as Appendix C. Other than departmental concerns about dredging and potential wake damage--which as explained above, should not be an issue, and water safety, i.e., sharing of waterways with commercial fishing and recreational interests, which will be addressed in routing of vessels, state-of-the-art navigation equipment, and crew training, it appears the project could be implemented with minimal adverse environmental impact and State or Federal permitting requirements. These as well as other operational considerations having environmental impact such as noise and exhaust emissions, would be fully dealt with in a comprehensive feasibility study and implementation plan.

IV DESCRIPTION OF THE CONCEPTUAL OPERATING SYSTEM: (VESSELS, ROUTES, SCHEDULES, CAPACITY AND FINANCIAL/ECONOMIC PARAMTERS)

A. Basic Assumptions: System Design

As in the aircraft industry where development costs are very high, there is a trend toward standardization of design among fast ferry designer/builders for essentially the same reason. For the proposed North Carolina Fast Ferry System, we somewhat arbitrarily chose three different size existing passenger vessel designs for service on the proposed routes--all of which fall under the Coast Guard's Subchapter "T" Regulations. The latter sets forth required life saving equipment, stability criteria and manning standards for passenger vessels with break points at 49 and 149 passengers. Outline specifications for selected vessels are as follows:

Vessel Description		INCAT 250	INCAT 150	USA-Cat Water Bus
No. of Passengers		250	149	49
Length Overall	ft.	102.5	72	51
Beam (Width)	ft.	28.5	28.5	17
Draft (Max.)	ft.	3.5	3.0	3.0
Loaded Service Speed	mph	40	40	34.5
Type Propulsion		W-J[i]	W-J	SPP[ii]
Propulsion Power	hp	4,000	3,000	850[iii]
Construction Mat'l.		Alum.	Alum.	Alum.
Budget Price	$(000)	$3,500	$2,300	$588

Notes: (i) W-J = waterjets; (ii) SPP = surface-piercing propellers; (iii) vessel has loaded speed capability of 46 mph with 1100 horsepower.
Photos and/or drawings of U.S. built vessels similar to this type and size of ferries are found in Figures 14-18.

These vessels were assigned to the routes described earlier as shown in Figure 12, and hypothetical schedules were developed using estimated travel time for each of the ferries described above on their respective routes. Similar calculations were made for the 156 passenger *Sea Swift 26*, a 45 knot (51.75 mph) surface effect vessel, to show the effect of higher speeds on trip time for longer voyages. The Sea Swift has the highest first cost and is the fastest of the vessels considered. It could be most advantageously employed on short, high density traffic routes. Typically, loaded speed of surface effect craft degrade significantly in higher sea states, and therefore, expected performance of this type vessel must be carefully evaluated in light of actual operating conditions on the route.

B. Transport Capacity

Hypothetical ferry schedules for the Albemarle and Pamlico Route Systems are given in

Figure 10

HIGH-SPEED FERRIES

Cost/Seat v.s. Transport Efficiency

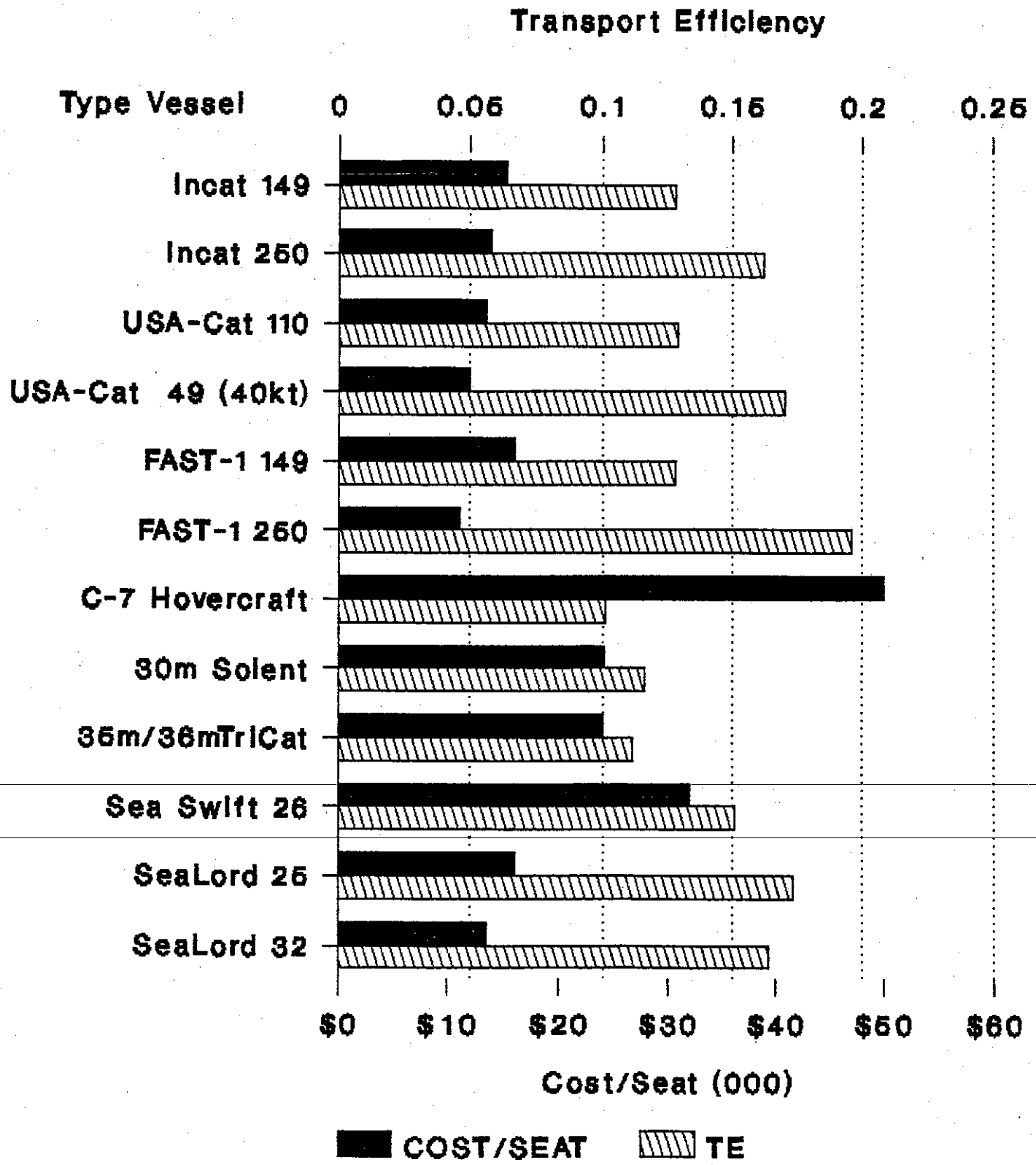


Figure 13 (Continued)

Albemarle Schedules (Continued)

No. 6 Cont.	From	To	Depart	Arrive
	Edenton	Plymouth	6:09	6:39pm
	Plymouth	Columbia	6:54	7:13
	Columbia	Edenton	7:28	8:17

Pamlico Route Systems

Ferry No.	From	To	Depart	Arrive
No. 4	Manteo	Ocracoke	08:00	09:51
	Ocracoke	Manteo	10:10	12:01pm
	Manteo	Ocracoke	12:16	2:07
	Ocracoke	Manteo	2:22	4:13
	Manteo	Ocracoke	4:28	6:19
	Ocracoke	Manteo	6:34	8:25

Ferry No.	From	To	Depart	Arrive
No. 5	New Bern	Ocracoke	08:00	09:55
	Ocracoke	New Bern	10:10	12:05pm
	New Bern	Ocracoke	12:20	2:15pm
	Ocracoke	New Bern	2:30	4:25
	New Bern	Ocracoke	4:40	6:35
	Ocracoke	New Bern	6:50	8:45

Note: Ferry No. 4 & 5 schedule based on 35 knots (40.25 mph)
Port time allowance, 15 minutes each end.

Figure 13

HYPOTHETICAL FAST FERRY TRIP SCHEDULES

Albemarle Route System

Ferry No.	From	To	Depart	Arrive
No.1	Manteo	Elizabeth City	08:00	09:13
	Eliz. City	Edenton	09:28	11:02
	Edenton	Manteo	11:17	1:01pm
	Manteo	Elizabeth City	1:16	2:29
	Eliz. City	Edenton	2:44	4:18
	Edenton	Manteo	4:33	6:17

Ferry No.	From	To	Depart	Arrive
No. 2	Manteo	Edenton	08:00	09:44
	Edenton	Elizabeth City	09:59	11:33
	Eliz. City	Manteo	11:48	1:01pm
	Manteo	Edenton	1:16	3:00
	Edenton	Elizabeth City	3:15	4:49
	Eliz. City	Manteo	5:04	6:17

Note: Ferry No. 1 & 2 schedule based on 35 knots (40.25 mph)

Ferry No.	From	To	Depart	Arrive
No. 6	Edenton	Plymouth	09:00	09:30
	Plymouth	Columbia	09:45	10:44
	Columbia	Edenton	10:59	11:48
	Edenton	Plymouth	12:03pm	12:33
	Plymouth	Columbia	12:48	1:47
	Columbia	Edenton	2:02	2:51
	Edenton	Plymouth	3:06	3:36
	Plymouth	Columbia	3:51	4:50
	Columbia	Edenton	5:05	5:54

Note: Ferry No. 6 schedule based on 30 knots (34.5 mph)
Port allowance all ferries 15 minutes.

Figure 13 (Continued)

Pamlico Schedules (Continued)

Ferry No.	From	To	Depart	Arrive
No. 3	Swan Quarter	Ocracoke	08:00	08:50
	Ocracoke	Swan Quarter	09:05	09:55
	Swan Quarter	Ocracoke	10:10	11:00
	Ocracoke	Swan Quarter	11:15	12:05pm
	Swan Quarter	Ocracoke	12:20	1:10
	Ocracoke	Swan Quarter	1:25	2:15
	Swan Quarter	Ocracoke	2:30	3:20
	Ocracoke	Swan Quarter	3:35	4:25
	Swan Quarter	Ocracoke	4:40	5:30
	Ocracoke	Swan Quarter	5:45	6:35
	Swan Quarter	Ocracoke	6:50	7:40
	Ocracoke	Swan Quarter	7:55	8:45

Note: Ferry No. 3 schedule based on 35 knots (40.25 mph)

Ferry No.	From	To	Depart	Arrive
No. 7	Washington	Bath	08:00	08:37
	Bath	Belhaven	08:52	09:44
	Belhaven	Swan Quarter	09:59	10:55
	Swan Quarter	Belhaven	11:10	12:06pm
	Belhaven	Bath	12:21	1:13
	Bath	Washington	1:28	2:05
	Washington	Bath	2:20	2:57
	Bath	Belhaven	3:12	4:04
	Belhaven	Swan Quarter	4:19	5:15
	Swan Quarter	Belhaven	5:30	6:26
	Belhaven	Bath	6:41	7:33
	Bath	Washington	7:48	8:25

Note: Ferry No. 7 schedule based on 30 knots (34.5 mph)
All ferries 15 minutes port time.

Projected daily and annual transport capacity at load factors ranging from 50 to 100% utilization are given in Table IV. Based on the assumptions used, annual transport capacity ranges from about 1.2 million to a theoretical maximum of 2.3 million passengers a year at 100% utilization.

As stated earlier, absent passenger traffic forecasts, ferry schedules presented are for illustration only. The scheme outlined above utilizes about 73% of Primary Route transport capacity to Ocracoke and only 27% to Manteo. Development of actual schedules and their optimization will be a separate task involving many factors. For example, transport capacity between Elizabeth City and Manteo could be significantly increased merely by having one ferry shuttle between the two points with the other ferry providing less frequent service between Elizabeth City and Edenton. In any case, the proposed seven vessel fleet--two 250 passenger and three 150 passenger ferries plus 2 feeder vessels, would provide great flexibility in meeting unexpected imbalances in passenger traffic flows through such measures as substitution of vessels by size, reducing or increasing the number of trips made per day, route adjustments, etc.

C Economic Parameters

1. Cost of Vessels

Using the "Budget Prices" shown in Section A above, the approximate total cost of the seven high-speed ferries amounts to:

(2) 250 Passenger Catamarans	@ $3,500,000 each =	$7.0 million
(3) 149 Passenger Catamarans	@ $2,300,000 each =	6.9 million
(2) 49 Passenger Water Buses	@ $ 590,000 each =	1.2 million
Total (first cost) of ferries		$15.1 million

Prices are exclusive of associated acquisition costs including such things as classification fees, owner's outfit items, spare parts, delivery expense, and interest during construction. Inclusion of these items could easily bring the total invested cost to around $16.5-17 million dollars.

2. Administrative and Management Expense

It is assumed that a quasi-governmental Ferry Authority will be established to obtain funds for additional developmental work including preparation of a comprehensive business plan, and to finance and administer high-speed passenger ferry operations over the long term. This Authority could either operate the system itself or franchise major routes to experienced private ferry operating companies who would be responsible to the Authority for the day-to-day management and operation of their respective routes or part of the system. Whatever the case, it is expected that ferry management organization and operating practices will be more analogous to airline industry management--with close ties to tourism interests, than to conventional marine ferry operations. The cost of administration including such items as salaries and wages of staff personnel, marketing, advertising, traffic and terminal management expense, are considered

Table IV **Estimated Direct Operating Costs-Fast Ferries**

Type Vessel		Incat	Incat	Incat	Incat	Incat	USA-Cat	USA-Cat	Totals
Pax Capacity		250	250	149	149	149	49	49	
Vessel Cost		$3,500,000	$3,500,000	$2,300,000	$2,300,000	$2,300,000	$590,000	$590,000	$15,080,000
Route-From:		New Bern	Manteo	Manteo/E.C.	Manteo/Eden.	Ocracoke	Edenton	Swan Quarter	
To:		Ocracoke	Ocracoke	Edenton	Eliz. City	Swan Quarter	Ply./Col.	Washington (1)	
To:		New Bern	Manteo	Manteo	Manteo	Ocracoke	Edenton	Swan Quarter	
R/T Per Day		3	3	2	2	6	4	2	
R/T Miles (n.m.)		121.6	121.6	141.5	141.5	46.8	59.9	119.8	
Daily Oper. Hours		12	12	12	12	12	12	12	
Oper. Days/Year		300	300	300	300	300	300	300	
Crew Cost		$284,493	$284,493	$221,133	$221,133	$221,133	$135,271	$135,271	
Maintenance		113,000	113,000	89,000	89,000	89,000	32,780	32,780	
Fuel & Lube		697,095	697,095	439,110	439,110	439,110	103,887	103,887	
Supplies		10,250	10,250	9,000	9,000	9,000	3,575	3,575	
Insur. & Damages		127,500	127,500	97,500	97,500	97,500	54,750	54,750	
1st Year Interest		300,562	300,562	197,512	197,512	197,512	50,666	50,666	
Depreciation-10 Yrs		315,000	315,000	207,000	207,000	207,000	53,100	53,100	
Total D.O.C.		$1,847,900	$1,847,900	$1,260,255	$1,260,255	$1,260,255	$434,029	$434,029	$8,344,623
Avg. D.O.C Per DAy		$6,160	$6,160	$4,201	$4,201	$4,201	$1,447	$1,447	
					Pax Carried/Day				
@ Load Factor (%)	100%	1500	1500	894	894	1788	588	588	7,752
@ Load Factor (%)	75%	1125	1125	671	671	1341	441	441	5,815
@ Load Factor (%)	50%	750	750	447	447	894	294	294	3,876
					Pax Carried/Year				
@ Load Factor (%)	100%	450000	450000	268200	268200	536400	176400	176400	2,325,600
@ Load Factor (%)	75%	337500	337500	201150	201150	402300	132300	132300	1,744,200
@ Load Factor (%)	50%	225000	225000	134100	134100	268200	88200	88200	1,162,800
					Avg. Cost/Seat-Mile				
@ Load Factor (%)	100%	$0.068	$0.068	$0.100	$0.100	$0.100	$0.123	$0.123	
@ Load Factor (%)	60%	$0.113	$0.113	$0.166	$0.166	$0.167	$0.205	$0.205	
					Avg. Cost/One-Way Trip		(see Note 2)		
@ Load Factor (%)	60%	$6.84	$6.84	$11.75	$11.75	$3.92	$6.15	$12.30	

Note (1) Including intermediate stops at Belhaven & Bath, both ways.

Note (2) These costs per trip are based on 1/2 the round-trip distance and may not correspond to actual voyages.

Indirect Operating Expenses as opposed to cost associated with vessel operations including crew, fuel, maintenance, depreciation, etc. The latter being referred to as Direct Operating Costs.

3. Direct Operating Costs-Vessels

Estimated direct operating expense for each of the ferries together with transport capacities and approximate COST factors per seat-mile and per passenger for an *average* trip are contained in Table IV. Total annual vessel operating costs for the entire fleet amount to approximately $8.34 million which includes 100% financing of initial vessel cost for ten years at 9% interest. Depreciation is straight-line, also for ten years, less 10% salvage value. With the exception of the 49 passenger "water buses" which require high utilization to amortize their relatively high operating expenses, COSTS per seat-mile at the 60% load factor level appear quite manageable even if the addition of Indirect operating expenses doubled Direct operating cost. That is, even if cost per seat-mile doubled. For example, with a total cost of $0.226 per seat-mile, the cost to transport a passenger from New Bern or Manteo to Ocracoke would amount to around $14.00, assuming 60% average utilization. Similarly, the cost to go from Manteo to Elizabeth City, a distance of 37.3 nautical miles, would amount to roughly $12.40 assuming the same situation as in the New Bern/Ocracoke example. It needs to be emphasized, these are order-of-magnitude COST figures without consideration of profit or what actual fares may ultimately be.

4. Terminal Improvement Costs

As indicated earlier, aside from the need for shelters at most ferry terminals, the nature and extent of improvements, if any, to proposed ferry terminal sites is expected to be quite minimal. These improvements could best be handled by the municipalities in question and/or the NCDOT Ferry Division in places such as Swan Quarter. The cost of terminal improvements and/or terminal building design can be determined once vessel size and capacity are known.

V SUMMARY AND RECOMMENDATIONS

A. Summary

The high speed ferry industry is already large and growing rapidly world-wide and is the preferred method of water transport in many parts of the world.

This preliminary investigation and analysis has established the operational and technical feasibility of employing high speed passenger ferries on the sounds and rivers of Northeastern North Carolina in support of the Regional Harbors Water-Based Tourism Development Concept. Determination of system viability and/or economic feasibility would be a logical extension of this early work.

Visits were made to proposed terminal sites in Elizabeth City, Hertford, Edenton, Plymouth, Columbia, Manteo, Swan Quarter, Belhaven, Bath, Washington, Ocracoke and New Bern, and to alternative locations at Wanchese, Engelhard and Hatteras. All of these harbors are accessible by vessels drawing not more than 5 feet of water and (except for Hertford) have public or privately owned wharves suitable for use by the type of shallow draft fast ferries considered. There are no major obstructions or hazards to navigation on any of the routes selected other than the extremely shallow waters on the western shores of the Outer Banks and two bridges.

Routes were developed linking all of the *regional harbors* earmarked for development as tourism centers within and between the respective Albemarle and Pamlico Sound ferry systems. Manteo was designated as the principal Hub for the Albemarle ferry system and between-Sound connection point with service to Ocracoke, the latter serving as a primary Hub and connector for traffic to Pamlico River ports and the major southern terminus at New Bern. A route map was prepared and is contained in Appendix B.

Theoretical ferry schedules were prepared for each of the ferries on their respective Routes based on estimated trip times which take into account no wake zones and include allowances for traffic and weather delays plus a standard 15 minute allowance for loading and disembarking passengers. Routes and ferry schedules established would enable a traveler to enter the *Sounds System* at any of the *regional harbors* for a quick or leisurely visit to any other tourism center north or south of Manteo within one or two day's time.

Budget prices and specifications were requested from eleven ferry designer/builders for low wake, 35-knot vessels with interior seating capacity for 150 and 250 passengers, airline or bus-type seats, food kiosk and provision for storing bicycles and luggage. A draft not to exceed 5 feet, with four feet or less preferred, was specified as was waterjet propulsion. Surface piercing propellers were also deemed acceptable. These high speed ferry designs were evaluated and three U.S. built catamarans were selected for use in the demonstration model developed by the consultants. A prerequisite for consideration was Coast Guard certification and one or more vessels of the design in service operating at the speeds indicated. Two different size 35-knot Incat Catamarans were selected for service on the *primary* routes, one a 250 passenger and the other a 150 passenger craft. A 51 foot, 49 passenger, 30-knot USA Catamaran was selected for feeder service work and was dubbed a "water bus." A partial list of alternative U.S. and foreign designs deemed potentially suitable for the ferry service were identified and should be considered in future equipment evaluations.

A fleet of seven vessels would be required to maintain all of the routes specified with an acceptable level and frequency of service. Based on the scheduling and operating assumptions used, transport capacity of the fleet ranges from approximately 3,800 to 7,700 persons per day

which is equivalent to 1.2 to 2.3 million passengers a year--both figures at 50% and 100% capacity utilization, respectively. Estimated purchase price of the 7 ferries is $15.1 million with total vessel acquisition cost in the range of $16.5 to $17 million. Operating 7 days a week, 12 hours a day, 300 days a year, estimated average annual direct operating costs for the fleet including debt service on 100% ten-year financing, depreciation, crew costs, fuel, maintenance, insurance and supplies, amount to approximately $8.34 million. At an average 60% Load Factor, direct vessel operating cost per seat-mile amounts to $0.113 for the 250 passenger ferry, $0.116 for the 150 passenger craft, and $0.205 per seat-mile for the small Water Bus.

As evidenced by the letter report in Appendix C, the low wake, shallow draft ferry System as proposed in this Report is expected to have minimal adverse impact on the environment of the sounds and rivers affected. Concerns expressed for water traffic safety will be addressed in the design of the actual vessels and in the development of operating management policies and crew training procedures.

B. Recommendations

A number of ambitious steps will be required to advance the proposed fast ferry system from the present conceptual stage into reality as a useful economic development tool. The latter will require the development of a comprehensive business plan involving:

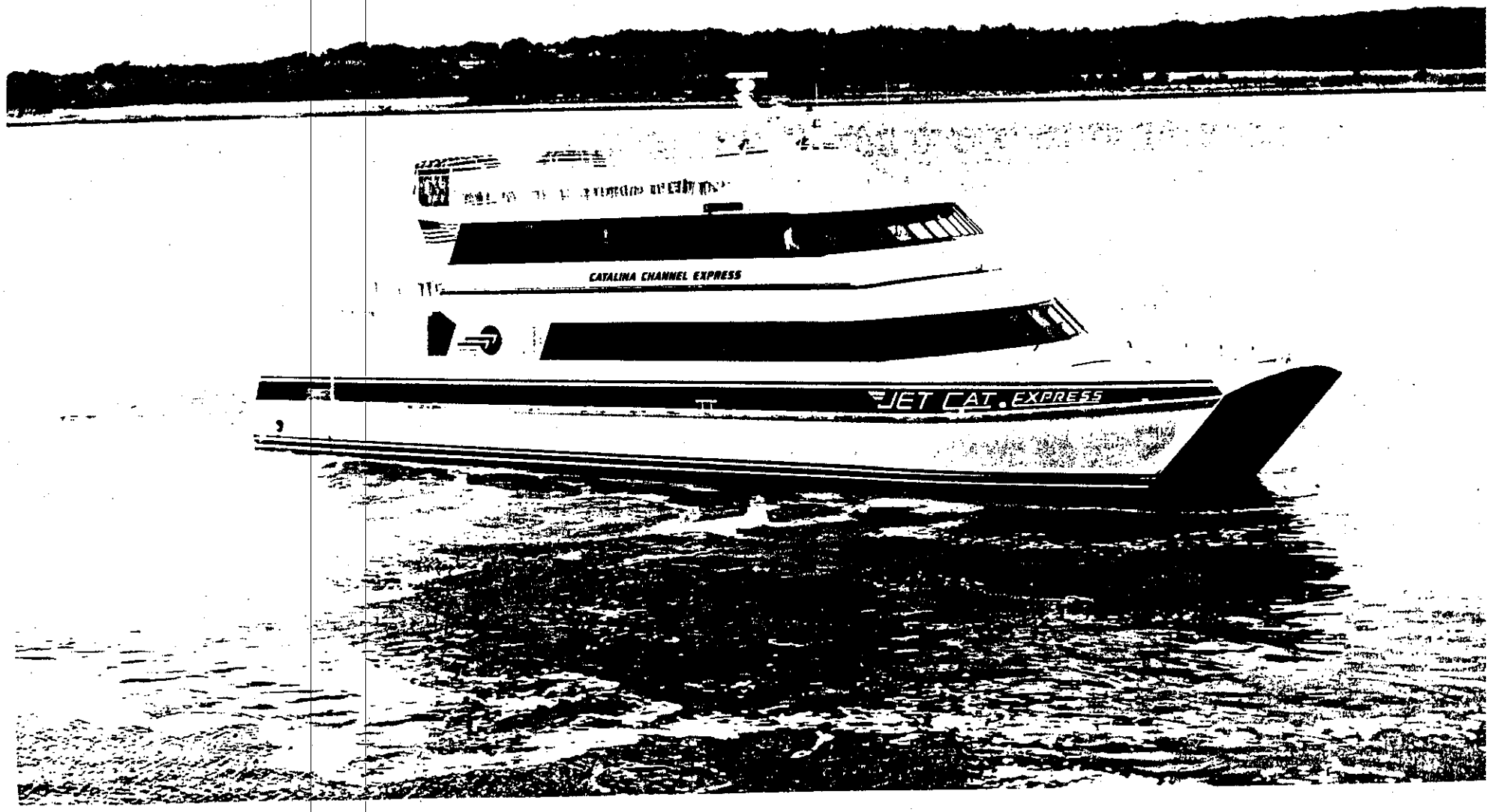
1. The creation of a public or quasi-public Northeastern North Carolina Ferry Authority for the purpose of obtaining State and federal funds needed for carrying out further necessary development activities, and management of a business development program for implementation of the high speed ferry system;
2. Market studies to more accurately define existing ferry traffic potential and the probable impact on ridership of future targeted tourism packages to be developed jointly with the private travel industry;
3. The design and economic feasibility of a complete fast ferry operating system including vessel selection, terminal design and other terminal infrastructure requirements, regulatory and environmental requirements, organizational structure, staffing requirements, required investment, return on investment, break-even revenues, passenger fares, administrative, management and operating costs; and,
4. Identification and resolution of public policy issues concerhing the nature and scope of the Ferry Authority Charter, public/private financing of vessels, the availability of subsidies, private versus public operation of the vessels, etc.

Accomplishment of the foregoing tasks and program will require an experienced, multi-disciplinary team of business development professionals with practical management and operating experience in the marine transportation and fast ferry industries. Charles D. Miller and Associates has the needed expertise and staff resources to successfully manage a development program of this scope and complexity and will be pleased to work with the Office of Tourism Development in the implementation of its exciting water-based tourism development program.

---End---

FIGURE 14

SIMILAR TO "INCAT-250"



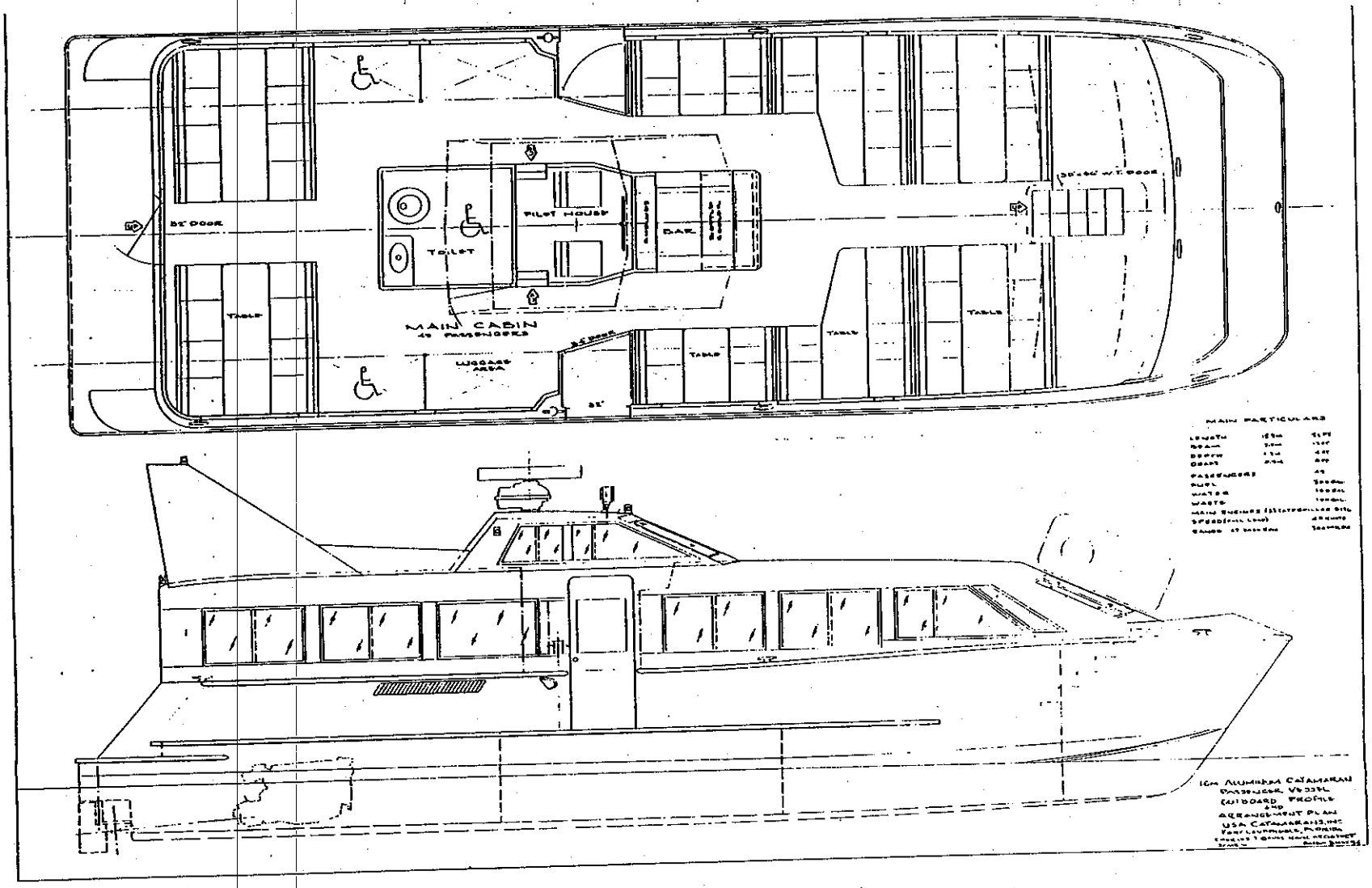


FIGURE 16

USA CATAMARANS
51 FT "WATER BUS"

FERRIES:

Matching the Right Design to Your Route

FIGURE 15
72 FT INCAT
SIMILAR TO "INCAT-150"

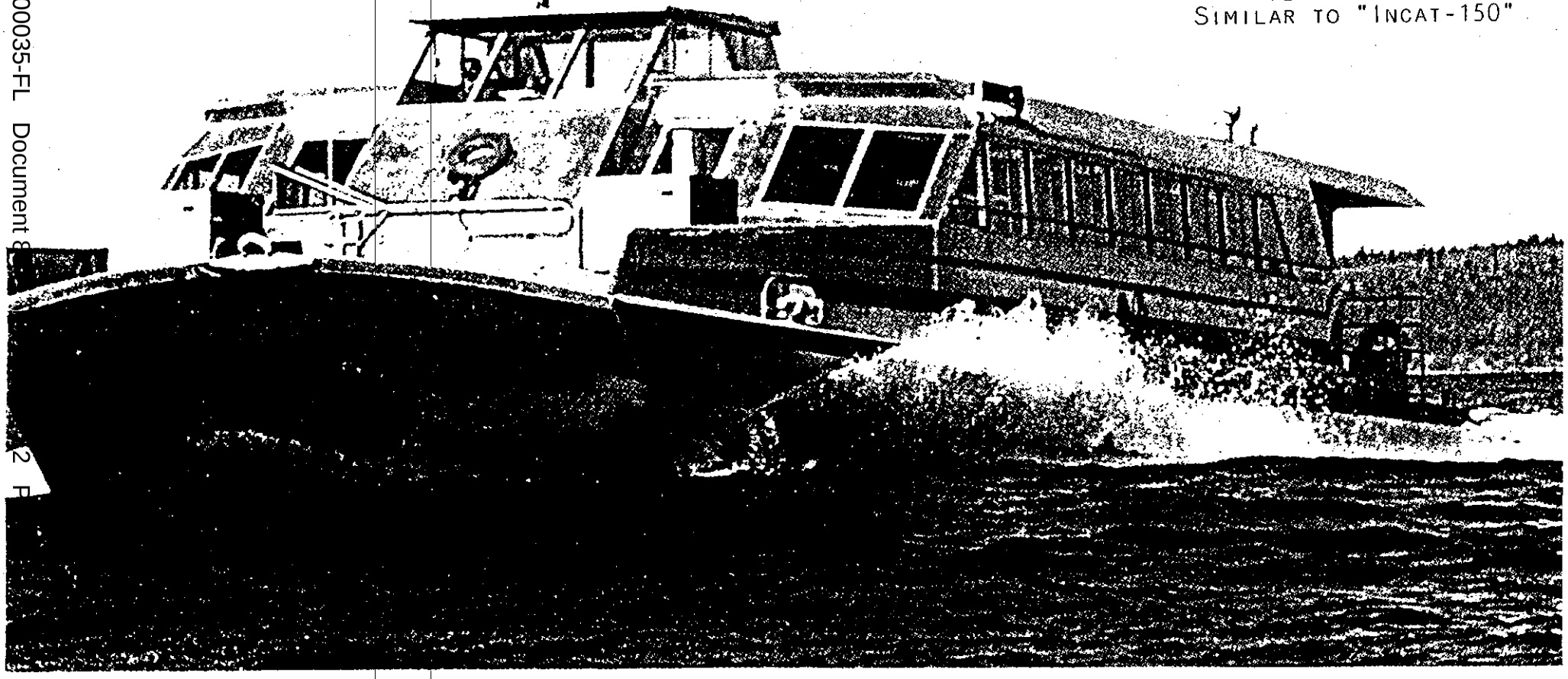


FIGURE 18

35+ KNOT FAST-1 TRIMARAN
OCEAN-GOING SPEEDBOAT VERSION

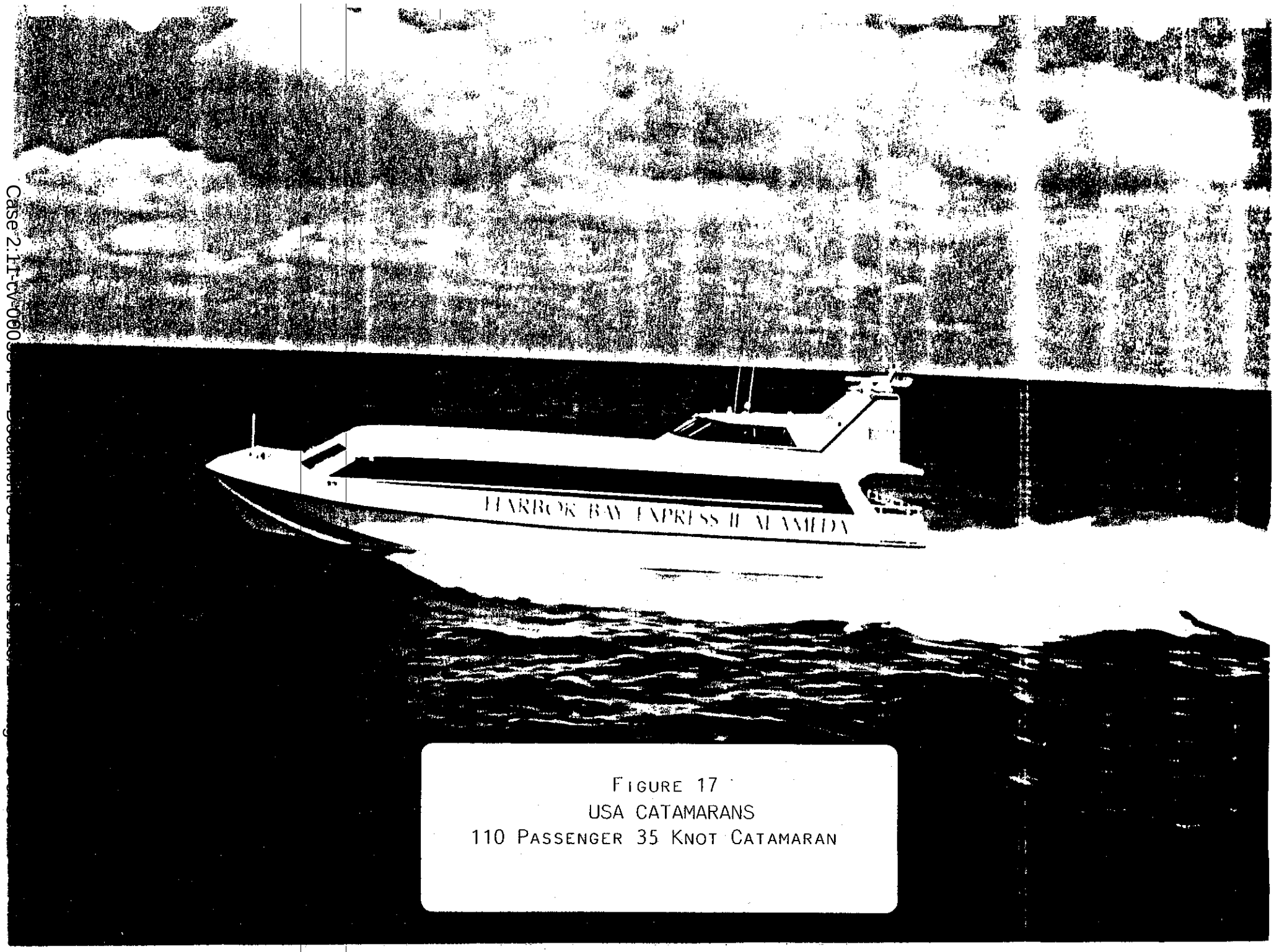


FIGURE 17
USA CATAMARANS
110 PASSENGER 35 KNOT CATAMARAN

APPENDIX A
Description of Regional Harbors

1. Elizabeth City

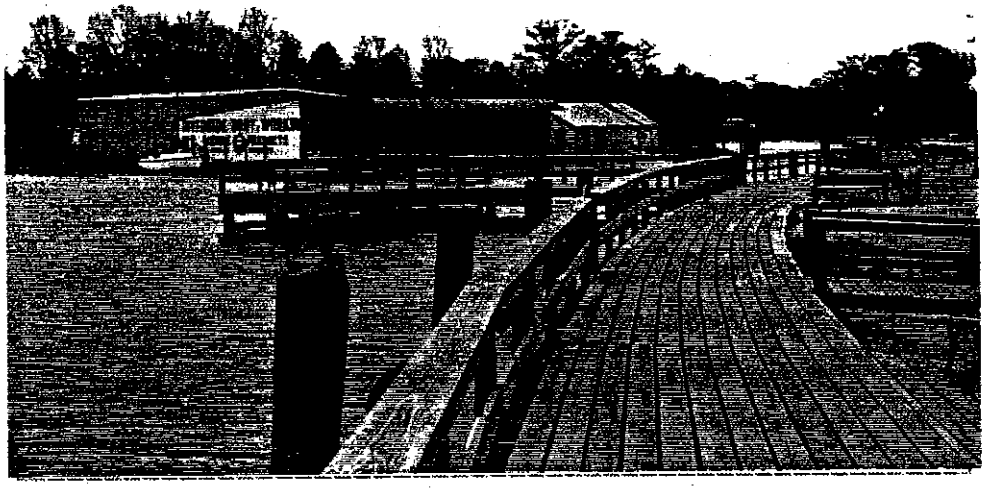
Elizabeth City is the northern-most *Regional Harbor* and *Anchor City* evaluated by the Consultants. This quaint little city is found at the head of the broadest reaches of the Pasquotank River--which connects with the Dismal Swamp Canal and, ultimately, Hampton Roads. It is easily reached by road via U.S. Route 17 North and South and by Route 158 which is one of two roads providing access to the Outer Banks. The City owned Waterfront Park, which is centrally located off Water Street downtown, has steel, concrete capped bulkheads and about 6 feet of water depth alongside. A 100 space parking area is located within a short walk of the City docks. The downtown waterfront area is being redeveloped with a new marina located just West of City Park and a new waterside restaurant is being built behind the *Waterworks Building*. Additionally, there are many existing shops, bed and breakfasts, and historic buildings, all within a short walk of the proposed ferry terminal site.

The marginal wharf, adjacent to the City parking area referred to above, appears to be in good condition and only minor alterations would be needed to accommodate fast ferries. One alternative would be to add mooring dolphins--consisting of pile clusters, either side of the existing "T-Pier" which is built perpendicular to the wharf and can be seen in the photos below. Ferries could then transfer passengers over this small pier. Further study is needed to determine the most cost-effective and least environmentally intrusive terminal design.

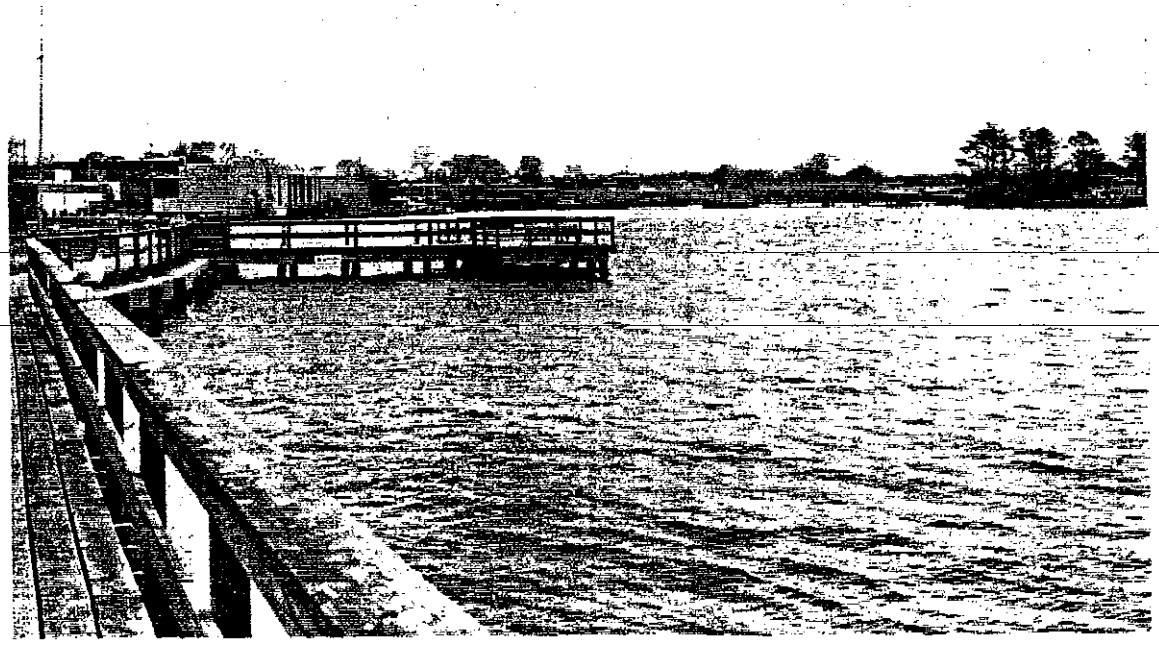
To the east and downstream of City Park is Elizabeth City Shipyard where diesel fuel can be purchased and sewage tanks pumped. This yard is capable of performing any repairs or maintenance normally required by a fast ferry.

Ferries departing City Dock would proceed at idle speed for roughly one-quarter mile down-river in order to avoid wake damage to boats moored at E.C. Shipyard and other marinas in the harbor. Thereafter the boats would accelerate to normal cruise speed for the run to the mouth of the Pasquotank, a distance of about 15 miles, within a clearly marked channel with ten feet of water and normally calm seas. A chart of Elizabeth City Harbor showing the location of the proposed Ferry Terminal is found below.

MAP OF ELIZABETH CITY



"T-Pier" At City Park Looking South



View of "T-Pier" Looking North.

City Dock Downstream of "T-Pier"
(Looking South)

Channel to Albemarle Sound. View from
City Marina.

2. Hertford

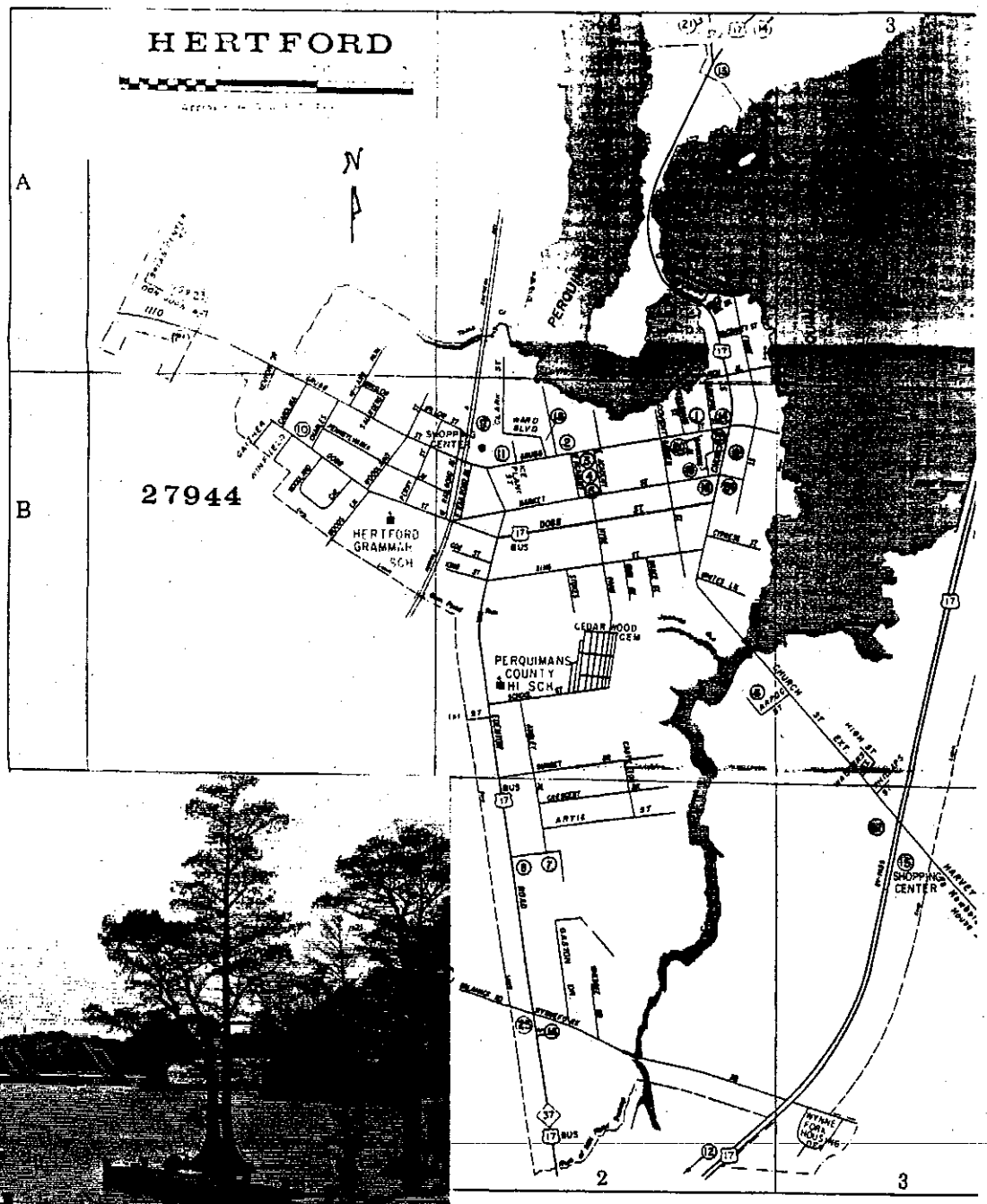
Historic Hertford is a small town located at the head of navigation on the Perquimans River about 12 statute miles above the mouth of the River at Harvey Point. By road it is roughly mid-way between Elizabeth City and Edenton. There are no existing public or commercial dock facilities except for a small boat launching ramp and picnic area adjacent to the Police Station. Farther upstream, there is a small boat pier at the Parks and Recreation Center which would be insufficient for mooring even the smallest ferry considered in this report. There appears to be little in the way of tourist attractions or amenities in the vicinity of either boat landing area; however, there is ample parking at the launching ramp (also at the Town Park) and the historic homes of Hertford's Church and Front Streets are but a short walk from the downtown site. Several miles to the south is the restored, historic Newbold-White house which could only be reached by automobile.

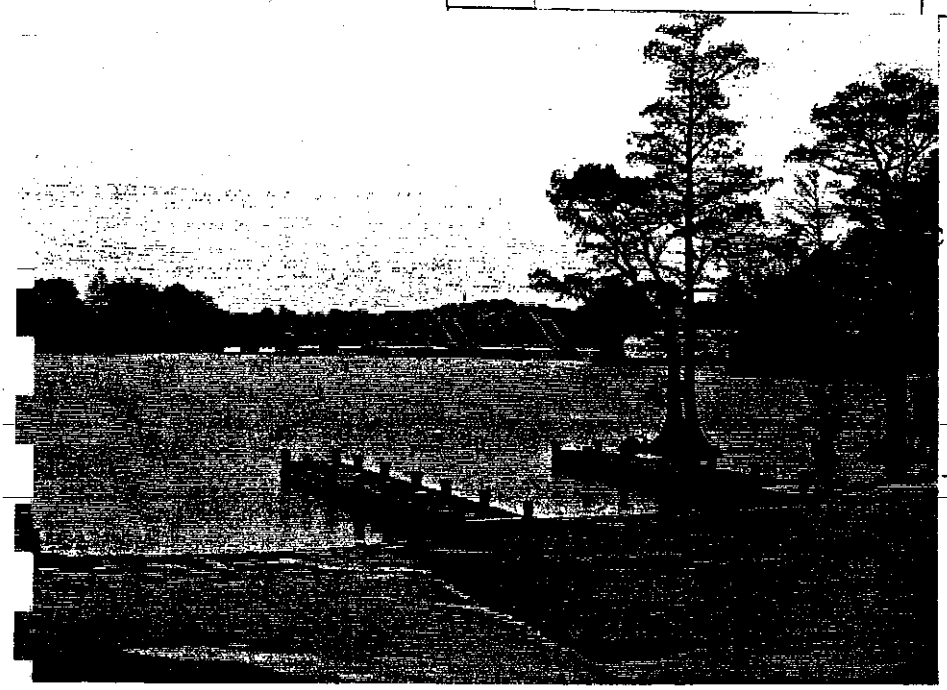
To reach either of historic Hertford's dock sites, a ferry must pass beneath the new Route 17 highway bridge, which has a fixed vertical clearance of 33 feet, and then through the old Route 17 swing bridge which opens on demand during certain hours of the day.

About 7.5 miles south of the City of Hertford off Yeopim Creek there is a new real estate development called *Albemarle Plantation.* The marina at this facility is only about a mile from Albemarle Sound. It has several "T-Head" piers which could easily accommodate ferries up to 120 feet in length. There is talk of building a convention center at the Development. Although this is a private facility, it would appear beneficial to the Developers as well as land owners to arrange for a ferry stop at the marina. Without a doubt, tourists destined for Hertford could be bussed more economically than diverting a ferry to Hertford proper, at least for the foreseeable future.

A map of Hertford together with photos of dock sites and the new marina at Albemarle Plantation are shown below.

MAP OF HERTFORD

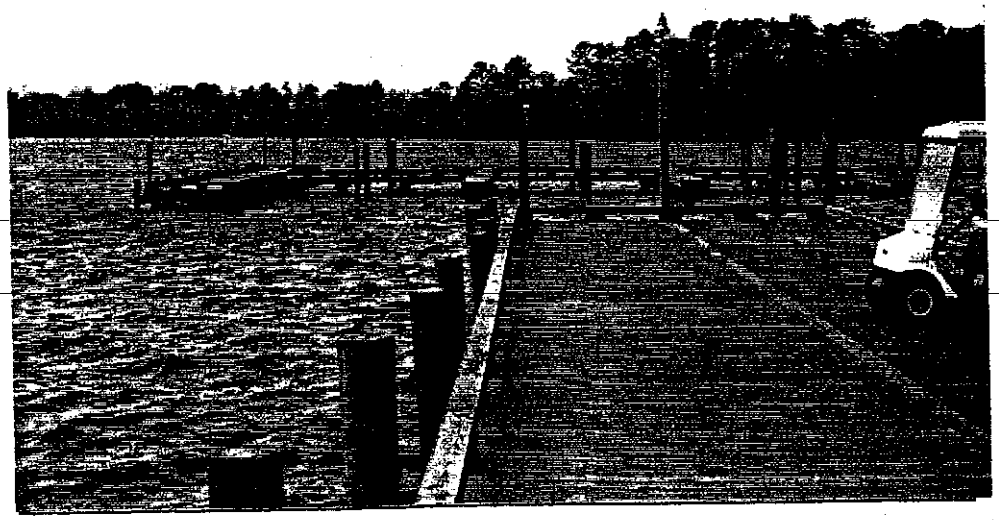




Boat Ramps Near Police Station

CITY OF HERTFORD

Boat Dock at City Park and Recreation Center
Upstream of Boat Ramps



Large Piers at Albemarle Plantation
Marina.

3. Edenton

Edenton, located at the western end of Albemarle Sound and the head of Edenton Bay, is a major boating center and an historic port area whose roots go back to the early 18th and 19th centuries. The relocated Visitors Center is just a short walk from the Town Docks and offers tours of historic houses dating to the early 1700s. The Town is immaculate and the well-kept historic homes are a subject worthy of a Norman Rockwell painting. Historic sites, antique shops, numerous restaurants, and several bed and breakfasts are within an east walk of the proposed ferry landing which is also the site of an attractive waterside park.

The approach to Edenton by water is free and unobstructed with about 8 feet of water in the channel shoaling to 6 feet in way of the berths at the Town wharves. A fast ferry that does not create a large wake should be able to maintain cruising speed, traffic permitting, to within a few hundred yards of the wharves. There is sufficient room within the small harbor to accommodate several ferries at one time. There is also parking adjacent to the waterfront Park. Conceivably, the former Visitors Center located in close proximity to the wharves, could be connected to the docks by a covered walkway and used for a ferry terminal--at least initially.

A photo of the Town Docks and proposed ferry landing is shown below. Other photos of the former Visitors Center and historic waterfrong homes plus a chart segment and map of Edenton follows.

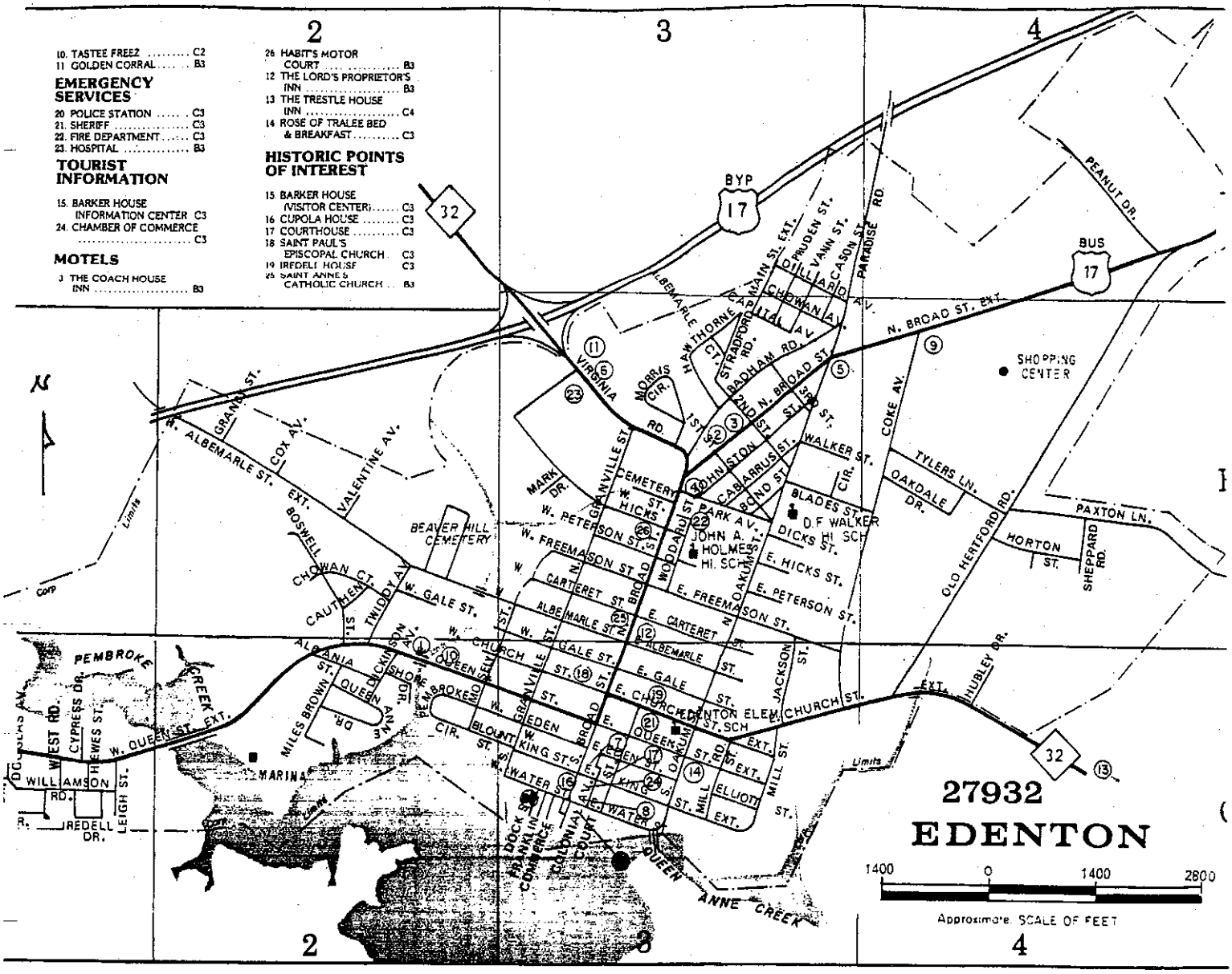
Edenton Town Docks

EDENTON

Former Visitors Center - Town Docks

View of Historic Homes on East Water Street

MAP OF EDENTON



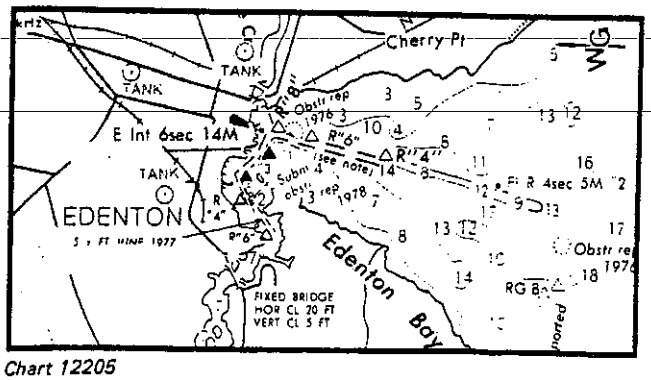


Chart 12205

Chart Segement - Chart 12205

4. Town of Plymouth

The town of Plymouth is six miles upstream from Albemarle Sound on the left ascending bank of the Roanoke River. It is connected to points East and West--including US 17, by U.S. Route 64, and North and South destinations by State Highway 45. Plymouth developed along the riverfront and the railroad which, until a few years ago, crossed Albemarle Sound via a trestle providing a vital link with the Port of Hampton Roads. There are abandoned industrial plants along the waterfront and it appears most surviving businesses moved to locations on Route 64.

Plymouth has a waterfront park located near the Police Station which it shares with a small railroad museum close by. Otherwise, there are no apparent tourist attractions in the immediate vicinity of the proposed ferry landing. However, there is ample space for parking at the Town park.

Plymouth's waterfront park is bulkheaded and the Roanoke River has a controlling depth of 8 feet. Approaching from seaward, a ferry would have to reduce speed to 5 miles per hour while transiting the fixed Highway 45 Bridge which has a 50 foot vertical clearance and a "no wake zone." Traffic permitting, a low wake ferry could travel at cruise speed for the balance of the trip up the river to within a hundred yards or so of the Town Wharf. A small ferry could utilize the existing wharf facilities; however, some minor alterations and restorative work may be necessary. Following are some photos taken from the Town Park.

View of Town Dock - Looking Downstream

PLYMOUTH

View Upstream from Town Park

Roanoke River Downstream of Town Park

5. Columbia

Located four miles up the Scuppernong River from Albemarle Sound just below the Highway 64 Bridge, Columbia is now a popular boating center. Excellent fishing in the cypress swamps attract fishermen all year-round. The City has built a 1,400 foot boardwalk along the picturesque river bank for exercising and fishing. The City is in process of rebuilding the town park with gazebo and water fountain which borders an existing bulkheaded wharf about 300 feet long. The wharf appears to be in good condition and would be satisfactory for berthing the small feeder ferries envisioned for this service. There is parking about a block a way which could be used for ferry travelers. There are no bridges or other obstructions to navigation between Columbia and the Sound and controlling river depth is over 6 feet. A low-wake ferry should be able to maintain cruising speed to within a few hundred yards of the Town Dock.

A picture of the Town Dock taken from the West side of the River and a chart segment of the Scuppernong River are shown below. Other photos taken of the park and pier follow.

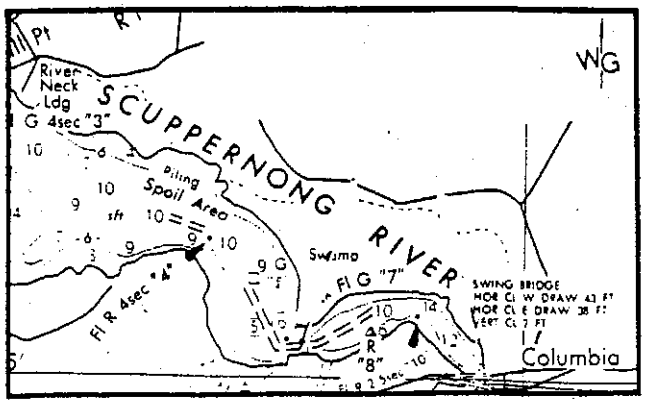
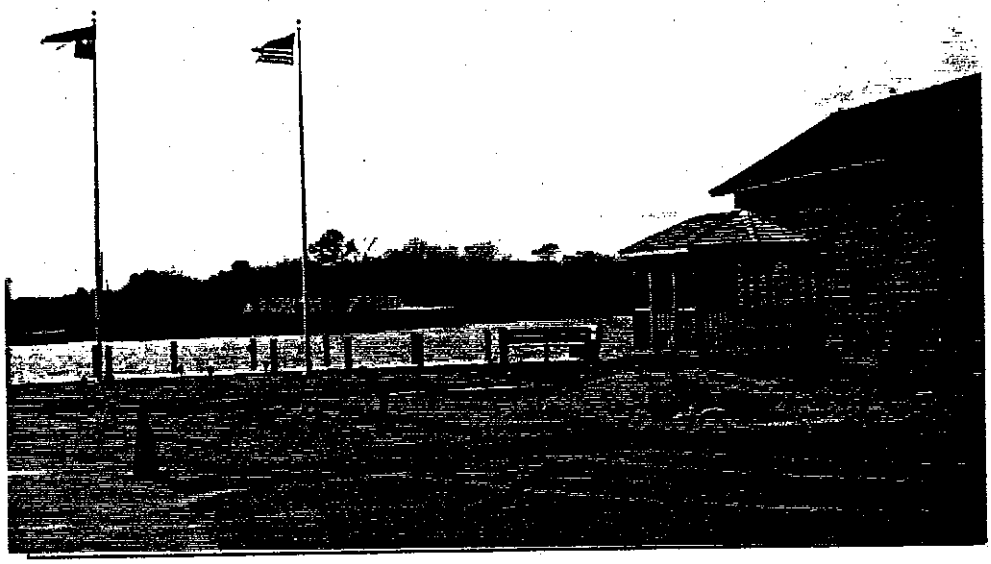


Chart 12205

COLUMBIA



Reconstruction Work At Town Park

View of Town Wharf Looking Downstream

6. Manteo

Although not in the geographic center of the *Sounds System*, Manteo's location at the convergence of the Albemarle and Pamlico Sounds, and other important considerations, makes it well-suited to serve as the Hub for the proposed Northeastern North Carolina high-speed passenger ferry system. Manteo is situated on the northeastern side of Roanoke Island which is reached via U.S. Route 64 from the mainland to the West or US 158 from the North, the only two roads serving the Outer Banks.

Manteo and Roanoke Island are already major tourist destinations and have many tourist attractions including "The Lost Colony" Outdoor Drama at the Fort Raleigh National Historic Site, the North Carolina Aquarium, Elizabethan Gardens, the Elizabeth II State Historic Site across the harbor from downtown Manteo, the Weeping Radish Brewery and Festhouse plus numerous bed and breakfasts, hotel/motels, shops--including those found at the proposed ferry terminal complex, restaurants etc. Perhaps of equal importance, Manteo and Roanoke Island attractions are now connected with parks and tourist attractions in Kitty Hawk, Nags Head and other Outer Banks areas by David Hoare's bus company which operates a fleet of English double-decker buses.

Manteo's harbor facilities are owned by the City but operated by a private company. The marina has a "T-head" pier capable of handling a 120 foot ferry and there is another site owned by the City which is available for constructing a new ferry terminal if necessary. The proposed ferry landing at the marina would require very little, if any, modifications to accommodate tourists. Possibly some of the vacant space in the adjacent shopping arcade could be converted to a terminal area which might be attractive to tourists as well as the shopkeepers. Town officials are very enthusiastic about the high-speed ferry concept and indicated they would assist in finding additional parking space away from the dock area as ferry parking spaces at the marina would be very limited. The Dockmaster, Captain Paul Fiducia, offered free dockage for a ferry provided fuel is purchased from the City Marina at regular commercial prices.

The controlling water depth in the channel between Manteo and the Intercoastal Waterway is 7.5 feet and there are no bridges, major hazards or obstructions along the route. However due to the size and shape of the harbor and approach channels, it is expected ferries would enter and leave at idle speed for a distance of about a quarter of a mile. The Harbor offers good protection in all weather conditions and there is sufficient room at the docks to accommodate two ferries at the same time. It should be noted that all distances to and from Manteo are via the north end of Roanoke Island. Ferries enroute Ocracoke and other destinations to the south could use the Roanoke Sound Channel passing beneath the US 64-264 Bridge proceeding south between Bodie Island and Wanchese and reaching Pamlico Sound at a point northeast of Stumpy Point. Which of the two routes would actually be the fastest has yet to be determined; however, the northern route was used in our calculations as the restricted portion of the channel is relatively short increasing the likelihood of achieving greater vessel speed over the entire route.

CHART OF MANTEO & WANCHESE HARBORS

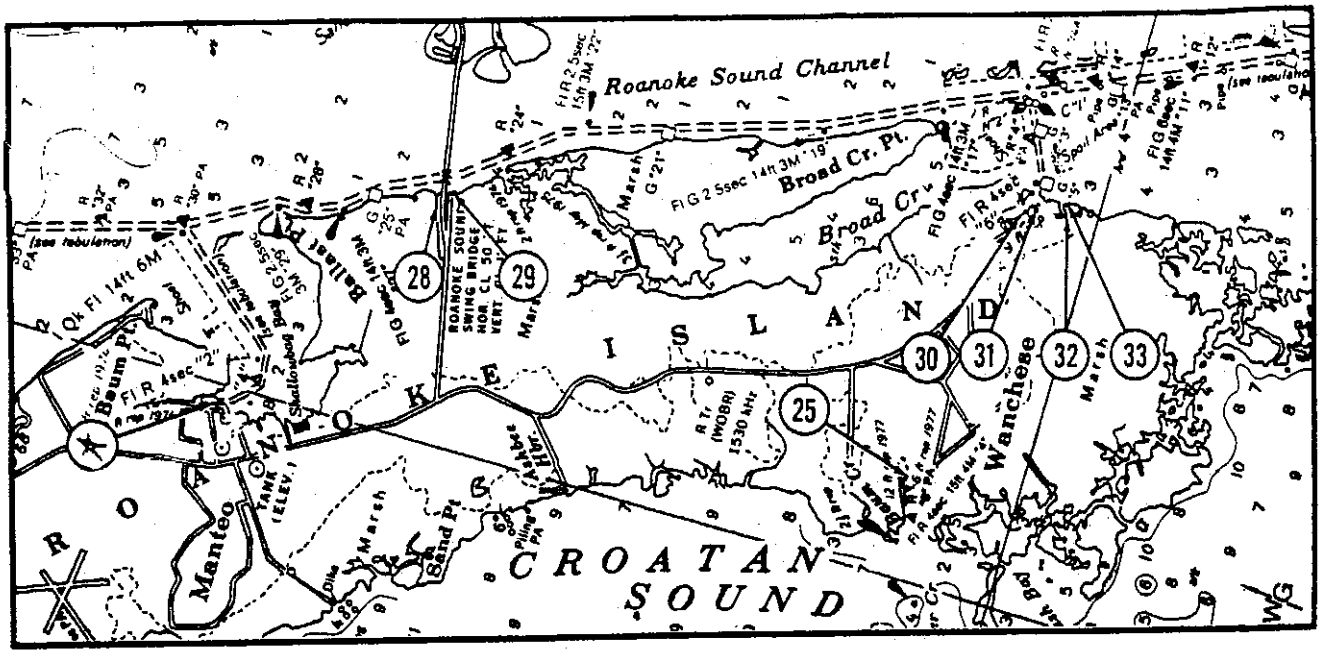
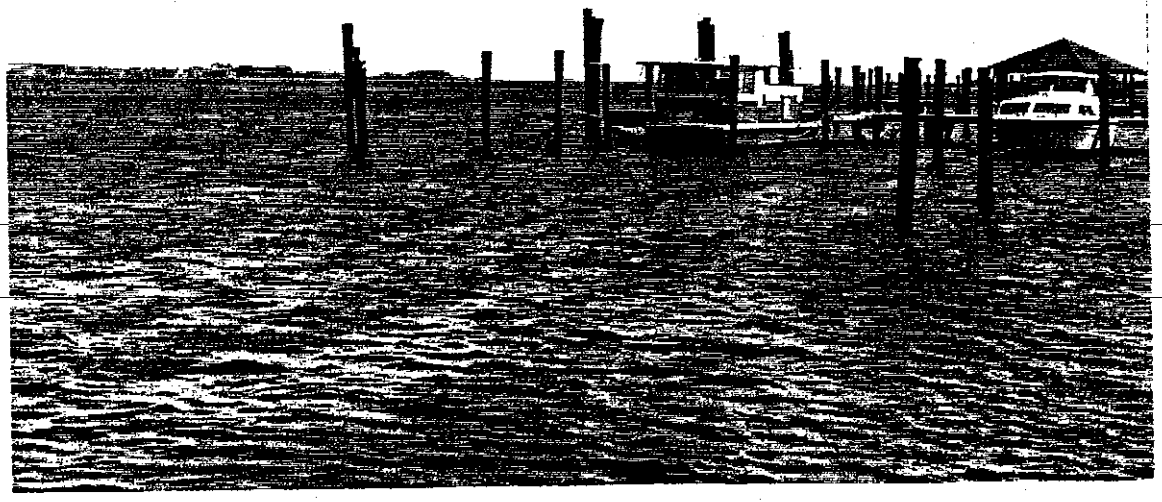


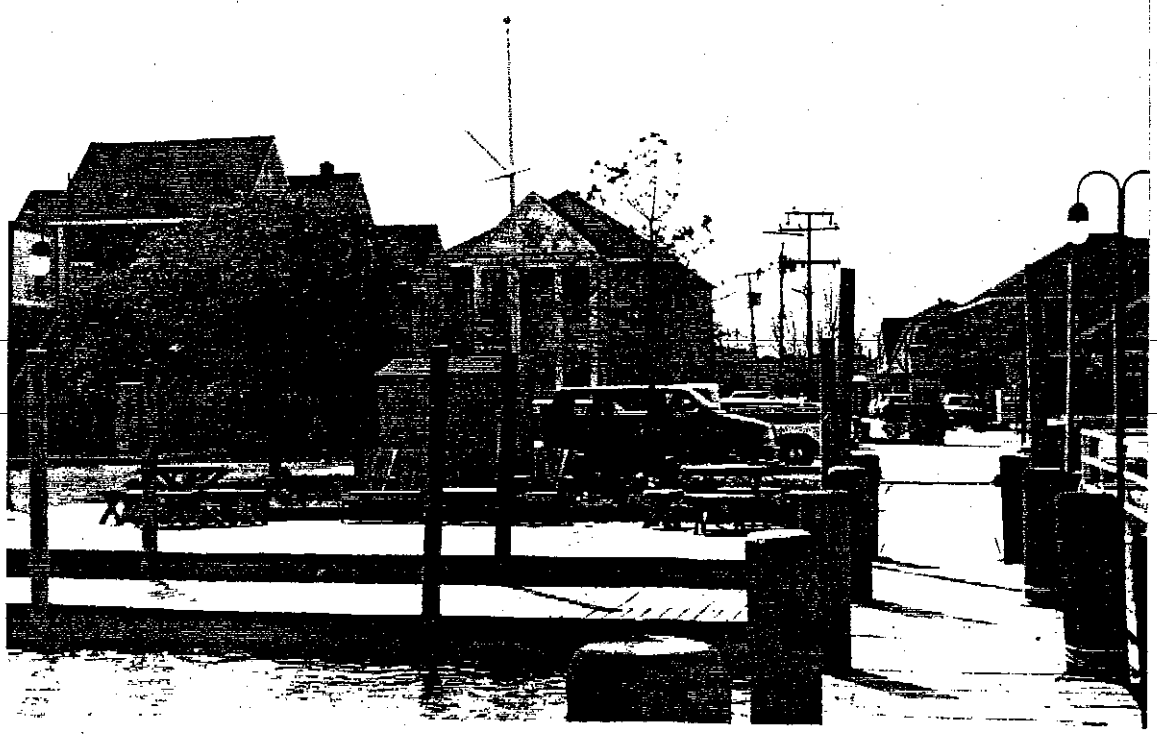
Chart 12204



Proposed Ferry Landing - Manteo Marina

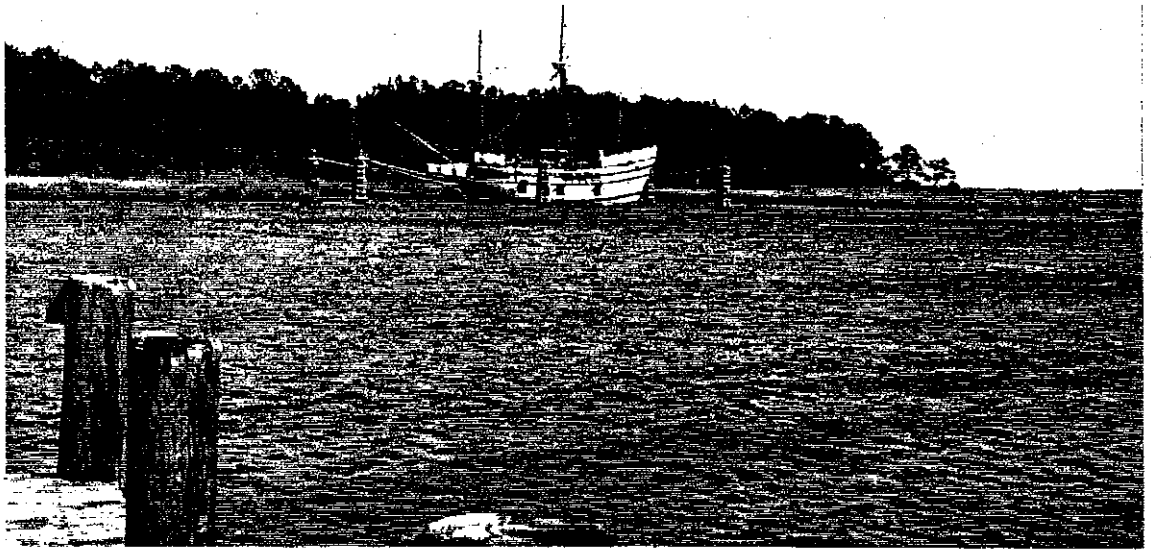
MANTEO

Marina and Shopping Area - Manteo



Entrance to Marina from Street - Manteo

MANTEO



Elizabeth II Replica Across from Ferry Landing

Inn Located at Manteo Marina & Ferry Landing

7. Ocracoke

Ocracoke is the southern-most island of the Outer Banks chain inhabited year-round. The village of Ocracoke is a favorite vacation spot for those who love a deserted beach, great fishing, sea food and the charm reminiscent of an undiscovered Key West. The Town is centered around a large, protected harbor called Silver Lake. Accommodations range from Cottages to Inns/Hotels and Bed and Breakfasts, all on a relaxed and casual scale. Because of the proximity of Ocracoke's amenities to each other, a car is not a requirement and, judging from the number of bikes observed, biking appears to be the preferred means of local transportation. Ocracoke is connected with Hatteras Island to the North, by a free auto-passenger ferry operated by NCDOT which, exclusive of queuing time takes about 40 minutes one-way. Another NCDOT auto ferry links Ocracoke with Swan Quarter on the mainland, a distance of about 24 nautical miles. The ride takes about 2.5 hours and costs $1.00 for foot passengers and $10.00 for cars, each way.

Ocracoke's protected harbor is dredged to a depth of 12 feet and has several private and public docks. The State of North Carolina maintains a large ferry terminal, here, which is also used by the Cedar Island Ferry, and has parking space for about 100 cars. With proper scheduling, it is believed this terminal could also handle the three passenger-only ferries envisioned by this report. However, there is a 90 foot pier with 8 feet of water alongside just north of the Ferry Docks that could be used as a fast ferry terminal. In either case, it would appear that the increased accessibility and convenience provided by the proposed passenger ferry services would greatly augment Ocracoke's existing tourism business.

A chart insert for Ocracoke plus photos of harbor and ferry installations follow.

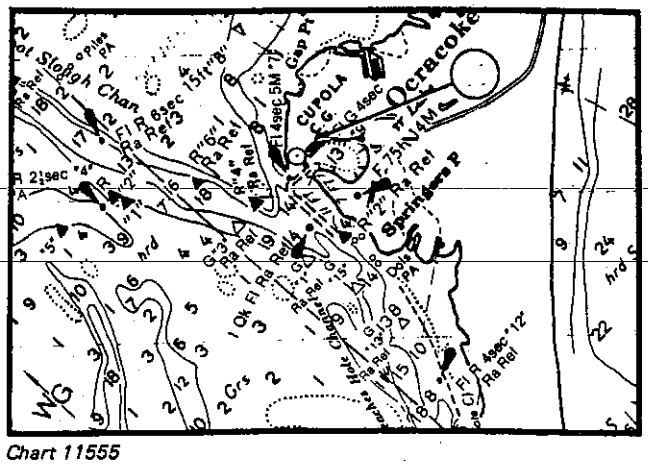


Chart 11555

OCRACOKE HARBOR

City Dock Adjacent to Ferry Terminal - Town of Ocracoke

Ferry to Swan Quarter at NCDOT Terminal

TOWN OF OCRACOKE

General View - Town of Ocracoke Harbor

Typical Scene "Downtown" Ocracoke.

8. Swan Quarter

Swan Quarter is located on the western shore of Pamlico Sound near the mouth of the Pamlico River northwest of Ocracoke and is roughly mid-way between New Bern and Manteo. The latter plus its close proximity to U.S. 264 make it the shortest, most direct route to Ocracoke Island for travelers from central and northern North Carolina. Which is the reason given for building the NCDOT ferry terminal at Swan Quarter. Essentially, Swan Quarter functions as a transportation connection point between the lower Outer Banks and the mainland. It is not a tourist destination unless one is planning to visit the Lake Mattamuskeet National Wildlife Refuge, nearby.

The ferry terminal consists of a large, dredged basin in Swan Quarter Bay with a channel depth maintained to a minimum of 8 feet. A private fishing boat pier with 6 feet of water is just north of the State Ferry Dock. The Terminal has parking for 100 or more cars. Mr. Watson, Port Captain at Swan Quarter, thought a 35-knot, 150 passenger-only ferry shuttling to and from Ocracoke Village would be very popular with travelers. Parking one's car at Swan Quarter, the high-speed ferry would be in Ocracoke in something short of an hour. With round-trip travel time reduced from five hours to not more than two hours, a 60% saving of time, more travelers would be apt to go and return the same day or to have more time to enjoy a weekend of biking and relaxation in Ocracoke.

A mini-Chart of Swan Quarter is shown below.

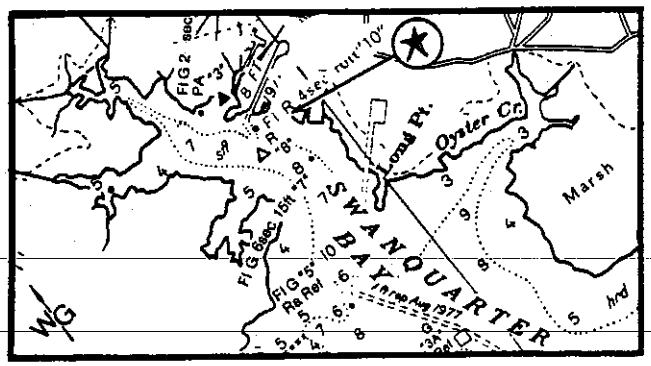


Chart 11548

9. Washington

Located 35 statute miles up the Pamlico River and Tar Rivers, ("Little") Washington is the most western of the *Regional Harbors* evaluated by the Consultants in the sixteen county Northeastern North Carolina Tourism Development area. The City is readily accessible by boat via a clearly marked channel with 8 to 9 feet water depth which is more than ample for the size and type of ferries contemplated. The only potential hazard to navigation is a railroad swing bridge located just upstream of Runyon Creek (below the City Dock) about 1/4 mile northwest of Buoy No. 19. The Bridge has a horizontal clearance of 69 feet and a vertical clearance of 7 feet when closed. The Bridge is the normally left open.

The City's riverfront park has a 1 1/4 mile concrete bulkhead with 6 feet water depth alongside and parking spaces for well over 100 automobiles. Downtown tourist amenities include two Bed and Breakfasts, six hotel/motels, several restaurants, and a "walking tour" of historic homes and places. Aside from a dinner boat, the *Pamlico Queen*, the waterfront is underutilized; however, it is felt that Washington's riverfront area has great potential and that the proposed ferry service could play a pivotal role in the redevelopment of historic downtown Washington.

A small chart of Washington is included below, and a panoramic view of Washington's waterfront in the area between the Route 17 Highway Bridge and the Railroad Bridge, is given on the following page.

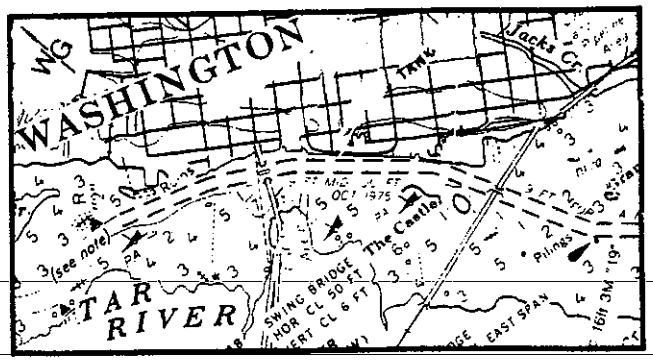


Chart 11554

Chart Segement, Chart 11554

WASHINGTON

View of Washington Upstream of City Dock

Bulkheaded Section of Riverfront - Across River on Right.

10. Belhaven

Belhaven is located on the right ascending bank of Pantego Creek just above its junction with the Pungo River which is part of the Intracoastal Waterway. The town is approximately 17 statute miles from the mouth of the Pamlico River and 28 miles, by water, from Swan Quarter. The Pungo River is well marked and there are no obstructions to navigation enroute Belhaven. There are three possible docking sites in Belhaven including one owned by the Township and two private marina repair facilities. The city-owned Belhaven Wildlife Access Area is bulkheaded with 10 feet of water alongside, and there are parking spaces for about 75 cars. The two private marine facilities, Belhaven Marine and Robb's Boat Yard & Marine, have docks capable of handling vessels of up to 120 feet in length. They also have parking for about 50 cars within a short walking distance of the wharves. All three ferry sites are within easy walking distance of several restaurants, 2 Bed and Breakfasts and 3 hotel/motels, plus various shops. Belhaven is a quaint, friendly town reminiscent of a bygone era which should be popular with water-borne tourists. It has great possibilities as a *Regional Harbor*.

A chart segment of Chart 11553 is shown below.

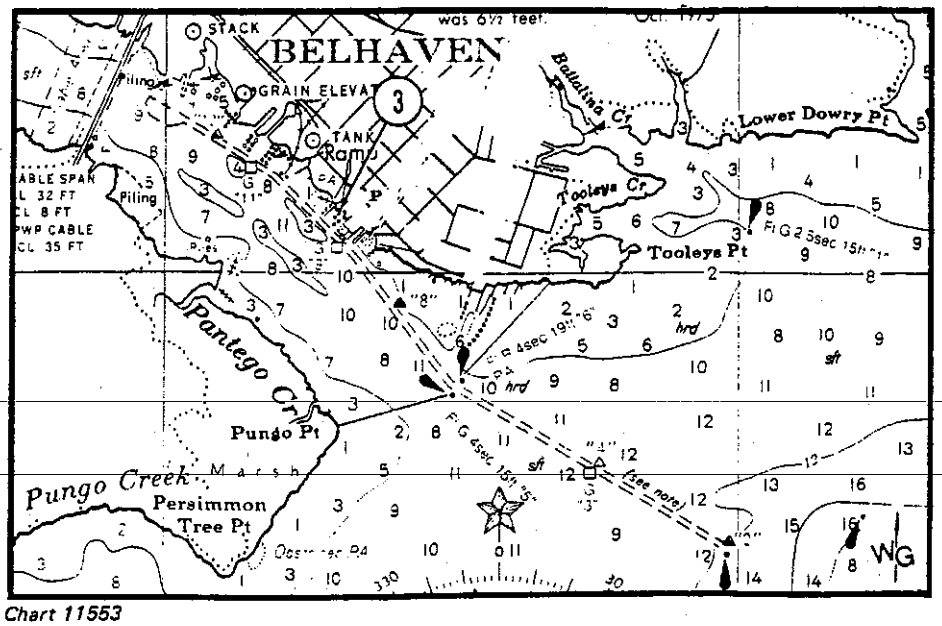


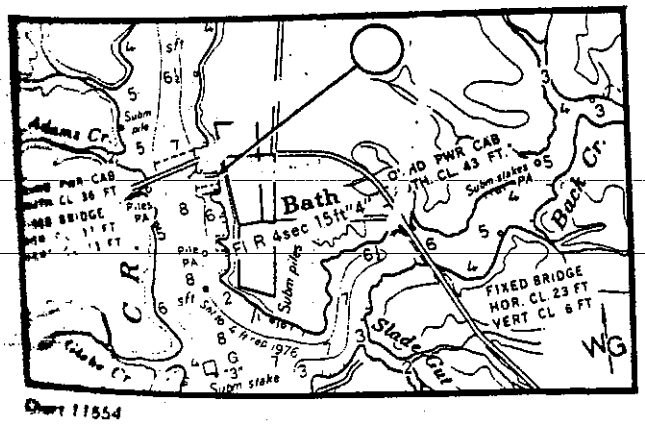
Chart 11553

11. Bath

About 26 miles (by water) West of Belhaven is the town of Bath which, being closer to the Pamlico River, is only 8 miles farther from the mouth of the Pamlico, i.e., 25 miles versus 17 miles, than Belhaven. Bath is located on the right ascending bank of Bath Creek about 2 miles from the Pamlico. There are no major navigational hazards to contend with and water depth is over 6 feet in the channel and at two possible ferry docking sites which can presently handle vessels up to 65 feet in length. One site is at the Harbour Motel just off Route 264 and the other is the "Old Showboat" Dock owned by the Historic District of Bath. The latter could handle a vessel up to 100 feet in length with the addition of two mooring dolphins made up of pile clusters. Present thinking is to serve these smaller harbor towns with a fast feeder vessel ("water bus") which would be about 50-55 feet long and well within the capabilities of even very small dock facilities. Parking at both sites is limited to about 25 cars; however, there is an additional 50 parking spaces at the nearby Visitors Center.

The Town of Bath has many historic houses and a large Visitors Center. During the summer there is an outside performance at the Center telling of the exploits of Blackbeard the pirate, one of Bath's more colorful past residents. There is one Bed and Breakfast and one gift shop which are open year-round. Bath has had a proud history and would appear to benefit greatly from the increased tourism a ferry service would bring.

A chart segment of Chart 11554 is shown below.



12. New Bern

Although not located in one of the 16 Northeastern North Carolina Counties targeted for development under the *Regional Harbors* concept, New Bern is seen as a natural tourism "gateway" to the proposed fast passenger ferry system. The City of New Bern is located about 30 miles from the mouth of the Neuse River at its junction with Pamlico Sound. The City is connected to the center of the state by Route 70, a multi-lane highway and historic Route 17 to the North and South. New Bern is already a major tourist center with walking guided tours of the historic City, many good restaurants, shops, Bed and Breakfasts as well as a number of first class hotel/motel accommodations. There are four large commercial marinas in the downtown area as well as one at Union Point Park, a City-owned facility. The latter has parking for well over 100 cars and has a Finger Pier which, with relatively minor modification, would be suitable for berthing the 100-110 foot ferries envisioned for this service. Water depth is 6 feet at the pier which would be adequate. The Neuse River is known for its sometimes choppy seas especially in the section of the river where it turns to the Northeast and empties into the Sound. Weather and traffic conditions permitting, a fast ferry could maintain cruising speed throughout the Neuse and until within a few hundred yards of the ferry terminal.

A chart segment for Chart 11552 showing the general layout of New Bern's harbor, at the confluence of the Trent and Neuse Rivers, is shown below.

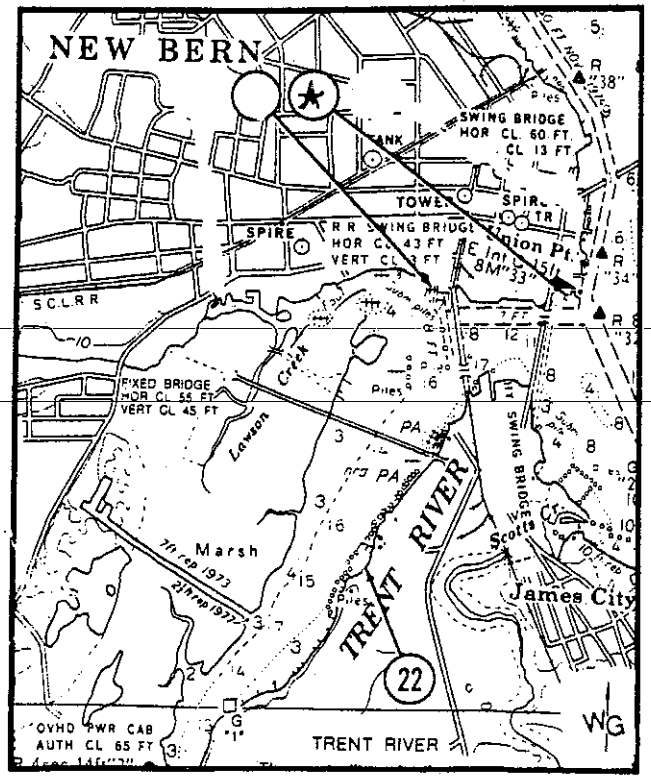


Chart 11552

GARY GREENE
CONSULTING ENGINEERS

POST OFFICE BOX 99213
RALEIGH, NORTH CAROLINA 27624-9213
919-846-1238 FAX 919-846-0909

APPENDIX C

DESIGN MANAGEMENT PLANNING
CIVIL TRANSPORTATION MARITIME STRUCTURAL

May 2, 1994

Charles D. Miller
Charles D. Miller & Associates
5317 Princess Anne Road
Virginia Beach, Virginia 23462

Subject: Environmental Concerns Discussion
Fast Ferry Project

Dear Charlie:

Per your request, we have discussed subject project with representatives of State agencies that will be important in providing input on permitting the activity. The names of the individuals along with their association and interest in the impact are as follows:

No one from DOT

- John Humphreys, Associate Attorney General, Environmental Section, Department of Justice which advises staff from legal viewpoint and interpretation of laws on permits.
- John Parker, Chief - Major Permits Section, Division of Coastal Management which acts as clearinghouse on permit applications.
- Preston Pate, Assistant Director - Field Operations, Division of Coastal Management. Field operations unit are responsible for performing site visits and preparing reports with regards to impact on permit applications.
- Dick Hamilton, Division of Wildlife Resources which is responsible for impact on waterfowl and boating safety.
- Red Munden, Division of Marine Fisheries which is responsible for impact on marine habitat and commercial / recreational fishing.

The requirement for obtaining permits will be dependent on whether waterfront facilities (new or modification) or dredging of channels and/or basins will be required. If not, permits will not be required from these State Agencies nor do I foresee any federal permit required from the Corps of Engineers. As an introduction to the project, the characteristics of the vessel were described as a 150 to 200 passenger only vessel with a maximum draft of 4 feet, maximum speed of 35 knots and maximum vessel generated wave (no distance from sailing line) of less than 9 inches. The following comments were the items mentioned by the above:

(New Bern Continued.)

Using the proposed system, it would be possible for travellers to board the ferry at New Bern and arrive in Ocracoke in less than two hours time or, alternatively, explore the historic harbors of the Pamlico and/or Albemarle Sounds at their leisure over a period of several days. In either case, it would appear that the advent of a fast-ferry service would enhance the already significant tourism business of New Bern while opening up new vistas for those who otherwise might not venture to the Outer Banks or the historic smaller regional harbors of the Pamlico and Albemarle sounds.

1 Not a concern with boating if captains operate the vessels, vessels are equipped with appropriate equipment and rules of boating safety are followed.

2 Waterfowl (e.g. ducks) could be impacted dependent on noise and navigation route; however, with minimal number of trips anticipated and the fact that general navigation route will likely follow existing channels (see below), impact is not expected to be minimal.

3 With the use of a jet drive in lieu of conventional propeller, no concern for impact on channel bottoms.

4 The question on impact from the operation is dependent on the route selection. If existing channels are utilized, no impact is expected on marine life or fishing. Note that fixed fishing gear (nets, crab pots, etc.) is allowed outside of existing channels; therefore, operation of ferry outside of channel could impact commercial and recreational fishing. Also, oyster bed, sea grasses, etc. may lie outside of existing channels which could be impacted. While movable fishing gear is allowed within channels, normally fishing with movable gear does not occur within channels. All types of fishing will occur outside of the channel which could be impacted.

Basically, routing of the ferry should occur within existing channels or the route will have to address impact on fishing (fixed and movable) along with location of oyster beds, etc.

5 The noise factor was mentioned; however, we were not able to discuss since the actual noise level created by the operation was unknown.

As stated above, the requirement for permits is dependent on terminal development and/or channel dredging. If neither are required, no permits will be required. While not discussed with the above, I would recommend that the municipalities be responsible for the improvements and simply make any improvement as general waterfront improvements. While permits may not be required, the routing of the operation should consider impact on fishing and marine environment along with potential of encountering fixed fishing gear outside of established channels.

For your information, Mr. Humphreys stated that the original concerns that were envisioned by regulatory agencies were due to an anticipated deep draft vessel (requiring dredging at most locations) producing significant vessel generated waves and possessing a regular propeller driven drive. If the characteristics of the vessel are not as described earlier in this letter, these concerns may be realized. Therefore, the project should attempt to use a vessel possessing characteristics as described earlier.

Since the actual location of the terminals is unknown at this time (other than name of municipality), requirements for dredging, marine construction, paving, building construction, water and sewer requirements, vessel fueling facilities and maintenance facilities could not be reviewed.

However, the impact associated with the above would not be solely related to the ferry operation (with possible exception of parking and building facility requirements) since the draft of the vessel is not significant. Each site should be reviewed with regards to channel and basin dimensions (while depth may be sufficient, does the basin allow maneuvering of the vessel), waterfront construction requirements, parking requirements and other miscellaneous building requirements.

If you have any questions, please advise.

Sincerely,

Gary Greene

March 13, 2018

HARBOR TOWN PROJECT

Professor Nicholas Didow
4516 McColl Building
Kenan-Flagler Business School
University of North Carolina
Chapel Hill, NC 27599-3490
nick_didow@unc.edu
919.962.3189

Water Transportation in the Albemarle Sound

Katie Bradshaw, Heather Brutz, Kiara Burroughs, Elisa Elkind, Cindy Frantz, Maria Grimshaw, Taylor Mallard, Susan Sullivan, Brandon Stephenson, Elise Wagner

UNC KENAN-FLAGLER BUSINESS SCHOOL

AGENDA

Welcome

Introductions by County/Town/Organization Elected Officials and Managers

Introduction of Professor Nick Didow and his Team

Overview of the Harbor Town Project and Plan

Questions and Comments

Next Steps for County/Town/Organization Elected Officials and Managers

Professor Didow has assembled a dedicated team from the IBX and from several universities and institutions across the state.

UNC KENAN-FLAGLER BUSINESS SCHOOL

UNIVERSITY OF NORTH CAROLINA SCHOOL of the ARTS

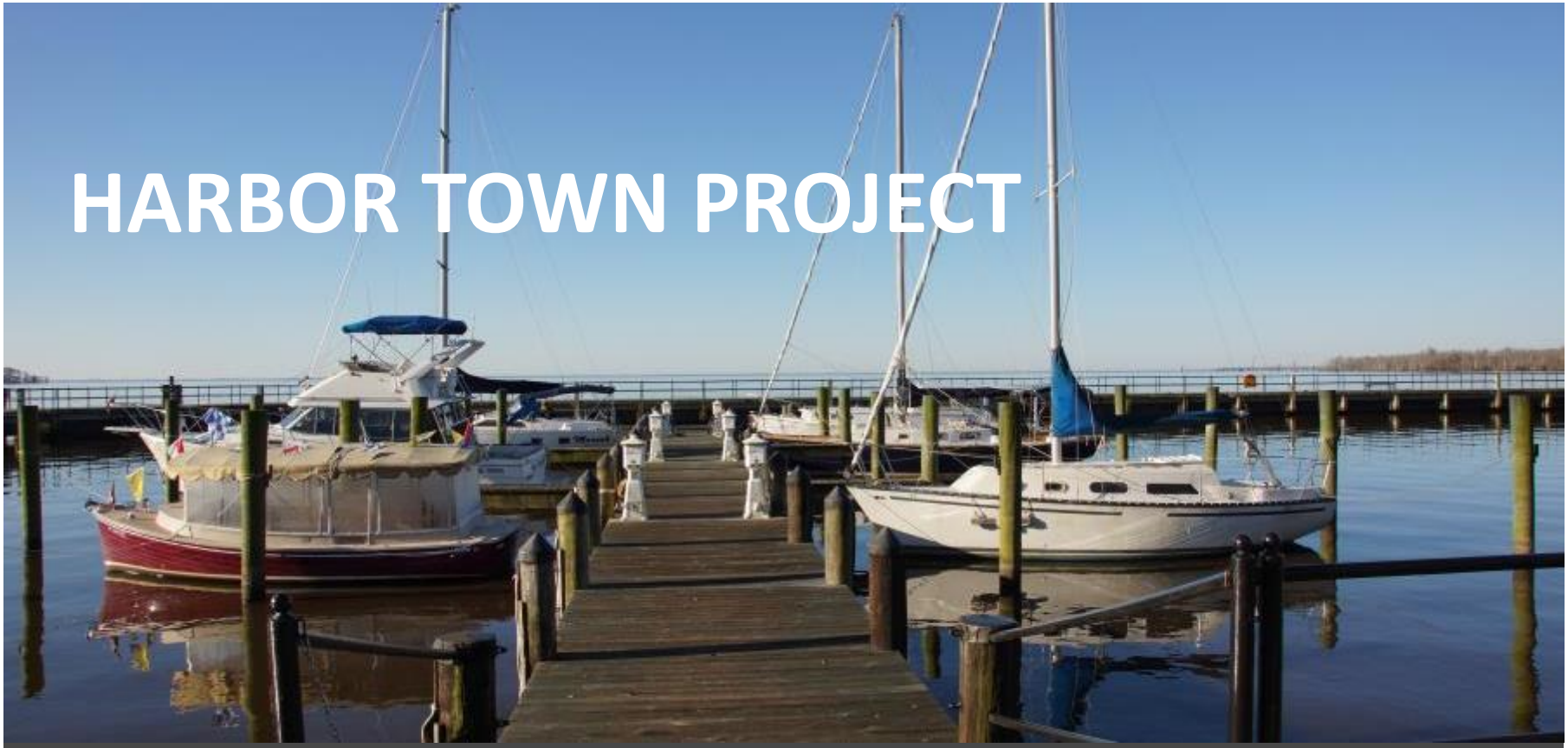
OUTDOOR THEATRE

East Carolina UNIVERSITY

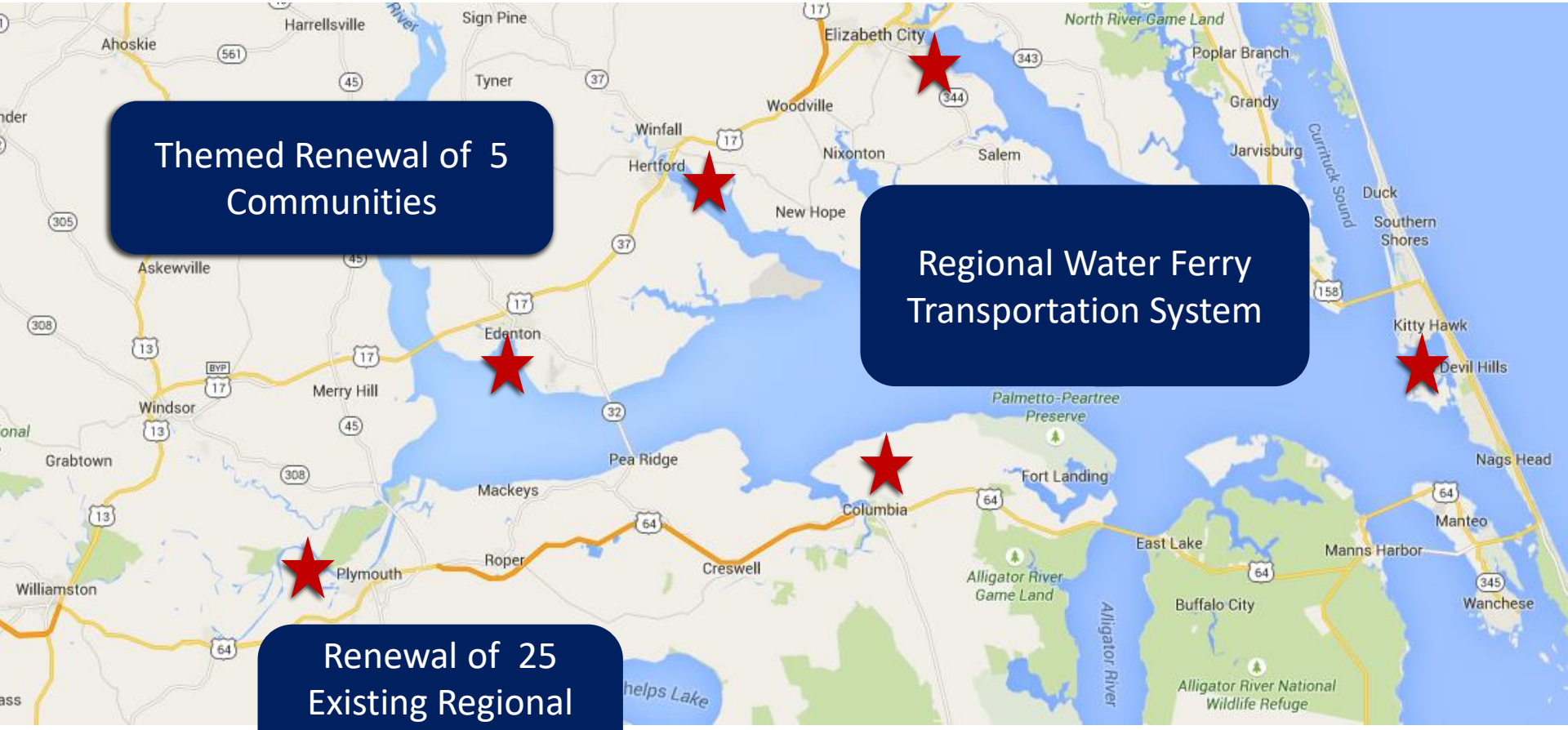
ELIZABETH CITY STATE UNIVERSITY 1891

The team also includes Bunny Sanders, Phil McMullan, and Peter Thompson, who developed an earlier version of this strategy in 1993.

HARBOR TOWN PROJECT



The Water Ferry System is one of several Phase One initiatives to increase tourism and create sustainable jobs and careers.



UNC KENAN-FLAGLER BUSINESS SCHOOL

A water ferry serving the Albemarle Sound is an attractive investment opportunity that can quickly become profitable.

Five Boats

49 seat catamaran

149 seat catamaran

Towns

In phase 1, ferries stop in six towns:

- Elizabeth City
- Edenton
- Hertford
- Plymouth
- Columbia
- Kitty Hawk

Impact

The ferry has the potential to create 94 jobs. Tourism is estimated at $14M.

Cost

$13.8M in capital expenditures is required to launch the ferry. Average annual operating expenses are $1.95M.

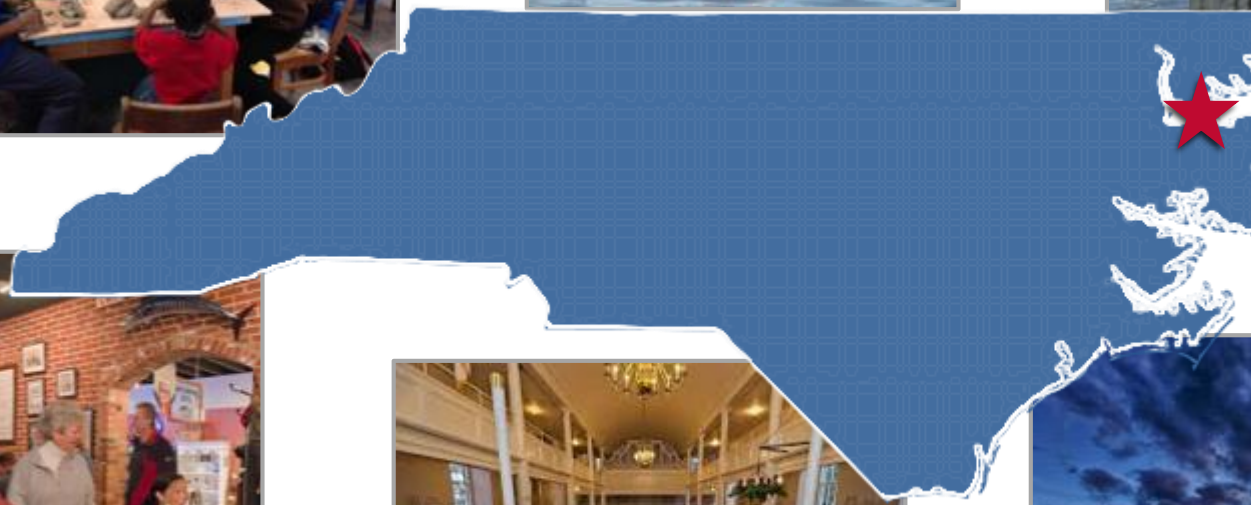
Return

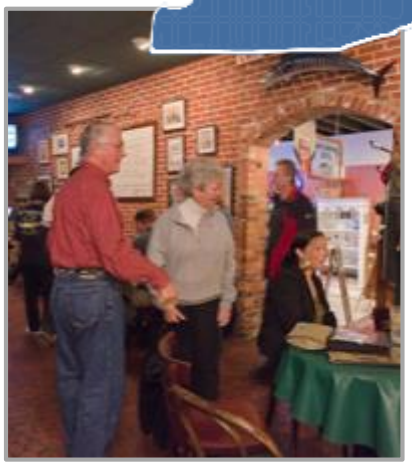
The ferry has the potential to be profitable in year 1. Year 1 annual ridership is projected to be 107,000.

See appendix for more detail on calculations

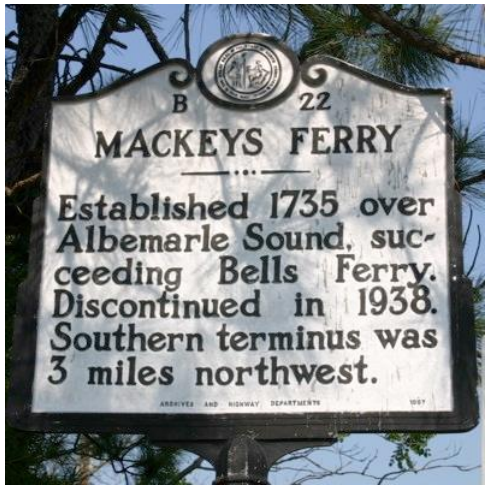
Introduction

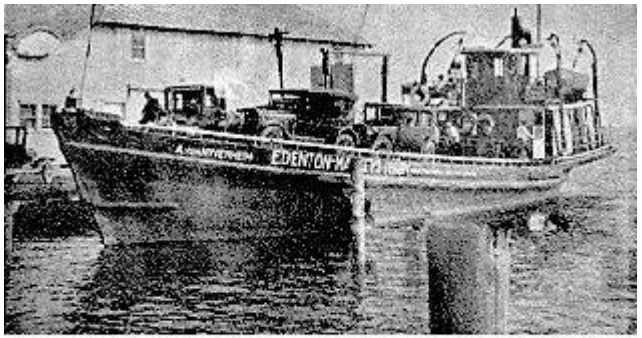
The Albemarle Sound region of northeastern North Carolina is a region rich in history, natural resources, and faith.



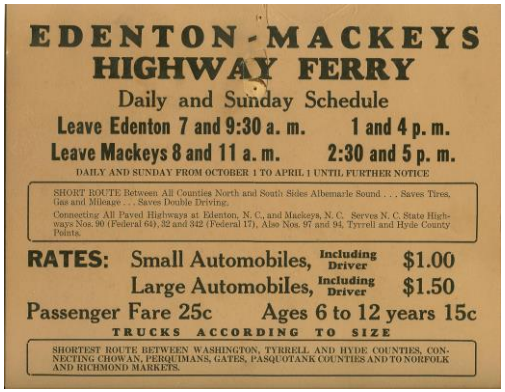


Ferries have long been part of the life and lore of the Albemarle Sound region.





The *A. von NYVENHEIM*, ferry between Edenton, Chowan Co., and Mackey's Ferry, Washington Co., ca. 1920
Photo courtesy Port O'Plymouth Museum, Fred Davenport donation, Museum of the Albemarle



EDENTON - MACKEYS HIGHWAY FERRY

Daily and Sunday Schedule

Leave Edenton 7 and 9:30 a. m. 1 and 4 p. m.

Leave Mackeys 8 and 11 a. m. 2:30 and 5 p. m.

DAILY AND SUNDAY FROM OCTOBER 1 TO APRIL 1 UNTIL FURTHER NOTICE

SHORT ROUTE Between All Counties North and South Sides Albemarle Sound . . . Saves Tires, Gas and Mileage . . . Saves Double Driving.

Connecting All Paved Highways at Edenton, N. C., and Mackeys, N. C. Serves N. C. State Highways Nos. 90 (Federal 64), 32 and 342 (Federal 17). Also Nos. 97 and 94, Tyrrell and Hyde County Points.

RATES: Small Automobiles, Including Driver $1.00

Large Automobiles, Including Driver $1.50

Passenger Fare 25c Ages 6 to 12 years 15c

TRUCKS ACCORDING TO SIZE

SHORTEST ROUTE BETWEEN WASHINGTON, TYRRELL AND HYDE COUNTIES, CONNECTING CHOWAN, PERQUIMANS, GATES, PASQUOTANK COUNTIES AND TO NORFOLK AND RICHMOND MARKETS.

350th Anniversary Guided Cruise
May 11-13, 2018
$1,000+ per person
First four counties in NC: Currituck, Chowan, Perquimans and Pasquotank, created in 1668 as precincts of the Albemarle area.

The historic communities of the region have considerable potential tourism market appeal because of their unique identities.

Columbia–
Art and Nature

Edenton–
"the South's prettiest town"-*Forbes*

Hertford–
Antiques and S-bridge

Plymouth–
Civil War and *The Battle of Plymouth*

Elizabeth City–
Harbor of Hospitality
USCG and EC Shipyard

Kitty Hawk–
First in Flight

Source: Forbes, Team Analysis

Why is now the time for the Harbor Town Project?

The Harbor Town Project celebrates the beauty, assets, resources, and history of the Albemarle Sound region and its people.

Towns and counties across the IBX understand the shared benefits of regionalism.

State and local political and community leaders support a major planned, coordinated tourism-based economic development intervention for the region.

Other traditional economic development initiatives will benefit from the Harbor Town Project.

Funds from Golden LEAF's forthcoming Community Based Grant Initiative can be leveraged by private investment, additional foundation grants, and other state and federal funding for capital and start up expenses.

People understand the benefits of the Harbor Town Project and get excited about it! It will renew and upgrade the historic downtowns of IBX waterfront communities and existing eco and historic tourism sites.

The Harbor Town Project will foster other creative, thoughtful regional initiatives.

The Albemarle Sound represents a significant opportunity for tourism based economic development in northeastern North Carolina.

Overview

Operational assumptions provide a foundation for projected profitability

Resources

Existing assets, including area attractions and dock facilities, provide a foundation for success

Passengers

Current interest from existing tourists and residents provide a readily available market

A ferry service in the Albemarle Sound region can draw 170,000 visitors annually and generate an NPV of $5 million over the next 10 years

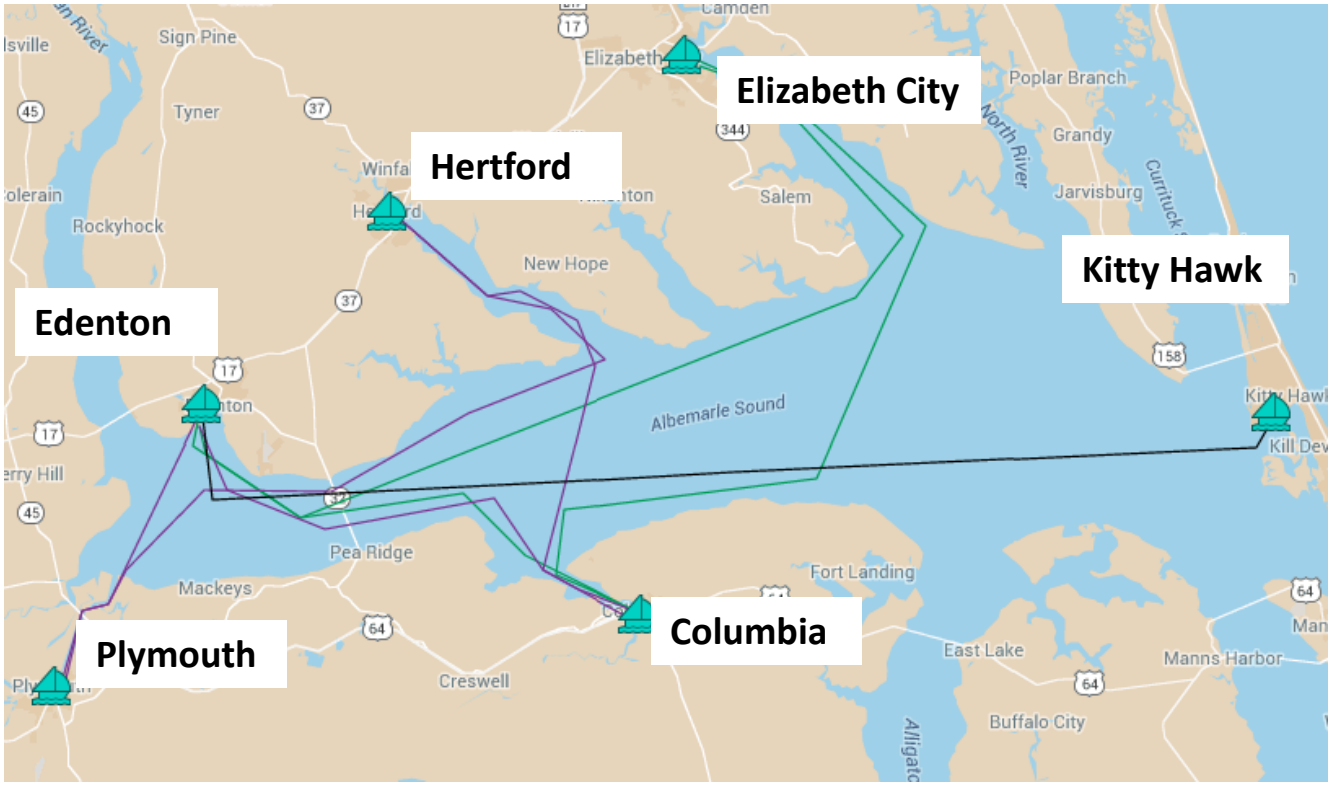
Routes would include Elizabeth City-Columbia-Plymouth-Edenton-Hertford circuits, and Kitty Hawk-Edenton direct express.

Average trip: *66 min @ 32 mph (28 knots)* **Plymouth-Edenton:** 24 mins

2 Ferries on Kitty Hawk-Edenton Direct Express: 1 hr 45 mins

1 Ferry on Clockwise and 1 Ferry on Counterclockwise 5 town circuits

1 Ferry maintenance, charter, or special scheduling



Source: NCDOT GIS Unit

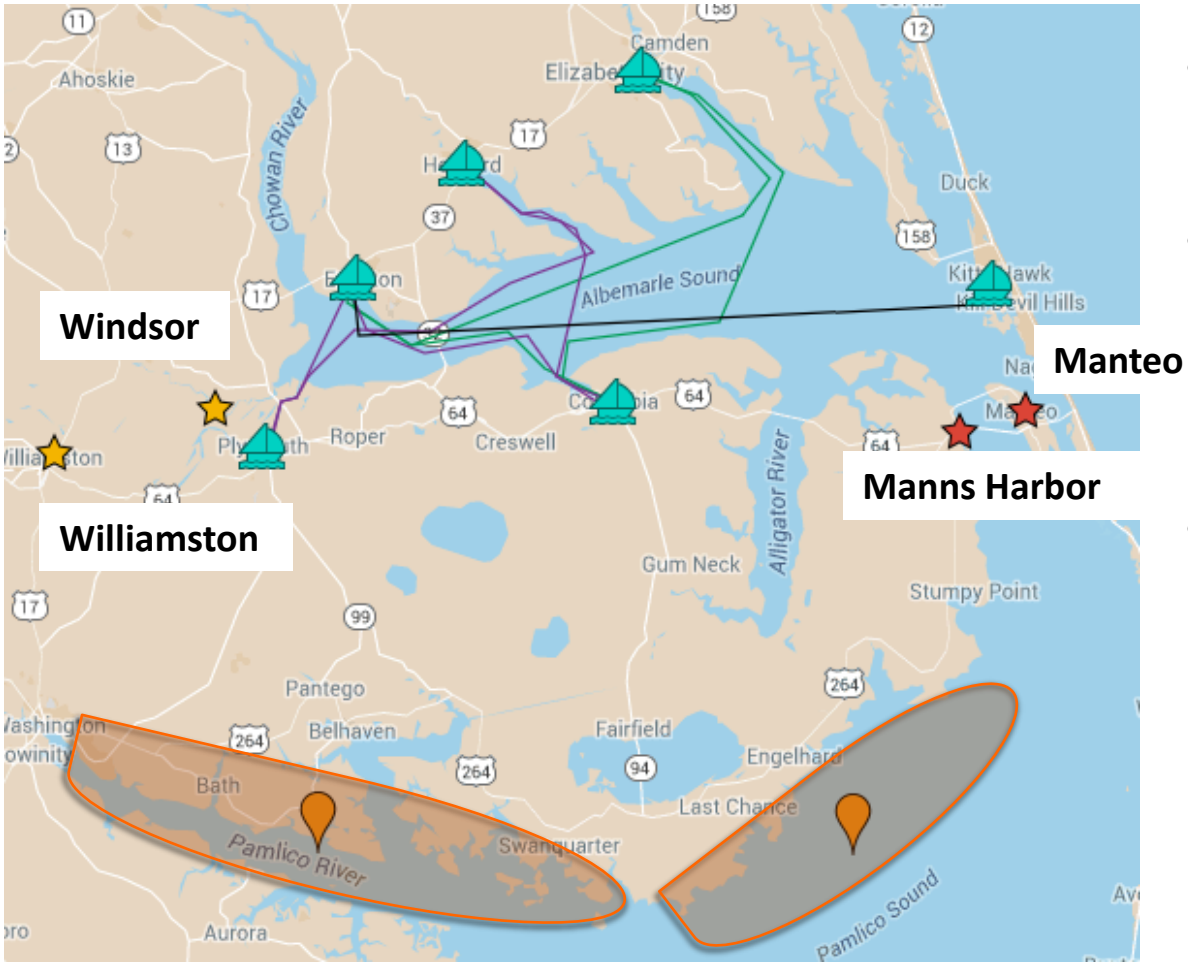
Total operating hours/day per vessel: *10.5 hours*

Why These Cities:

- Location (accessibility and inter-distance)
- Infrastructure and amenities
- Vitality, attraction, and potential
- Bring more tourists to the OBX
- Generate additional tourism in the IBX

Quick ramp up time & flexible hop on hop off trips

More routes and ferries can be added over time to include other locations on the Albemarle Sound, IBX, OBX, and Pamlico Sound.



- Connect to other IBX and OBX cities
- Add one-off trips to more cities near the Albemarle Sound and up rivers
- Reach towns along the Pamlico Sound and Pamlico River

We can apply best practices from other successful public and public-private water transportation systems.

PRICING

- Local resident discounts
- Commuter/education bulk pass
- Hop on/hop off pricing
- Family/seasonal passes
- Ticket prices vary greatly

PARTNERSHIP

- Public transportation at docks (bikes rentals, etc.)
- Onshore nature walks
- Discounts at local businesses

POSITIONING

- Onboard entertainment
- Seasonal schedule
- Onboard concessions
- Special event charters – nature talk, star gazing, weddings, wine and cheese, sunset dinner and drinks, holiday cruises

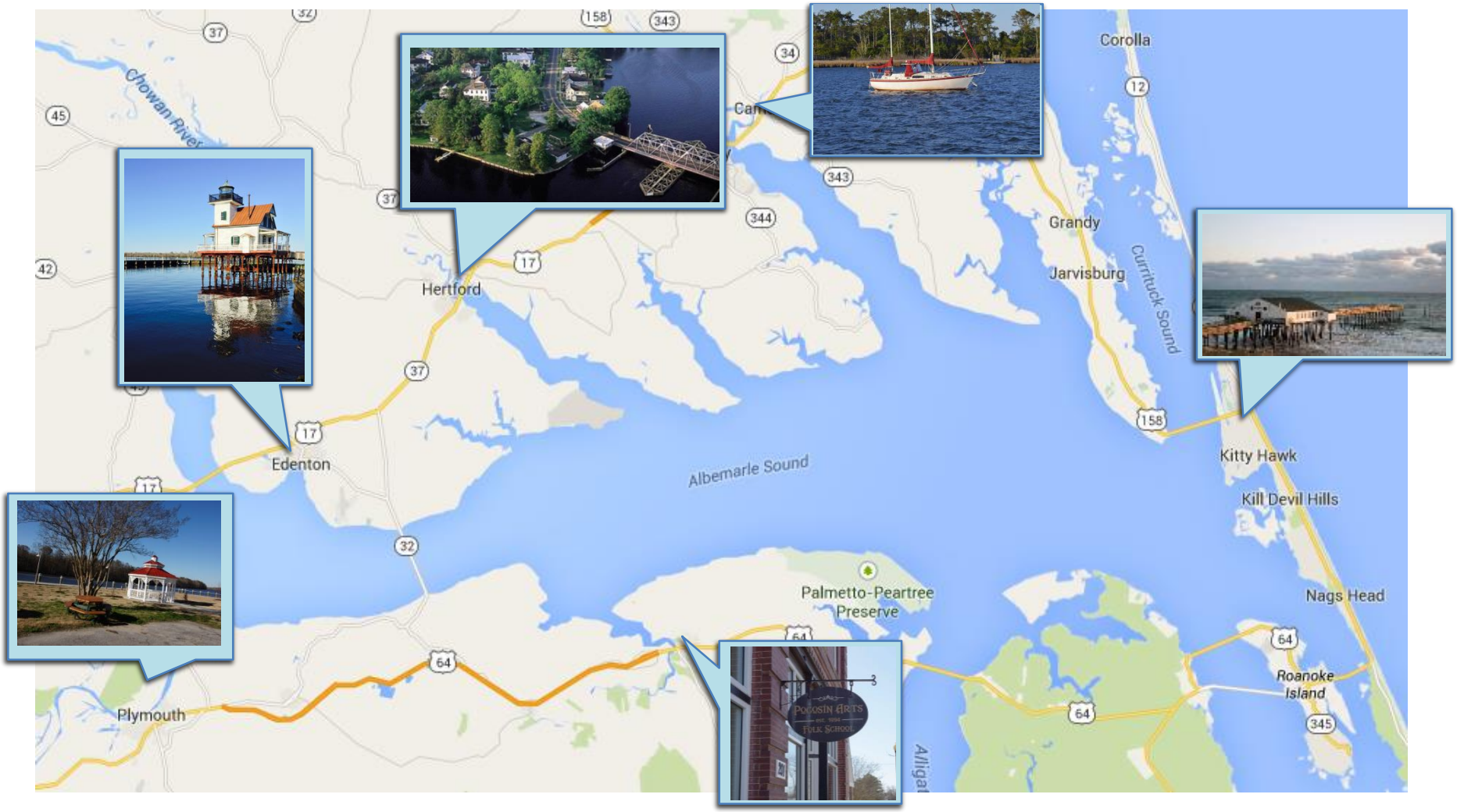
See Appendix for more information on benchmark studies in price/schedules

The Albemarle Sound represents a significant opportunity for tourism based economic development in northeastern North Carolina.

Overview	Resources	Passengers
Operational assumptions provide a foundation for projected profitability	Existing assets, including area attractions and dock facilities, provide a foundation for success	Current interest from existing tourists and residents provide a readily available market

A ferry service in the Albemarle Sound region can draw 170,000 visitors annually and generate an NPV of $5 million over the next 10 years

Projected consumers would enjoy visiting historic towns and sites, seeing nature, and exploring the IBX region by ferry.



Exploring the IBX is a perfect way for visitors to experience North Carolina.

The IBX friendly small-town culture and Southern Hospitality make for an authentic tourist experience.

The Outer Banks is an established tourist brand and attractive destination now drawing over 8 million visitors annually.

Cape Hatteras National Seashore

Jennette's Pier

Cape Hatteras Lighthouse

Wright Bros. Memorial

Upgrades in historic downtown waterfronts can leverage existing infrastructure to serve both ferries and other water traffic.

Port City	Power	Water	Pump Out	Fuel	Wifi	Restaurant	Restroom/ Shower	Groceries/ Shopping
Columbia	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Edenton	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Elizabeth City	No	Yes	No	No	Yes	Yes	Yes	Yes
Hertford	Yes	Yes	Yes	No	No	Yes	No	Yes
Plymouth	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Kitty Hawk	No	Yes	No	Yes	No	No	Yes	Yes

Note: Fuel dock to be added at Edenton and Dry Dock/Maintenance Facility to be built at location TBD

"The Albemarle Loop Marinas" brochure, 2015

The Albemarle Sound represents a significant opportunity for tourism-based economic development in northeastern North Carolina.

Overview

Operational assumptions provide a foundation for projected profitability

Resources

Existing assets, including area attractions and dock facilities, provide a foundation for success

Passengers

Current interest from existing tourists and residents provide a readily available market

A ferry service in the Albemarle Sound region can draw 170,000 visitors annually and generate an NPV of $5 million over the next 10 years

The estimated market in Year 1 is 107,000 visitors from three different consumer groups.

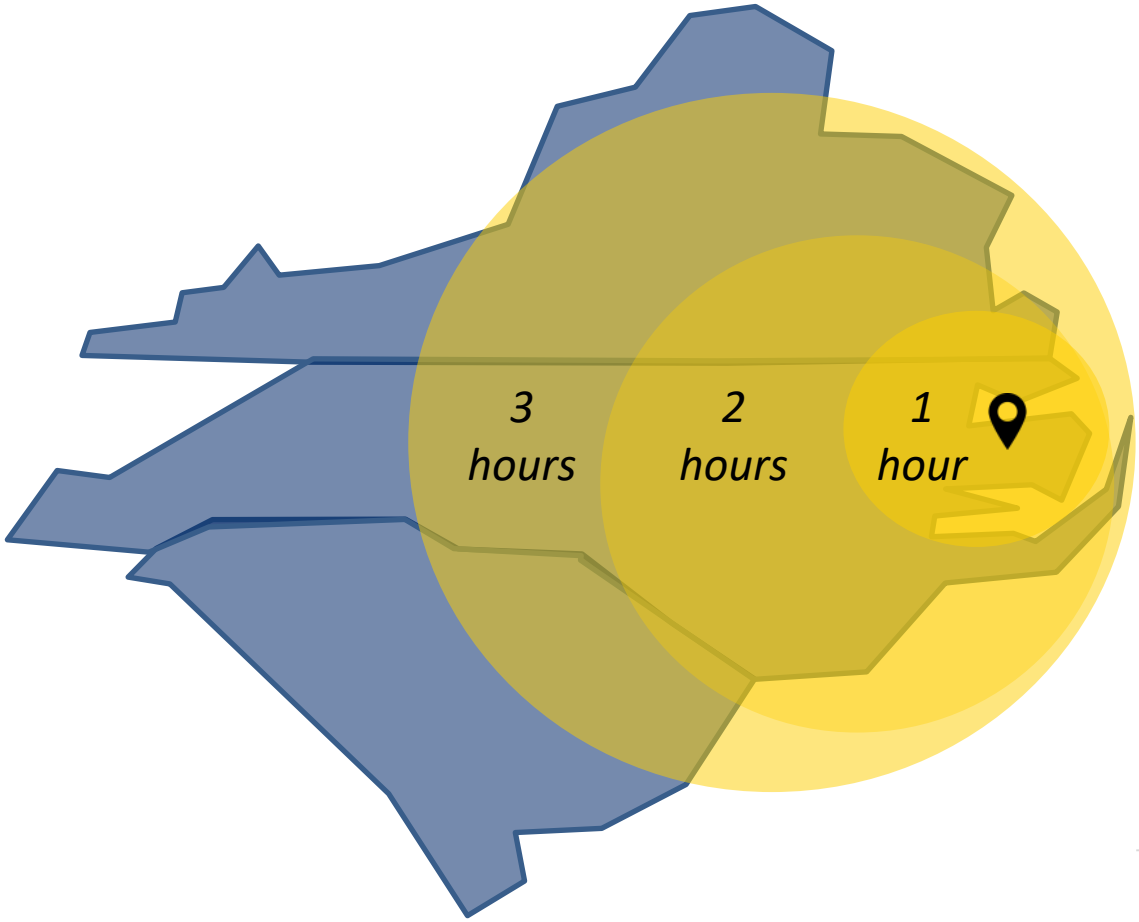
Projected Visitors:

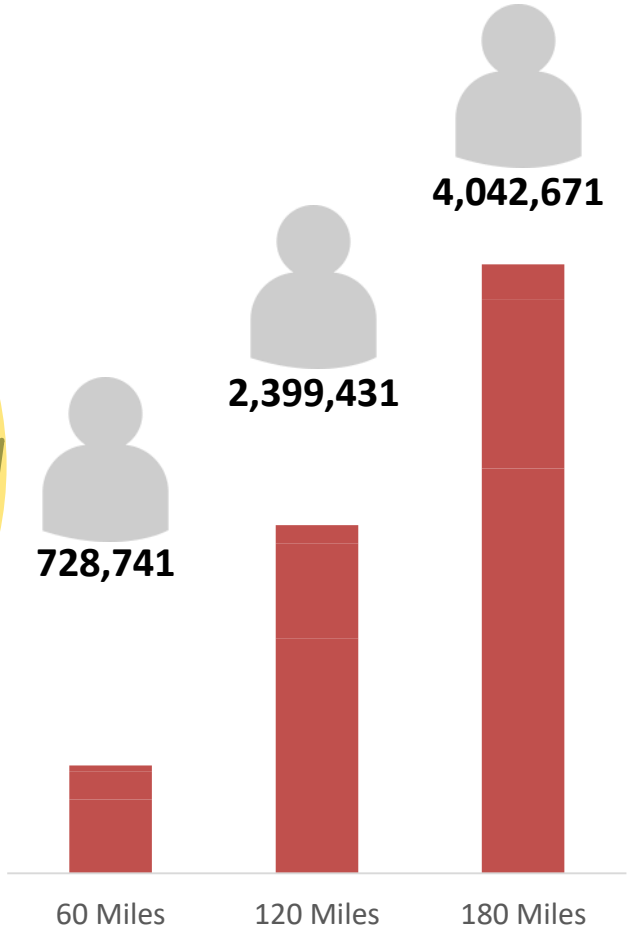
	Weekenders		Coastal Tourists		Inner Banks Residents		
To Area:	5,000,000	+	8,000,000	+	200,000	=	13,200,000
To Ferry:	20,000	+	57,000	+	30,000	=	107,000

A projected **107,000 visitors** will use the Albemarle Sound Ferry System in Year 1

See appendix slides for more detail on calculations

Weekenders or Day Trippers can be attracted from population centers within driving distance of the Albemarle Sound.





Source: US Census, Social Explorer, Team Analysis

Some coastal tourists in the OBX want to do more than just enjoy the beach.

Popular activities for overnight visitors in the coastal region of North Carolina:

Shopping

28%

Visiting the Beach

70%

Rural Sightseeing

17%

Visiting Historic Sites

15%

Wildlife Viewing & Bird Watching

10%

Source: 2013 North Carolina Regional Travel Summary, North Carolina Department of Commerce

Between 100,000 and 140,000 tourists from the OBX might enjoy riding the ferry and visiting the IBX each year.

8 million
- Tourists who visit the Outer Banks annually

17%
- Interested in rural sightseeing or historical tours

1.36 million
- Outer Banks tourists interested in rural sightseeing

10%
- Assumption about how many would take the ferry

Sources: 2013 North Carolina Regional Travel Summary, NC Department of Commerce
2013 Economic Impact of Travel on Counties, NC Department of Commerce
North Carolina's Northeast Alliance

IBX residents are interested in a wide variety of outdoor activities, adventures, and good times.

- Over 40% of the total Inner Banks population makes over $50,000 annually
- Average age: ~ 40 years

- Outdoor Activities:
  - Fishing
  - Hunting
  - Horseback Riding
  - Baseball
  - Basketball
  - Volleyball
  - Golf
  - Tennis
  - Swimming
  - Skiing
  - Boating
  - Biking
  - Camping
  - Gardening

Source: http://accessnc.commerce.state.nc.us/docs/

A ferry service provides an essential part of the infrastructure required for successful economic development of the Albemarle Sound region.

107,000 estimated visitors in first year

$14,000,000 estimated direct tourism spending per year at $131 per person per day

94+ estimated direct employment by ferry system, town docks, bringing the 5 sound communities to life

Source: Team Analysis

Financial Model

The investment opportunity, a conservative financial model, ticket price and passengers, and growth potential…

A water ferry serving the Albemarle Sound is an attractive investment opportunity that can quickly become profitable.

Five Boats

49 seat catamaran

149 seat catamaran

Towns

In phase 1, ferries stop in six towns:

- Elizabeth City
- Edenton
- Hertford
- Plymouth
- Columbia
- Kitty Hawk

Impact

The ferry has the potential to create 94 jobs. Tourism is estimated at $14M.

Cost

$13.8M in capital expenditures is required to launch the ferry. Average annual operating expenses are $1.95M.

Return

The ferry has the potential to be profitable in year 1. Year 1 annual ridership is projected to be 107,000.

See appendix for more detail on calculations

The ferry system would operate for 174 days a year.

April

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Total Operational Days: 174

August

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October

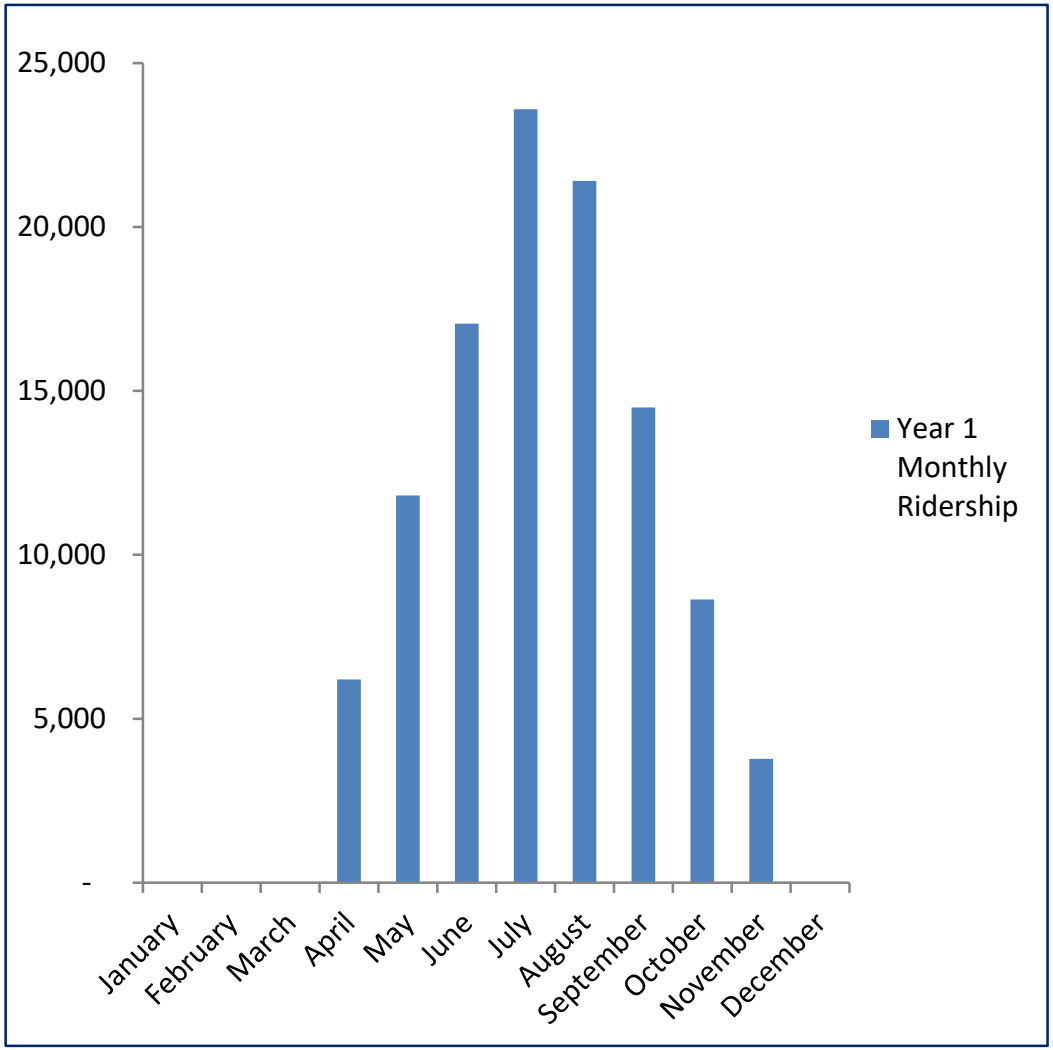
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Based on benchmark cities and NCDOT Ferry System data, the IBX ferry system will experience seasonality in ridership demand.

	Monthly Total	Operating Days	Average Daily Ridership
January	-	-	-
February	-	-	-
March	-	-	-
April	6,198	12	516
May	11,812	19	622
June	17,052	30	568
July	**23,591**	**31**	**761**
August	21,409	31	691
September	14,499	30	483
October	8,639	14	617
November	3,777	7	540
December	-	-	-
Total	**106,977**	**174**	**615**



UNC KENAN-FLAGLER BUSINESS SCHOOL

Our models show that the water transport system is a strong opportunity for operational sustainability.

Investment Opportunity:

- Five 49-passenger catamaran ferries traveling Route 1, Route 2, and Route 3
- Sells food and drinks, but not alcohol

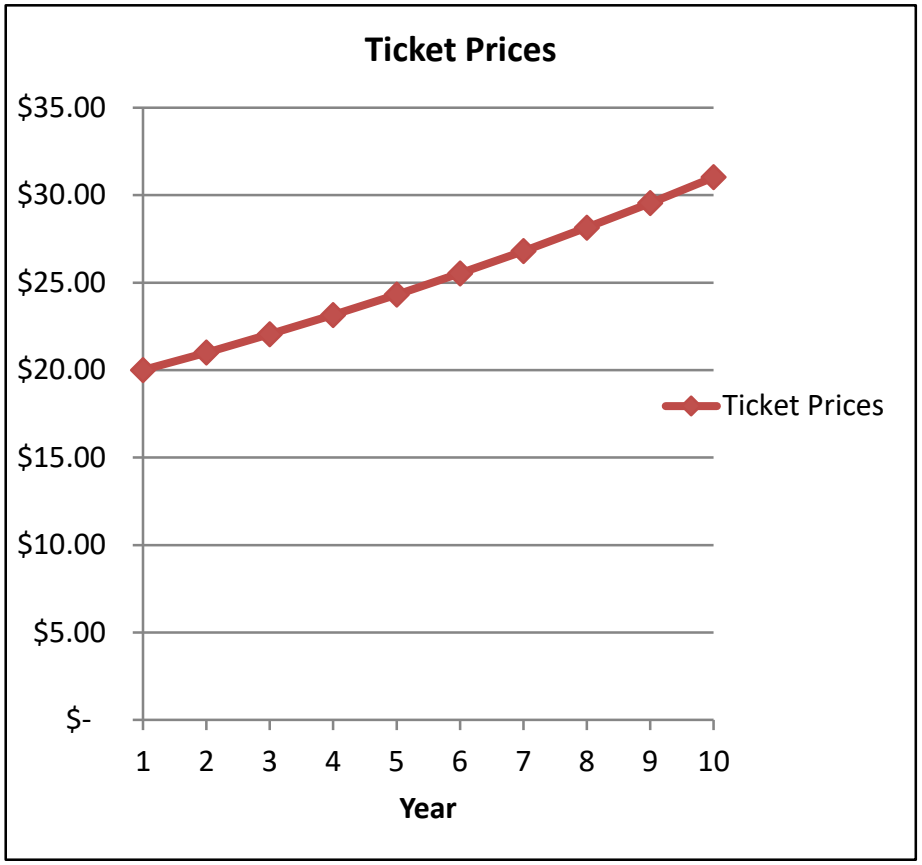
Start-Up Costs	Year 0
Administration and Due diligence	$ 255,000.00
Boats	$ 8,500,000.00
Terminal Expenses	$ 354,684.50
Dry Dock Facility	$ 4,350,000.00
Contingency (3%)	$ 403,790.54
Total Start-Up	**$ 13,863,475.04**

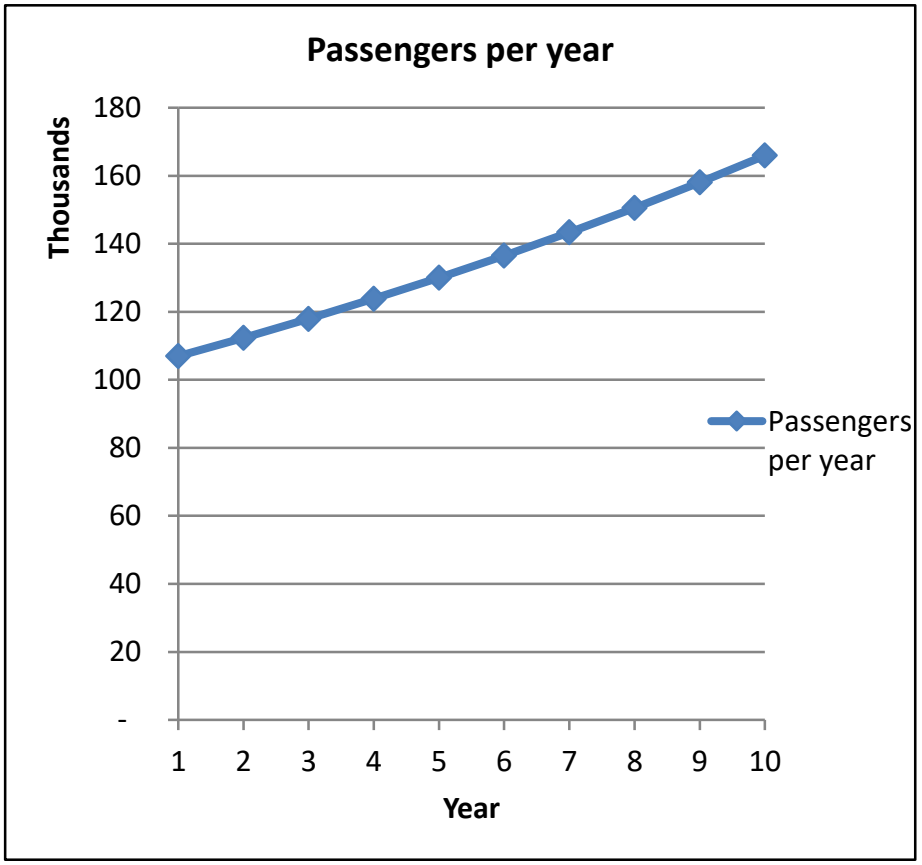
Assumptions

- Capital expenditures and start up costs are fully funded
- Ticket prices escalate 5% annually
- Yearly ridership escalates 5% annually
- Marketing and advertising expense is 10% of ticket sales

Conservative assumptions were made for ticket prices and number of passengers.

The model is most sensitive to ticket prices and ridership. Ticket prices and Passengers escalate at a conservative 5% annually





Different investment scenarios yield different financial outcomes.

Financial Metrics (10 year model)	1	2	3	4
Investment	$ 0	$ 4,350,000	$ 8,854,685	**$ 13,204,685**
Start Up Costs	$ 13,863,475	$ 9,513,475	$ 5,008,791	**$ 658,791**
Year 1 Net Income	($ 302,910)	($ 87,447)	$ 88,191	**$ 228,242**
Year 10 Net Income	$ 1,707,323	$ 1,814,327	1,925,136	**$ 2,032,139**
Internal Rate of Return (IRR)	-9%	-3%	8%	**67%**
Return on Investment (ROI)	(0.55)	(0.20)	0.78	**14.42**
Net Present Value (NPV)	($ 10,585,333)	($ 5,288,242)	$ 126,654	**$ 5,328,243**
Payback Period	Over 10 Years	Over 10 Years	7.75 Years	**2.14 Years**

Scenario 1: No outside funding

Scenario 2: Dry Dock Facility Financed

Scenario 3: Boats and Terminal Expenses Financed

Scenario 4: All Capital Expenditures Financed

Risks and Mitigations

An overview of the political, operational, environmental, and financial risks

Other key risks and challenges should be addressed with next steps or mitigation measures.

Key Risks & Challenges	Mitigation
Local political leader support • Are local leaders excited about this opportunity? • Are local leaders willing to work across county lines to ensure success of this ferry system?	Host leadership meetings to build support; establish monetary expectations early; establish centralized planning and coordination within IBX 501/c/3
Additional Infrastructure Needs • Do the docks need to be updated? • Do water, fuel or sewage facilities need to be installed? • Are additional parking lots needed?	Determine exact needs in robust feasibility study
Impact on Wildlife & Vegetation • Will wakes from ferries damage low lying marsh areas around regional harbors? • Will the ferries produce noise that will disturb waterfowl?	Select low wake vessels and plan navigation routes in existing channels
Ridership Estimate • Will enough interest be generated to attract sufficient passengers?	Conduct additional market research into potential Weekenders and Day Trippers, existing OBX tourists, and IBX residents

Note: Full list of risks and potential mitigation tactics can be found in the appendix

Summary

The Albemarle Sound represents a significant opportunity for tourism based economic development in northeastern North Carolina.

Resources

Existing assets, including area attractions and dock facilities, provide a foundation for success

Passengers

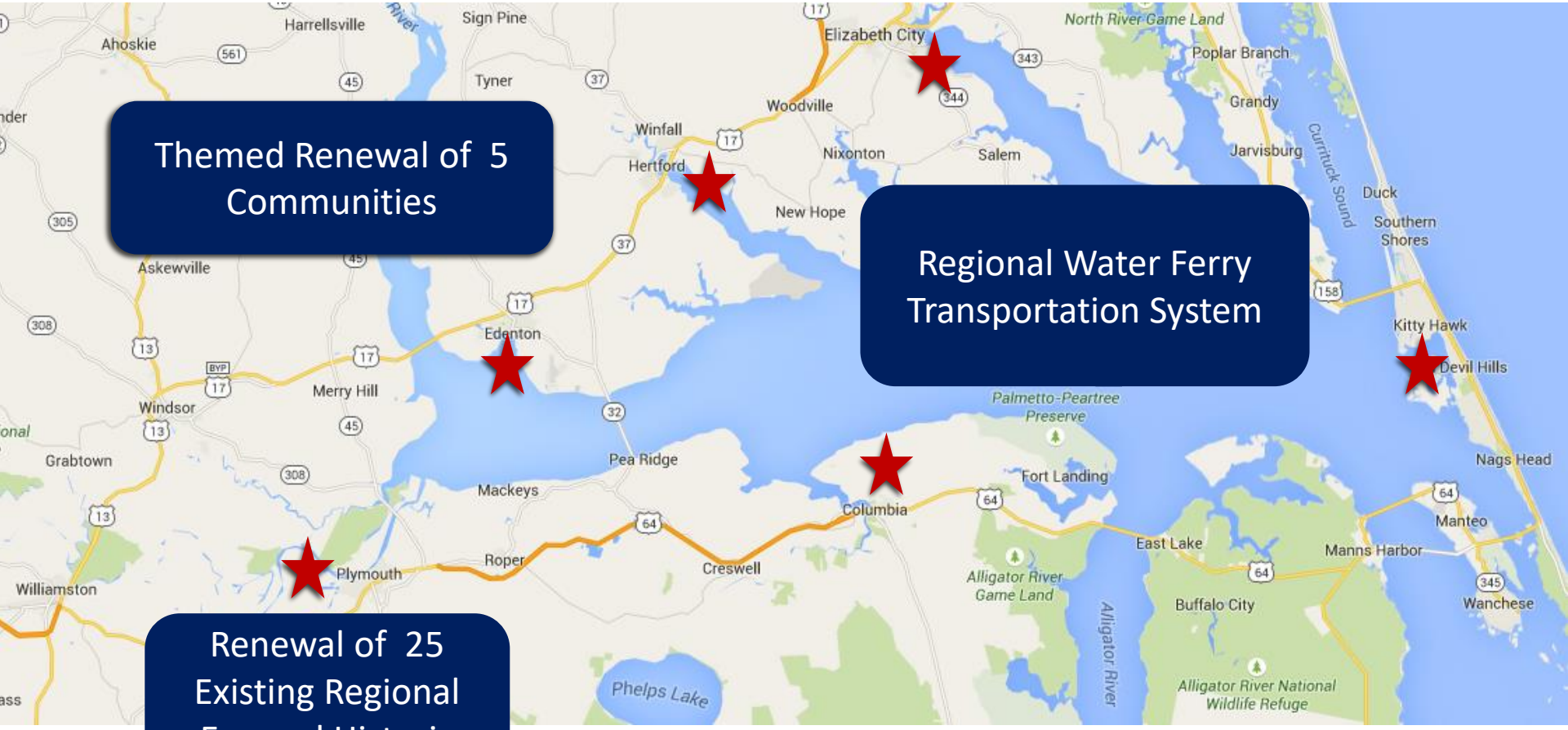
Current interest from existing tourists and residents provide a readily available market

Plans

Operational assumptions provide a foundation for projected profitability

A ferry service in the Albemarle Sound region can draw 170,000 visitors annually and generate an NPV of $5 million over the next 10 years

Success of the Water Ferry System is enhanced by the coordinated development of all Phase One tourism-based initiatives.



UNC KENAN-FLAGLER BUSINESS SCHOOL

The initial investment for all three initiatives will be about $22 million and will take about five years to be fully operational.

	Y1	Y2	Y3	Y4	Y5	TOTAL
THEMED RENEWAL OF 5 COMMUNITIES						
avg $400,000 per community	$680,000	$720,000	$440,000	$160,000		$2,000,000
3% contingency	$20,400	$21,600	$13,200	$4,800		$60,000
SUBTOTAL	**$700,400**	**$741,600**	**$453,200**	**$164,800**		**$2,060,000**
REGIONAL WATER FERRY TRANSPORTATION SYSTEM						
start up costs -- planning, design, permitting	$127,500	$76,500	$25,500	$12,750	$12,750	$255,000
dry dock facility		$1,305,000	$3,045,000			$4,350,000
terminals/ docking facilities at 6 sound communities		$270,000	$360,000	$270,000		$900,000
5 49 passenger ferries @ $1.7M each				$5,100,000	$3,400,000	$8,500,000
3% contingency	$3,825	$49,545	$102,915	$161,483	$102,383	$403,790
SUBTOTAL	**$131,325**	**$1,701,045**	**$3,533,415**	**$5,544,233**	**$3,515,133**	**$13,863,475**
RENEWAL OF 25 EXISTING REGIONAL ECO AND HISTORIC TOURISM SITES						
5 per yr @ avg $200,000 per site	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$5,000,000
3% contingency	$30,000	$30,000	$30,000	$30,000	$30,000	$150,000
SUBTOTAL	**$1,030,000**	**$1,030,000**	**$1,030,000**	**$1,030,000**	**$1,030,000**	**$5,150,000**
TOTAL	**$1,861,725**	**$3,472,645**	**$5,016,615**	**$6,739,033**	**$4,545,133**	**$21,073,475**
PROJECT PLANNING, MANAGEMENT AND COORDINATION						
10% of budget less direct cost of ferries	**$186,173**	**$347,265**	**$501,662**	**$163,903**	**$114,513**	**$1,313,515**
GRAND TOTAL	**$2,047,898**	**$3,819,910**	**$5,518,277**	**$6,902,936**	**$4,659,646**	**$22,386,990**

A ferry service provides an essential part of the infrastructure required for successful economic development of the Albemarle Sound region.

107,000 estimated visitors in first year

$14,000,000 estimated direct tourism spending per year at $131 per person per day

94+ estimated direct employment by ferry system, town docks, bringing the 5 sound communities to life

Source: Team Analysis

Questions and comments

Next Steps for County/Town/Organization Elected Officials and Managers

Phase One

- Towns of Elizabeth City, Hertford, Edenton, Plymouth, Columbia
- Washington, Tyrrell, Chowan, Perquimans, Pasquotank counties

By May 1 ---

1. Pass partnership resolution authorizing IBX 501/c/3 to draft and submit regional Harbor Town Project proposal to Golden LEAF Foundation and other potential public and private funding sources on your behalf
    1. $1.5M Golden LEAF funding from each county will include $200,000 allotted to IBX for 5 year development and management of the regional project, overseen by IBX Bd of Dir
2. Select one person to represent your town/county on the IBX Board of Directors (5 + 5 = 10 IBX Bd of Dir from Phase One counties and towns, Didow serves as initial ED of IBX and Ex Officio member Bd of Dir)

Phase Two – Participation by other towns and counties across the region is welcomed

- Towns of Windsor and Williamston and…
- Bertie, Hertford, Gates, Camden, Currituck, Hyde and…

The IBX Authority

Breathing Life into the Inner Banks

Faculty Advisor: Nick Didow
- Nick_Didow@unc.edu
- 919-962-3189

Team Lead: Jay Yang
- Jay_yang@kenan-flagler.unc.edu
- 806-787-8687

IBX Authority Team

Dr. Nick Didow is an associate professor of marketing at UNC Kenan-Flagler. He started UNC's Carolina Center for Public Service and helped establish the Chapel Hill Downtown Economic Development Corporation.

Jay Yang is from Tianjin, China. He worked with Corning Incorporated as a project manager for four years before entering the full-time MBA program at UNC Kenan-Flagler.

Bill Pan is a first year MBA student at UNC Kenan-Flagler concentrating in management consulting. Prior to UNC, Bill worked in the tech industry, focusing in workforce management and integrated security.

Dave Thakkar is from Charlotte, NC. He worked for a software company in Charlotte for 3 years before entering the full time MBA program at UNC Kenan-Flagler. He loves to dance and play basketball.

Shravan Prasad is a full-time MBA student. Before UNC Kenan-Flagler, he worked as an internal consultant in product lifecycle management for a leading agricultural equipment manufacturer.

Tre Shockley is a junior undergrad business major from Cincinnati, Ohio. He is concentrating in corporate finance and consulting, with a dual minor in Spanish for the Professions and African-American Studies.

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Inner Banks (IBX)

Executive Summary

We propose to organize and institute the IBX authority to foster economic development and regional cooperation through tourism in the Inner Banks.

Why do we need IBX Authority?

Structure of IBX Authority

Impact and Financials

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Agenda

Why do we need IBX Authority?

- Unsuccessful past programs
- The potential for tourism

Structure of IBX Authority

- Governance
- Administration
- Promotion
- Membership & Sales

Impact and Financials

- Cost structure analysis
- Funding sources

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

1

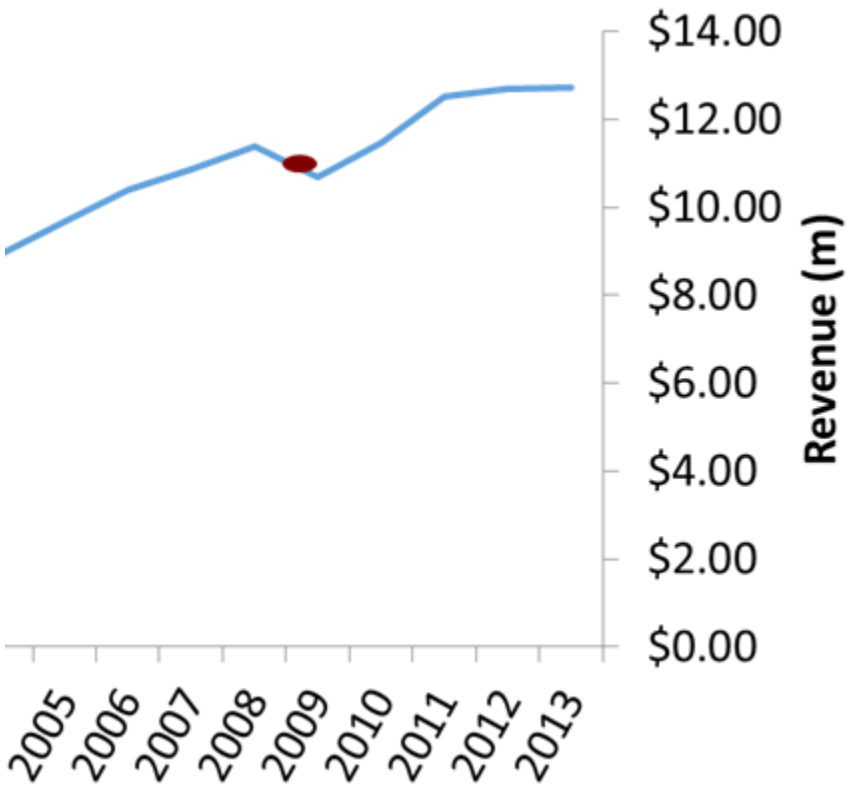
Why Do We Need the IBX Authority?

1.1

Previous Unsuccessful Programs

Independent Marketing: Historic Hope Plantation

Amount: $184,525.70
Year: 2009
Goal: This grant will assist Historic Hope Foundation with efforts to **increase tourism** in Bertie County by expanding the interpretation of the Historic Hope site and providing enhanced educational opportunities for Bertie County students.



Grant made no significant impact on the revenue for Bertie County

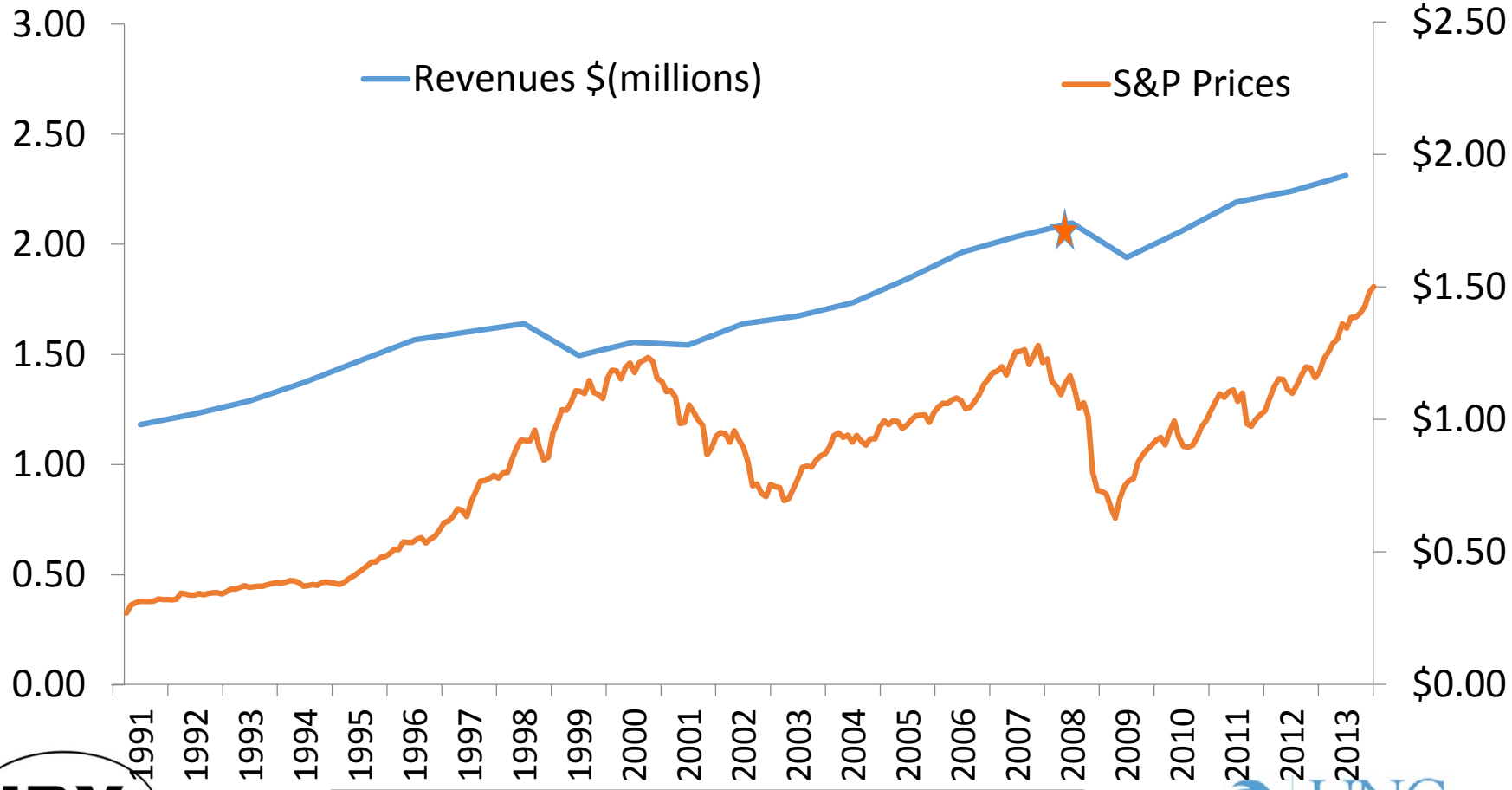
Independent Marketing:
Dismal Swamp Canal Welcome Center

- Amount: $40,000.00
- Description: 2008
- The purpose of this Golden LEAF grant is to assist with local and regional tourism marketing activities that will promote and **encourage increased visitation and tourism revenues** in Camden County and the northeast region of North Carolina.

IBX
INNER BANKS, EASTERN NORTH CAROLINA

UNC
KENAN-FLAGLER
BUSINESS SCHOOL

Camden Domestic Tourism Revenues (millions) compared to S&P 500 Historical Prices (thousands)



Camden tourism revenues are not significantly impacted by the grant

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Unreliable Personnel:
Failed Randy Parton Theatre

$21.5 million project was the first major economic development underwritten by a North Carolina municipality

Randy Parton, given access to nearly $3 million by the city with few strings attached, spent some of it on liquor, two trips to Las Vegas casinos and, meals

City Finance Director MeLinda Hite told CJ that the city currently owes $19.9 million in principal.

"In the beginning, city officials gave us a bunch of false information. They didn't tell us what the **feasibility study** said. They didn't give us any of the negatives," Jim Garrett, a local businessman

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Economic investment should not be into declining industries

48%

- Failure rate for projects in *target* industries

60%

- Failure rate for all projects

70%

- Failure rate for projects in *declining* industries

IBX
INNER BANKS, EASTERN NORTH CAROLINA

UNC
KENAN-FLAGLER
BUSINESS SCHOOL

Declining Industry:
$1.2 million JDIG for DRS Technical Services

Economic Investment Committee voted to award a Job Development Investment Grant to DRS Tech to facilitate expansion in Elizabeth City (2009)

Plans to create 100 new jobs during the next two years

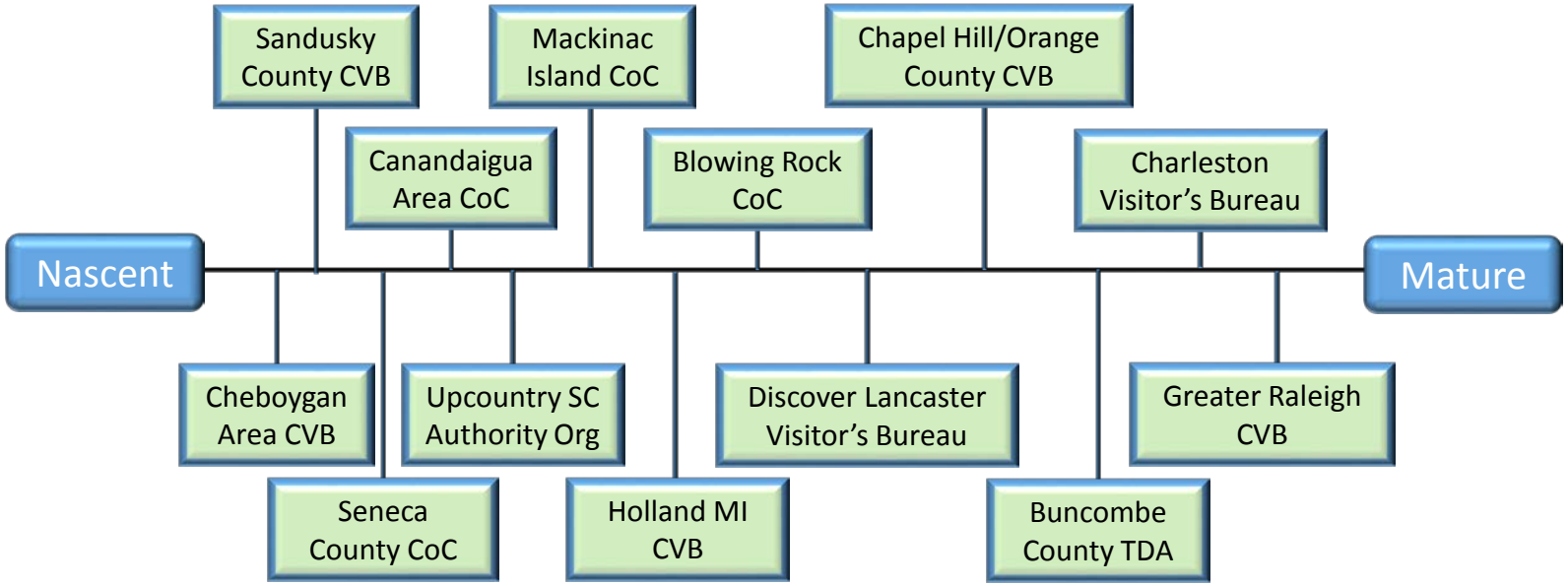
63-acre aviation business park remains empty, and Elizabeth City could be on the hook for more than $2 million in penalties. (2012)

JDIG: job development investment grant

1.2

Economic Development Through Tourism

Representative Benchmarks



- Chapel Hill - $182M in visitor spending annually
- Helen (Alpine village theme) - 3rd most visited city in GA
- Blowing Rock, NC - Tweetsie railroad $10.3M revenue
- Bay Lake FL - Disney Land
- Martin County, NC - Equestrian -> concert wedding :168 acre/$3M

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

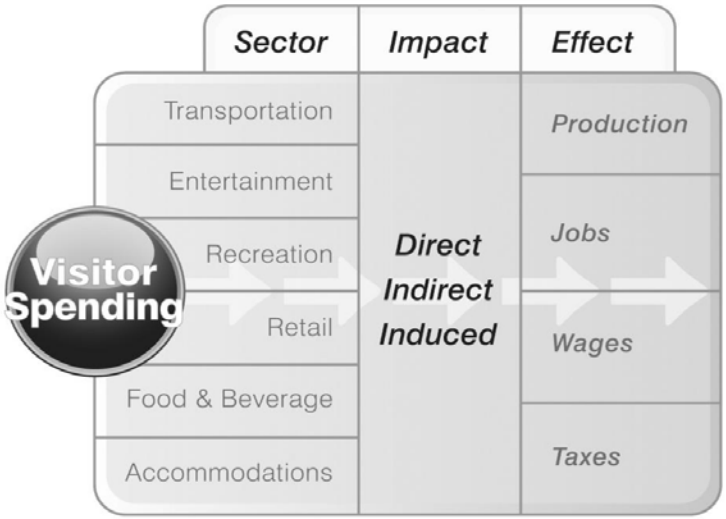
Deep dive into the success of Buncombe county and Asheville tourism's impact on economic development

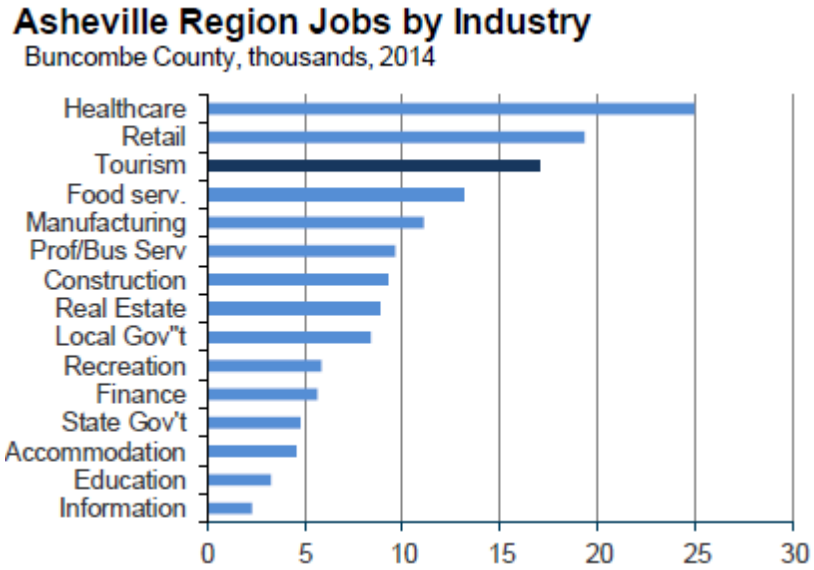
- Tourism revenue
- Visitor spending
- Employment opportunities
- Personal income
- Tax collection

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism generated more than $2.6B in revenue (2014) for Buncombe county





- Visitor spending is a leading indicator of economic development
- The tourism industry supported 24,856 jobs (1 in 7) within Buncombe county, (more than Manufacturing, Construction and Finance)

IBX INNER BANKS, EASTERN NORTH CAROLINA

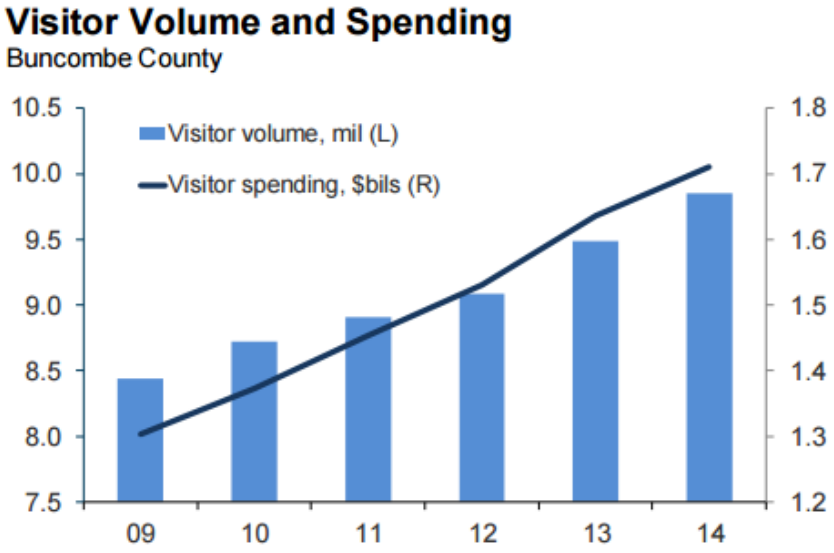
UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism is also a key source of personal income that directly ties to the quality of life

- Employees in Asheville earned $714M in 2014 as a result of visitor activity
- Tourism generated $287M in taxes and helped offset the average household tax burden by $1,232/household

Tourism Labor Income (Compensation)
(US$ Million)

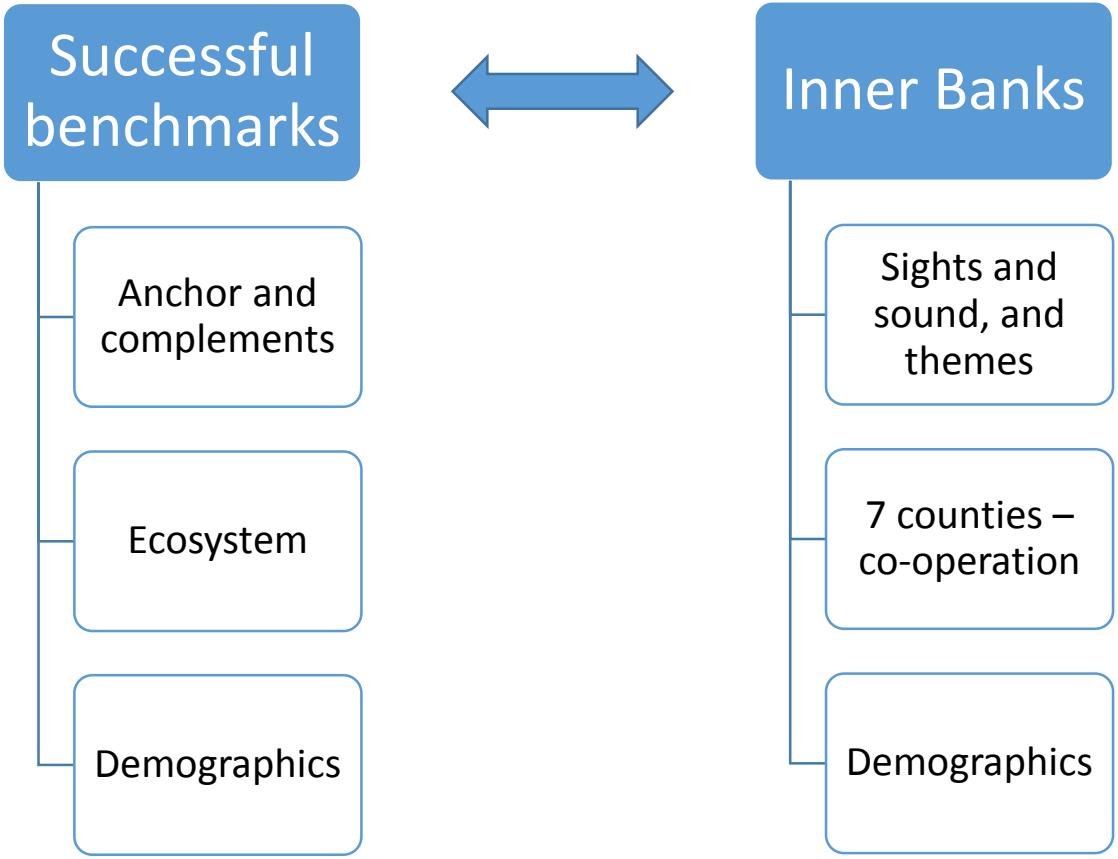
	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	0.1	0.1	0.1
Construction and Utilities	-	10.4	2.8	13.1
Manufacturing	-	2.5	0.5	3.0
Wholesale Trade	-	3.0	5.3	8.4
Air Transport	0.7	0.5	0.7	1.8
Other Transport	37.7	8.3	2.9	48.9
Retail Trade	60.9	1.8	17.2	79.9
Gasoline Stations	6.9	0.1	1.2	8.2
Communications	-	7.3	2.6	9.8
Finance, Insurance and Real Estate	7.2	14.2	10.5	31.9
Business Services	-	49.2	14.0	63.1
Education and Health Care	-	0.6	49.2	49.8
Recreation and Entertainment	62.8	2.4	2.3	67.5
Lodging	95.9	0.2	0.1	96.2
Food & Beverage	155.3	7.6	12.9	175.8
Personal Services	22.7	8.9	11.1	42.7
Government	-	10.5	3.0	13.5
TOTAL	450.1	127.4	136.4	713.9



IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

The inner banks has potential to replicate the success from tourism



IBX
INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Contrasting the demographic data of the 7 inner banks counties with Asheville

2015	Washington County, NC	Camden County, NC	Pasquotank County, NC	Perquimans County, NC	Chowan County, NC	Bertie County, NC	Tyrrell County, NC
Avg. household income	$55,649.55	$78,600.78	$71,765.00	$67,214.18	$57,411.06	$54,679.49	$51,066.49
Population	12,580	10,389	39,884	13,521	14,631	20,097	4,143
Median age	45.3	41	37.6	47.9	46.7	44.4	42.7
Unemployment rate	6.17%	5.48%	7.19%	6.51%	6.29%	7.21%	6.53%

2015	Asheville, NC
Average household income	$68,648.00
Population	88,048
Median age	39.10
Unemployment rate	3.69%

The demographic gaps are similar between all our benchmarks and the inner banks

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

2

IBX Organizational Structure

The mission of IBX is to foster sustainable economic development in the Inner Banks through tourism

Foster sustainable economic development in the Inner Banks through tourism

Identify and recruit both primary attractors as well as auxiliary businesses to establish themselves in the area – particularly anchors

Connect and educate local tourism attractions, centralizing a regional network of attractions

Build and develop a cultural and economic infrastructure capable of sustaining tourism in the long run

IBX INNER BANKS, EASTERN NORTH CAROLINA

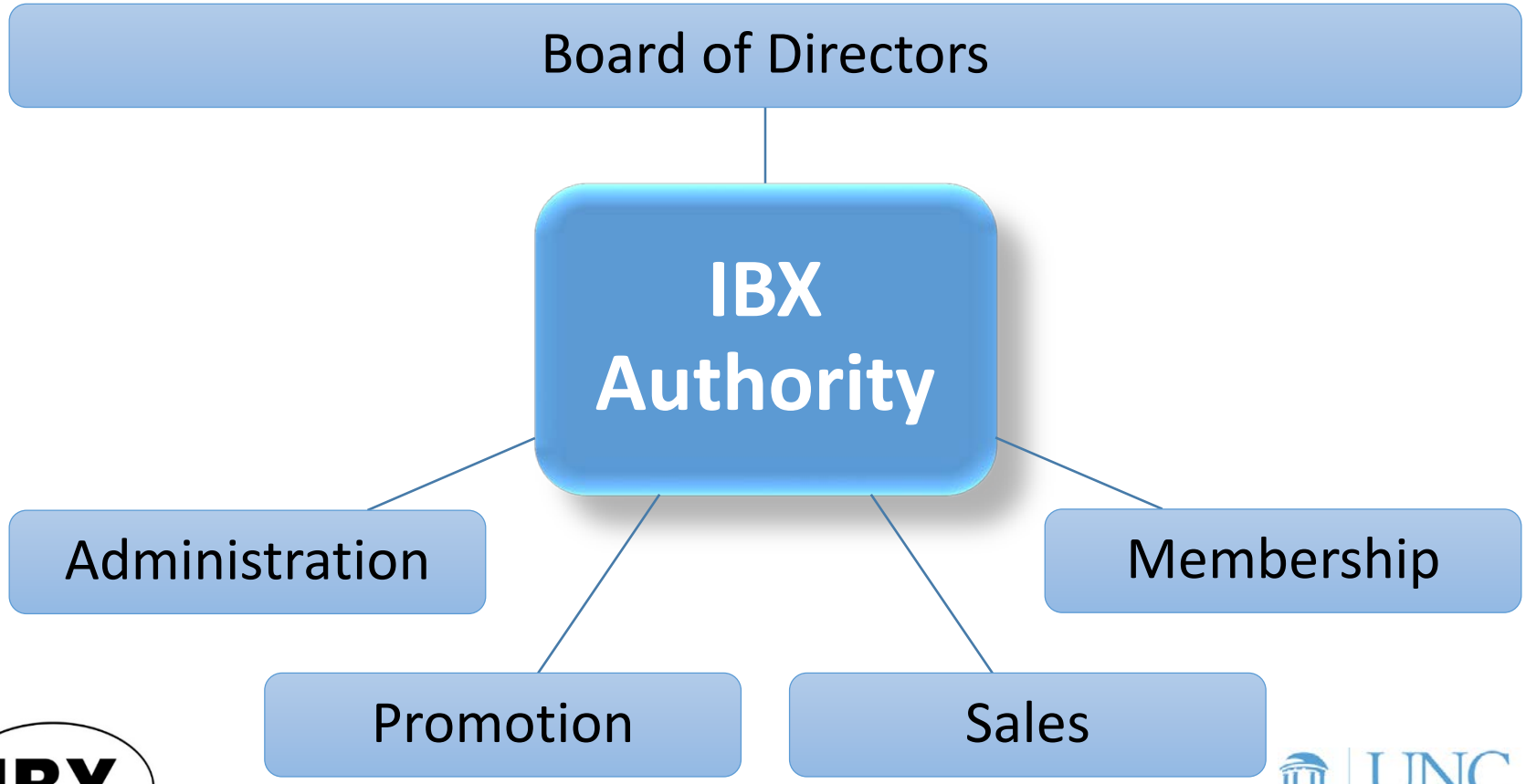
UNC KENAN-FLAGLER BUSINESS SCHOOL

The strategy involves a partnership of 7 communities and 4 major initiatives to increase tourism and create sustainable employment

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

The IBX Authority will be governed by a Board of Directors and be organized into Administration, Promotion, Sales and Membership departments

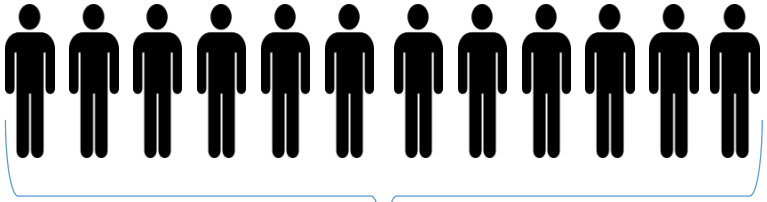


2.1

Board of Directors and Governance

Board of Directors

A diverse body engineered to make thoughtful decisions



Budget

Strategic Plan

Major Expenditures

Appoint Executive Director

IBX Authority

8-12 Members

Investor Based

1-4 Year Tenure

Details of best practice on page 55 – 63

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Board of Directors Purpose

"They're [Board of Directors] there to help set **big policy** if there is a big issue of some sort or there is a decision that needs to be reached where there is a good chance that there might be **differences of opinion**. What they do is provide input and feedback on programs that we've got in place or considering doing."

- Perrin Lawson, Deputy Director, Charleston Area Convention & Visitors Bureau

"The Board of Directors approves **budget**, they guide the **program of work**, and they are charged with approving auditor. They also hold the organization accountable to policy."

- Karen Kuchenbecker, VP Operations, Charleston Regional Development Alliance

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Board Member Election Process Options

2/3rds

- More unified decision
- High chance of constructive dialogue

51%

- Quick and simple
- Agile decision making

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Board of Directors will have representation from major **industries** and **counties** in the IBX

Infrastructure	Restaurants/services
	Hotels
	Transportation
Economic	Attractions
	Education/training
	Real Estate/Investors
Government	State
	Local
Member at Large	

Details of best practice on page 55 – 63

Board of Director Committees

Audit

- Responsible for hiring and reviewing the audit process of the IBX Authority

Nomination

- Create list of people they want to see on the board for the following cycle
- Members can self nominate (10 signatures)

Personnel

- Responsible for selecting the executive director

IBX INNER BANKS, EASTERN NORTH CAROLINA

Details of best practice on page 55 – 63

UNC KENAN-FLAGLER BUSINESS SCHOOL

2.2

Administration

Administrative department will handle Payroll, HR, Treasurer, Operations, and IT

Payroll	HR	Treasurer	Operations	IT
Paycheck management	Recruiting/ Hiring	Manage cash flow of organization	Ensure that organization facilities are maintained to a high standard	Provide back end support and for IBX online presence
Scheduling	Employee Legislation (Labor laws, minimum wage, etc.)	Ensure financial reporting done accurately	Coordinate cross functional efforts within the IBX	Support internal software (payroll, event management etc.)

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Administrative advice from various tourism groups

Annual staff retreats to facilitate team chemistry

Be cognizant of any changes in local legislation that can affect tourism within IBX

Organize and structure monthly meetings

Details of best practice on page 55 – 63

2.3

Promotion

Promotion will focus on advertising, an online presence, corporate communication, and event management

Advertising

- Digital advertising (Google AdWords, banner ads)
- Print advertising (Billboards, flyers, brochures)

Online Presence

- Social Media (Facebook, Twitter, Instagram, etc.)
- Website development and upkeep
- Travel magazines and blogs

Corporate Communication

- Outreach to local companies and national companies regarding opportunities and events in IBX

Event Management

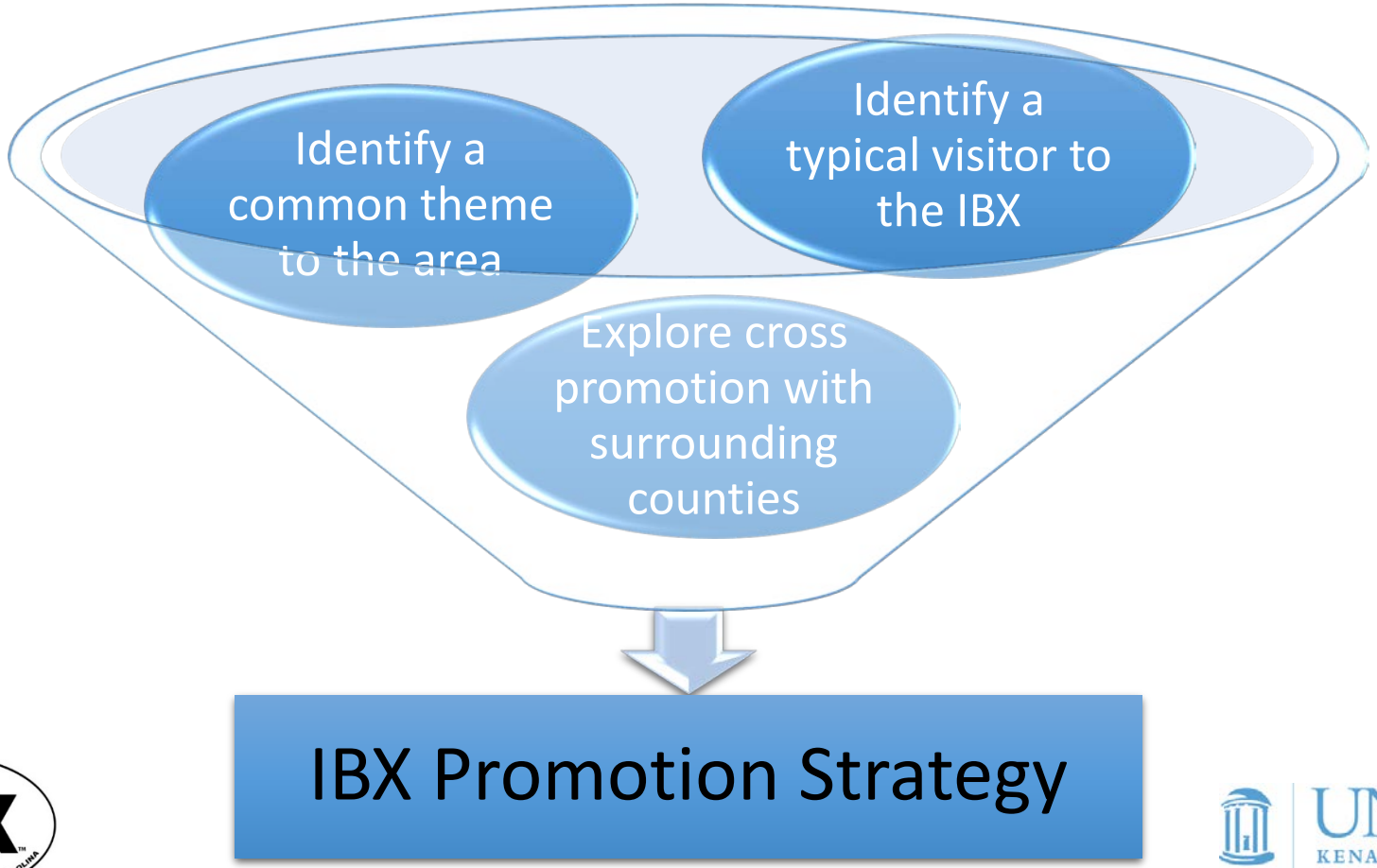
- Facilitating the use of venues in the IBX area to festivals and events
- Spreading the word about events happening in IBX nationally (Trade shows, festivals, concerts, conventions, etc.)

IBX INNER BANKS, EASTERN NORTH CAROLINA

Details of best practice on page 64 – 70

UNC KENAN-FLAGLER BUSINESS SCHOOL

Startup promotional best practices will involve identifying key demographics and partnerships within the area



Promotion tips from interviews with tourism agencies

Invite travel bloggers to stay in and write about IBX

Reach out to charter bus companies and offer discount lodging as a layover on trips

Contact travel agencies to advertise and promote the IBX

GROUPON Getaways

Post getaways and experience packages on E-Commerce retail outlets such as Groupon, LivingSocial, etc.

IBX INNER BANKS, EASTERN NORTH CAROLINA

Details of best practice on page 64 – 70

UNC KENAN-FLAGLER BUSINESS SCHOOL

Promotion Advice

"Biggest challenge is making sure branches [businesses] understand where they fit into big picture. Instead of trying to promote individual businesses. They have to **realize they are competing as a *collective*** with rest of world and country"

– Perrin Lawson, Deputy Director, Charleston Area Convention & Visitors Bureau

"Make sure the area is being **promoted in one way** based on testing and marketing research."

– Kathleen Frankford, President, Discover Lancaster

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

2.4

Membership Development and Sales

There are 5 essential tasks in developing members – an essential precursor to economic development

Membership Drive/ In-reach	• Ensure existing businesses and attractions affiliate themselves to the IBX authority
Sales/ Outreach	• Work to have external businesses create or expand presence locally
Partnership	• Partner with other groups and local committees to collaborate
Growth	• Establish new local businesses, while ensuring their theme is consistent and complements the anchor
Education	• Working with education and training liaisons in the local government to fill requirements

IBX INNER BANKS, EASTERN NORTH CAROLINA

Details of best practice on page 71 – 79

UNC KENAN-FLAGLER BUSINESS SCHOOL

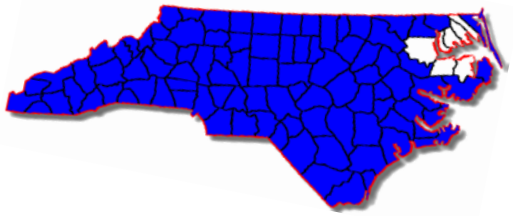
These 5 tasks will be mapped to 2 departments based on the stakeholder location relative to inner banks

Economic development department (Internal stakeholder development)

- Membership drive/In-reach
- Growth and Education
- Partnership

Sales department (External stakeholder development)

- Sales
- Outreach
- Partnership



IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Implementing operational best practices will lead to balanced economic development

Manage member expectations

Institute familiarization tour for locals

Gradually increase membership dues

Balanced economic development

Details of best practice on page 71 – 79

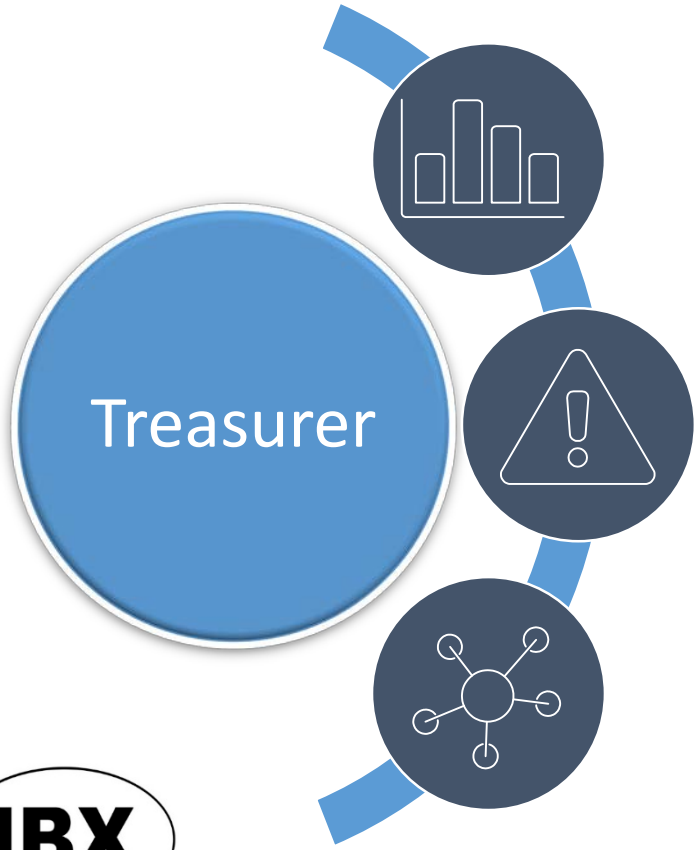
3

Financials and Impact

3.1

Treasurer's Responsibilities

Treasurer will coordinate and organize the internal finances of IBX in addition to managing funds established by IBX



Create, manage, and maintain IBX internal budget

Manage IBX fund to invest in high-impact, financially sustainable projects (ideally positive returns)

Serve as a touch point for all major expenditures

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

3.2

Cost Projections

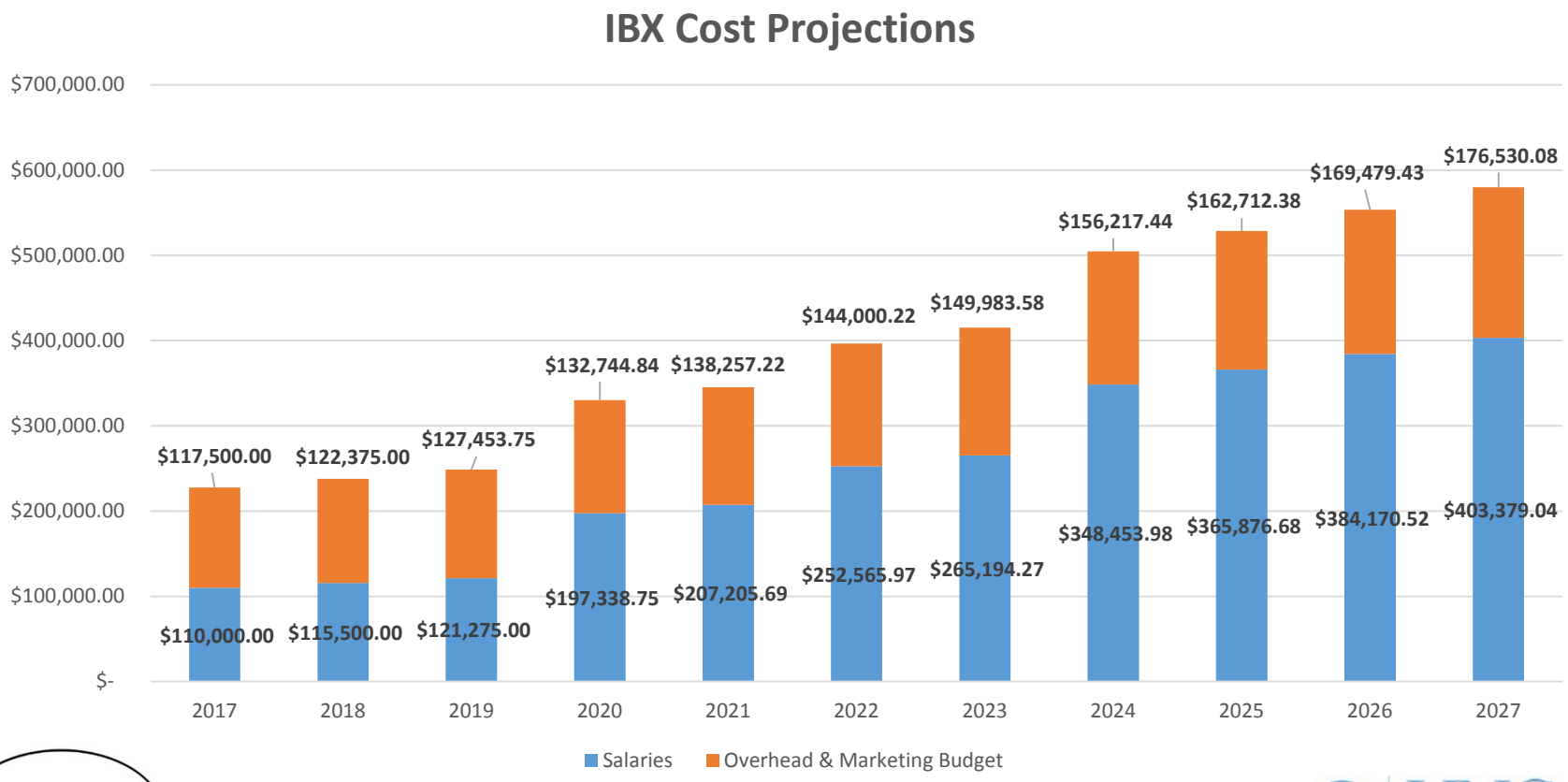
Projected operating costs come from wages, overhead, non-static operational, and investments

- Salaries & Wages, for all employees
- Facilities Overhead, such as rent, utilities, etc.
- Non-Static Operational, such as print, web hosting, client meals, etc.
- Investments for Growth & Education, for attractions and tourism businesses
- Investments for Infrastructure Development, such as Zion's Gate, roads/signs, etc.

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Total Cost Projections Over 10 Year Span



IBX
INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

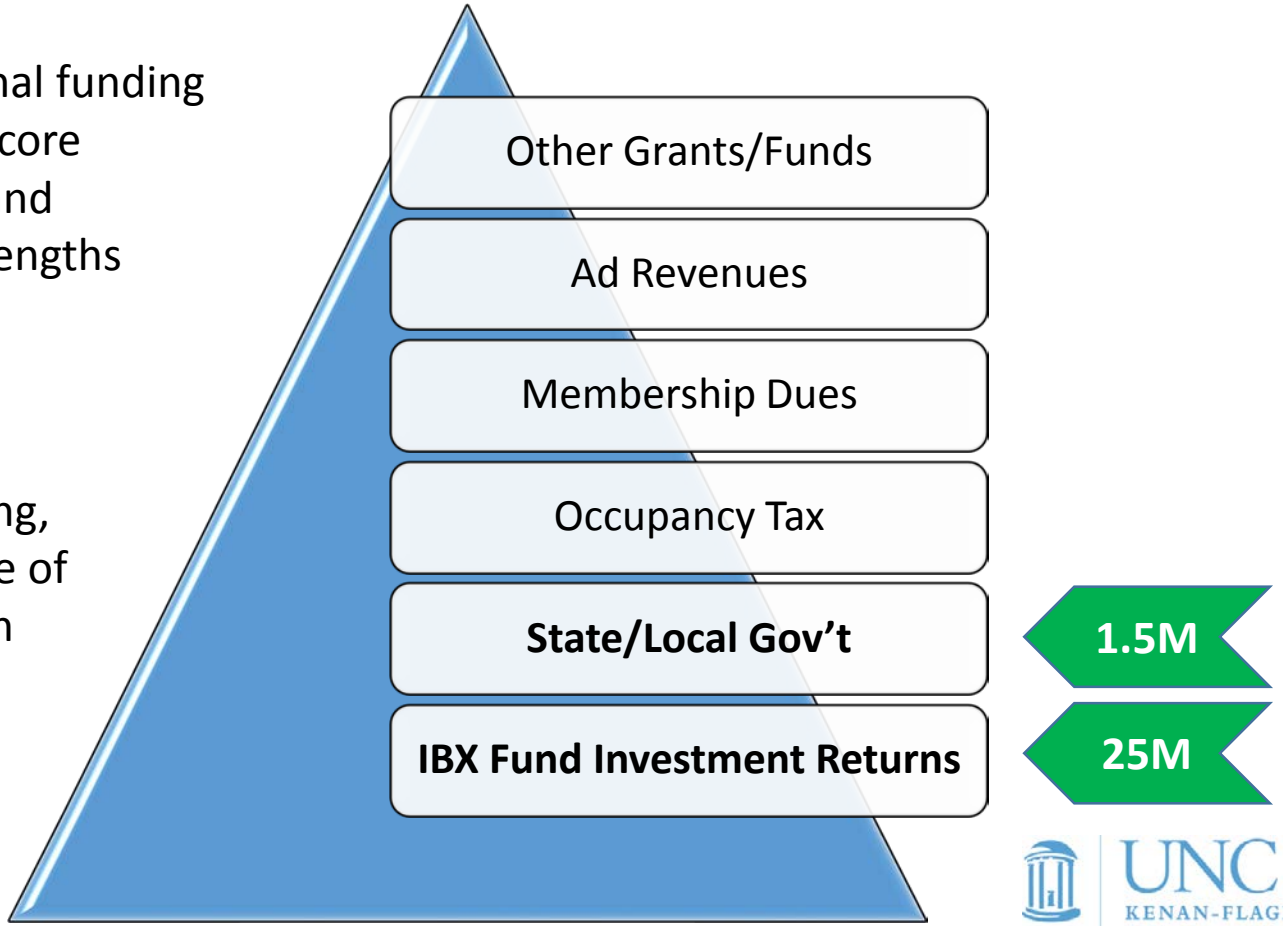
3.3

Revenue Sources & Fund Management

Finance will also work towards sustainable growth through establishing a continuous base of funding

Add on additional funding sources via IBX core competencies and competitive strengths

Establish a strong, continuous base of funding through tried-and-true systems



IBX
INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Sensitivity analysis to the returns of IBX Fund of Funds

Historical returns point to a significant amount of fund interest being able to pay for our operational costs, and perhaps also support our NENC development investments that **adhere to strict investment criteria.**

	Return rates			
	0.08%	**0.22%**	**1.16%**	**1.80%**
$ 25,000,000	$ 20,000	$ 55,000	$ 290,000	$ 450,000
$ 50,000,000	$ 40,000	$ 110,000	$ 580,000	$ 900,000
$ 100,000,000	$ 80,000	$ 220,000	$ 1,160,000	$ 1,800,000

5 year S&P avg Return	13.00%
10 year S&P avg Return	9.03%
5 year NP avg Return	1.80%
3m Tbill, 10 yr Avg	1.16%
3m Tbill, 5 yr Avg	0.08%
3m Tbill, 2016	0.22%

IBX INNER BANKS, EASTERN NORTH CAROLINA

Details of best practice on page 80 – 86

UNC KENAN-FLAGLER BUSINESS SCHOOL

4

Recommendation and Conclusion

Recommendation

Tried and True Governance Structure	Scalable Organizational Layout	Sustainable Financial Plan
• Even number, 8-12 member board with turnover plans • Representative industries/geographies creates a healthy environment	• 3 initial staff members with skills in admin, finance, IT, sales • Eventual four departments with department heads and tasks	• Predictable cost structure, ~$160k first year • Fund management creates sustainable revenue at ~1% return rate annually

Institute the IBX Authority in order to turn around the economic conditions of the Inner Bank through tourism development.

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

5

Appendix

5.1

Appendix A

Best Practices on: Administration and Board

RETURN to IBX structure

UNC Interview
Org structure: Admin

- Best Practices:
  - **Structure all departments by function while setting up the organization**
  - **Figure out major initiatives, have good social media presence, partner with hotels and other local businesses**
  - At the beginning keep scope small and then scale up. **Decision making: Find 3 or 4 initiatives to go after that give the maximum impact in least time or with least effort.** It should be something that works reasonably well, such as partnering with local business or creating a social media presence
  - It is critical to have a mission, vision statement and core values. The founder as the first person in the organization is tasked with establish this.
  - **Hiring is key!** There is a need to get clarity on this and the person setting up the organization needs to establish key competencies and skills needed and select people strictly based on this document. This is the true value differentiator and it also has long term consequences in shaping the organization's culture.
  - As the organization grows, there is a need to codify core values and establish a culture, especially when the size reaches 4-6 people. There is a need to have participation from all of them to build, protect and propagate a culture.

IBX INNER BANKS, EASTERN NORTH CAROLINA

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

UNC KENAN-FLAGLER BUSINESS SCHOOL

UNC Interview
Org structure: board

- While deciding the size of the board, the primary consideration is to balance diversity v/s size. There are 2 approaches: **representative board and stakeholder based board**
- In a representative board, a fixed number of people from each county are elected to the board (Similar to UpCountySC). At times, the number of people depend on the size of the county they are representing. If a county does not have a single representative, then it has no voice. There is potential for conspiracy theories that they aren't getting their fair share. The other flip side is that with multiple counties, the board becomes too large and consensus is next to impossible and decision making becomes inefficient, there is little potential to have a common meeting time, many members may not attend and people may not be happy with the decisions made.
- In a stakeholder based board, choose people who have credibility with everyone across counties – those who are thoughtful and smart people (**Our proposal for the IBX board**). Besides a potential to limit the size, this is one way to overcome conspiracy theories. It would be collectively viewed as having a regional hat rather than county specific decisions. The representation by stakeholders would include all sectors – business, restaurant, real estate, banker. Further, they can be selected from different locations, either from inside or outside the Inner Banks, which is good from a diversity perspective unlike stakeholder boards

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

UNC Interview
Day-to-day: board

- Building on the enthusiasm part, the first few projects can be a demo. They can be pre selected with strict guidelines and a limited roll out (try in one county) with defined outcomes. This can be a success story that is shared with everyone while the process is scaled up.
- For funding, the proposal is to ensure that the IBX only provides seed funding for an initial period and that the business needs to be self sufficient after a pre-determined timeframe. This goes a long way in setting expectations and a rigorous evaluation process to ensure ROI and documentation maintains the validity of the process.
- Certain criteria to consider while deciding on which projects to pursue: while evaluating applications or projects in general, it is always necessary to check whether the complementary are in place to ensure success**. If a new hotel has to be constructed, the board has to ensure that there is sufficient demand, the capital and ROI look good and that the infrastructure is developed to handle the traffic**. To ensure a transparent decision making process, one idea is to have a scoring matrix and all board members rank each proposal based on criteria. This is published on the website or is readily available. If an idea is not funded, then those who proposed it can meet with the board to **get feedback**. This improves goodwill, enthusiasm and transparency.

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

UNC Interview
Day-to-day: Admin

- For general decision making on the board, they need to be ready to lay out cards on the table. 2 possible formats are – all members make an independent decision with voting OR a blind format.
- For funding, it would be worthwhile to find a foundation that funds community economic dev projects. Prof. Dave mentioned the Lilly foundation, Collins fund and others out there that give economic development grants. It would be interesting to understand their evaluation process for applications and benchmark best practices.

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Org structure: board

Seneca county's governance includes 2 committees and a COC board. The committees handle day-to-day tasks while the COC is involved in higher order activities, while the COC board handles the most important tasks.

1. **Tourism committee** – It consists of **tourism property owners** such as hotels, eateries, wineries and museums. **They meet to brainstorm possible opportunities, discuss day-to-day operations and tackle challenges**. This is a sounding board for all businesses. Concerns that cannot be resolved are escalated to the Advisory committee.
   - No term limit, no size limit, general appointment - no elections, participation is voluntarily
2. **Advisory committee** – It consists of **tourism property champions/specialists and every sector is represented** (example of wine industry). There are many stakeholders and this committee has representation from both local properties and external businesses who have local operations. **Their objectives include brainstorming for solving issues or creating attractions, market segmentation and targeting, etc.** The focus is more long term and it is hierarchically above the tourism committee.
   - Members are county legislature appointed
3. **COC board** – It consists of the **top people within each segment and industry**, as appointed by county officials. They include **government representatives, businesses and tourism property owners**.
   - Members are voted, maximum of 3 consecutive terms of 2 years each

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: board

- **Board representation and committee structure** – the main objective is ensuring that every sector is represented, every voice is heard and ideas are well thought out. This helps in presenting a united front while approaching local county legislature to discuss issues and concerns or while proposing changes to the legislation.
- In the case of Seneca, **the local legislature proposed an increase in the occupancy tax to increase collections**. But this would have hurt local businesses, as tourists would prefer to stay in neighboring counties instead. The COC board handled this situation by taking it up with the authorities. **Another case was a proposal to increase minimum wages to $15**. Again this was not sustainable and the COC stepped in to rescue local businesses.
- Given the highly politicized landscape of tourism, the advisory presents a unified front to take up concerns with the local government. **They talk to senators and legislators in order to protect the community, properties, and wealth and well being of the people. Even the locals are tourists - they pay sales tax and eat at the restaurants. They are the biggest brand ambassadors and need to be taken care of.**
- Quote and Advices:
  - Funding is the biggest challenge – the more the better. There should be a dedicated team tackling this issue. Seneca did a great job in securing $450M to further develop the region. With many businesses, great tax structure and strong population, they are able to last during off season, which is a true test of sustainability.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Org structure: Board

- A representative board structure is a challenge. There are 4 different levels of membership and combined with 7 counties leads to a big board where gaining consensus is almost impossible. Tim is also on a South East 12 state organization with 50+ board members. The solution is completing a lot of work in smaller groups. An executive committee of 4 members handles only critical and high level tasks, besides taking all the decisions. Other day to day tasks are assigned to sub-committees of 6-8 people. The collective board functions as a sounding board to ensure everyone's voice is heard. For the IBX, when its scope expands to include more counties beyond the initial 7, a structure involving a board with multiple sub-committees is essential.
- Best practices:
  - While there are many ways to structure a board, **one good practice is having a representative board with 2 elected officials from each county for a 2 year term**, leading to a balanced representation
  - **Legally a 501 C3 is better than a 501 C6.** The C3 can receive federal grant as part of the foundational grant and contributions are tax deductible. Other organizations like that SC National heritage quarter have dual funding

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

GREENVILLE COUNTY
Org structure: Admin

- UpCountySC has a unique organizational structure. It is a public private collaboration. They **started through a federal grant in 1978 as the Appalachian regional commission**. It was a study commissioned by the state and over time it moved towards becoming a tourism promotion organization. When the study applied for a grant their second year, it was declined but the state continued funding it. It is a multi county regional organization from the beginning. Hence they began as a **501 C6 and remain so to this day**, while they are exploring the possibility of changing to a 501 C3 like the COC/CVB's are currently.
- Staffing: Only 3 people on payroll – 2 full time and 1 contract
- Their board has 16 members from 6 county and 2 year terms, with at least 1 representative from each county to balance representation (they do not want 4 reps from one county v/s just 1 from the other). The representatives are chosen from each county's member pool
- There are multiple commissions, besides the board. For example, Spartanburg has multiple economic development commissions (each with a unique tactical mission) and has been great at electing officials to lead these agencies.

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

5.2

Appendix B

Best Practices on: Marketing

RETURN to IBX structure

FINGER LAKES
Org structure: Marketing

- **The Finger Lakes region is similar to the IBX**, since it presents a similar landscape – multiple counties closely located to each other with similar attractions and the potential to collaborate with each other for the economic development of the entire region through tourism.
- Every county has its own Tourism promotion agency (TPA) and based on the size of the region, it can range from a Chamber of Commerce (COC) to a convention and visitors bureau (CVB). **The Tourism Promotion Agency (TPA) serves as the marketing and promotional tourism partner.** Usually just one person performs all duties.
- Interaction with businesses is limited, based on relevance to tourism. The TPA does not invest money in developing new properties. **They advise and guide properties (Ex. brain storming ideas) in developing attractions, promote and market them and also help in optimizing businesses once they are up and running**.
- "I love NY" is strictly a marketing firm for the entire state of NY and is not involved in any development activities

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: Marketing

- Given scarce resources and small budgets, funding is always targeted and there is a great emphasis on niche marketing. **It is the focal point for most TPAs, based on a persona or target tourist profile** (Ex. bird watching, hiking, biking, boat niches). While ideally all counties would like to target every niche, tough choices are made with selective funding for only select business segments. If bird watching garners more interest than biking, then the TPA will decide on investing in promoting bird related businesses. **ROI is the primary criteria while deciding on investments.**
- **Director of marketing travels often and builds relationships with property owners and managers**. He is a resource that is available to be leveraged by local businesses and has ongoing discussions with them on how he can be of help. This includes **improving operational efficiencies, tackling challenges or roadblocks, aiding press releases, or marketing through social media/newspaper**.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: Marketing

Quotes and Advices on best practices from Finger Lakes TPA:

- Targeting a particular demographic is most important. **The first task is identifying a typical visitor**.
- **Identify a common theme to the area** and perform marketing activities based on that. Also ensure development of businesses consistent with this theme. Seneca has different themes – agriculture tourism, wine, history, culture, art. It is possible to create different "trails" for each theme so that a tourist has different options – this essentially expands the potential tourist outreach, based on interests.
- Besides running ads and publications, Seneca COC is contacted by counties to run particular co-op ads. **Exploring cross promotion with surrounding counties is invaluable.** This is in addition to the recommended annual travel guide that lists all local tourism properties (free listing).

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: Marketing - Customer targeting

Seneca just re-did their marketing plan this year. It mainly involves info gathering, followed by targeting a particular demographic through a marketing plan. Following are the sources of information that the COC uses to learn about visitors in the area:

1. **Research analysis** and publications such as oxford economics and private regional studies that provide various details to help targeting – who are the travelers, where they come from, what are their interests, how long they're planning to stay, are they families/couple, with kids. These research studies are the best source of information for target demographic. There is no study done by the COC or a survey agency.
2. **Data collection** from the visitors center and CVB – the receptionist usually asks details such as where a person is coming from and what they do.
3. **Occupancy reports from hotel** – this is used to gain insights into whether seasonality/mid-week/certain events are driving more visitors.
4. **Sales tax reports provide insights into how much visitors are spending**, and help project the need for job creation within tourism properties. Besides planning human capital training and management, it helps properties plan to better handle visitors and invest in expanding facilities, be it a new product, an attraction, more tables in the restaurant or more buildings based on the segment.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: Marketing - Customer targeting (contd.)

- For Seneca county, the target geography is within a 6 hour driving radius: everyone in NYS, OH, PN, NJ, DC, MA, Canada (largest international traveler to the area, they represent quite a big % of overall audience). Demographic is white 50's retired/ working professionals, HS+ education, 50k+ annual salary and travel without their children.
- Gen X + baby boomers are the primary target. Gen X is important as they are the future of tourism in the area, considering the shifting demographic with time.
- With **boomers** as the main target, the primary channel is print ads rather than digital media. However, digital campaigns are more cost effective and have far better reach. It is used to target Gen Y and millennials as a future tourist stream. **Campaigns will become more digital with time, reflecting the shifting demographic**.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Org structure: Marketing

- UpCounty, SC comes very close to the structure of the IBX, since they are tasked with governing multiple counties under them (each with their own TPA). **Further, it has a dual mission of marketing and economic development of the Upper regions of SC through tourism and developing synergies between the different counties.** However, they focus only on looking for big projects (common theme!) and are not caught in the weeds on the development side to encourage certain businesses. The latter task is handled by the local TPA's and so far have been very successful at developing projects as well as economic development. **One of the Anchors of the Upcounty area is its rich heritage, which includes native American settlements from the 1700's.**
- **Promotional efforts are critical** to the success of local businesses. **Before this authority was instituted, the product development (new attractions) and operations of existing businesses was bad for several years due to a lack of publicity.** There is a need for an authority organization that **coordinates** the entire region's marketing on a national level for the benefit of local communities.

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

5.2

Appendix B

Description of Best Practices on:

Membership & Sales

RETURN to IBX structure

FINGER LAKES
Org structure: Membership development and sales

- Every county has its own Tourism promotion agency (TPA) and based on the size of the region, it can range from a Chamber of Commerce (COC) to a convention and visitors bureau (CVB)
- In the Finger Lakes region, each of the 14 counties have their own TPA or PR agency and they work together for cross promotion of attractions to form an ecosystem. **While one employee handles PR activities, all other members develop memberships – encourage businesses to sign up and multiply synergies in the ecosystem**
- Seneca has a huge wine industry with ties with Napa Valley. They have won international awards. Every county in the Finger Lakes region is different and not all have wine. Each county has its bread and butter (aka Anchor)

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Org structure: Membership development and sales

Quotes and Advices on best practices from Finger Lakes TPA:

- While developing new attractions, always measure the final impact on economic development. The best measure of success is an improvement in quality of life. This has to be factored in during the decision making process and while developing a plan from scratch. Economic development is a big spin off from tourism and there is huge potential in promoting an ecosystem of complementary businesses.
- It is essential to focus on core resources (aka Anchor) and then develop complementary attractions around the central theme that has been identified along with the anchor.
- An important objective is to increase occupancy in hotels that drives revenues, occupancy tax and ultimately development. This is achieved through better tourist attractions.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

FINGER LAKES
Day-to-day: Membership development and sales

Quotes and Advices on best practices from Finger Lakes TPA:

- Institute a **FAMILIARIZATION tour** (FAM tour), similar to what Seneca county organizes – All local employees (front desk staff at hotel, bartenders of restaurant) are taken on a full day tour, where they learn about different properties in the area and upcoming attractions. This is critical, since they are the biggest ambassadors to keep visitors informed.
- Ensure that **new properties fit the niche** that has been recognized based on the target customer and complements the anchor. Success of the properties depends on **synergies** from co-ordination between the owners, and partners operating within the area.
- **Infrastructure development** is the backbone to tourism and ultimately economic development, creating a virtuous cycle. It all starts with infrastructure followed by development of properties, and the local governments must be committed to supporting the tourism industry through this means on an ongoing basis. Lack of infrastructure leads to a vicious cycle since there is no tourism without proper roads, hotels and transport means. Lack of businesses are also a challenge and this is not something that the COC can solve – it only facilitates development by inviting businesses and supporting local businesses.
- Bottom line, economic development is the top priority and should be the central thought while taking decisions relating to developing the tourism industry.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

FINGER LAKES
Day-to-day: Sales - Anchor v/s Complements

- Seneca county has been very effective in **both identifying its anchors and developing complementary attractions** over time
- 3 Anchors:
  1. **Wine/wineries**
  2. **Water** – waves, lake, canal. The 2 largest finger lakes are on either side of Seneca. The water wine tour (a boat tour visiting all the wineries) combines both the wine and water attractions
  3. **Rich history**: This place was the beginning point of westward expansion, political ideology, fertile industry, generation of water power, Mormon beginnings, growth of homes and women's rights convention - right to vote. Waterloo was the birthplace of memorial day and month long events are organized every year in commemoration. Counties leverage every little piece while marketing themselves – this is the key to success.
- Complements can be attractions developed to fit a theme or events that leverage unique local resources/events:
  1. **Cheese tasting** goes well with wine – hence a cheese and creamers trail has been created.
  2. Famous people such as Christopher McDonald from "Happy Gilmore" and NY giants head coach are regular visitors. **The movie 'It's a wonderful life' was almost exclusively shot in the region** and the actor celebrates by visiting Seneca every year. The COC has a big marketing spend to commemorate such events and drive traffic.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Org structure: Membership development and sales

- Tim Todd highlights a difference between tourism and economic development to indicate why buy in and partnerships is critical. He says economic development is about building an office block and hoping people occupy it. Tourism on the other hand involves different developments such as brick and mortar, enhancing parks or water resources. Hence every tourism development activity contributes to economic development, but the opposite isn't always true. **Tourism development needs a strategy**, if an economic development organization is already in place, to collaborate and gain buy in from the organization about their development activities.
- The other critical task in managing members is **promoting a sense of community between counties and ensuring they play nice with each other.** Managing expectations is a critical piece of this puzzle. If done well, it results in **balanced development**. Every county has its own economic development organization and this diversity throws up many challenges.
    - UpCounty region of SC is yet to balance its development. Currently only Spartanburg and Greenville are doing well. Spartanburg has the only BMW plant in the US. But 30-45minutes in each direction, all regions are more in need and very challenged. While it is a blessing that some places are doing well and supporting the region, the small counties feel they are not getting their fair share and most new big attractions are going to the bigger places.

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Org structure: Membership development and sales

- **Case in point:** Oconee in the far west of SC has half national forest and public parks. They also have great water resources such as lakes and a marina, which offers great potential for tourism development. Managing expectations is critical and the small counties such as Oconee need to be convinced that they will not see a 300 room Hyatt hotel and convention center in the near future, but rather a 50 room lodge, with a conference center, zip lines and a golf course.
- **Another challenge encountered while managing expectations is the "me too" mentality**. An authority organization needs to ensure that attractions complement each other rather than copy. Since Spartanburg is doing really well, they look to imitate all the great attractions of surrounding areas. Greenville started an ice rink, which was copied by Spartanburg the next year and another neighboring county the third year. There was insufficient demand to sustainably profit from 3 ice rinks in such close proximity. Arguments that can be employed include asking the counties to be realistic with the resources they have – land, geographical, natural and monetary, along with their ability to employ people as well as attract tourists.

- UpCountySC has a **flat member fee of $100** (has remained this way for a while), in order to promote participation. They can afford to do so, given ample state funding. Members include hotels, restaurants, recreation providers and tour operators. The primary target is not the high end Hilton, but small bed and breakfast with 2 person staff. Many already pay local COC dues, state lodging association fees, etc, and hence the rationale behind low dues.

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Org structure: Membership development and sales

- Membership dues: A failed statewide rollout was having board members selected only from those organizations that had more than $10,000 in dues and pay more than $1000 if they wanted to be part of the organization. Smaller businesses did not have a voice and could not afford to be involved. It lasted 2 years before it was dissolved. This highlights the importance of having every size of business and sector of the economy to be represented and not tying board seats to revenue.
- Best practices:
  - **Most important task is to sell the idea of tourism and ensure the community is bought in**. If they are against it, then it is most difficult to make any sort of progress. **Everyone from elected members to community leaders and members need to be on-board.** Without them, it is a long and frustrating battle in a losing cause.
  - A graduated system of charging membership fees, based on their annual revenues, promotes participation from all sizes of business, especially at the grass root level **(Ex. For revenue >$0.5M $500/year dues, v/s $100/year for smaller operations)**
  - **Manage expectations, prevent the "me too" mentality** to ultimately promote balanced development. Keep membership fees nominal to promote participation

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

GREENVILLE COUNTY
Day-to-day: Membership development and sales

- As an organization, they have multiple responsibilities. **However, with just 3 people on the staff, everyone is a jack of all. Tasks include** the need to secure funding, develop marketing plans to woo investors, write grants, have interactions with legislature and government, handle marketing, work with American Indian tribal leaders, and PR to oversee publications – print ads, website or social media. Among these activities, majority of the time is spent in development, discussion with elected officials to ensure tourism is on the radar and working across local CVBs to ensure consistency of actions for economic development.
- UpCountySC is an integration function and is responsible for getting the counties to work together. Each county has its own COC and they play nice with each other most of the time. **Integration is more project based and the challenge is to move it up to have a common theme. It does not make sense from a financial or marketing perspective to individually get all counties work together in bicycling.** An additional challenge is to have all counties follow directions from the authority organization, since they do not have many levels to pull. With so many COC's, everyone focuses on their own little niche, but not a central theme. **Ideally everyone works towards a common type of attraction to develop a theme. In reality, some counties buy in to an idea, but rarely do all of them sign on to different niches suc has cycling, hiking or certain events.**

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

5.3

Appendix C

Best Practices on: Financials

RETURN to IBX structure

FINGER LAKES
Financial Facts

- The tourism industry for finger lakes area is self-sufficient in terms of budget and funds. **It plows back all earnings (occupancy tax from motels, bed and breakfast) into the tourism industry and advertising**
- Seneca county has an agreement of "**funding matching**": The State matches the funding from the local government every year (If the local govt. invests $100k, the state govt. contributes another $100k)
- Another big source of revenue come from **selling ads in travel guides** and **co-op ads** (Co-operative advertising means that a partnership is established between 2 parties to share the cost of advertising). Profit is recorded after expensing these ad campaigns. The COC gets local businesses to buy advertising space in different publications (digital/online). They generally feature multiple properties on one advertisement. **By becoming a member, the business is featured on their brochure – that's the only free marketing and the rest is purchased.**
- **Marketing budgets are dependent on the size of the county.** For instance, Seneca has a budget of ~$300K annually (one of the lowest in the region, contrasting to a neighboring county with $1M+). But they have the most number of tourism properties, which helps offset lower budgets by improving occupancy tax. With more people staying within the borders of the county overnight, Seneca compensates and boasts of a 30% occupancy v/s 4-6% in neighboring counties.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

GREENVILLE COUNTY
Financial aspects

- Bulk of funding comes from the state tourism council, but they also have private funding from other grants and businesses: member funding, ads, publications and websites.
- Membership dues: <5% of revenue from membership fee, since most businesses are small and dues are low.
- Explore the possibility of organizing festival/charitable cause and benefiting from the proceeds, given the 501 C3 status

Source: Interview with Tim Todd, Executive Director, "UpCountySC" authority organization, Greenville county, SC

UNC Interview
Day-to-day: investment

- Best practices contd.:
  - Building on the enthusiasm part, **the first few projects can be a demo**. **They can be pre-selected with strict guidelines** and a limited roll out (try in one county) with defined outcomes. This can be a success story that is shared with everyone while the process is scaled up.
  - For funding, **the proposal is to ensure that the IBX only provides seed funding for an initial period and that the business needs to be self sufficient after a pre-determined timeframe**. This goes a long way in setting expectations and a rigorous evaluation process to ensure ROI and documentation maintains the validity of the process.
  - Certain criteria to consider while deciding on which projects to pursue: while evaluating applications or projects in general, it is always necessary to check whether the complementary are in place to ensure success. **If a new hotel has to be constructed, the board has to ensure that there is sufficient demand, the capital and ROI look good and that the infrastructure is developed to handle the traffic.** To ensure a transparent decision making process, one idea is to **have a scoring matrix** and all board members rank each proposal based on criteria. This is published on the website or is readily available. If an idea is not funded, then those who proposed it can meet with the board **to get feedback**. This improves goodwill, enthusiasm and transparency.

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

UNC Interview
Day-to-day: project justifications

- Best practices contd.:
  - **Approval processes** will be critical and the board needs to ensure a fair process. Similar to academic journals a robust process can be instituted. It involves a county submitting a title page with all details addressed to the editor. There is another version with all identifiable information removed, which will be utilized by the board to take decisions. **This way the proposals would be county agnostic and the decision would be purely based on merit and benefit to the entire region.** This coupled with board members who are 'independent' (not local) and hence don't have skin in the game will ensure a fair process.
  - The flip side to a very rigorous process is if too many people get rejected, in which case people lose faith in the system and will give up. The art lies in balancing expectations and enthusiasm. **Expectations can be set by making public information, the total amount of grant money available and number of projects they are looking to approve for instance.** People have a better idea on average funding and hence expectations are tempered. **Care needs to be taken that there are not 30 applications and only one get funded**, especially if its an onerous process for the businesses. This ties in to the enthusiasm part.

IBX INNER BANKS, EASTERN NORTH CAROLINA

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

UNC KENAN-FLAGLER BUSINESS SCHOOL

UNC Interview
Day-to-day: investment project

- For general decision making on the board, they need to be ready to lay out cards on the table. 2 possible formats are – all members make an independent decision with voting OR a blind format.
- For funding, it would be worthwhile to find a foundation that funds community economic dev projects. Prof. Dave Hoffman mentioned the Lilly foundation, Collins fund and others out there that give economic development grants. **Lilly foundation's application form for project proposal is attached.**

Source: Interview with Dave Hoffman, Hugh L. McColl Distinguished Professor and Area Chair of Organizational Behavior, UNC Kenan-Flagler Business School

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Project application form

PROJECT GRANT ATTACHMENT
For Indianapolis Arts and Cultural Organizations

PROJECT GRANT PROPOSAL OVERVIEW SUMMARY PAGE

PROPOSAL INFORMATION

Application submitted to:	
Date of application:	

ORGANIZATION INFORMATION

Organization Name:	
Grant Contact:	
Grant Contact Email:	
Grant Contact Phone:	

PROJECT PROPOSAL SUMMARY

Project Description (400 character limit):	
Project dates (if applicable):	

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

5.4

Appendix D

Other Supporting Data

RETURN to IBX structure

Financial Projections

Category	Assumptions	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
REVENUE												
IBX Fund Returns		$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00	$ 580,000.00
Other Grants		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
State/local gov		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Occupancy Tax		$ -	$ 17,520.00	$ 21,652.09	$ 26,758.74	$ 33,069.79	$ 40,869.30	$ 50,508.32	$ 62,420.71	$ 77,142.63	$ 95,336.72	$ 117,821.88
Membership Dues		$ -	$ -	$ -	$ 1,500.00	$ 1,819.13	$ 2,101.09	$ 2,426.76	$ 2,802.91	$ 3,237.36	$ 3,739.15	$ 4,318.71
Private Investors		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenue		$ 580,000.00	$ 597,520.00	$ 601,652.09	$ 608,258.74	$ 614,888.91	$ 622,970.38	$ 632,935.08	$ 645,223.61	$ 660,379.99	$ 679,075.86	$ 702,140.60
EXPENSES												
Salaries												
Exec Director		$ 50,000.00	$ 52,500.00	$ 55,125.00	$ 57,881.25	$ 60,775.31	$ 63,814.08	$ 67,004.78	$ 70,355.02	$ 73,872.77	$ 77,566.41	$ 81,444.73
Treasurer		$ 40,000.00	$ 42,000.00	$ 44,100.00	$ 46,305.00	$ 48,620.25	$ 51,051.26	$ 53,603.83	$ 56,284.02	$ 59,098.22	$ 62,053.13	$ 65,155.79
Tech/Web		$ 20,000.00	$ 21,000.00	$ 22,050.00	$ 23,152.50	$ 24,310.13	$ 25,525.63	$ 26,801.91	$ 28,142.01	$ 29,549.11	$ 31,026.56	$ 32,577.89
Sales1		$ -	$ -	$ -	$ 35,000.00	$ 36,750.00	$ 38,587.50	$ 40,516.88	$ 42,542.72	$ 44,669.85	$ 46,903.35	$ 49,248.51
Sales2		$ -	$ -	$ -	$ -	$ -	$ 35,000.00	$ 36,750.00	$ 38,587.50	$ 40,516.88	$ 42,542.72	$ 44,669.85
Sales3		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 35,000.00	$ 36,750.00	$ 38,587.50	$ 40,516.88
Sales4		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 35,000.00	$ 36,750.00
Marketing1		$ -		$ -	$ 35,000.00	$ 36,750.00	$ 38,587.50	$ 40,516.88	$ 42,542.72	$ 44,669.85	$ 46,903.35	$ 49,248.51
Marketing2		$ -	$ -	$ -	$ -	$ -	$ 35,000.00	$ 36,750.00	$ 38,587.50	$ 40,516.88	$ 42,542.72	$ 44,669.85
Total Salaries		$ 110,000.00	$ 115,500.00	$ 121,275.00	$ 197,338.75	$ 207,205.69	$ 287,565.97	$ 301,944.27	$ 352,041.48	$ 369,643.56	$ 423,125.74	$ 444,282.02
Overhead												
Rent/Office		$ 15,000.00	$ 15,750.00	$ 16,537.50	$ 17,364.38	$ 18,232.59	$ 19,144.22	$ 20,101.43	$ 21,106.51	$ 22,161.83	$ 23,269.92	$ 24,433.42
Facilities Maint		$ 5,000.00	$ 5,250.00	$ 5,512.50	$ 5,788.13	$ 6,077.53	$ 6,381.41	$ 6,700.48	$ 7,035.50	$ 7,387.28	$ 7,756.64	$ 8,144.47
Supplies/Travel		$ 2,000.00	$ 2,100.00	$ 2,205.00	$ 2,315.25	$ 2,431.01	$ 2,552.56	$ 2,680.19	$ 2,814.20	$ 2,954.91	$ 3,102.66	$ 3,257.79
Marketing Budget		$ 20,000.00	$ 21,000.00	$ 22,050.00	$ 23,152.50	$ 24,310.13	$ 25,525.63	$ 26,801.91	$ 28,142.01	$ 29,549.11	$ 31,026.56	$ 32,577.89
Total Overhead		$ 42,000.00	$ 44,100.00	$ 46,305.00	$ 48,620.25	$ 51,051.26	$ 53,603.83	$ 56,284.02	$ 59,098.22	$ 62,053.13	$ 65,155.79	$ 68,413.57
Total Expenses		$ 152,000.00	$ 159,600.00	$ 167,580.00	$ 245,959.00	$ 258,256.95	$ 341,169.80	$ 358,228.29	$ 411,139.70	$ 431,696.69	$ 488,281.52	$ 512,695.60
Margin		$ 428,000.00	$ 437,920.00	$ 434,072.09	$ 362,299.74	$ 356,631.96	$ 281,800.59	$ 274,706.79	$ 234,083.91	$ 228,683.30	$ 190,794.34	$ 189,445.00
Running Cash Total		$ 428,000.00	$ 865,920.00	$ 1,299,992.09	$ 1,662,291.83	$ 2,018,923.79	$ 2,300,724.38	$ 2,575,431.17	$ 2,809,515.08	$ 3,038,198.38	$ 3,228,992.72	$ 3,418,437.72

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Historical Returns

Year	S&P 500	3-month T.Bill	10-year T. Bond	Historical risk premium
2006	15.61%	4.68%	1.96%	4.91%
2007	5.48%	4.64%	10.21%	4.79%
2008	-36.55%	1.59%	20.10%	3.88%
2009	25.94%	0.14%	-11.12%	4.29%
2010	14.82%	0.13%	8.46%	4.31%
2011	2.10%	0.03%	16.04%	4.10%
2012	15.89%	0.05%	2.97%	4.20%
2013	32.15%	0.07%	-9.10%	4.62%
2014	13.52%	0.05%	10.75%	4.60%
2015	1.36%	0.21%	1.28%	4.54%

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Scope of the Project

In Scope

- Study and research best practice of similar authorities across country
- Surveys and interviews with providers and Department of Correction leaders
- Analysis of external and internal factors that impacts the organization and activities of IBX authority

Out of Scope

- Detailed implementation of recommendations
- Develop recommendations to directly improve the economics of the areas
- Secure funding of IBX authority

IBX™ INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Current Tourism Locations

How can IBX impact them? (Con't)

- How do we best serve the different Tiers?
  - Tier 1: TEACH
    - Enlighten as to their regional importance, connect them to nearby attractions to help develop networks, find and strengthen thematic elements of attractions in the area
  - Tier 2: CONNECT
    - Connect to bigger thematic areas, educate/teach about best practices, develop pipeline of customer base
  - Tier 3: LEARN
    - Build infrastructure, educate/teach about operational technique, connect to bigger thematic areas eventually

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Current Tourism Locations

How can IBX impact them? (Con't)

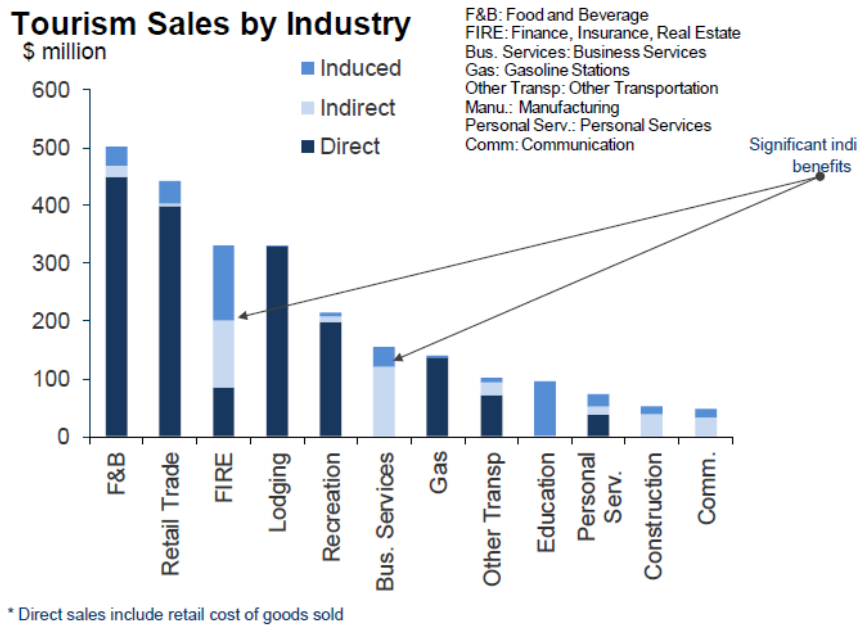
Examples of Albemarle Sound tourist locations and their Tier assignments

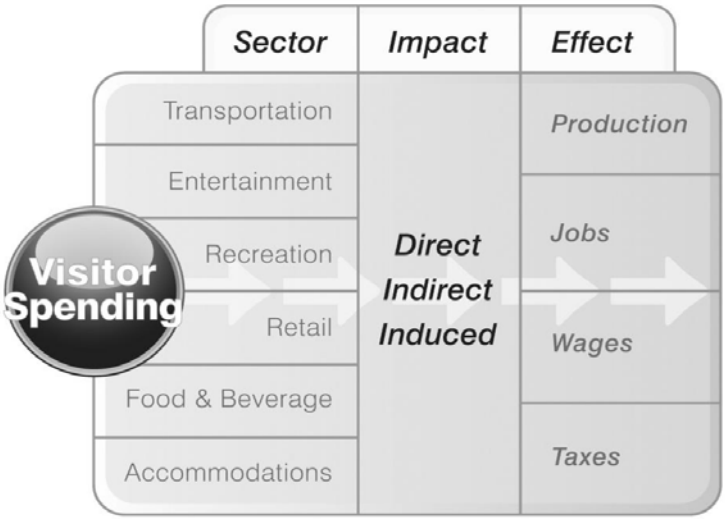
Name	City	Region	TA Rate	TA Revs	Category	Seasonal	WF	TR	demo
Historic Edenton	Edenton	North Sound	4.5	74	Historical	none	1	1	family
Barker House	Edenton	North Sound	4.5	73	Historical	none	1	1	family
Edenton Bay Cruises	Edenton	North Sound	5	28	Watersports	non-winter	1	0	couple
Queen Anne Park	Edenton	North Sound	4.5	17	Park	none	1	1	family
St. Paul's Episcopal Church	Edenton	North Sound	4.5	30	Religious	none	1	1	family
Cupola House	Edenton	North Sound	4.5	34	Historical	none	1	1	family
Edenton National Fish Hatchery	Edenton	North Sound	5	1	Nature	non-winter	1	0	family
Rocky Hock Playhouse	Edenton	North Sound	4	2	Theater	none	1	0	family
Jim Catfish Hunter museum	Hertford	North Sound	5	9	Museum	none	1	0	family
Albemarle Plantation Golf	Bethel	North Sound	4.5	7	Golf	non-winter	1	0	sport
Pocosin Lakes Wildlife Refuge	Columbia	Southeast Sound	5	23	Nature	non-winter	1	0	family
Vinyards on the Scuppernong	Columbia	Southeast Sound	4.5	13	Food	none	1	0	couple
Pettigrew State Park	Phelps Lake	Southeast Sound	4.5	8	Nature	non-winter	1	0	family
Somerset Place	Phelps Lake	Southeast Sound	4.5	30	Historical	none	1	0	family
Newbold White House	Hertford	North Sound	3.5	3	Historical	none	1	0	family
Port O'Plymouth Museum	Plymouth	Southwest Sound	4	15	Museum	none	1	0	family
Roanoke River Lighthouse	Plymouth	Southwest Sound	3.5	10	Historical	none	1	0	family
God's Creation Wildlife Museum	Plymouth	Southwest Sound	5	1	Museum	none	1	0	family
Mackey's Crab Bar & Grill	Mackeys	Southwest Sound	0	0	Food	none	1	0	family
Various Massage	Columbia	Southeast Sound	4.5	4	Resort	none	1	0	couple
Pocosin Arts	Columbia	Southeast Sound	4	4	Artisan	none	1	0	family

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism generated more than $2.6B in revenue (2014) for Buncombe county



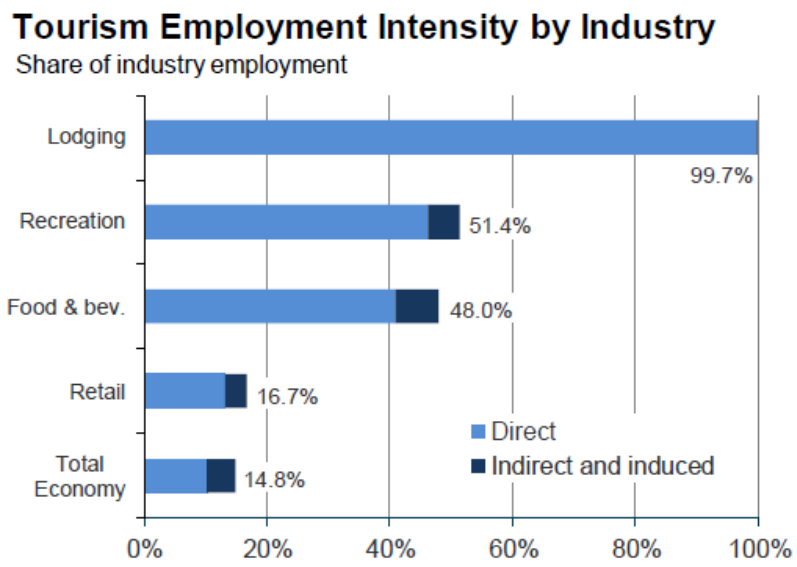


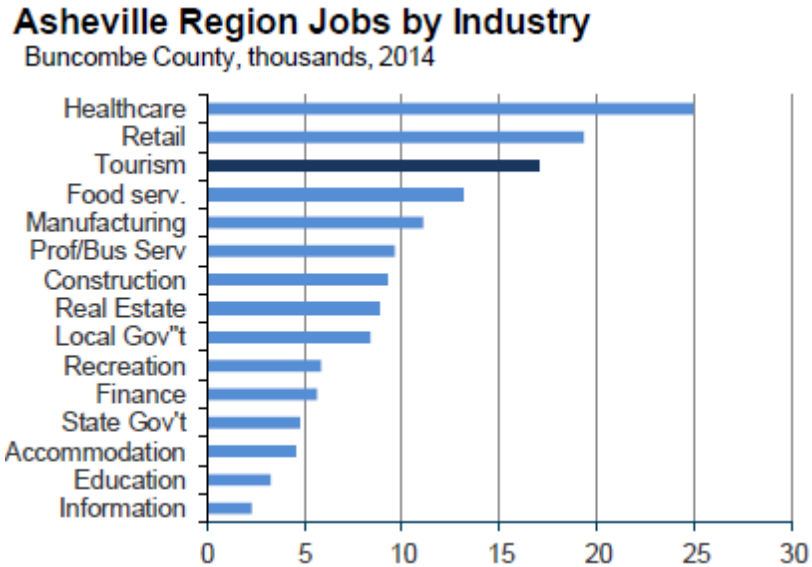
Visitor spending is a leading indicator of economic development. Tourists spent $1.7B in 2014 translating to a 4.6% growth.

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

The tourism industry supported 24,856 jobs (1 in 7) within Buncombe county





Tourism employs more people than Manufacturing, Construction and Finance.

IBX INNER BANKS, EASTERN NORTH CAROLINA

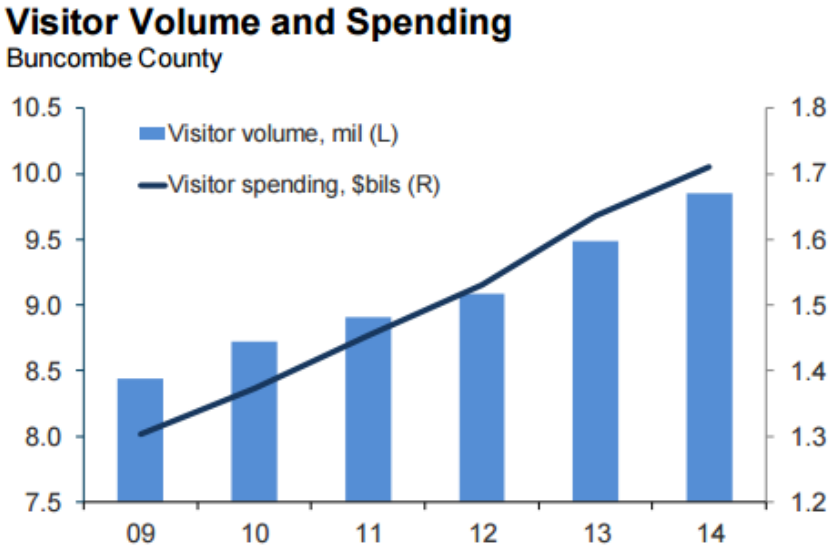
UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism is also a key source of personal income that directly ties to the quality of life

- Employees in Asheville earned $714M in 2014 as a result of visitor activity
- Tourism generated $287M in taxes and helped offset the average household tax burden by $1,232/household

Tourism Labor Income (Compensation)
(US$ Million)

	Direct	Indirect	Induced	Total
Agriculture, Fishing, Mining	-	0.1	0.1	0.1
Construction and Utilities	-	10.4	2.8	13.1
Manufacturing	-	2.5	0.5	3.0
Wholesale Trade	-	3.0	5.3	8.4
Air Transport	0.7	0.5	0.7	1.8
Other Transport	37.7	8.3	2.9	48.9
Retail Trade	60.9	1.8	17.2	79.9
Gasoline Stations	6.9	0.1	1.2	8.2
Communications	-	7.3	2.6	9.8
Finance, Insurance and Real Estate	7.2	14.2	10.5	31.9
Business Services	-	49.2	14.0	63.1
Education and Health Care	-	0.6	49.2	49.8
Recreation and Entertainment	62.8	2.4	2.3	67.5
Lodging	95.9	0.2	0.1	96.2
Food & Beverage	155.3	7.6	12.9	175.8
Personal Services	22.7	8.9	11.1	42.7
Government	-	10.5	3.0	13.5
TOTAL	450.1	127.4	136.4	713.9



IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism encourages spending in a wide variety of industries, promoting equality of income

Spend Category	Description
Lodging	Visitor spending in the accommodation sub-sector, including food and other services provided by hotels and similar establishments
Recreation	Visitor spending within the arts, entertainment and recreation subsector
Local transport	Visitor spending on local transport services such as taxis, limos, trains, rental cars, and buses
Shopping	Visitor spending in all retail sub-sectors within the Buncombe County economy
Service stations	Visitor spending on gasoline - only the margin counts as local economic impact
Second homes	Spending associated with the upkeep of seasonal second homes for recreational use as defined by the Census Bureau
Food & beverage	Visitor spending at restaurants and bars

IBX INNER BANKS, EASTERN NORTH CAROLINA

UNC KENAN-FLAGLER BUSINESS SCHOOL

Tourism as a driver of economic development

- "I love NY" the official statewide PR agency for the state of NY has their own pool of fund in addition to the state's $40M budget.
- Tourism is #4 employer in state and hence the state government devotes such large budgets to tourism promotion and development.

Source: Interview with Richard (Rick) Newman, Destinations Marketing Manger, Seneca county COC, NY

History of Golden Leaf

- https://www.nccivitas.org/2009/dissolve-golden-leaf/

[PUT ON COUNTY LETTERHEAD]

January 30, 2017

Nicholas Didow, Professor
Kenan-Flagler Business School
4516 McColl Building
University of North Carolina
Chapel Hill, NC 27599-3490

Re: IBX Authority

Dear Professor Didow,

We have received a copy of the final IBX Authority Report, and we do not approve the distribution of the IBX Authority Report.

It should be noted that we do not support the use of occupancy taxes for the activities contained within the IBX Authority Report.

Finally, we do not support the report in its current form.

As always, should you have any questions or comments, please do not hesitate to contact me.

Very truly yours,

_____

cc: Local Members of the General Assembly
Mark Little, Executive Director, Kenan Institute of Private Enterprise
Cathy Davison, Executive Director, Albemarle Commission

COUNTY OF PASQUOTANK

RESOLUTION FOR PASQUOTANK COUNTY, NC

At a regular meeting of the Pasquotank County Board of Commissions on April 2, 2018, the Pasquotank County Board of Commissions, on a motion by Jeff Dixon, and seconded by Bill Sterrit the following resolution was adopted by a vote of 6 to 1:

Whereas, A summary of the Albemarle Regional Tourism Development Strategy has been reviewed by members of the Pasquotank County Commission; and

Whereas, the Pasquotank County Board of Commissioners agrees to be included in an Albemarle Regional Tourism Development Strategy to be coordinated by the IBX Authority, a Private Non-Profit 501(3)C under the auspices of the UNC Kenan Flagler School of Business; and,

Whereas, the Pasquotank County Board of Commissions understands that four other Northeastern North Carolina cities and counties might also be included: Edenton, NC, in Chowan County; Plymouth, NC, in Washington County; Columbia, NC in Tyrrell County; and Hertford, NC in Perquimans County; and,

Whereas, the IBX authority shall apply for multiple grants to develop, coordinate, manage and implement the regional tourism strategy; and,

Whereas, The IBX Authority shall be governed by the IBX Authority Board of Directors; and

Whereas, All IBX Authority plans and budgets must be approved by the board of directors of IBX; and

Whereas, Pasquotank County and the City of Elizabeth City shall each appoint one member to the Board of Directors; and

Whereas, the Pasquotank County Board of Commission understands that it shall not be responsible for any funding to meet the expenses for the operations of the IBX Authority, but that the operating cost for the IBX Authority shall be a part of all grants which it will be responsible for preparing and submitting.

NOW, THEREFORE, BE IT RESOLVED THAT: The Pasquotank County Board of Commissioners supports the Golden Leaf Foundation grant application for funding of $7.5 million for development of the five aforementioned towns at $1.5 million each, which includes a total of $200,000 to be deducted from each town grant to sustain the operation of the IBX Authority for a period of 2 years.

ATTEST:

Lynn B. Scott,
Clerk to the Board of Commissioners

Cecil Perry, Chairman
Pasquotank County Board of Commissioners

(COUNTY SEAL)

HORACE C. REID, JR.
MAYOR

BRANDON S. SHOAF
TOWN MANAGER

CINDY E. SHARBER
TOWN CLERK

BENJAMIN M. GALLOP
TOWN ATTORNEY

ORIGINAL CHARTER 1758
HERTFORD
NORTH CAROLINA

COMMISSIONERS:

ARCHIE L. APLES, III
MAYOR PRO TEM

J. SIDNEY ELEY

FFRANK E. NORMAN, III

QUENTIN S. JACKSON

Resolution to Declare Surplus Property
of the Town of Hertford
Resolution No. 2-12-18-02

Whereas, a summary of the Albemarle Regional Tourism Development Strategy has been reviewed by members of the Town Council of Hertford, NC and,

Whereas, the Town of Hertford, NC agrees to be included in an Albemarle Regional Tourism Development Strategy to be coordinated by the IBX Authority, a private Non-Profit 501 C(3) under the auspices of the UNC Kenan Flagler School of Business and,

Whereas, the Town Council understands that four other Northeastern North Carolina counties might also be included: Edenton, NC in Chowan County; Plymouth, NC in Washington County; Columbia, NC in Tyrrell County; and Elizabeth City in Pasquotank County and,

Whereas, the IBX Authority shall be governed by the IBX Authority Board of Directors and,

Whereas, all IBX Authority plans and budgets must be approved by the board of directors of IBX and,

Whereas, the Town of Hertford shall appoint a member to the Board of Directors and,

Whereas, the Town of Hertford understands that it shall not be responsible for any funding to meet he expenses for the operations of the IBX Authority, but that operating cost for the IBX Authority shall be a part of all grants which it will be responsible for preparing and submitting.

Now therefore be it resolved by the Town Council of the Town of Hertford supports the Golden Leaf Foundation grant application for funding of $7.5 million for development of the five aforementioned towns at $1.5 million each, which includes a total of $200,000 to be deducted from each town grant to sustain the operation of the IBX Authority for a period of 2 years.

This, the 12th day of February, 2018.

(SEAL)

TOWN OF HERTFORD ORIGINAL CHARTER 1758 NORTH CAROLINA

Horace C. Reid, Jr., Mayor

Cindy E. Sharber, Town Clerk

Resolution # 2018 – 03-02
IN SUPPORT OF FIVE-COUNTY
HARBOR TOWN FERRY

WHEREAS, the City of Elizabeth City agrees to assist Pasquotank County in promoting an Albemarle Regional Tourism Development Strategy to be coordinated by the IBX Authority, a Private Non-Profit 501(c)3 under the auspices of the UNC Kenan Flagler School of Business; and,

WHEREAS, the City of Elizabeth City understands that four other Northeastern North Carolina cities and counties might also be included: Edenton, NC, in Chowan County; Plymouth, NC, in Washington County; Columbia, NC in Tyrrell County; and Hertford, NC in Perquimans County; and,

WHEREAS, the IBX authority shall apply for multiple grants to develop, coordinate, manage and implement the regional tourism strategy; and,

WHEREAS, The IBX Authority shall be governed by the IBX Authority Board of Directors; and

WHEREAS, All IBX Authority plans and budgets must be approved by the board of directors of IBX; and

WHEREAS, Pasquotank County and the City of Elizabeth City shall each appoint one member to the Board of Directors; and

WHEREAS, the City of Elizabeth City understand that they shall not be responsible for any funding to meet the expenses for the operations of the IBX Authority, but that the operating cost for the IBX Authority shall be a part of all grants which it will be responsible for preparing and submitting.

NOW, THEREFORE, BE IT RESOLVED THAT: the City of Elizabeth City supports the concept and strategy of creating a five-town Harbor Town Ferry project.

ADOPTED, this the 26th day of March 2018.

Bettie J. Parker
Mayor

April D. Onley
Interim City Clerk