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North Carolina Maritime Strategy

How can North Carolina position itself as a portal to the Global Economy?

MARITIME STUDY EXECUTIVE TEAM MEETING, RALEIGH NC
2.22.2011



AGENDA

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// Agenda



- **Maritime Study Executive Team**
- **The Project Team**
- **Study Background and Context**
- **Overview of North Carolina Maritime Strategy Scope**
- **Outcomes and Results**
- **Schedule Milestones**
- **Executive Team Involvement**

MARITIME STUDY EXECUTIVE TEAM

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// Maritime Study Executive Team



- **Walter Dalton** – Lt. Governor (Chair)
- **Al Delia** – Governor’s Policy Advisor (Vice Chair)
- **Keith Crisco** – Secretary Department of Commerce
- **Dee Freeman** – Secretary Department of Environment and Natural Resources
- **Gene Conti** – Secretary of Transportation

- **Roberto Canales, PE** – NCDOT (Staff Lead / MSET Liaison)
- **Virginia Mabry** – NCDOT (Project Manager)

// Maritime Study Executive Team



Expectations of the MSET

- Provide high-level leadership to the North Carolina Maritime Study
- Establish and communicate state-level strategic objectives
- Identify members of the Advisory Council, and engaged advisory body that will provide guidance and input to development of a comprehensive maritime strategy for North Carolina

// Maritime Advisory Council



- Advisory council to be named by MSET and support its mission
- Public and private sector representatives to serve as a fully-engaged, hands-on advisory body
- Potential Members:
 - Staff representatives from Governor's and Lt. Governor's office
 - League of Municipalities
 - County commissioners
 - GTP Director
 - Economic Development Regions
 - US Military
 - Logistics task force members
 - NC Department of Agriculture
 - NC State Ports Authority
 - UNC Greensboro
 - Farm Bureau
 - NC Truckers Association
 - NC Chamber of Commerce
 - Class 1 Railroads (NS, CSX)
 - NCRR
 - Shipping lines / ocean carriers (e.g. ICL, Yang Ming Line)
 - Major manufacturers (shippers) and retailers (receivers) (e.g. Caterpillar, Goodyear, Lowes)



PROJECT TEAM

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- 52,000 employees worldwide; 250+ in North Carolina
- Practicing in North Carolina for 25 years
- Offices in Raleigh, Cary, Greensboro, and Charlotte
- Personnel at NC military installations
- Clients include:
 - NCDOT
 - Municipalities
 - NCRR
 - NCDENR
 - NS and CSX
 - Transit Agencies
 - Federal/DOD
 - Private Industry
 - NCSPA
 - Universities

THE TOP 500 DESIGN FIRMS

RANK		FIRM
2010	2009	
1	2	AECOM TECHNOLOGY CORP., Los Angeles, Calif.
2	3	URS CORP., San Francisco, Calif.†
3	1	JACOBS, Pasadena, Calif.
4	4	FLUOR CORP., Irving, Texas†
5	5	CH2M HILL, Englewood, Colo.†
6	6	THE HOK GROUP INC., San Francisco, Calif.†
7	7	PERKINS+WILL, Chicago, Ill.†
8	8	PARSONS BRINCKERHOFF INC., Pasadena, Calif.†
9	9	PARSONS, Pasadena, Calif.†
10	10	ARCADIS/MALCOLM PIRNIE, Highlands Ranch, Colo.†
11	11	URS CORP., San Francisco, Calif.†
12	12	PARSONS BRINCKERHOFF INC., New York, N.Y.†
13	13	HDR, Omaha, Neb.†
14	14	PARSONS BRINCKERHOFF INC., Pasadena, Calif.†
15	15	PERKINS+WILL, Chicago, Ill.†
16	16	ARCADIS/MALCOLM PIRNIE, Highlands Ranch, Colo.†
17	17	URS CORP., San Francisco, Calif.†
18	18	LOUIS BERGER GROUP, Morristown, N.J.†
19	19	PERKINS+WILL, Chicago, Ill.†
20	20	ARCADIS/MALCOLM PIRNIE, Highlands Ranch, Colo.†
21	21	URS CORP., San Francisco, Calif.†
22	22	PERKINS+WILL, Chicago, Ill.†
23	23	URS CORP., San Francisco, Calif.†
24	24	PERKINS+WILL, Chicago, Ill.†
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46	46	PERKINS+WILL, Chicago, Ill.†
47	47	URS CORP., San Francisco, Calif.†
48	48	PERKINS+WILL, Chicago, Ill.†
49	49	URS CORP., San Francisco, Calif.†
50	50	PERKINS+WILL, Chicago, Ill.†

2010 ENR rankings

- > No. 1 Design Firm
- > No. 1 Transportation (since 2001)
- > No. 1 Rail/Transit (since 2001)
- > No. 1 Marine/Ports
- > No. 1 Airports
- > No. 2 Highways
- > No. 2 Bridges

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URS

- 46,000+ employees worldwide; 270 in North Carolina
- Practicing in North Carolina for more than 45 years
- Morrisville, Wilmington, Charlotte, military installations
- Clients include:
 - Virtually all Branches of NCDOT and NCTA
 - NCSPA
 - CSX, Norfolk-Southern
 - Federal Agencies and Municipalities
 - Private Industry



// Project Team



Rachel Vandenberg, PE – Project Manager (AECOM)

- Leads AECOM's North American Intermodal practice
- 23 years experience in feasibility, planning, design and delivery of highway, rail and port projects
- Deputy program manager, Alameda Corridor
- Programmatic environmental studies, public outreach, and conceptual engineering for more than 400 miles of proposed high speed rail
- Feasibility studies for on-dock and inland rail facilities
- Strategic needs assessment for port access projects



// Project Team



Eddie McFalls, PE – Deputy Project Manager (AECOM)

- 18 years experience in NC preparing feasibility studies and NEPA documents
- Assisted with NCSPA Radio Island EIS and environmental screening for NCRR Morehead City to Havelock Track Relocation Study



David Griffin – Deputy Project Manager (URS)

- URS Vice President
- Raleigh Office - 18 years
- 30 years as NEPA practitioner and transportation planner



// Project Team



Toni Horst (AECOM)

- Specialist in economic impact and cost benefit assessment of transportation investment
- Rail, ports, inland waterway, and highway studies
- Past North Carolina experience includes economic impact of passenger rail investment and support for FRA applications



Tommy Harrelson (AECOM)

- Former NCDOT Secretary
- Over 44 years of managerial experience
- Experience implementing transportation programs
- Mediation, facilitation, and stakeholder development



// Project Team



Roger Heebner, PE (AECOM)

- 39 years experience with vast knowledge of railroad operations and standards
- Extensive experience with on-call service contracts for NS & CSX (former railroad employee)



Dennis Hoyle (URS)

- URS Raleigh Office - 7 years
- Vice President / Director of Design
- Over 30 years as civil and structural engineer



// Project Team



Mark Sisson, PE (AECOM)

- Manager of AECOM's North American Simulation team
- Port planner with 16 years of experience
- Port-wide capacity studies - Los Angeles & Long Beach
- Port valuation project for Maryland Port Administration



Pam Townsend, PE (AECOM)

- AECOM Vice President, Southern States District
- 27 years diversified experience with federal, state, local, commercial, and industrial programs
- Past president-Professional Engineers of North Carolina
- Joint Legislative JOBS Commission member (Gubernatorial appointment)





STUDY BACKGROUND & CONTEXT

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// Study Background & Context



Trends in Global Goods Movement

Today's trade major patterns result from several concurrent events:

- Unprecedented pipeline of goods from Asia to the US
- Containerization
- Larger and larger vessels
- Gateways and corridors that funnel goods to US population centers and from major manufacturing/processing centers

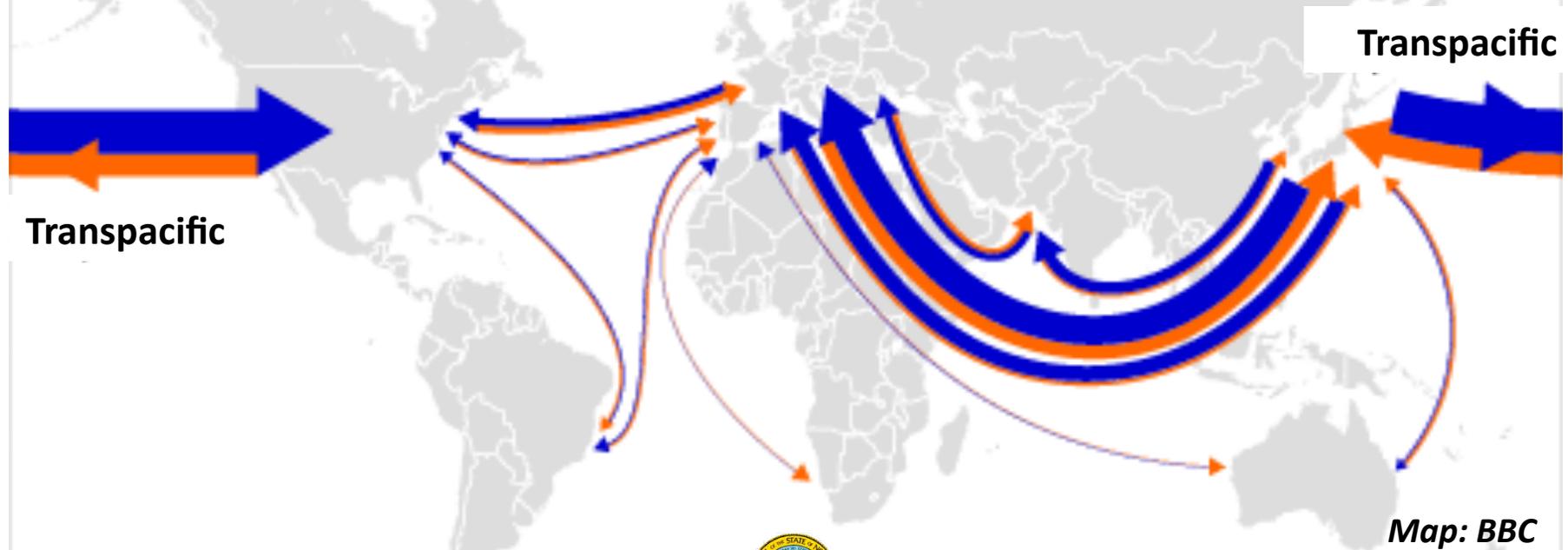
// Study Background & Context



Today, US imports are driven by China trade

China's entry into WTO was a game-changer...

...creating the need for a new, high-capacity, point-to-point pipeline for goods between Asia and North America

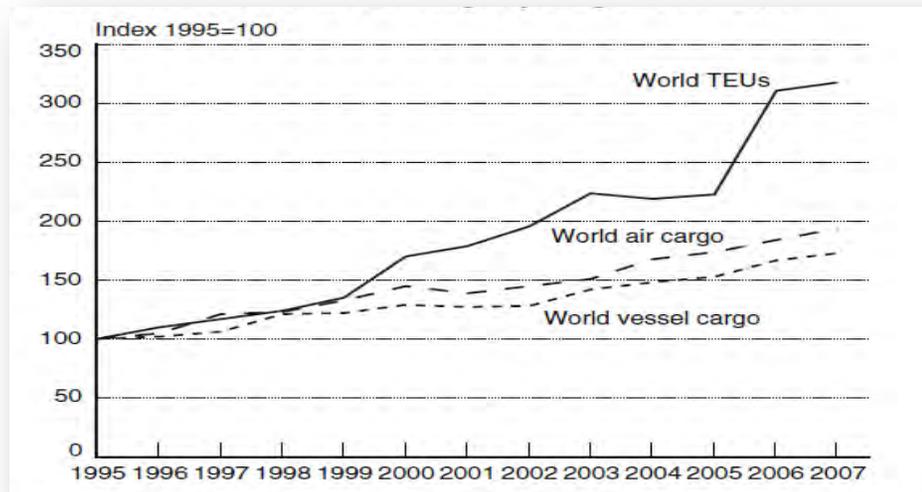


// Study Background & Context



Containerization

- 20th Century revolution in freight handling through increased security and efficiency
- Reduced dwell time for intermodal cargo
- Containers are now used for almost anything



Source: US Bureau of Transportation Statistics



// Study Background & Context



Top 25 US Container Ports



// Study Background & Context



Panama Canal Expansion – a New Paradigm?



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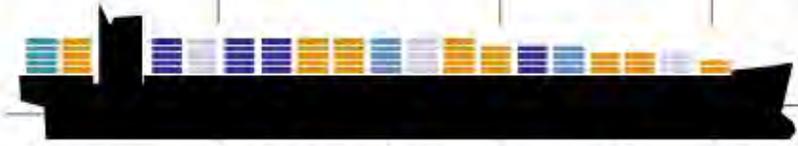
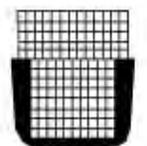
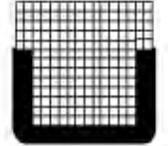
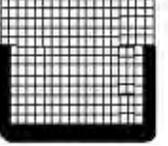
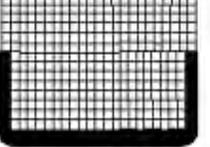


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// Study Background & Context



Larger Vessels

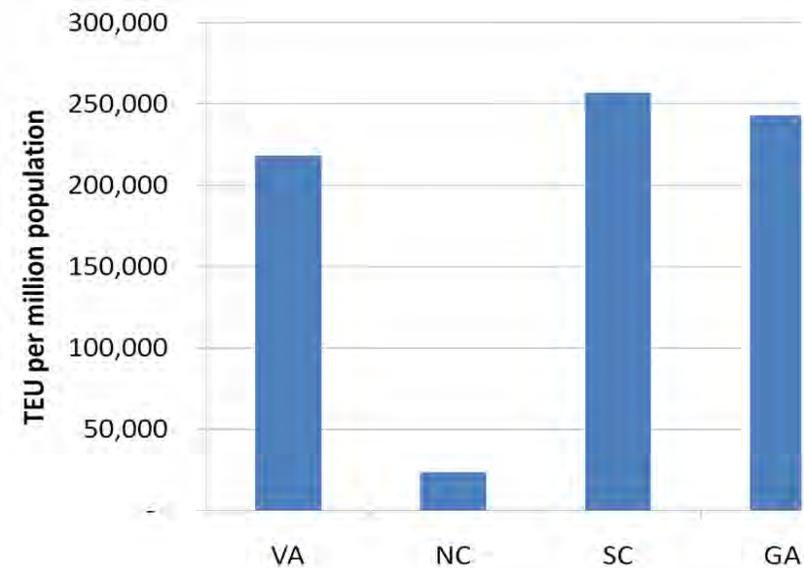
Designation	TEU Capacity	Year	Length	Beam	Draft
 Panamax	3,000-5,000	1980	965 ft	106 ft	 39.5 ft
 Post-Panamax	5,000-6,000	1992	1,043 ft	128 -138 ft	 49 ft
 5 th & 6 th generation	5,000-8,700	1997	1,148 ft	128 -138 ft	 49 ft
 Neo Panamax	10,000-13,000	2009	1,200 ft	160 ft	 49.9 ft

// Study Background & Context



Atlantic Coast Perspective

- Access to dense population centers
- Water depth is big issue
- Increased berth size
- Container capacity
- Promote & enhance existing assets



.... What are North Carolina's challenges and opportunities?



OVERVIEW OF STUDY SCOPE

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// Overview of Study Scope



Task 1. Project Management



Task 2. Stakeholder Coordination



Task 3.
Validate &
Incorporate
Prior Studies



Task 4.
Data
Collection &
Analysis



Task 5. GIS Database



Task 6.
Market Scenarios



Task 7.
Alternatives Definition



Task 8.
Evaluation Criteria &
Approach



Task 9.
Alternatives
Evaluation



Task 10.
Final
Report

// Overview of Study Scope



Project Management

- AECOM PM with DPMs from each of AECOM and URS
- Joint review/input from AECOM and URS of study analysis and products to assure best expertise of the nation's leading engineering companies

// Overview of Study Scope



Stakeholder Coordination

Three-tiered process that includes:

- Advisory Council
- Industry Outreach
- Public Involvement

// Overview of Study Scope



Industry Outreach

- Industry stakeholders integrated into strategy development
- Focused one-on-one interviews
- Group discussions aimed at sets of stakeholders with common interests
- Example industry stakeholders to be engaged:
 - NoPort Southport / Save the Cape
 - Progress Energy
 - Environmental regulatory and resource agencies
 - Terminal operators
 - USACE
 - Agricultural industry representatives
 - Barge operators

// Overview of Study Scope



Public Involvement

- **Early in the Study Process**
 - Preliminary market results and market opportunities
 - Positive outcomes
 - Coordinate with efforts of Logistics Task Force to target 7 Portals
- **Middle of Study Process**
 - Outline preliminary infrastructure alternatives and site options
 - Conduct meetings at about 5 locations
- **Late in Study Process**
 - Outline alternatives screening process
 - Describe most desirable market/infrastructure option(s)
 - Benefits/Costs

// Overview of Study Scope



Other Public Information Strategies

- Communications through project website
- Toll-free telephone line
- Social media
- Handouts, marketing pamphlets, brochures
- TV broadcasts, festivals, events

// Overview of Study Scope



Validate & Incorporate Prior Studies

- Use of data and extensive analysis already performed to the extent practicable
- Review and verification of market data
 - Current freight patterns, international and domestic trends in waterborne cargo, competitive landscape
- Review and analysis of infrastructure data
 - Transportation nodes and networks across modes

// Overview of Study Scope



Create GIS GeoDatabase

- Identify and define primary transportation networks, nodes, and facilities
- Statewide vs. site- or connection-specific
- Primary highway and rail networks
- Shipping nodes and facilities
- Existing and planned improvements
- Environmental features
- Demographic data

// Overview of Study Scope



Market Scenarios

- North Carolina positioning options based on forecasted trends in commodity flows
- Potential economic opportunities for North Carolina and growth potential for state industries
- Economic conditions and policies that could influence ability to maximize economic benefits of market opportunities
- What happens if you do nothing?

// Overview of Study Scope



Port Demand vs. Capacity: If You Build It, Will They Come?

- Demand and capacity are interrelated
 - Deep water terminals allow larger ships
 - Automated terminals reduce operating cost
 - New terminals carry the cost of construction, and must compete against existing terminals w surplus capacity
 - Road and rail improvements increase the appeal of a port
- How fresh are market projections, and what assumptions were made about cost and capacity of NC options vs other regional ports?

// Overview of Study Scope



Alternatives Definition

- Possible maritime facilities to match market scenarios may include:
 1. Major container terminal with capacity to accommodate neo-Panamax vessels
 2. Feeder port facilities for transshipment within or near North Carolina
 3. Barge terminals with links to major regional container terminals

- Definition of statewide infrastructure needs based on port volumes and types defined in each market scenario
 - Terminals, site development, and access
 - Rail and road network and connections
 - Channel and wharf improvements

// Overview of Study Scope



Evaluation Criteria and Approach

- Objective approach to measure relative benefits, effectiveness, and costs associated with various market alternatives and associated infrastructure investment
- Example evaluation criteria:
 - Job creation
 - Economic benefits to the State
 - Public benefits to the State
 - Travel time (for time-sensitive goods)
 - Rail and road connectivity
 - Right of way impacts
 - Consistency with transportation plans
 - Environmental impacts

// Overview of Study Scope



Alternatives Evaluation

- Environmental screening
- Cost analysis
 - Wharf and terminal developments, roadway and railroad improvements, right of way, dredging, mitigation, operations
- Benefit analysis
 - In comparison to no-build scenario
 - Direct transportation/shipper and operational benefits (cost and time savings)
 - Economic benefits (employment growth, industrial diversity)
 - Community benefits (transportation network reliability)
- Financing and funding options
- Asset management and stewardship



STUDY OUTCOMES & RESULTS

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// Study Outcomes and Results



- ✓ Decision tool and process for evaluating port and related multi-modal investments
- ✓ Basis for long- and short-term investment strategy for more efficient, effective and safe movement of waterborne cargo in and out of the state
- ✓ Identification of priority projects
- ✓ Support for long-range planning
- ✓ Address institutional issues to approach maritime transportation issues in a more seamless manner

MILESTONES & MSET INVOLVEMENT

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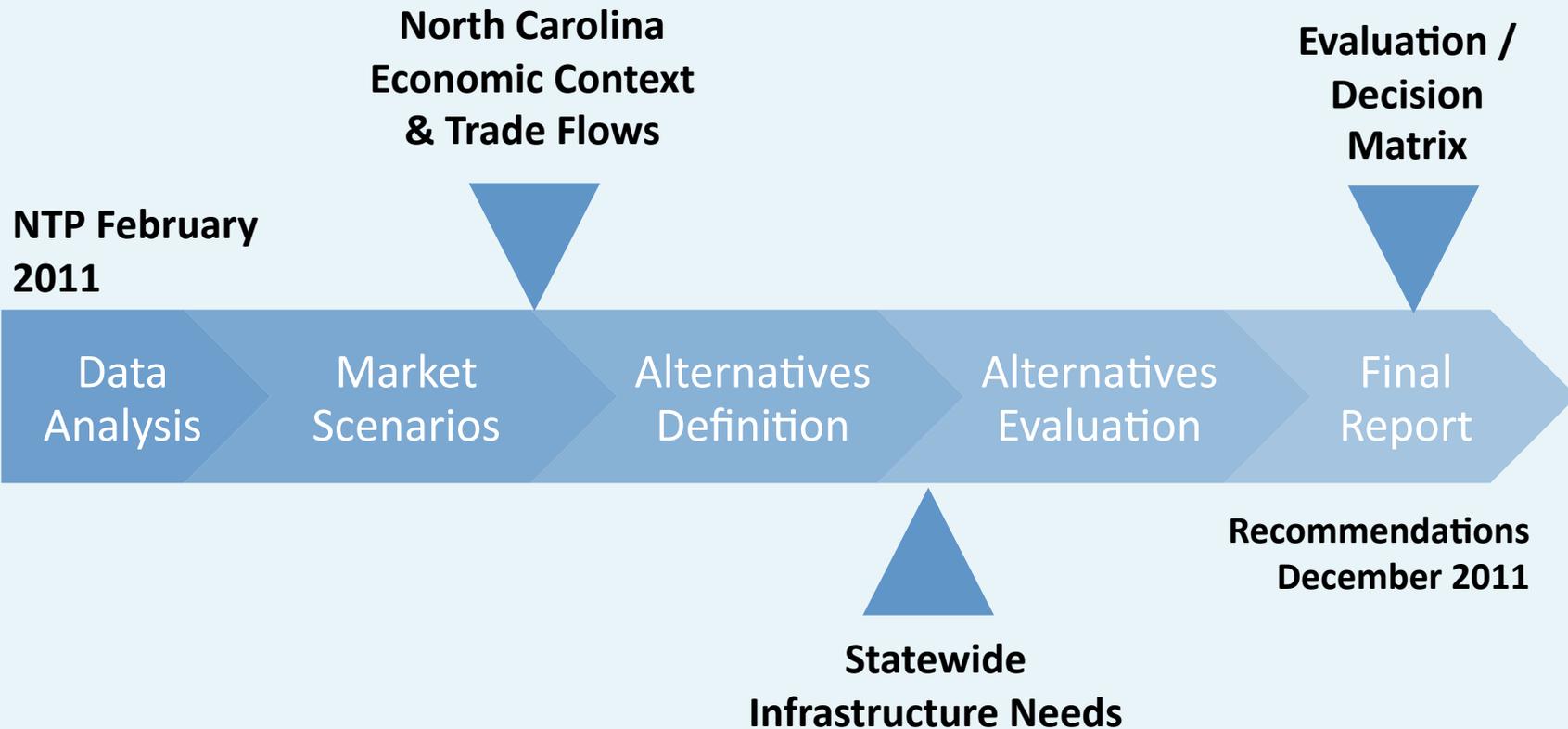


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// Major Study Milestones



Summary Schedule and Milestones

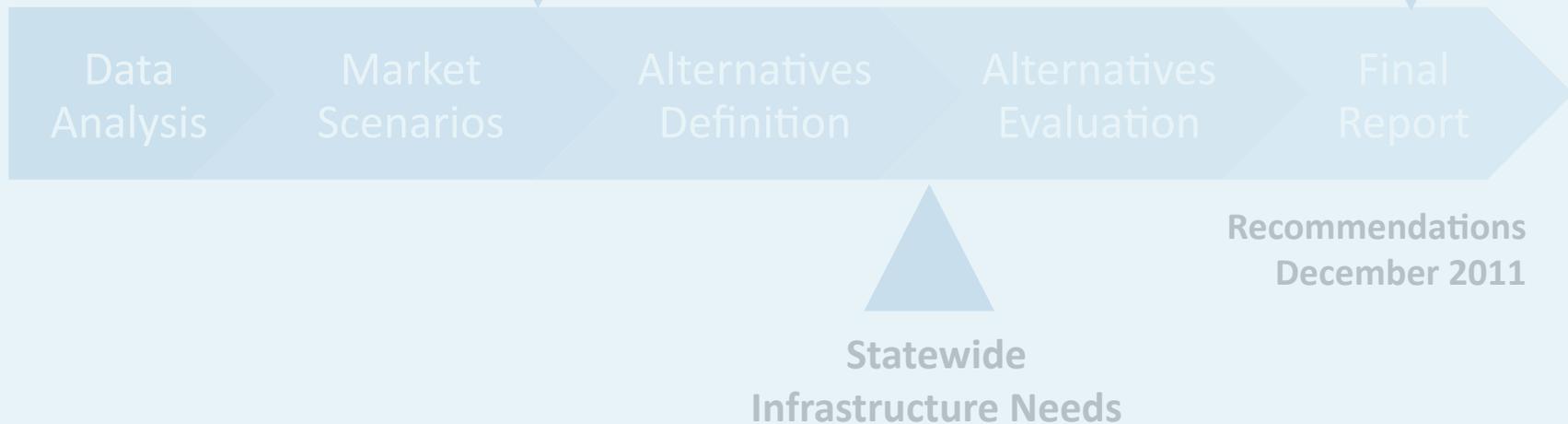


// Executive Team Involvement



Summary Schedule and Milestones

- What midstream issues are critical to you in defining intermediate study milestones?
- How would the MSET like to be engaged in public outreach activities?



// THANK YOU

questions & answers

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APPENDIX

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// Overview of Study Scope



Primary GIS Data Sources

- NC OneMap
- North Carolina Department of Transportation
- ESRI
- National Oceanic and Atmospheric Administration (NOAA) – Coastal Geospatial Data
- USGS Land Cover Institute (LCI)
- Federal Emergency Management Agency (FEMA)
- US Fish & Wildlife Service Geographic Information Systems
- US Department of Agriculture - - Natural Resources Conservation Service (NRCS) Soil Data Mart
- NC Division of Coastal Management (NCDCM) – Wetland data
- US Census Bureau
- US Maps & Data -- Geodata.gov
- National Register of Historic Places
- National Park Service GIS
- FRA 1:100,000 network
- FHWA FAF database

// Overview of Study Scope



Highway Corridor Data

- Primary Interstate, Intercity Routes, or Alternative Routes
- High Truck Volumes / Percentage by Route
- Major Congested Routes (High V/C Ratio)
- Routes with one or more Modal Links
- Military-Critical Highways

Railroad Data

- High Volume Routes
- Routes with one or more Modal Links
- Military-Critical Railroads
- Distinction between Passenger, Freight, Shared Use, and Abandoned
- Railroad Ownership or Shared Assets

// Overview of Study Scope



Terminal and Intermodal Node Data

- Gateways: links from NC to a national or international market, such as major ports, airports, and rail/roadway entry points.
- Hubs: concentrations of freight activity, including transfer between modes
- Freight Generators: concentrated initiators or attractors of maritime movement, such as: distribution centers/warehouses; value-added facilities; Manufacturing/ assembly facilities; and Agricultural/ mining transfer facilities
- Pipeline locations and storage terminals (not sure about this one)
- Major intermodal transfer facilities
- Major switching areas/facilities
- Maintenance depots/yards
- Rest areas/passing sidings
- Staging areas
- Ownership
- Cargo types and volumes

// Overview of Study Scope



Marine Data

- Major Water Bodies / Water Depths per NOAA Bathymetric Charts
- Major Waterways, Routes and Channels
- Wharf Length
- Terminal Area
- Facility Owners / Operators
- Cargo Types and Volumes

Environmental Data

- NC Division of Coastal Management's CREWS Data and NWI Data
- Federal and State Parks
- Federal and State Wildlife and Waterfowl Refuges / Management Areas
- Designated Critical Threatened and Endangered Species Habitats
- Districts / Sites listed in or eligible for National Register of Historic Places