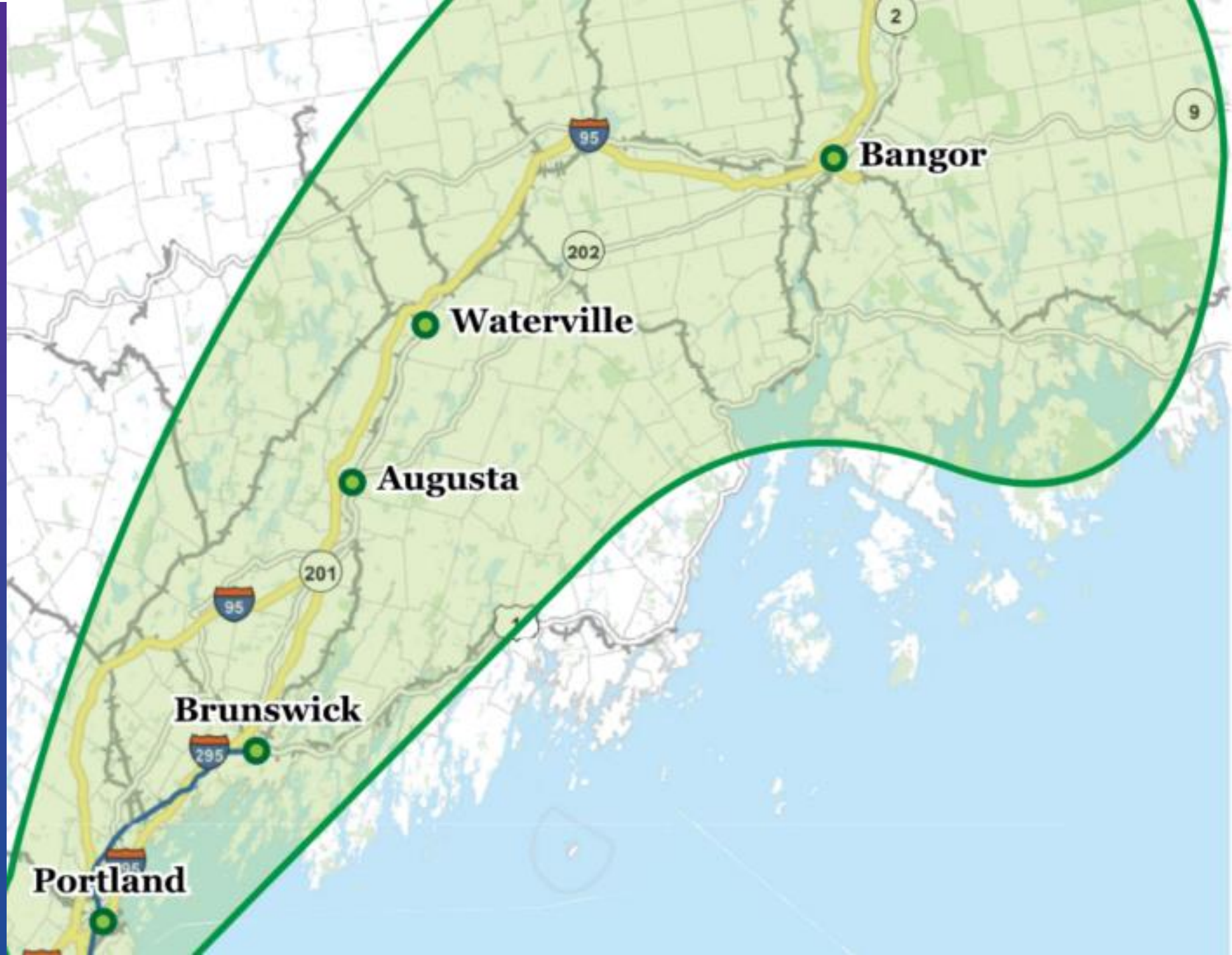


MaineDOT Bangor Transit Propensity Study

Advisory Group Meeting

December 2022

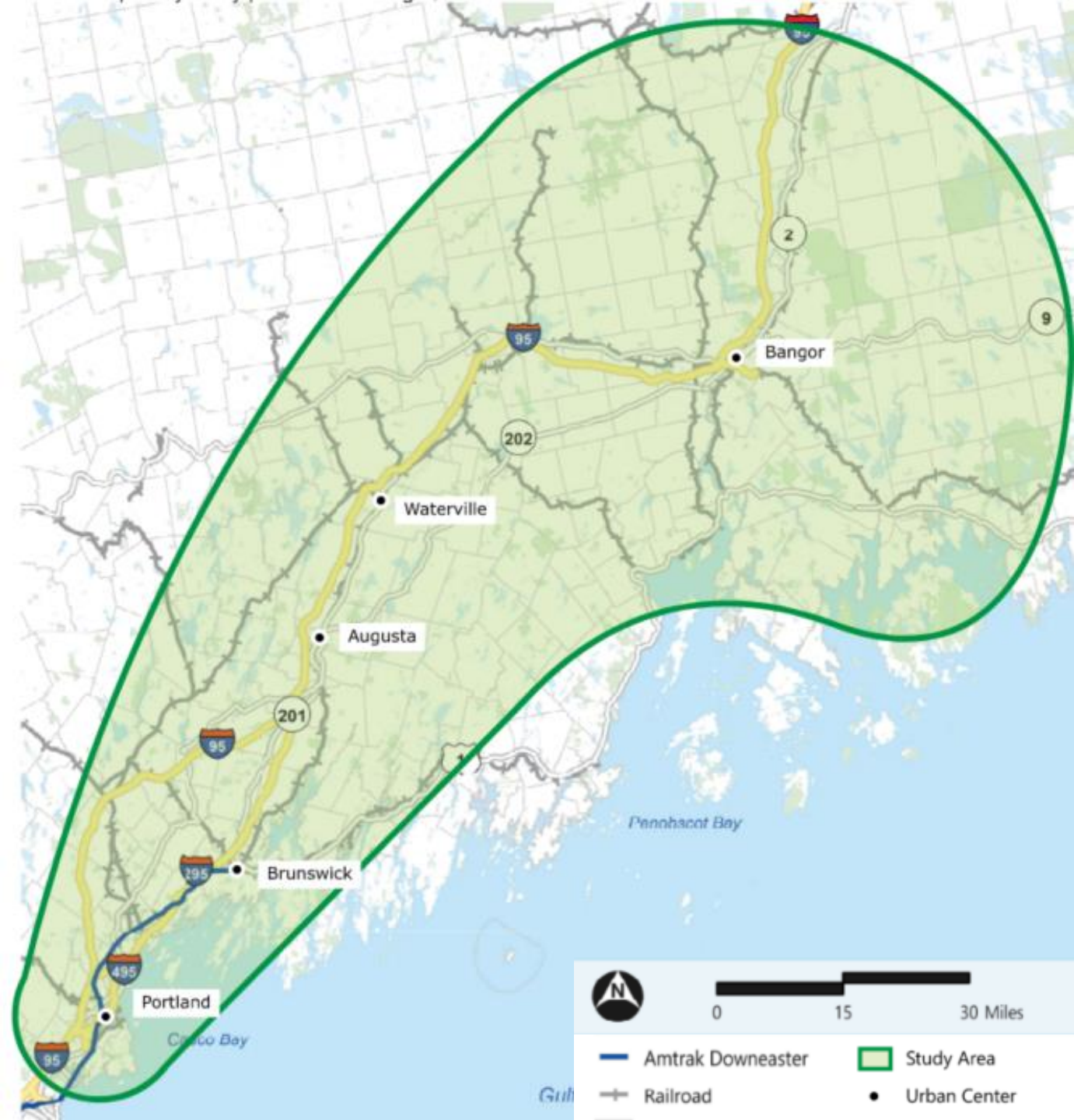


Agenda

- Project Overview
- Review of Previous Meeting
- Propensity Estimation Methodology & Results
- Planning Order of Magnitude Cost Estimate
- Discussion & Questions

Project Overview

- To understand the travel and potential cost of enhanced transit service
 - Who would potentially use service
 - How much it would conceptually cost
- Study area
 - Bangor to Portland corridor

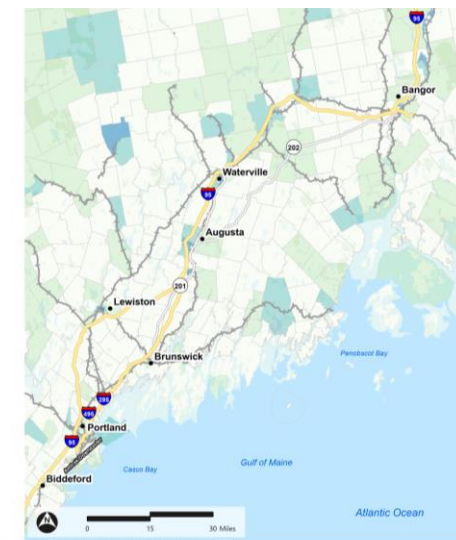
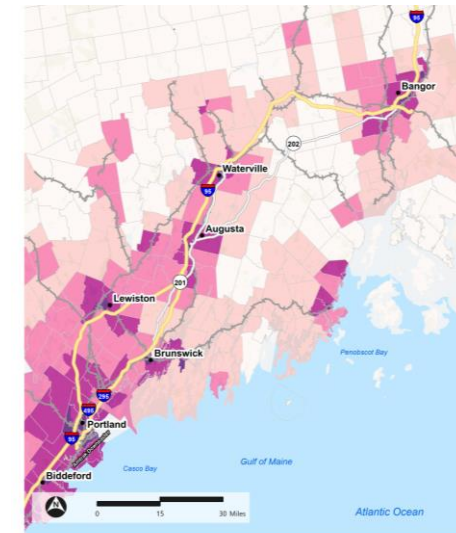
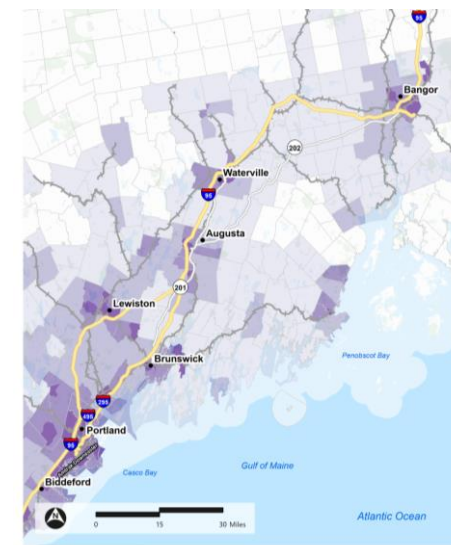


Existing Travel Modes

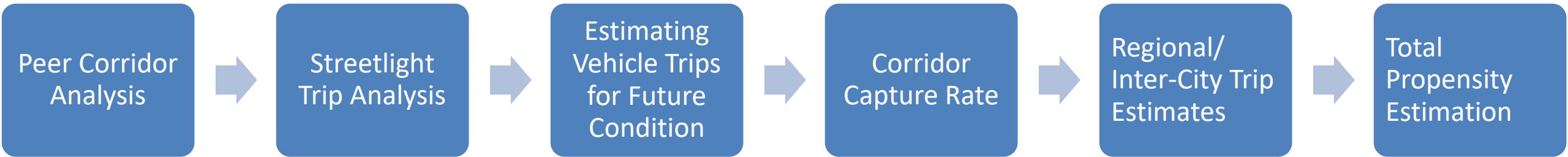
	Personal Vehicle (Cars)	Average Speed (mph)	Concord Coach Lines Bus Service	Average Speed (mph)	Greyhound Bus Service	Average Speed (mph)
Bangor to Portland Peak Hour	1h 50m – 2h	70	2h 10m (Scheduled)	60	2h 55m (Scheduled)	50
Bangor to Portland Off- Peak Hour	1h 50 m – 2h	70	2h 10m (Scheduled)	60	2h 55m (Scheduled)	50
Bangor to Boston Peak Hour	3h 30m – 3h 40m	70	4h 25m (Scheduled)	50	5h 35m (Scheduled)	40
Bangor to Boston Off-Peak Hour	3h 20m – 3h 30m	70	4h 25m (Scheduled)	50	5h 35m (Scheduled)	40

Activity and Demographic Analysis

- Peer Literature review of corridors similar to Portland – Bangor
 - Small urban areas, parallel highway access, Amtrak connection
- Review of Existing Transit Services
 - Amtrak Downeaster intercity rail service Boston-Brunswick
 - Concord Coach Line intercity bus service Boston-Orono
- Study Area Travel Data Collection
 - Population & Employment Density
 - Median Household Income
 - Zero-Car Households
 - Vehicle Traffic on I-95, I-295 (AADT, 2019)

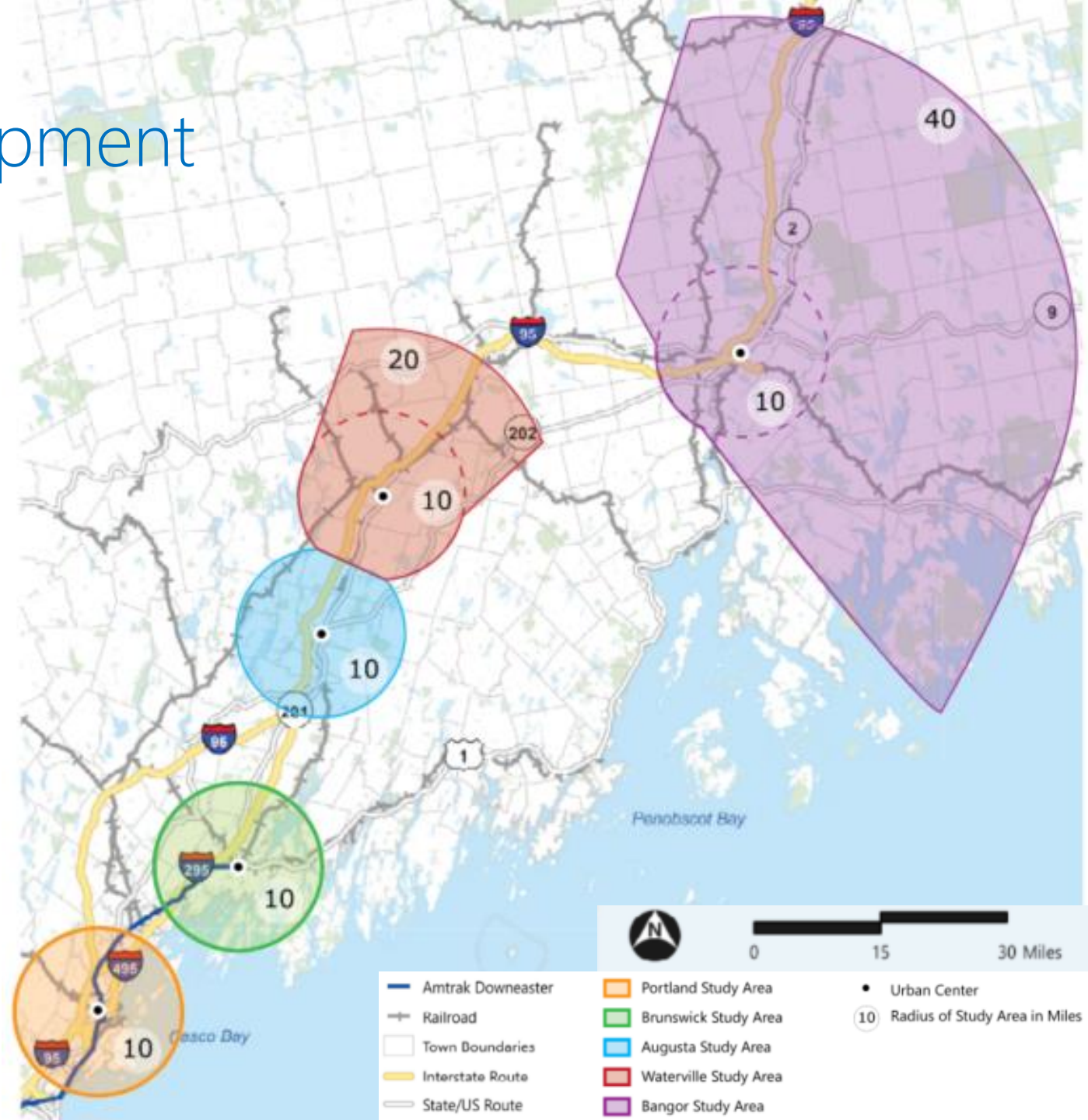


Transit Demand Propensity: Methodology

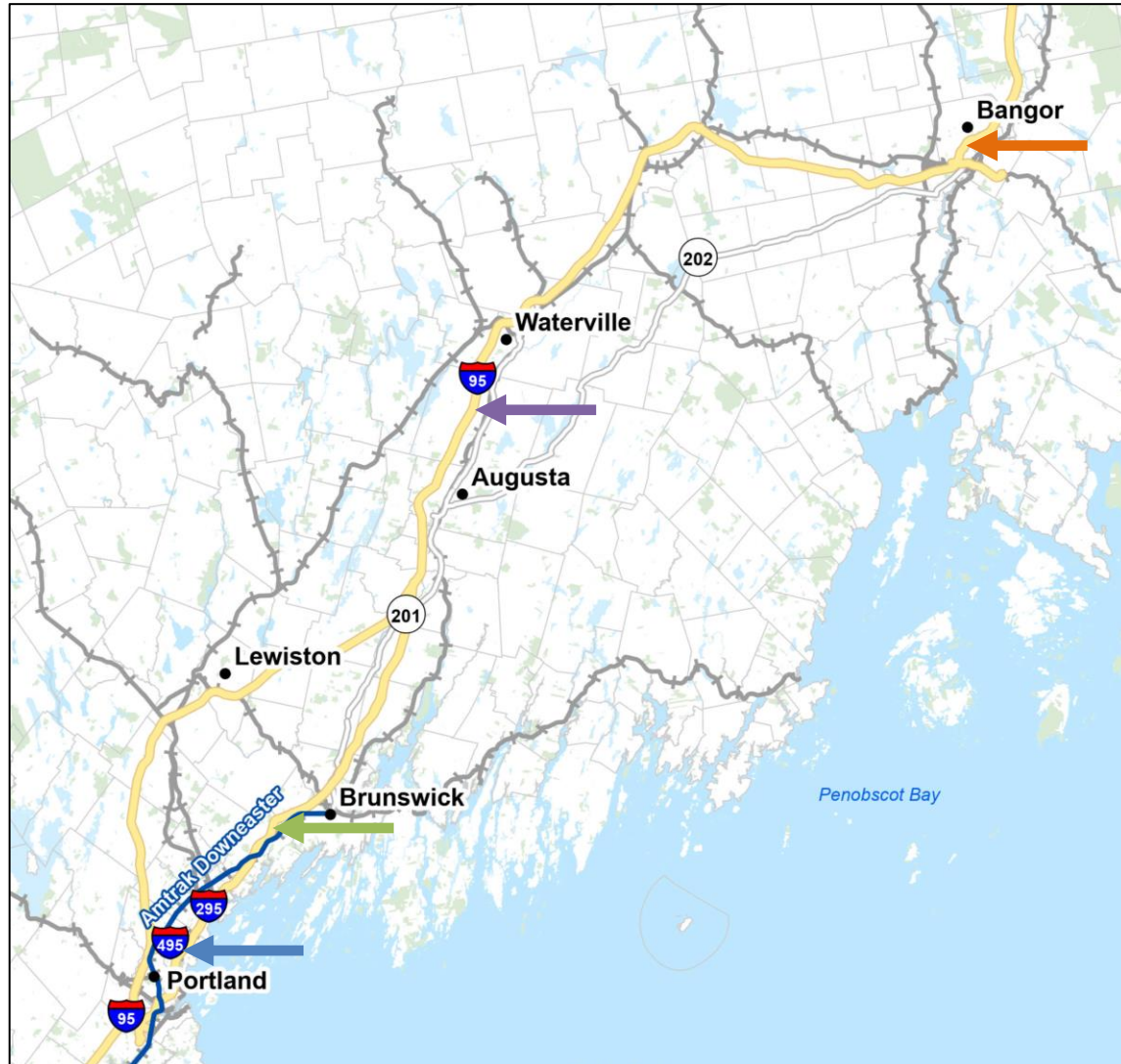


Catchment Area Development

- Focused on activity centers along exiting rail corridor
- Developed origin and designation catchment areas
- Origins
 - Directional demand area, with larger catchment area at potential end of line
 - Larger area to account for flexibility in future station placement
- Destinations
 - Smaller, 1-mile radius around dense area considering accessibility



AAAT Vehicle Counts



2019 AADT Southbound Traffic Volumes

- 10,340 vehicles
- 15,650 vehicles
- 22,890 vehicles
- 23,130 vehicles

Growth Factors, 2021-2040

- Estimated project opening year 2040 for use of Maine Statewide Travel Demand Model
- Applied specifically between cities

		Destination				
		Portland	Brunswick	Augusta	Waterville	Bangor
Origin	Portland	x	1.12	1.06	1.06	1.13
	Brunswick	1.12	x	1.07	1.07	1.08
	Augusta	1.06	1.07	x	1.13	1.10
	Waterville	1.06	1.07	1.13	x	1.10
	Bangor	1.13	1.08	1.10	1.10	x

Study Area Transit Propensity

- Based on trips to/from activity centers in Streetlight Data
- Considered ratios of Downeaster service

Propensity Range	Estimated Monthly Riders	Ratio Regional to Local Trips
Low	5,150	4.5
High	7,250	6.5
Peer Comparison	7,200	n/a
Downeaster Monthly (2019)	47,500	

Transit Propensity Results Considerations

- Trip purpose and frequency - available data provided total daily trips, not considering day of the week, time of day, or trip purpose.
- Travel time for potential riders – length of the trip, potential speed, and parallel options, of car/bus services
- No assumed service plan, but focused on need of travel trips
- Potential impacts to demand:
 - Alignments
 - Stations site selection and nearby economic development
 - Service plan

Order of Magnitude Conceptual Cost: Results

- Applied comparable per mile/station unit costs from recent projects
 - \$3.5M - \$5.25/mile for FML
 - \$8.5M/mile - \$12.0M/mile for Lower Road, East Augusta lines
 - \$1.235M/station – assumed 3 for each alignment
- Assumptions
 - Condition was not assessed
 - Potential unknowns not included such as layover yard, vehicles, property acquisition, parking

Alignment	Approximate Length	Low Estimate	High Estimate
Downeaster Extension from Brunswick	100 miles	\$628M	\$902M
L-A Extension from Lewiston	100 miles	\$375M	\$538M



MaineDOT Bangor Transit Propensity Study

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