

Midcoast Route 27 Corridor Management Plan

Prepared by

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Front Desk Copy

Midcoast Route 27 Corridor Management Plan

1. OVERVIEW

This corridor management plan summarizes municipal and regional transportation, land use, economy, housing, and natural and scenic resources. Essential transportation-related investments are prioritized to meet the current and anticipated future needs of the corridor communities and the region.

To ensure that community concerns are addressed, municipal officials from each corridor community appointed representatives to the corridor committee that drafted this plan's recommendations of investments. Adopted municipal comprehensive plans and land use ordinances were reviewed in the drafting of this plan. In 2005, the MidCoast Economic Development District Regional Transportation Assessment was prepared for major corridors in the area, including Route 27. That assessment report and a 2003 Route 27 Committee report of proposed improvements was also reviewed in the preparation of this corridor management plan, and their objectives form the basis of many of the recommended investments.

The Midcoast Route 27 corridor includes the municipalities of Boothbay, Boothbay Harbor and Edgecomb, Lincoln County, and is about 13.3 miles in length. The corridor centers on Route 27, which is a two-lane highway for nearly all of its length in the corridor, and traverses village areas in Boothbay, Boothbay Harbor and Edgecomb and Adams Pond and Cross River in Boothbay.

The highest traffic volumes on Route 27 are in Boothbay Harbor north of the Route 96 intersection. In 2009, the factored annual average daily traffic (FAADT) there was 11,028 vehicles. Seasonal tourism and year-round commuting between Boothbay Harbor and Wiscasset and Augusta as well as trucking activity and local traffic volumes continue to increase at a greater rate than the increase in the region's population. The increase in traffic volumes is exacerbated by the lack of adequate public transportation alternatives.

All of the corridor communities have adopted comprehensive plans. A summary table of these comprehensive plans and their provisions affecting transportation and the corridor is presented in Section 3. All of the corridor communities have adopted land use ordinances creating zones or districts beyond state-required shoreland zones. A summary of these districts is also presented in Section 3 among with a corridor zoning map.

The highest concentrations of population are found in the Boothbay Harbor village area, with significant densities found along shoreland areas. About 19% of the Lincoln County population lived in the corridor municipalities in 2010. Boothbay Harbor has lost year-round residents over the past twenty years, while Boothbay and Edgecomb have both gained year-round residents.

Population

Area	1990	2000	2010	Total # Change	Total % Change
Boothbay	2,648	2,960	3,120	472	17.8%
Boothbay Harbor	2,347	2,334	2,165	-182	-7.8%
Edgecomb	993	1,090	1,249	256	25.8%
Corridor	5,988	6,384	6,534	546	9.1%
Lincoln County	30,357	33,616	34,457	4,100	13.5%

Sources: Census

The largest single employer in the corridor is St Andrews Village Retirement Center, Hospital and Healthcare Center. Medical services are an important and growing employment sector in the region, supported by the increasing number of elderly. Service and hospitality occupations, including those in the tourism industry, provide significant, although low wage employment, especially in season. Traditional industries including construction occupations remain strong sectors, even though they employ fewer people today than they once did.

Following this overview are sections with more detailed descriptions of corridor transportation, land use, economic development, housing, natural resources, and scenic resources. The corridor investments sought by each community are listed at the end of this plan.

2. TRANSPORTATION

Route 27 has the federal functional classification of arterial throughout the corridor. The map titled *Transportation* shows the factored annual average daily traffic (FAADT) volumes for 2009 at key points along Route 27 and along selected intersecting roadways; and percentage change since 2000, as well as the percentage of heavy trucks contributing to the total volume. Also shown are High Crash Locations (HCLs), where eight or more crashes have occurred over a three-year period, and the roadway level of service (LOS), which is a measure of congestion. Route 27 comes under the State access management law. From the Boothbay Harbor village to the US Route 1 intersection in Edgecomb, the roadway is designated as a mobility corridor and a retrograde arterial, which has the strictest state standards applied due to existing congestion. To learn more about the State's access management regulations and standards, see: <http://www.maine.gov/mdot/planning-process-programs/access-mngmnt.php>.

Traffic Volumes

The total vehicle miles traveled (VMT) has been rising faster than the increase in population. Between 1990 and 2008, VMT in Lincoln County increased by 19.8%, while the population increased by 16.8%. Due to the economic downturn, in 2008, VMT was estimated to have dropped to 2001 levels in Lincoln County. Over the past three decades, more people have been driving more often and greater distances. Commute times have generally increased. Most of these increases reflect the greater distances being traveled as residents find work farther from home.

Factored Annual Average Daily Traffic Volumes (FAADT)

Roadway	Location	2009	Change since 2000	Town
US Route 1	West of Route 27	15,193	-2.0%	Edgecomb
US Route 1	East of Route 27	12,419	-0.2%	Edgecomb
Route 27	South of US Route 1	6,349	15.6%	Edgecomb
Route 27	North of Mill Rd	7,171	13.8%	Edgecomb
Route 27	Near Edgecomb town line	7,403	15.3%	Boothbay
Route 27	South of Hardwick Rd	8,186	1.2%	Boothbay
Route 27	Near Boothbay town line	9,858	11.1%	Boothbay Harbor
Route 27	North of Route 96	11,028	13%	Boothbay Harbor
Route 27	South of Route 96	9,346	-3.8%	Boothbay Harbor
Route 27	Near Southport town line	3,054	-7.7%	Boothbay Harbor
McKown Point Rd	South of Route 27	1,053	--	Boothbay Harbor
Lakeside Dr	North of Route 27	1,643	--	Boothbay Harbor
Route 96	East of Back Narrows Rd	3,934	1.4%	Boothbay Harbor
Country Club Rd	East of Route 27	1,923	--	Boothbay

Roadway	Location	2009	Change since 2000	Town
Corey Lane	Near Boothbay Harbor town line	2,755	--	Boothbay
Back River Rd	West of Route 27	1,043	--	Boothbay
River Rd	Near Boothbay town line	1,160	--	Edgecomb
McKay Rd	East of Route 27	280	--	Edgecomb
Mill Rd	West of Route 27	251	--	Edgecomb
Eddy Rd	West of Route 27	1,024	--	Edgecomb

Source: Maine DOT

Notes: FAADT factored annual average daily traffic.

The highest through traffic volumes on Route 27 are in Boothbay Harbor north of the Route 96 intersection. In 2009, the factored annual average daily traffic (FAADT) there was 11,028 vehicles. The lowest volume along Route 27 in the corridor, 3,054 FAADT, is found near the Southport town line. The traffic trips generated by the occupants of housing units are described in Section 4: Economic Development and Housing. The map titled *Transportation* shows volumes of state roads at select locations. From this, general traffic patterns can be observed.

The Gateway 1 US Route 1 Corridor Preservation Strategic Planning Process estimates in the "Riding the Currents" Low Density growth scenario ^A that daily traffic volumes along most of the corridor portion of Route 27 will increase by over 5,000 additional vehicles from 2005 to 2030. The same modeling predicts that volumes on Route 1 could increase by over 5,000 vehicles both east and west of the Route 27 intersection.

Traffic congestion lowers a roadway's level of service (LOS). LOS is a qualitative measure that characterizes operational conditions within a traffic stream and includes speed, travel times, freedom to maneuver, traffic interruptions, and the perceptions of motorists and passengers. There are six levels of service, given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is defined as the maximum flow or capacity of a system. For most purposes, however, a level of C or D is usually used as the maximum acceptable volume.

Route 27 has congestion on a year-round basis, with an LOS of C from the US Route 1 intersection in Edgecomb southward to the River Rd in Boothbay. Route 27 has an LOS of D from the River Rd intersection in Boothbay to the Eastern Avenue intersection in Boothbay Harbor. Congestion is notably greater in summer months.

^A The "Riding the Currents" Low Density growth scenario assumes moderate growth in population, housing, and employment, and further assumes available land for development and similar municipal land use regulations as are in place today.

Since most of the Route 27 roadway is two lanes, site-specific congestion during commute times and in the summer tourist season occurs regularly, especially at the intersections of other collector roadways. Route 1 has an LOS of E on both east and west approaches to the Route 27 intersection area, indicating significant congestion. Route 96 has an LOS of C within Boothbay Harbor and a portion of Boothbay. Outside of the Boothbay Harbor village in which some key local roads have an LOS of C, most town roads in the corridor have an LOS of B or A. See the map titled *Transportation*.

Much of Route 27 is posted 50 M.P.H in Edgecomb, with smaller stretches posted 30 and 40 M.P.H. near the Route 1 intersection and 40 M.P.H. between the Old County Rd and McKay Rd intersections. In Boothbay, the northern half of Route 27 is posted 50 M.P.H. South of the Hardwick Rd intersection, the posted speed is 40-45 M.P.H. Just north of the Country Club Rd intersection, the speed is 30 M.P.H. and increases to 45 M.P.H. near the town line. In Boothbay Harbor, the speed drops to 35 M.P.H. just north of the Hackmatack Rd intersection, and is further reduced to 25 M.P.H. south of the Route 96 intersection through the village area. West of the Old Ice House Rd intersection, the speed is 30 M.P.H. to the Southport town line. See the map titled *Posted Speed Limits*.

Corridor wide, it is likely that traffic volumes will continue to increase faster than the historical rates of growth, perhaps tied more closely to the housing growth observed until recently. Without adequate public transportation, most people must use private vehicles, which further exacerbates traffic congestion.

Safety

The number of crashes was similar in each corridor community from 2008 to 2010, for a corridor total of 395 crashes, of which 145 occurred on Route 27. In 2009, high crash locations where eight or more crashes have occurred in a three-year period were found on Route 27 in Boothbay between the Hardwick Rd intersection and the Adams Pond Rd (northern) intersection. The US Route 1/Route 27 intersection is also a high crash location. See the map titled *Transportation*.

Several additional areas along Route 27 and most of its intersections with secondary roadways, although not designated as high crash locations, are in fact dangerous due to limited sight distances and blind spots. These include Mason, Eddy, Middle, Old County, McKay and Hardwick Roads intersections and portions of Route 27 above the Edgecomb Town Office, between Middle and Old County Roads and south of Parsons Point Road.

Crashes 2008-2010

Area	3-Year Total Crashes	3-Year Total Units* Involved in Crashes	3-Year Total Crashes on Route 27	3-Year Total Units* Involved In Crashes on Route 27
Boothbay	136	211	55	96
Boothbay Harbor	126	215	50	102
Edgecomb	133	203	40	53
Corridor	395	629	145	251
Lincoln County	1,934	2,889	220	373

Source: Maine DOT

Note: Crashes can involve more than one vehicle and more than one individual.

* Units will include vehicles as well as pedestrians and bicyclists

From 2008 to 2010, most of the occupants involved in crashes did not sustain injuries.

Injuries Total: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Occupants With No Injuries
Boothbay	3	3	30	28	210
Boothbay Harbor	1	2	18	20	224
Edgecomb	1	2	16	44	235
Corridor	5	7	64	92	669
Lincoln County	22	61	250	508	3,095

Source: Maine DOT

Note: Figures refer to any vehicle occupant, pedestrian or bicyclist.

Serious injuries and fatalities tend to occur where posted speeds are higher. Of the five fatalities that occurred in the corridor, all were on Route 27.

Injuries on Route 27 In the Corridor: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Occupants With No Injuries
Boothbay	3	1	14	11	99
Boothbay Harbor	1	0	5	17	113
Edgecomb	1	0	4	11	58
Corridor	5	1	23	39	270

Source: Maine DOT

Note: Figures refer to any vehicle occupant, pedestrian or bicyclist.

Where the causes of crashes were evident, the most common in the corridor over the three-year period were driver inattention, following too closely, and speeding.

**Vehicles - Common Crash Causes Totals:
(Apparent Contributing Factors)
2008-2010**

Area	Driver inattention distraction	Illegal, unsafe speed	Failure to yield right of way	Following Too Close	Other
Boothbay	53	26	12	7	106
Boothbay Harbor	41	19	16	12	113
Edgecomb	47	25	15	12	98
Corridor	141	70	43	31	317
Lincoln County	674	251	114	405	577

Source: Maine DOT

Note: Figures refer to the actions of drivers, above factors either reported as factor #1 or #2 of crash. Two contributing factors can be noted for each involved unit.

**Vehicles - Common Crash Causes on Route 27 in the Corridor:
(Apparent Contributing Factors)
2008-2010**

Area	Driver inattention distraction	Illegal, unsafe speed	Failure to yield right of way	Following Too Close	Other
Boothbay	27	5	4	9	49
Boothbay Harbor	18	5	14	22	51
Edgecomb	30	12	7	17	63
Corridor	75	22	25	48	163

Source: Maine DOT

Note: Figures refer to the actions of drivers.

Two pedestrians sustained recorded injuries/possible injuries in the period within the corridor. One of those possible injuries was sustained on Route 27 in Boothbay Harbor.

Pedestrian Injuries Total: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Non- Inj.
Boothbay	0	0	0	0	0
Boothbay Harbor	0	1	0	1	2
Edgecomb	0	0	0	0	0
Corridor	0	1	0	1	2
Lincoln County	1	3	2	9	18

Source: Maine DOT

Note: Figures refer to Individuals.

Pedestrian Injuries on Route 27: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Non-Inj.
Boothbay	0	0	0	0	0
Boothbay Harbor	0	0	0	1	1
Edgecomb	0	0	0	0	0

Source: Maine DOT

Note: Figures refer to individuals.

One cyclist sustained recorded injuries in the period within the corridor. That injury occurred on Route 27 in Boothbay Harbor.

Bicyclist (non-motorized) Injuries Total: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Non-Inj.
Boothbay	0	0	0	0	0
Boothbay Harbor	0	0	1	0	2
Edgecomb	0	0	0	0	0
Corridor	0	0	1	0	2
Lincoln County	0	0	2	1	6

Source: Maine DOT

Note: Figures refer to individuals.

Bicyclist (non-motorized) Injuries on Route 27 In the Corridor: 2008-2010

Area	Fatalities	Incapacitating Injuries	Evident Injuries	Possible Injuries	Non-Inj.
Boothbay	0	0	0	0	0
Boothbay Harbor	0	0	1	0	2
Edgecomb	0	0	0	0	0

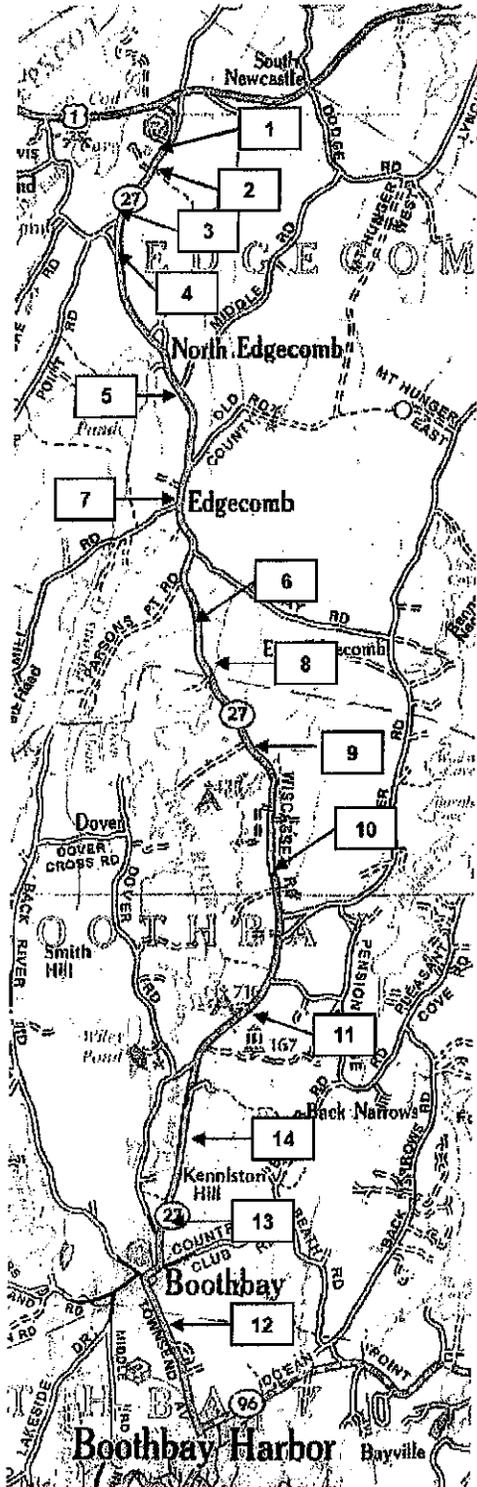
Source: Maine DOT

Note: Figures refer to individuals.

Road Conditions

Route 27 was paved in 2011 and is in good condition. As shown in Route 27 Cross-Sections, the width of road varies with the shoulders between 1.5' and 4' except for a portion near the Edgecomb-Boothbay town line where the shoulders exceed 10' in width. Other state roads in the corridor, including Route 96, River Road and Eddy Road, all have portions of compromised road surfaces, road bases and shoulders. Inadequate state road maintenance has allowed portions of these roads to degrade faster than would have been expected otherwise. Lack of adequate ditching and culverts increases flooding, which further damages portions of these state roads. In some instances, the road base was not designed to handle the amount of traffic that has used these roadways over the past twenty plus years. Some key town roads are also in need of repair.

Route 27 Cross-Sections



Location #	West Shoulder	West Lane	East Lane	East Shoulder
1	4'	11.5'	12'	2.5'
2	4'	11'	12'	2'
3	3'	12'	12'	3'
4	3'	12'	12'	3'
5	3.5'	11.5'	12'	3'
6	3'	12'	12'	2.5'
7	4'	11'	12.5'	2'
8	10.5'	12.5'	12'	10.5'
9	3.5'	11.5'	12'	2.5'
10	3'	12'	12'	3'
11	3'	12.5'	12'	2.5'
12	2.5'	12'	12'	3.5'
13	3'	12.5'	11.5'	1.5'
14	4.5'	11.5'	12'	2'

2.5' shoulder – Location #6



Town voters decide how much they are able and willing to spend on such repairs.

Bicycle and Pedestrian Facilities

Walkways, sidewalks, bike paths, and bike facilities promote health, reduce dependence on automobiles, and provide for increased recreational opportunities. Through the comprehensive planning process, citizens can identify and prioritize their community's pedestrian and bicycle needs. To augment this effort with more detailed inventory, analysis and recommendations, some communities also draft a municipal pedestrian and bicycle plan. The Lincoln County Regional Planning Commission has been asked by Boothbay and Boothbay Harbor to assist the community in preparing a bicycle and pedestrian plans have been prepared for Boothbay. This work effort is expected to begin in 2012.

Portions of Route 27's shoulders are suitable for biking and walking but as illustrated in the Route 27 Cross-Sections, the shoulders vary in width. This combined with the high speeds of motor vehicle traffic limits the use of this road's shoulders largely to bicycle enthusiasts. Changes in grade and limited sight distance around corners also limit the safe shared use of these roadways.

Public Transportation

The lack of regularly scheduled or seasonal local bus service and dispersed location of residents and of workplaces inhibits public transportation. Coastal Trans offers door-to-door demand-response transportation to all towns in Lincoln County and is available for grocery shopping, personal business and medical appointments for low-income families. This service requires an application process. Coastal Trans provides transportation by bus, van or automobile for MaineCare members to medical appointments for clients that cannot arrange their own medical transportation. Agency and or volunteer drivers provide medical transportation. The Maine Department of Health and Human Services has identified the lack of adequate transportation (both personal and public) as negatively affecting the health care of many low-income individuals in the Midcoast.

Concord Coach (Trailways) offers daily service between Bangor and Boston, Massachusetts. The bus route for Maine Coastal Route One includes stops in Brunswick, Bowdoin College, Bath, Wiscasset, Damariscotta, Waldoboro, Rockland, Camden/Rockport, Lincolnville, Belfast, Searsport, and Bangor.

Nearby Air Service

The Wiscasset Airport (KIWI, FAA IWI) is located near the Route 1/Route 144 intersection at 96 Chewonki Neck Rd, Wiscasset. This airport has a paved

runway 3,397 feet long and 75 feet wide and is rated in good condition. Aviation fuel services and tie downs are available. The Fixed Base Operator (FBO) is Ocean Point Aviation, which offers aircraft maintenance, flight training, and aerial tours. According to the FAA, in 2008 there were 47 aircraft based on the field, and average of 129 aircraft operations weekly, of which 64% were local general aviation, 31% transient general aviation, 5% air taxi, and less than 1% military. No scheduled bus service is provided to the airport but taxi service is available.

The Airport is a Level II facility under the Maine Aviation Systems Plan (MASP) and is eligible for both Federal and state aid under the Airport Improvement Program. According to the MASP, the airport's economic benefit to the community has a total output of over \$2,000,000, with a payroll of nearly \$780,000.

Rail Service

There is one rail line in the corridor. The State of Maine owned rail line runs through the extreme northern point of Edgecomb. The eastern terminal in Rockland has been renovated and put back into seasonal use as a train station. The rail line serves freight needs, and intermittent seasonal tourist travel by Maine Eastern Railroad to Brunswick, with the long-range goal of connecting service to Portland and Boston. Depending on the cost-effectiveness, year-round passenger service may become a long-term objective of Maine DOT and the communities through which the rail line passes. Given the short length of rail line within Edgecomb and its remote shoreland location, any service (schedule stop) is likely to be accessed from neighboring Wiscasset or Newcastle.

Maine DOT Current Projects

As of July 2011, the following transportation projects are under construction or recently completed in the corridor (costs are estimates subject to change):

- **Route 1 Highway resurfacing** (PIN 017305.00) in Edgecomb, Newcastle, Damariscotta, and Nobleboro (\$4,086,195)
- **Route 27 Highway resurfacing** (PIN 017778.00) in Edgecomb, Boothbay and Boothbay Harbor (\$2,350,000)
- **Knickerbocker Bridge** (ID 2438) Replacement in Boothbay on Barbers Island Rd: (PIN 012630.00) (\$5,160,000)

As of July 2011, no projects in the corridor are shown on the Maine DOT 2011 Construction Advertisement Plan (CAP).

Maine DOT Biennial Plan Projects

The Maine DOT Biennial Capital Work Plan for Fiscal Years 2010-2011 included these projects in the corridor (costs are estimates subject to change):

- **Route 1** in Edgecomb, Newcastle, Nobleboro and Damariscotta: Highway Resurfacing: Beginning 0.11 of a mile southerly of the Cochran Road and extending northerly 12.26 miles to 0.06 of a mile northerly of the East Pond Road (PIN 017305.00) (\$4,218,950). See above under Maine DOT Projects under construction/recently completed.
- **Route 1** in Edgecomb: Intersection Improvements without Signal: Relocate the intersection of Route 1 and the Eddy Road to approximately 100 feet northerly of the current location (PIN 017286.00) (\$270,000)
- **Barter's Island Bridge** (ID 2039) in Boothbay: Bridge Rehabilitation: located on SA#5 over Back River (PIN 017083.00) (\$400,000).

The Maine DOT Biennial Capital Work Plan for Fiscal Years 2012-2013 includes these projects in the corridor (costs are estimates subject to change):

- **Route 1** in Edgecomb and Wiscasset: Bridge wearing surface replacement: Donald E. Davey Bridge (ID 2262) over the Sheepscot River (PIN 019287.00) (\$1,700,000)
- **Route 27** in Boothbay and Boothbay Harbor: Engineering for drainage and pedestrian safety improvements connecting businesses, schools and village areas (PIN 019397.00) (\$39,000) This project involves engineering of a sidewalk on the east side of Route 27 between Boothbay Region High School and the YWCA and Boothbay Commons.

The Maine DOT 2010-2015 Multimodal Six-Year Transportation Capital Improvement Plan included these projects and candidate projects in the corridor.

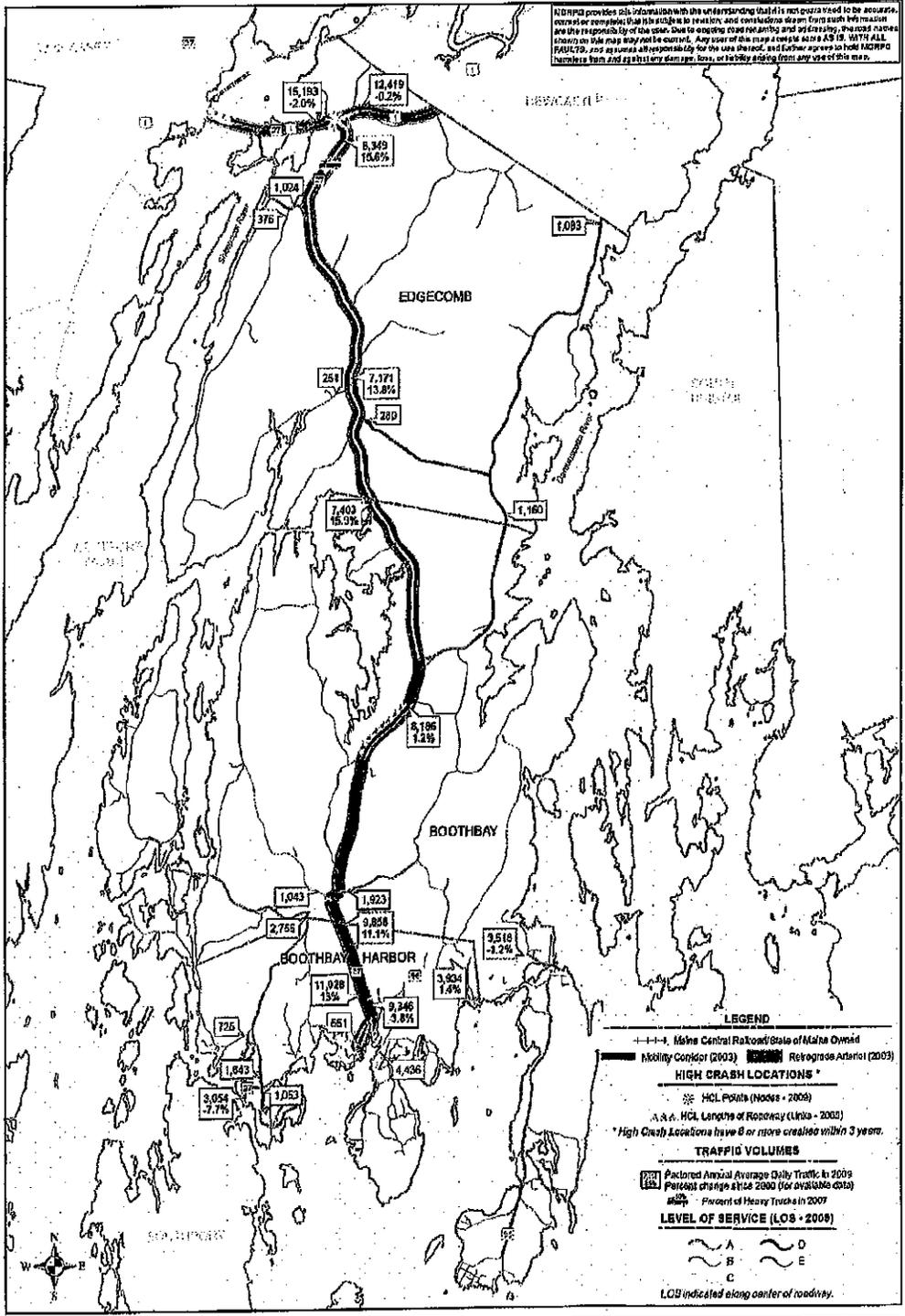
Maine DOT 2010-2015 Multimodal Six-Year Plan

Type	Road	Town(s)	ID	Description
Intersection Improvements without Signal	Route 1	Edgecomb	Project # 017286.00	Relocate the intersection of Route 1 and the Eddy Road to approximately 100 feet north of the current location.
Intersection Improvements Without Signal	Route 1	Edgecomb	Candidate # 29230	Located at the intersection of Routes 1 and 27.
Highway Improvements	Route 27	Boothbay Harbor	Candidate # 18656	Beginning 0.10 of a mile southerly of Pear Street and extending northerly 0.15 of a mile to Eastern Avenue.
Highway Resurfacing	Route 27	Boothbay Harbor, Boothbay, Edgecomb	Candidate # 42485	Beginning at the intersection of Oak Street and Eastern Avenue and extending northerly 11.04 miles to Route 1.
Highway Improvements	Oak Street	Boothbay Harbor	Candidate # 18655	Beginning at Eastern Avenue and extending southerly 0.43 of a mile to Todd Avenue.

Source: Maine DOT

Transportation Objectives (from the Midcoast Council for Business Development and Planning 2005 Regional Transportation Assessment, Route 27 Corridor)

- **Corridor-Wide:** Consider installing uniform directional and informational signs. Encourage all communities along the corridor to enact impact fees to fund traffic improvements.
- **Edgecomb:** Consider safety improvements for left-turning Route 27 traffic. Evaluate traffic safety at other intersections and work with local officials to make improvements as necessary.
- **Boothbay:** Railroad Village and Boothbay Common areas – evaluate traffic, safety and pedestrian issues and work with local officials to implement appropriate improvements.
- **Boothbay Harbor:** In the "Meadow," evaluate traffic, safety and pedestrian issues and work with local officials to implement appropriate improvements.



MIDCOAST STATE ROUTE 27 CORRIDOR **TRANSPORTATION**

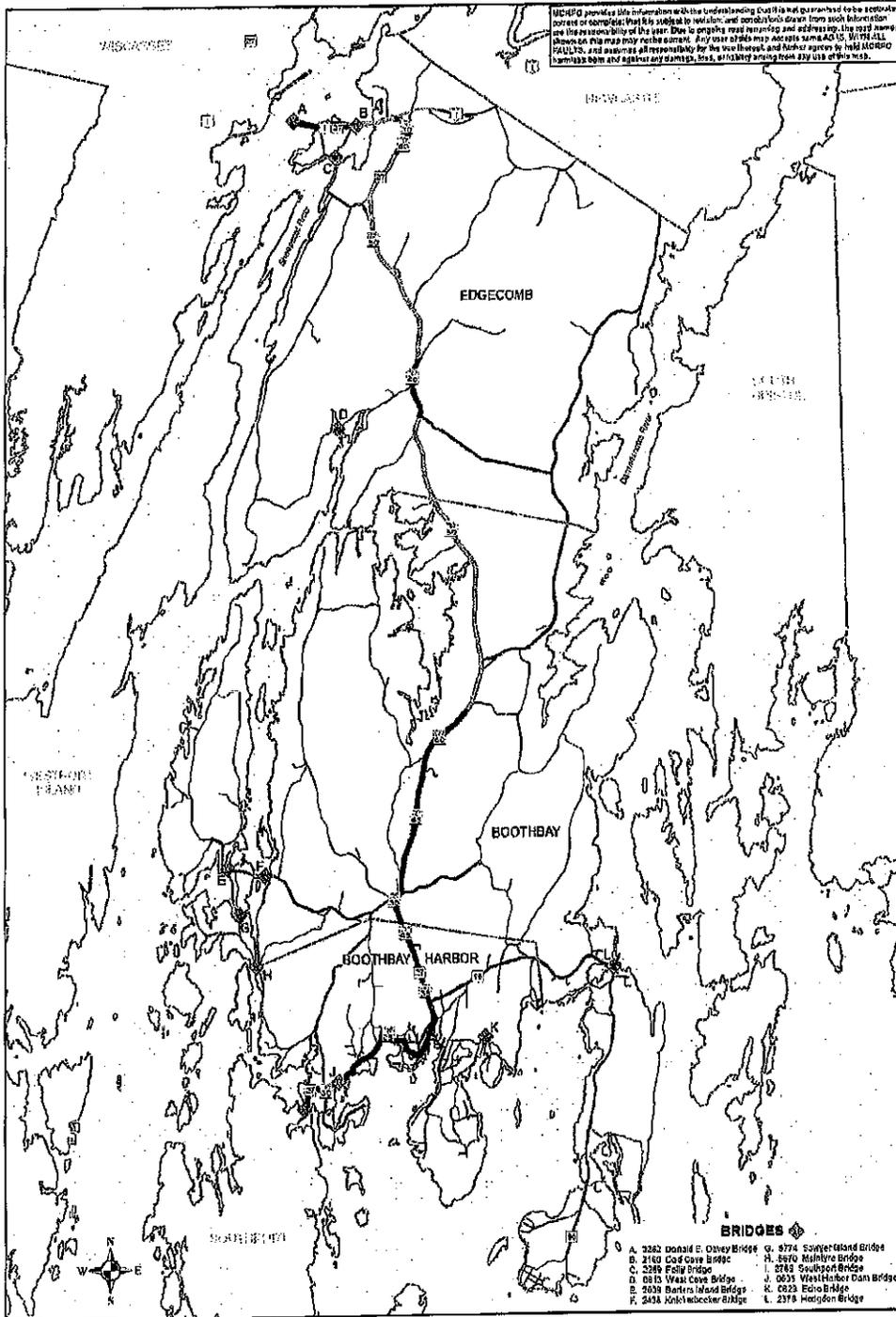
0 0.5 1 2 Miles

Map prepared by LatLong Logic, LLC
Sources: MECOT and MECIS
Map revised: July, 2011

Level of Service is a qualitative measure that characterizes operational conditions within a traffic stream and includes speed, travel time, freedom to maneuver, lane interruption, and the percentage of vehicles and passengers. There are six levels of service, given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is defined as the maximum or capacity of a system. For most purposes, however, selection of C or B is usually used as the maximum acceptable volume.

MRCOT's Level of Service data is meant for system analysis and should not be substituted for an engineering study of a specific corridor or segment of roadway which includes consideration and verification of all factors that affect the LOS value of the entire facility.

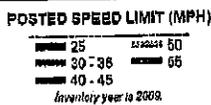
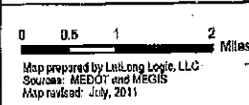
MID - COAST
REGIONAL PLANNING COMMISSION
1640 DUTCHMAN STREET, SUITE 301 - BOCA RATON, FL 33433
(561) 991-2319 - WWW.MIDCOASTPLANNING.COM



MDCRC provides this information with the understanding that it is not guaranteed to be accurate, correct or complete. It is subject to revision, and modifications drawn from such information are the responsibility of the user. Due to ongoing road renumbering and redesign, the road names shown on this map may not be current. Any user should map details from A.D.C. 10178-011 (04/13/10), and assumes all responsibility for his use thereof, and hereby agrees to hold MDCRC harmless from and against any damage, loss, or liability arising from any use of this map.

MIDCOAST STATE ROUTE 27 CORRIDOR

POSTED SPEED LIMITS



MID - COAST
REGIONAL PLANNING COMMISSION
105 COUNTRY HILL STREET, SUITE 201 - ROCKLAND, ME 04841
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3. LAND USE

The map titled *Land Use Districts* shows municipally defined districts, as well as shoreland zones, within a 1,000-foot wide area along Route 27 and US Route 1. For the permitting of driveways and entrances, State access management regulations apply outside of compact urban areas.

**Comprehensive Plan and Land Use Ordinance Status
For Route 27 Corridor Municipalities**

Area	Comprehensive Plan		Land Use Ordinance
	Adopted Locally	State Consistent	Zones or Districts*
Boothbay	Yes 1992/3	Yes	Yes
Boothbay Harbor	Yes 1996	Yes	Yes
Edgecomb	Yes 2009	Yes	Yes

Note: *beyond shoreland zoning

Comprehensive Plans

Comprehensive plans serve as a guide of recommendations for the future development of communities. These plans provide the legal basis and foundation for municipal ordinances. Boothbay, Boothbay Harbor and Edgecomb have adopted comprehensive plans consistent with the Comprehensive Planning Land Use and Regulation Act (Title 30-A). Changes to state rules will require communities that wish to maintain the state consistency status of their comprehensive plan to update their plan under the new rule by 2012, with exceptions. Boothbay Harbor will begin an update of its comprehensive Plan in 2012.

Excerpts of comprehensive plan observations and recommendations relating to Route 27 transportation issues are noted in this section. These comprehensive plans were reviewed and considered in the formulation of this corridor management plan.

**Municipal Comprehensive Plans (CP):
Provisions Relating to Route 27**

Area	Observations (CP Excerpts)	Recommendations (CP Excerpts)
Boothbay	<p>Boothbay is highly dependent upon the condition of its road network...Highway transportation is the only mode of transportation existing in the community. There is no public transportation system as an alternative to individual automobiles.</p> <p>Route 27 and the River Road are each important regional transportation links. Policies in any one town affect neighboring communities. Thus there not only needs to be a comprehensive approach to Route 1 issues, but also a coordinated strategy by neighboring communities of Route 27 and the River Road. Otherwise, the ability of Boothbay residents to work in the region is impeded, as is the opportunity for Boothbay businesses servicing residents and tourists alike.</p>	<p>Policy: To develop local ordinances and incentive programs that would facilitate traffic flow on Routes 27 and 96.</p> <p>Action: Manage Route 27 and Route 96 access/egress placement, to the extent of its authority, by including specific language in the Performance Standard Section of the Land Use Ordinance which would require complete conformance to the D.O.T. guidelines, as with appropriate and specific penalty language for violations included in the Ordinance's penalty section.</p> <p>Action: Establish for major developments, a road improvement program for certain uses to ensure that any new development that places an increased demand on the road system pays for its fair share the of improvement and maintenance costs. Such a program could include: impact fees, in-kind contributions, or construction and maintenance of roads and related improvements.</p> <p>Action: Establish an on-going working committee to work with other surrounding towns and DOT to review, on a regular basis, the regional impacts of the road system and to promote Route 27 and Route 96, as well as Route 1 corridor plans.</p>

<p>Boothbay Harbor</p>	<p>It is difficult to consider transportation issues in Boothbay Harbor without considering the highway system as part of the regional highway network. Routes 1 and 27 are the highways used by residents commuting to their jobs, by businesses to transport material and products to markets, and by tourists who come to the area in significant numbers in the summer months.</p> <p>Routes 1 and 27 are each important transportation links. Policies in any one town affect neighboring communities. Here not only needs to be a comprehensive approach to Route 1 issues but also a coordinated strategy by neighboring communities of Route 27.</p>	<p>Policy: To develop local ordinances and incentive programs that would facilitate traffic flow on Route 27 and throughout the down area.</p> <p>Policy: Work with surrounding towns, the Lincoln County Planning Office (LCRPC) and MDOT to reduce the negative impacts of thru-traffic from commuters, tourists and other regional development activities on Boothbay Harbor.</p> <p>Strategy: Manage Route 27 curb cut placement by including specific language in the Performance Standards section of the LUO which would require complete conformance with MDOT guidelines.</p> <p>Action: Continue to work with regional groups and surrounding towns and MDOT to review, on a regular basis, the regional impacts of the road system and to promote Route 27 and Route 1 corridor plans.</p>
<p>Edgecomb</p>	<p>The driving determinant in managing ever-increasing traffic on Route 1 is the resolution of the Wiscasset bypass. Traffic and physical/economic growth projections of the DOT, the Gateway One project and Friends of Midcoast Maine suggest that growth at the current rate will create dangerous and chaotic conditions. Strategies for mitigation must be designed and adopted by towns working together. At the end of the peninsula, Boothbay Harbor expands along Route 27 into Boothbay. As demand for development increases along Route 27, it will move toward and into Edgecomb.</p> <p>Although the town's designated growth areas are Route 1 and Route 27, the Comprehensive Plan survey results made it very clear that more than half of the survey respondents do not want the existing water and sewer system expanded beyond Route 1.</p> <p>In addition to Gateway One, Edgecomb joined Boothbay and Boothbay Harbor in 2003 in a comprehensive study of Route 27. This effort led to a series of recommendations to MDOT, most of which have yet to be implemented due to cost constraints.</p>	<p>Policy: Provide public facilities and services in a manner that promotes and supports growth and development in identified growth areas.</p> <p>Strategy: 1: Restrict the expansion of water and sewer to the designated growth areas along Route 1 and Route 27.</p> <p>Strategy: 2: Explore acquisition and build public works building in the area of the Salt Shed along Route 27.</p>

Source: Municipal Comprehensive Plans. Note: See each community's comprehensive plan for the complete text of inventory, analysis, policies and strategies.

Land Use Ordinances and Zoning

The map titled *Land Use Districts* shows municipally defined districts within 1,000 feet of Route 27 and US Route 1.

Boothbay has three commercial districts along Route 27, two areas under a village district designation, shoreland districts and a water reservoirs protection district.

Boothbay Land Use Districts along Route 27

District	Lot size Minimum	Width Average	Front setback minimum	Side and rear Setback minimum
C1	80,000 Sq Ft*	200 Ft	100 Ft from state road ROW centerline	40 Ft
C2	40,000 Sq Ft*	100 Ft	50 Ft from state road ROW centerline	20 Ft
C3	40,000 Sq Ft	100 Ft	50 Ft from state road ROW centerline	20 Ft
Village	20,000 Sq Ft on public sewer and public water*, 40,000 Sq Ft subsurface*	100 Ft	33 Ft from road ROW centerline	10 Ft
Water Reservoirs Protection	60,000 Sq Ft on public sewer and public water, 4 acres subsurface (w/exceptions: 2 acres)	150 Ft	50 Ft from state road ROW centerline	20 Ft

Source: Zoning Ordinance of the Town of Boothbay.

Notes: *Outside of overlays and shoreland zones. The C1, C2, C3 and Village districts allow for mixed uses. Note: See the ordinance for exceptions, specific uses allowed and shoreland zoning standards.

In Boothbay Harbor, less than half of the length of Route 27 is zoned General Business and less than half is zoned General Residential, with a section near Southport zoned Special Residential, and portions zoned Downtown Business (A, B and C). Shoreland districts are found along portions of Route 27 both inland and coastal (areas within 250 feet of ponds, lakes or wetlands and within 75 feet of designated streams).

Boothbay Harbor Land Use Districts along Route 27

District	Minimum land area per dwelling unit or use	Street frontage minimum	Minimum setback from centerline of public road right-of-way	Side and rear year Setback minimum
General Business	10,000 Sq Ft residential on town sewer and water, 40,000 Sq Ft all other on town sewer and water, 20,000 Sq Ft residential and multifamily unsewered, 40,000 Sq Ft all other unsewered	50 Ft	South of Route 27/96 intersection: 30 Ft residential North of Route 27/96 intersection: 300 Ft residential 60 Ft commercial and all other	25 Ft residential, 10 Ft commercial and all other
General Residential	10,000 Sq Ft town water and sewer, 20,000 Sq Ft unsewered and multifamily, 40,000 Sq Ft other	50 Ft	30 Ft town water and sewer, 60 Ft unsewered	15 Ft town water and sewer, 25 Ft unsewered
Downtown Business	10,000 Sq Ft on town water and sewer	50 Ft	30 Ft residential, 25 Ft commercial, 30 FT all other	15 Ft residential, 10 Ft commercial, 15 Ft all other
Special Residential	10,000 Sq Ft town water and sewer, 20,000 Sq Ft town water and unsewered, 40,000 Sq Ft no town water and unsewered	50 Ft	30 Ft town water and sewer, 60 Ft unsewered	15 Ft on town water and sewer, 25 Ft unsewered
Resource Protection	4 acres	100 Ft	--	--

Source: Town of Boothbay Harbor, District Standards Section 170-28.

Note: See the ordinance for exceptions, specific uses allowed and shoreland zoning standards.

Edgecomb has districts along Route 27 that allow for mixed uses, with three specifically named Route 27 districts abutting the roadway, along with shoreland zones.

Edgecomb Route 27-named Land Use Districts

District	Minimum lot size	Buffer Depth main road	Buffer Depth other roads	Lot frontage	Front setback	Side and rear setback
Route 27, Area I	3 acres*	50 Ft.	none	300 Ft.*	100/200 Ft. * ²	15 Ft.
Route 27, Area II	1 acre	none	none	100 Ft.	Average * ³	15 Ft.
Route 27, Area III	3 acres*	50 Ft.	none	300 Ft.*	100/200 Ft. * ²	15 Ft.

Source: Edgecomb Comprehensive Plan 2009, Volume I.

Notes: * On lots with an access shared with an adjacent lot, 200 Ft. frontage is allowed. *² Setback must be 200 Ft. from centerline of Route 27 *³ Setback is the average of principal structures within 500 Ft. with frontage on Route 27. The Route 27 districts allow for mixed uses.
Note: See the ordinance for exceptions, specific uses allowed and shoreland zoning standards.

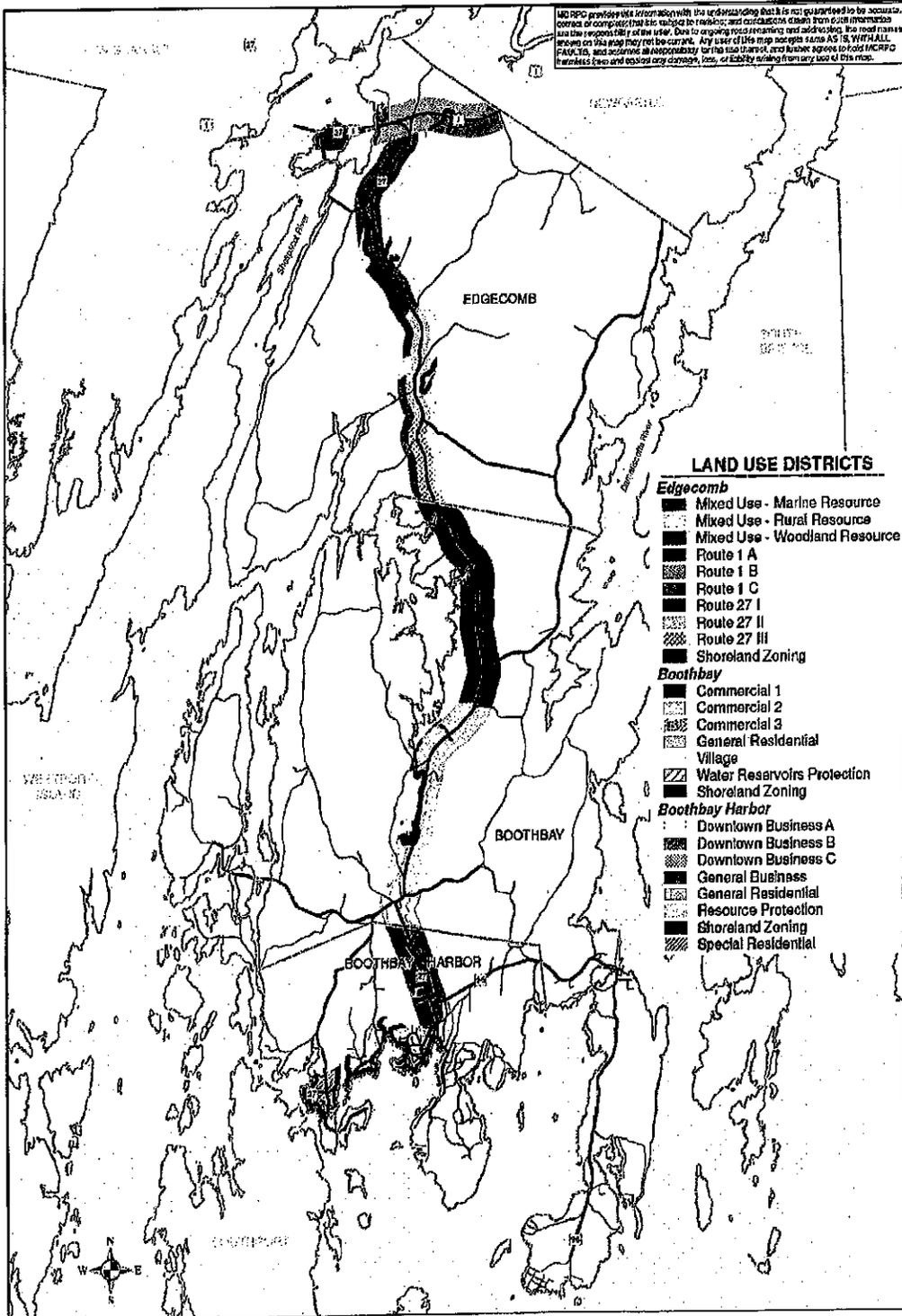
Through analysis of land use and transportation trends, and public input, the Gateway 1 US Route 1 corridor Preservation Strategic Planning Process suggested growth cores in Edgecomb where if future development takes place, that development would not degrade the capacity or safety of Route 1 or the scenic quality of surrounding rural areas, and could be serviced by public transportation. None of the recommended growth areas are on Route 27.

Access Management

Access management is currently addressed by State access management regulations and standards, but these may prove insufficient to preserve the mobility of the roadway. As well, communities with inadequate land use provisions like zoning, subdivision and site plan review may be less able to regulate effectively the scale of new development, in addition to the locations of new entrances and streets accessing Route 27 and on adjoining state highways. Current minimum road frontages (see the land use district tables for each community), and a lack of requirements for shared access points, make it likely that if development occurs along the roadway in the pattern that current land use regulations would allow, posted speeds would have to be reduced on the higher-speed stretches.

Land Use Objectives (from the Midcoast Council for Business Development and Planning 2005 Regional Transportation Assessment, Route 27 Corridor)

- Continue to support Route 27 corridor planning efforts.
- Encourage communities to locate commercial growth areas away from Route 27.
- Encourage communities to develop consistent and effective access management plans that include provisions for common points of access, shared parking, landscaping requirements, and large frontages.
- Continue to work with Route 27 communities on providing pedestrian and bike facilities as well as cross walks in village areas.



MIDCOAST STATE ROUTE 27 CORRIDOR LAND USE DISTRICTS WITHIN 1,000 FEET OF ROUTES 27 AND 1

0 0.5 1 2 Miles
 Map prepared by LaLong Logic, LLC
 Sources: Town Zoning maps, MEDOT and MRGIS
 Map created: June, 2011

Municipal Land Use Ordinances should be consulted for a complete description of land use districts and zones, including performance standards.

MID - COAST
 REGIONAL PLANNING COMMISSION
 106 SOUTH MAIN STREET, SUITE 201 - ROCKLAND, MAINE 04841
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4. ECONOMIC DEVELOPMENT AND HOUSING

The map titled *Employment and Housing* shows the location and relative size of major employers in the corridor and the density of housing at the census block level for 2010, which indicates where most people live within the corridor. This map also shows the number of housing unit permits issued by town from 2000 to 2010, and population growth from 2000 to 2010.

Employment

Over the past ten years, the three corridor towns have seen a combined net increase of 190 people in the labor force to total 3,900. During the same period, Lincoln County's labor force increased by a net of just 127 people to total 17,889. The three corridor towns combined saw a slight increase in employment between 2000 and 2010 with a gain of 38 jobs, while the County saw a loss of 643 jobs. Despite the influx of retiree-aged residents, employment opportunities have not kept up with the employment needs of residents, but the corridor has fared better than the County as a whole. The number of unemployed (and seeking work) more than doubled in the corridor towns to total 295 individuals. The unemployment rate for the County at 7.2% in 2010 is a significant increase from 3.0% in 2000.

Labor Force (Annual, Not Seasonally Adjusted)

Area	Civilian Labor Force		Employed		Unemployed		Unemployment Rate 2010	
	2000	2010	2000	2010	2000	2010	2000	2010
Boothbay	1,761	1,889	1,695	1,755	66	134	3.7	7.1
Boothbay Harbor	1,275	1,242	1,227	1,135	48	107	3.8	8.6
Edgecomb	674	769	645	715	29	54	4.3	7.0
Boothbay Harbor LMA	4,015	4,201	3,858	3,884	157	317	3.9	7.5
Lincoln County	17,762	17,889	17,238	16,595	524	1,294	3.0	7.2

Source: Maine Department of Labor

Note: The Boothbay Harbor Labor Market Area includes these municipalities: Boothbay, Boothbay Harbor, Edgecomb and Southport

In 2010, the largest single employer in the County, with over 500 employees, was Miles Memorial Hospital. The largest single employer in the corridor is St Andrews Village Retirement Center, Hospital and Healthcare Center. Medical, social services and education professions have seen growth, while many other sectors have stagnated or decreased. Hospitality occupations provide low wage employment in season. Traditional industries including construction, maritime activities, and related occupations remain important sectors, although they employ fewer people today than they once did.

**Major Employers (with 50+ employees)
Located in Route 27 Corridor Municipalities**

Company/Organization Name	Partial Address	Municipality	Sector	Employees
Andrews' Harborside Restaurant	Bridge St	Boothbay Harbor	Restaurant	50-99
Bigelow Laboratory-Ocean	Mckown Point Rd	W Boothbay Harbor	Non-Profit	50-99
Boothbay Region Elem School	Townsend Ave	Boothbay Harbor	Education	50-99
Fisherman's Wharf Inn	Commercial St	Boothbay Harbor	Hotels & Motels	100-249
Gregory Wing Nursing Facility	Emery Ln	Boothbay Harbor	Nursing Homes	50-99
Hannaford Supermarket & Phrmcy	Townsend Ave	Boothbay Harbor	Grocers-retail	100-249
Hodgdon Yachts Inc	School St	East Boothbay	Boats-Manuf	50-99
Maine Marine Resources Dept	Mckown Point Rd	W Boothbay Harbor	State Government	50-99
Rocktide Inn & Restaurant	Atlantic Ave	Boothbay Harbor	Restaurant	100-249
Spruce Point Inn Resort & Spa	Grandview Ave	Boothbay Harbor	Hotels & Motels	50-99
St Andrews Hosp & Healthcare	Saint Andrews Ln	Boothbay Harbor	Hospital	100-249
St Andrews Village Retirement	Emery Ln	Boothbay Harbor	Res Care Facilities	250-499
Tugboat Inn	Commercial St	Boothbay Harbor	Hotels & Motels	50-99
Washburn & Doughty Assoc Inc	Enterprise St	E Boothbay	Boats-Manuf	50-99
YMCA	Townsend Ave	Boothbay Harbor	Rec Services	100-249

Source: Maine Department of Labor, info USA 2008.

Notes: School employee statistics not aggregated by school district/union/RSU. Municipal employment not included. Edgecomb has no single employers with 50+ employees. The town's largest employer is the Edgecomb Elementary School.

**Major Employers (with 100+ employees)
Located in Lincoln County**

Company/Organization Name	Partial Address	Municipality	Sector	Employees
First NA	Main St	Damariscotta	Financial	100-249
Fisherman's Wharf Inn	Commercial St	Boothbay Harbor	Hotels/Motels	100-249
Hannaford Supermarket & Phrmcy	Townsend Ave	Boothbay Harbor	Grocers-retail	100-249
Hannaford Supermarket & Phrmcy	Main St	Damariscotta	Grocers-retail	100-249
Miles Memorial Hospital	Miles St	Damariscotta	Hospital	500-999
Moody's Diner	Atlantic Hwy	Waldoboro	Restaurant	100-249
Newcastle Marine	Hall St	Newcastle	Boat Manuf	100-249
Rocktide Inn & Restaurant	Atlantic Ave	Boothbay Harbor	Restaurant	100-249
St Andrews Hosp & Healthcare	Saint Andrews Ln	Boothbay Harbor	Hospital	100-249
St Andrews Village Retirement	Emery Ln	Boothbay Harbor	Nursing	250-499
Taction	Jefferson St	Waldoboro	Call center	100-249
YMCA	Townsend Ave	Boothbay Harbor	Rec Services	100-249

Source: Maine Department of Labor, info USA 2010.

Notes: Education employee statistics by school, not aggregated by RSU. Municipal employment not included.

The average weekly wage in 2010 was highest in Boothbay and lowest in Edgecomb, while the corridor average wage was higher than the countywide figure.

Total Employment: Fourth Quarter 2010

Area	Average # Establishments	Average Employment (Persons)	Average Weekly Wage
Boothbay	168	811	\$872
Boothbay Harbor	224	1,844	\$563
Edgecomb	57	225	\$543
Corridor	449	2880	\$648
Lincoln County	1,573	10,835	\$571

Source: Maine Department of Labor
 Note: Corridor wage is weighted average

Employment by sector in the Boothbay Labor Market Area is shown in the next table. The largest three sectors by average employment were accommodation/food services, retail trade, and health care/social assistance.

**Employment by Sector: Boothbay Harbor Labor Marker Area,
 Fourth Quarter in 2010**

Sector	Average # Establishments	Average Employment (Persons)	Average Weekly Wage
Agriculture, Forestry, Fishing & Hunting	32	25	\$336
Construction	82	230	\$652
Manufacturing	27	246	\$857
Wholesale Trade	15	49	\$629
Retail Trade	58	428	\$422
Transportation and Warehousing	17	66	\$757
Information	8	41	\$437
Finance and Insurance	11	69	\$777
Real Estate and Rental and Leasing	15	22	\$657
Professional and Technical Services	36	199	\$965
Administrative and Waste Services	26	185	\$799
Educational Services	7	234	\$648
Health Care and Social Assistance	18	334	\$1,038
Arts, Entertainment, and Recreation	22	141	\$627
Accommodation and Food Services	73	551	\$387
Other Services, Ex. Public Admin	35	140	\$427
Public Administration	9	90	\$554
Total	493	3,064	\$646

Source: Maine Department of Labor

Notes: Total includes non-disclosable sectors that are not shown in detail in this table. The Boothbay Harbor Labor Market Area includes these municipalities: Boothbay, Boothbay Harbor, Edgecomb and Southport.

Employment by sector in Lincoln County for the Fourth Quarter 2010 is shown in the next table. The largest three sectors by average employment were health care/social assistance, retail trade, and accommodation/food services.

Employment by Sector: Lincoln County, Fourth Quarter 2010

Sector	Average # Establishments	Average Employment (Persons)	Average Weekly Wage
Agriculture, Forestry, Fishing & Hunting	89	149	\$481
Utilities	6	33	\$985
Construction	270	661	\$625
Manufacturing	77	742	\$719
Wholesale Trade	58	187	\$608
Retail Trade	212	1,765	\$435
Transportation and Warehousing	59	272	\$627
Information	19	163	\$673
Finance and Insurance	37	362	\$814
Real Estate and Rental and Leasing	42	70	\$511
Professional and Technical Services	131	381	\$829
Management of Companies	4	90	\$923
Administrative and Waste Services	78	463	\$738
Educational Services	33	1,220	\$616
Health Care and Social Assistance	96	1,796	\$612
Arts, Entertainment, and Recreation	44	240	\$521
Accommodation and Food Services	152	1,320	\$346
Other Services, Ex. Public Admin	132	447	\$453
Public Administration	33	472	\$565
Total	1,572	10,833	\$571

Source: Maine Department of Labor

Note: Total includes non-disclosable sectors that are not shown in detail in this table.

Total taxable sales decreased significantly in the corridor and County from 2006 to 2010 and within Boothbay Harbor and Edgecomb. This reflects the larger regional, state and national economic downturns. Boothbay, however, did see a slight increase in sales during this period. Boothbay Harbor had the most activity, with 79.3% of corridor's total taxable sales in 2006 and 77.9% in 2010. Edgecomb had the least activity, with 6.0% of the corridor's taxable retail sales in 2006 and 4.7% in 2010. Boothbay had 14.7% of the corridor's taxable sales in 2006 and 17.5% in 2010. In 2006, the corridor accounted for 25.9% of County taxable sales. That figure was 25.6% in 2010.

**Total Taxable Retail Sales
for Route 27 Corridor Municipalities**

Area	2006	2010	Change
Boothbay	\$12,541,400	\$13,020,700	3.8%
Boothbay Harbor	\$67,882,200	\$57,985,600	-14.6%
Edgecomb	\$5,158,100	\$3,466,400	-32.8%
Corridor	\$85,581,700	\$74,472,700	-13.0%
Lincoln County	\$330,981,200	\$290,961,600	-12.1%

Source: Maine Revenue Services

Note: These figures do not include taxes collected from the sale of real estate.

Given the current focus of economic activity in the corridor with employment and retail businesses centered in Boothbay Harbor, similar type development is likely to continue in this area and spread outward. With increasing congestion along Route 1 in Lincoln County generally, Route 27 may become more attractive for medium and large-scale development that would otherwise locate on Route 1. This could include retail, warehousing and distribution activities, and to provide an alternative shopping venue for those traveling to and through Lincoln County.

Detail of Taxable Retail Sales in 2010

Category/Area	Boothbay	Boothbay Harbor	Edgecomb	Lincoln County
Business Operating	\$87,800	\$819,500	\$1,115,500	\$15,678,300
Building Supplies	\$257,200	NA	NA	\$36,977,800
Food Store	NA	\$2,245,700	NA	\$48,770,100
General	\$646,000	\$3,584,300	NA	\$20,626,800
Other	\$3,215,400	\$9,573,500	\$1,001,900	\$36,148,300
Auto Trans	\$1,546,400	\$2,479,000	NA	\$60,166,200
Restaurant	\$2,174,000	\$15,448,900	NA	\$47,119,200
Lodging	\$2,767,600	\$11,448,400	NA	\$25,474,900
Total	\$13,020,700	\$57,985,600	\$3,466,400	\$290,961,600
Personal	\$12,932,900	\$57,166,100	\$2,350,900	\$275,283,300

Source: Maine Revenue Services

Note: These figures do not include taxes collected from the sale of real estate.

Housing

The largest concentrations of housing in the corridor are found in the Boothbay Harbor village area and the Ocean Point area of Boothbay. See the *Employment and Housing* map. Many shoreland areas have notable densities due principally to the amount of seasonal homes. Newer housing tends to be placed at lower densities than was built traditionally and is far more dispersed than is represented by historical development patterns. See the *History of Growth Maps* for each corridor community. Boothbay's housing stock has been growing fastest, with 760 units built from 1990 to 2010, while Boothbay Harbor had 290 units built, and Edgecomb had 237 units built during this period. The corridor

had 5,404 housing units in 2010, which was 23.0% of Lincoln County's total housing stock in that year.

Housing Units of Route 27 Corridor Municipalities

Area	1990	2000	2010	Growth 1990-2010		Housing Unit Permits Issued 2000-2010
				#	%	
Boothbay	1,714	2,046	2,474	760	44.3%	362
Boothbay Harbor	1,885	1,993	2,175	290	15.4%	92
Edgecomb	518	572	755	237	45.8%	158
Corridor	4,117	4,611	5,404	1,287	31.3%	612
Lincoln County	17,538	20,849	23,493	5,955	34.0%	2,378

Source: Census, US HUD

Over the past twenty years, the growth in the number of households has occurred at a faster rate than the growth in population. In fact, Boothbay Harbor's number of households increased while its total population decreased. Increased growth in the number of households beyond the change in total population is due to a decline in average household size resulting from the immigration of retiree-aged households, empty nesters, more families headed by single parents, and reduced birth rates, among other causes. Note: There has been continued construction of vacation/second homes that are used seasonally, whose residents are not included in the year-round population figures. In 2010 the Census recorded that Boothbay had 893 seasonal units, Boothbay Harbor had 899 and Edgecomb had 189.

Households of Route 27 Corridor Municipalities

Area	1990	2000	2010	Growth 1990 - 2010	
				#	%
Boothbay	1,048	1,261	1,386	338	32.3%
Boothbay Harbor	1,023	1,097	1,084	61	6.0%
Edgecomb	403	466	523	120	29.8%
Corridor	2,474	2,824	2,993	519	21.0%
Lincoln County	11,968	14,158	15,149	3,181	26.6%

Source: Census

Housing Affordability

According to the Maine State Housing Office (MSHA), only home ownership in the Corridor community of Edgecomb was affordable to median income households in 2010. Housing in the other corridor communities, Boothbay and Boothbay Harbor, was unaffordable to median income households. For renters, the average rent in the Boothbay Labor Market Area was unaffordable to median

renter household income, with a renter affordability index of 0.70 in 2009. The lack of affordable housing in the corridor means that lower paid workers, for example those in the hospitality sector, often have to commute longer distances to work within the corridor. Many of these workers commute from inland communities where housing prices are more affordable.

Home Ownership Affordability

Area	Year	Affordability Index	Median Home Price	Median Income	Income Needed to Afford Median Home Price	Home Price Affordable at Median Income	Households Unable to Afford Median Home Price
Boothbay Harbor LMA	2000	0.79	\$140,000	\$39,193	\$49,622	\$110,575	2,027 (70.0%)
	2009	0.69	\$224,000	\$47,950	\$69,948	\$153,555	2,388 (68.9%)
Boothbay	2009	0.75	\$225,000	\$53,232	\$70,873	\$168,995	967 (67.1%)
Boothbay Harbor	2009	0.53	\$237,000	\$39,536	\$73,955	\$126,700	869 (78.6%)
Edgecomb	2009	1.07	\$149,000	\$53,163	\$49,560	\$159,833	268 (46.8%)
Lincoln County	2009	0.87	\$165,000	\$46,921	\$53,929	\$143,558	8,699 (56.9%)

Source: Maine State Housing Authority

Notes: The affordability index is the ratio of Home Price Affordable at Median Income to Median Home Price. An index of less than 1 means the area is generally unaffordable – i.e., a household earning area median income could not cover the payment on a median priced home (30 year mortgage, taxes and insurance) using no more than 28% of gross income.

Commuting

While most employment has remained in service centers large and small like Augusta, Bath, Boothbay Harbor and Wiscasset, average commute times and the total vehicle miles traveled have increased as more people live further away from their workplace in areas that often lack public transportation.

The Institute of Transportation Engineers has estimated that a single-family detached house generates almost ten trips per day on average. An apartment or mobile home generates about five trips per day on average. Trips to and from vacation homes are generated in season. Assuming a mix of housing types based upon estimated distributions, the corridor has on average approximately 11,600 more daily vehicle trips on area roadways due to the increase in housing units built from 2000 to 2010. A good portion of the traffic on state roads, however, is not generated locally, but is based on through trips by people who live and/or work outside of the corridor.

Most commuters in each community continue to drive to work alone, since scheduled, fixed-route public transportation is not readily available.

Commuting Methods in 2009

Means of Travel to Work	Boothbay	Boothbay Harbor	Edgecomb	Lincoln County
Car, truck, or van - Drove alone	1,418	796	459	13,027
Car, truck, or van - Carpooled	123	83	53	1,762
Public transportation	0	0	0	37
Motorcycle	0	0	0	27
Bicycle	0	14	0	21
Walked	75	100	10	470
Other means	23	8	5	135
Worked at home	55	73	78	1,210
Total	1,694	1,074	605	16,689

Source: Census (Workers 16 and Older)

Travel Time to Work in 2009

Travel Time to Work	Boothbay	Boothbay Harbor	Edgecomb	Lincoln County
Less than 5 minutes	157	246	13	1,129
5 to 9 minutes	245	344	60	2,169
10 to 14 minutes	471	201	86	2,318
15 to 19 minutes	196	16	95	1,959
20 to 24 minutes	80	24	90	1,537
25 to 29 minutes	9	28	44	1,039
30 to 34 minutes	167	35	54	2,084
35 to 39 minutes	0	0	9	316
40 to 44 minutes	90	49	19	760
45 to 59 minutes	82	24	17	1,234
60 to 89 minutes	112	13	11	654
90 or more minutes	30	21	29	280
Workers over 16 who did not work at home	1,639	1,001	527	15,479

Source: Census

About 53% of Boothbay residents who worked in 2000 did so within their town of residence. That figure was slightly more than 41% for Boothbay Harbor residents who worked in 2000, and almost 32% for Edgecomb. More recent commuting data is not available.

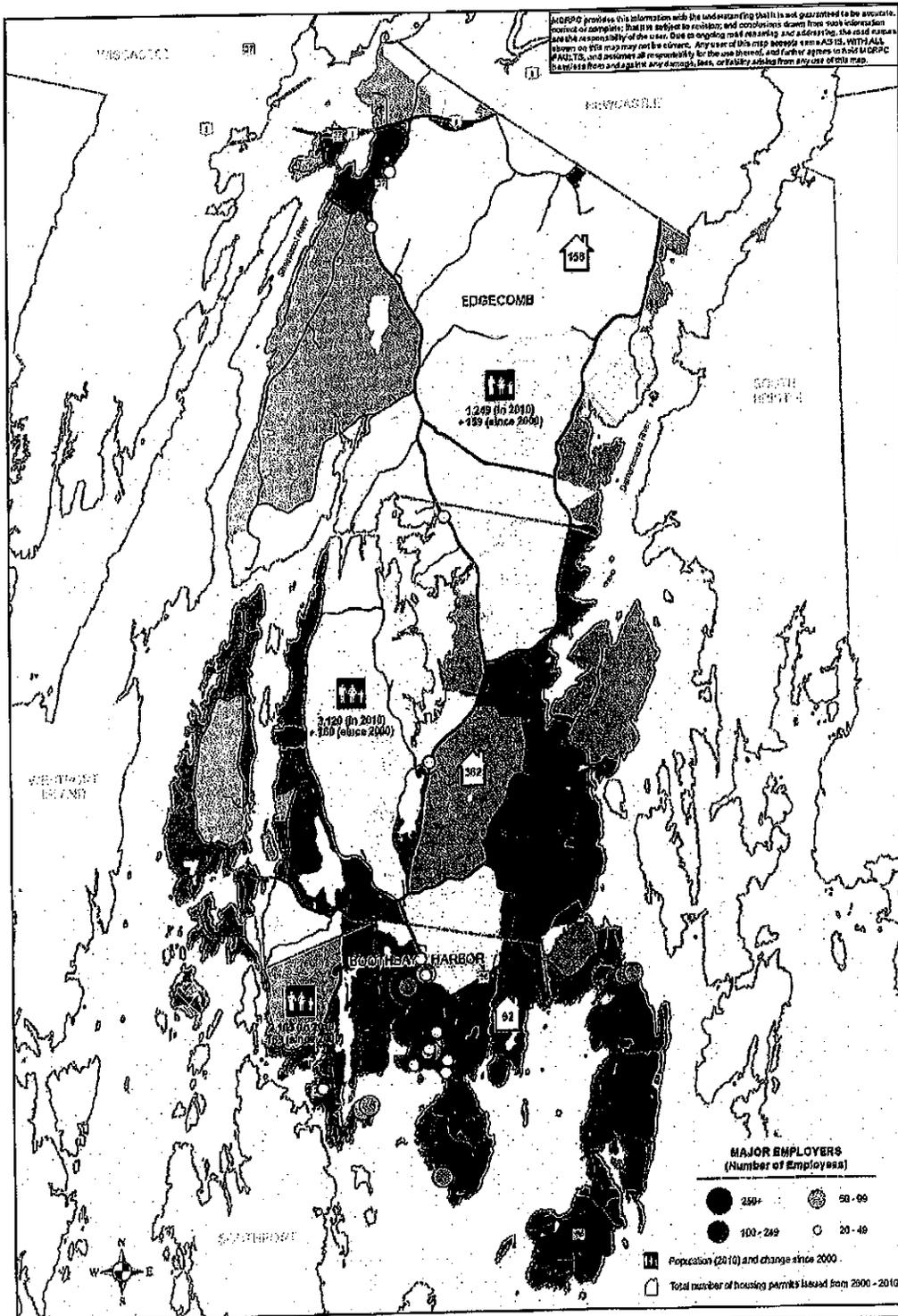
Place of Work (2000)

Area	Worked and Resided in Same Municipality	Worked outside Municipality of Residence but within Lincoln County	Worked In other Maine County
Boothbay	497	341	100
Boothbay Harbor	596	684	171
Edgecomb	108	169	64
Lincoln County		10,286	5,196

Source: Census

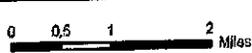
Economic Objectives (from the Midcoast Council for Business Development and Planning 2005 Regional Transportation Assessment, Route 27 Corridor)

- Continue to work with all communities to ensure mobility along Route 27 as well as safe access to businesses and residences.
- Encourage communities to view mobility along Route 27 as being essential for the future economic vitality of the area, and to take steps to minimize growth patterns, such as strip commercial development, that will limit mobility.

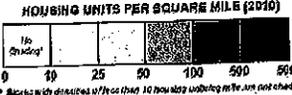


MIDCOAST STATE ROUTE 27 CORRIDOR

EMPLOYMENT AND HOUSING

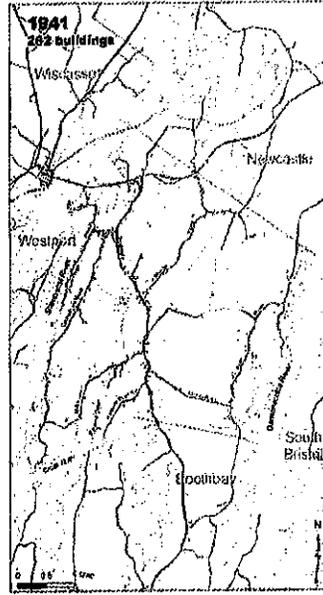
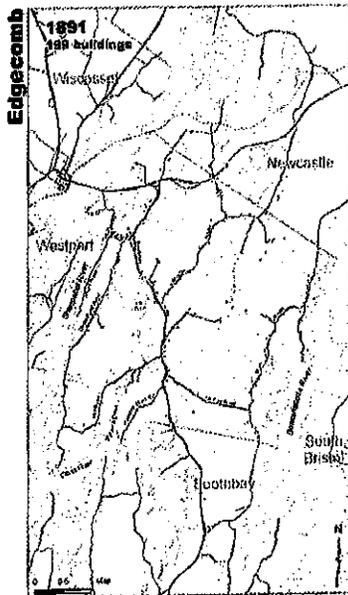
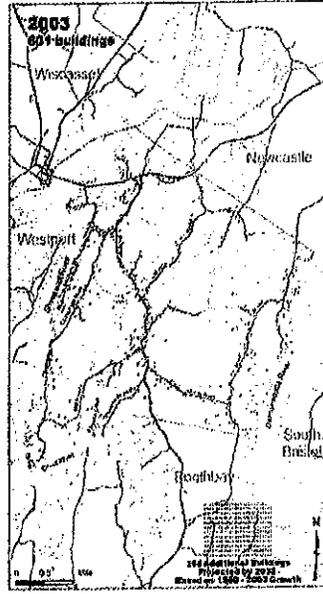
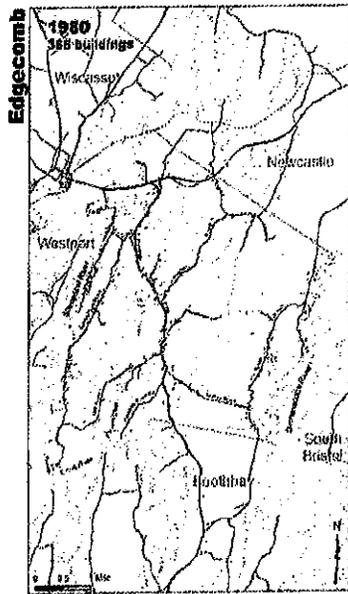


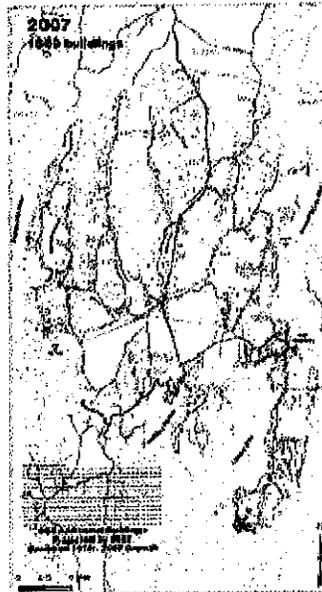
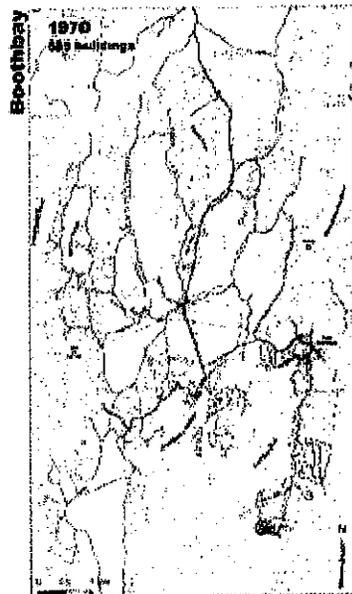
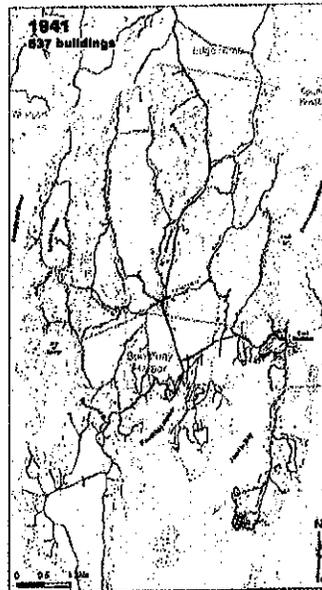
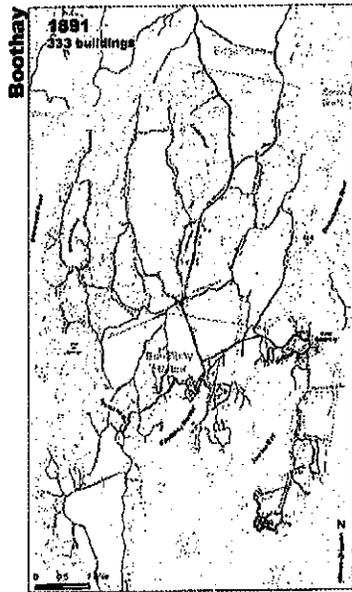
Map prepared by LaVing Logic, LLC
 Sources: MOORPC, MEDOT, MECHS, US Census and US HUD
 Map created: June, 2011

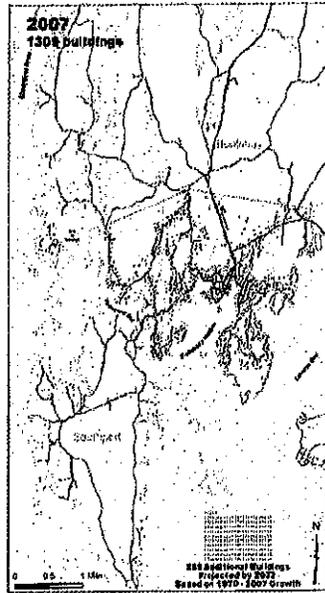
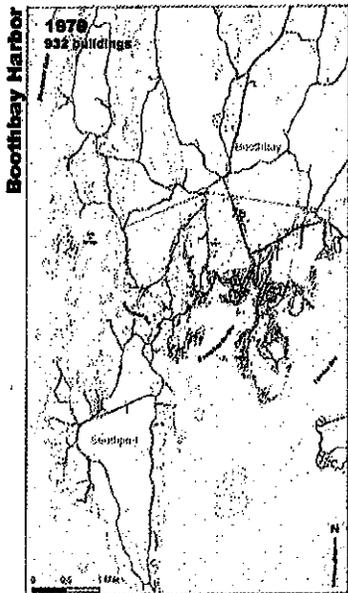
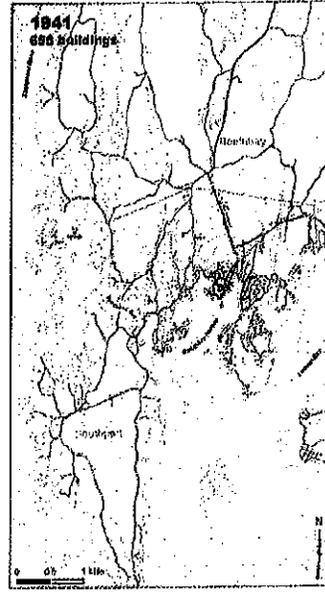
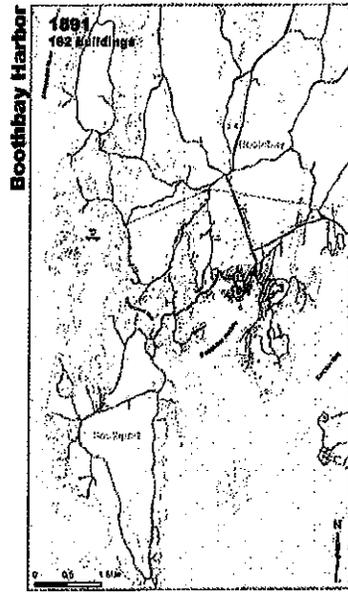


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History of Growth Maps







5. NATURAL AND SCENIC RESOURCES

The corridor's natural resources are varied and numerous. Some might be threatened by increased development pressure. Just as with transportation planning, there is value in regional cooperation to protect the quality of the corridor's land, air, and water.

The map titled *Land Cover* shows developed areas, forests, grasslands, fields, water bodies and wetlands. The map titled *Natural Resource Constraints* shows moderate and high value wetland habitats (10+ acres in size) that are or will be regulated through shoreland zoning, wetlands in the National Wetlands Inventory, current shoreland zoning along water bodies, and soils associated with steep slopes (15% and greater). Also shown are aquifers of significant yield (10-50 and 50+ gallons per minute), essential and other rare animal habitats, Maine Natural (MNAP) Area Program, and Focus Areas of Statewide Ecological Significance. Other habitats shown include deer wintering areas and shorebird/waterfowl/ wading bird habitats.

Primary Natural Constraints	
Area	Abutting/Near Route 27
Boothbay	Shoreland Zoning, Adams Pond, Sherman Cove, Cross River, Moderate and High Value Wetland, NWI Wetlands, Waterfowl/ Wading Bird Habitat, Soils associated with Steep Slopes
Boothbay Harbor	Shoreland Zoning, Boothbay Harbor, Moderate and High Value Wetland, NWI Wetlands, Waterfowl/ Wading Bird Habitat, Deer Wintering Area, Soils associated with Steep Slopes
Edgecomb	Shoreland Zoning, Lilly Pond, Sheepscot River, Moderate and High Value Wetland, NWI Wetlands, Waterfowl/ Wading Bird Habitat, Deer Wintering Area, Soils associated with Steep Slopes

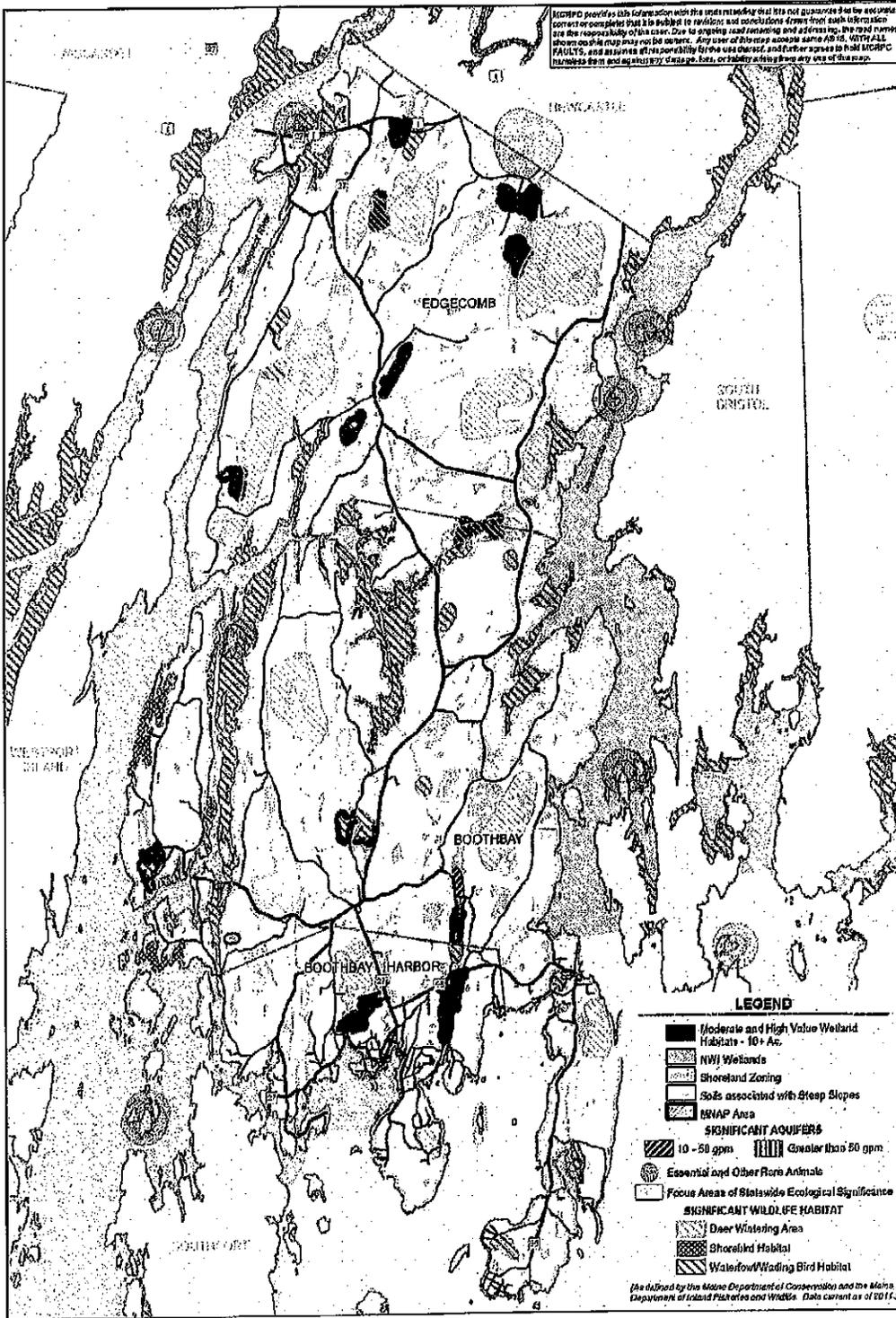
Source: Maine Department of Environmental Protection

Outside of village and downtown areas served by public/private water lines, many other residents and businesses in the corridor depend on private drilled wells for drinking water. In the past, considerable wetland acreage has been lost or impaired through draining, filling and development. Wetlands are critical to groundwater supplies and the protection of water quality, as well as for storm water management necessary to reduce flooding, and to provide for wildlife habitats.

Water bodies abut and are found a short distance from Route 27, the largest of which are the Sheepscot River, Cross River and Boothbay Harbor. In addition to their environmental value, lakes, ponds, bays and rivers along the corridor are valued for their scenic beauty and for recreational use. While no community has

officially identified scenic views along Route 27, there are many attractive vistas and traditional views within the corridor as illustrated in the photos presented in this section. See also the map titled *Topography*, which illustrates areas of high elevation.

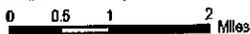
The Edgecomb comprehensive plan (2009): "Views containing architectural buildings as viewed from a distance, Route 27, The Edgecomb Town Hall and North Edgecomb Cemetery as viewed from Route 27. Also driving north, the open fields looking out to the Sheepscot River just before the Cod Cove Bed and Breakfast Inn."



MIDCOAST STATE ROUTE 27 CORRIDOR

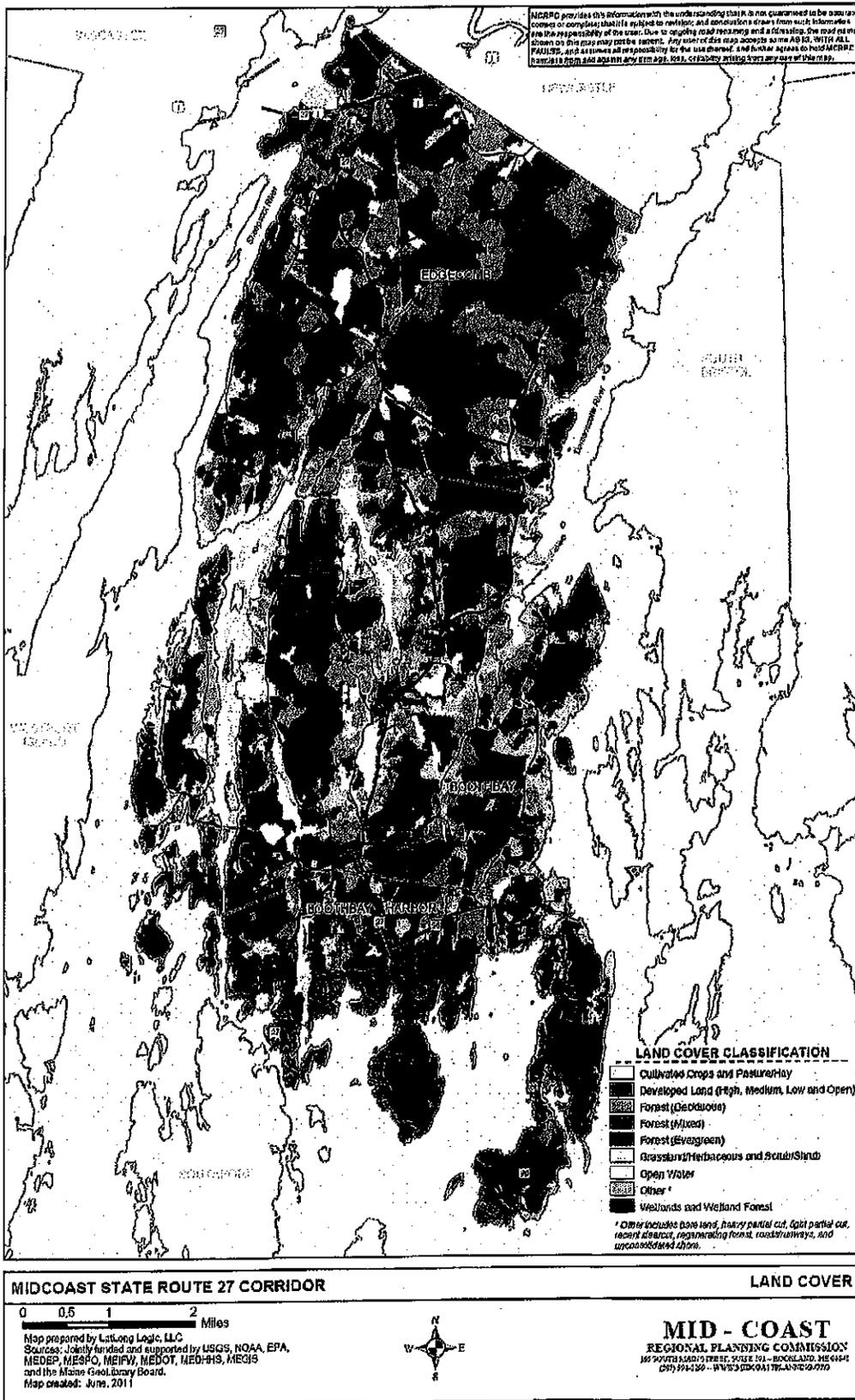
NATURAL RESOURCE CONSTRAINTS

This natural resource zoning is shown on this map despite the jurisdictional boundary which is owned by the Maine Department of Environmental Protection (DEP). Please refer to the DEP's zoning map for a detailed description.



Map prepared by LaLoug Logic, LLC
 NRCS, MDEOT, MEIWF, MNAF, MGS, USFWS and MEGIS
 Map revised: July, 2011

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6. CORRIDOR INVESTMENTS SOUGHT

This corridor management plan has described municipal and regional transportation, land use, economic development, housing, and natural and scenic resources, and has identified general objectives of the corridor communities. From this, an informed selection (listed below) has been made of essential transportation-related investments to meet the needs of residents, businesses, and others who use this corridor. Many of these investments will require specific analysis and evaluation by Maine DOT and transportation engineers to determine appropriate solutions, based on accepted transportation and civil engineering principles, before implementation can occur. Maine DOT is requested to review these recommendations and consider them when proposing and making improvements in the corridor. Given increasingly limited transportation budgets, and the rising costs of construction materials, it becomes even more crucial that new transportation investments be based on serving the best interests of the corridor and region as a whole.

Recommendations for Corridor Investments and Improvements (Immediate = within 2 years, Midterm = 2-5 years, Long term = 5 -10 years)				
	Recommendation	Rationale	Responsible Party	Timeframe
Recommendations Corridor-wide				
1	Encourage limiting access to one per lot exiting onto Route 27 where possible	Safety - maintain posted speed through controlled development	Towns	Immediate
2	Reduce curb cuts where possible	Safety - maintain posted speed through controlled development	Towns	Immediate
3	Encourage common points of access	Safety - encourage shared entrances to reduce curb openings	Towns	Immediate
4	Reduce curb cut widths where practical	Safety - better define access for entering, exiting traffic	Towns	Immediate
5	Encourage internal access between adjacent properties	Safety - reduce unnecessary vehicle movements onto highway	Towns	Immediate
6	Consider incentives for providing landscaping for new and existing development	Environmental - improve visual appearance of corridor	Towns	Mid-term
7	Remove vacant buildings at Route 1 intersection and install "Welcome to Boothbay Peninsula" gateway signage; consider	Economy - create better branding for corridor and improve visibility of corridor businesses	Towns	Mid-term

	installing sign kiosk for peninsula businesses			
8	Preserve historic cemetery views	Environmental - maintain historical characteristics of corridor	Towns	Immediate
9	Each town should be encouraged to include in land use ordinances protection of scenic views recognized in each community as significant	Environmental - improve visual appearance of corridor	Towns	Mid-term
10	Request LCRPC to review signage requirements in each community with goal of creating greater uniformity in corridor signage	Economy - create better branding for corridor and improve visibility of corridor businesses	Towns	Immediate
11	Improve Route 1-27 intersection with flyover and other traffic and safety improvements	Safety - reduce traffic conflicts and separate traffic flow	MDOT	Mid-term
12	Improve emergency vehicle access to Route 27 by installing emergency vehicle driver-actuated warning lights	Safety - provide for better access of emergency vehicles to the corridor during high traffic volume periods	MDOT	Mid-term
13	Create bike-ped path through corridor - ecotourism - community trails will feed into the corridor	Safety and economy - provide separate facility for bikes and pedestrians and integrate with existing and proposed trail network	MDOT	Long-term
14	Better delineate all crosswalks	Safety - improve pedestrian safety	MDOT	Immediate
15	Widen shoulders whenever and wherever possible	Safety improve safety of bicyclists and pedestrians using corridor	MDOT	Immediate
16	Conduct speed survey	Safety - evaluate whether existing speed limits are appropriate	MDOT	Immediate
17	Improve speed limit enforcement	Safety - ensure vehicles do not exceed speed limit	Sheriff	Immediate
18	Improve drainage and direct away from sensitive areas	Environmental - prevent highway runoff from entering wetlands and streams	MDOT	Mid-term
19	Install context sensitive street lighting in village areas	Environmental - improve visual appearance of village areas	MDOT	Mid-term

20	Reduce grades in steep sections	Safety - reduce potential for run-off-the-road and head-on collisions	MDOT	Long-term
21	Create bus passenger facilities and passenger parking areas	Economy - encourage more use of buses to get tourist to destinations on the peninsula	MDOT	Mid-term
22	Conduct feasibility studies for ferry, seasonal bus service	Safety and economy - evaluate the feasibility of establishing seasonal bus service from Wiscasset or ferry service to Portland, Bath, Rockland or Canadian ports and thereby improve the tourist economy and reduce traffic on Route 27	MDOT	Immediate
23	Develop peninsula shuttle service	Safety and economy - increase convenience to tourists and reduce unnecessary local trips	MDOT	Mid-term
24	Request MDOT to advise towns of road work well in advance of onset in order to accommodate municipal utility improvements	Economy - by coordinating state and local work the cost of utility work can be reduced	MDOT	Immediate
Recommendations for Boothbay Harbor				
25	Conduct traffic study to determine locations for turning lanes	Safety - improve safety of exiting and entering vehicles	MDOT	Immediate
26	Install landscaped center median where turning lanes not required	Safety and environmental - shelter turning lanes and improve appearance of highway	MDOT	Long-term
27	Install sidewalks on both sides of Route 27 from Route 96 to the school complex	Safety - improve pedestrian access to the many businesses along Route 27 without increasing cross-road pedestrian movements	MDOT	Mid-term
28	Widen shoulders or install bike lanes to Boothbay Common	Safety - improve bicycle safety	MDOT	Mid-term
29	Install landscaping along sides of Route 27 in the Meadow	Environmental - improve visual appearance of corridor	MDOT	Long-term
30	Revise Hammond Lumber parking lot to reduce access width	Safety - reduce conflicts between entering and exiting traffic and eliminate vehicles	MDOT	Mid-term

		backing out onto the highway		
31	Add sidewalk from the YWCA to Boothbay Center	Safety - improve pedestrian safety	MDOT	Immediate
32	Remove passing zone in Boothbay Harbor and evaluate the appropriateness of all other passing zones in the corridor	Safety - reduce unnecessary traffic conflicts created by vehicles passing in a congested area	MDOT	Immediate
Recommendations for Boothbay				
33	Modify Common Drive to one-way and add angled parking and sidewalks	Safety - eliminate one exit onto Route 27, increase parking capacity and reduce pedestrian crossings of highway	Town	Mid-term
34	Encourage Timber Tire Company and Boothbay Railway Village to jointly develop tire customer parking behind the tire building to improve view of the railway facility	Environmental - improve visual appearance of vicinity of major tourist destination	Town	Immediate
35	Conduct traffic study of Boothbay Center from the Clipper Mart to the southerly end of Common Drive	Safety - develop plan to reduce traffic conflicts and hazards to pedestrians of corridor's most dangerous traffic intersection	MDOT	Immediate
36	Add turning lanes at Industrial Road, Hardwick Road and River Road	Safety - provide for safer turning vehicle turns while maintaining thru traffic	MDOT	Mid-term
37	Add roadside landscaping	Environmental - improve visual appearance of corridor	MDOT	Mid-term
38	Realign, regraded, improve sight distance at Hardwick Road intersection	Safety - improve sight distance, intersection alignment, grade and safety at intersections	MDOT	Mid-term
39	Improve sight distance at Industrial Road	Safety - improve sight distance and safety at intersection	MDOT	Mid-term
40	Reduce width of access at Dave's	Safety - reduce conflicts between entering and exiting traffic and eliminate vehicles parking along the roadside	MDOT	Immediate
41	Widen pavement for bike, pedestrian use from Boothbay Common to	Safety - improve safety of pedestrians and bicyclists who frequent	MDOT	Mid-term

	Hardwick Road	tourist destinations and businesses in this portion of the corridor		
42	Realign and improve safety at both Adams Pond Road intersections	Safety - realign both intersections so they are perpendicular to the highway while improving sight distance and reducing accident potential	MDOT	Mid-term
Recommendations for Edgecomb				
43	Plant vegetation closer to road to reduce speed	Safety and environment - reduce speed in congested areas and improve aesthetics	MDOT	Mid-term
44	Realign Old County Road intersection	Safety - improve alignment and sight distance of intersection	MDOT	Mid-term
45	Realign and regrade McKay Road intersection	Safety - improve sight distance, intersection alignment, grade and safety at intersection	MDOT	Mid-term
46	Make Mason Road dead-end	Safety - existing alignment is unsafe; making dead end would eliminate safety hazard	MDOT	Immediate
47	Realign Eddy Road intersection and investigate methods of reducing traffic using Eddy Road as alternative to Route 27	Safety - improve intersection alignment and grade; potentially reduce volume of traffic using Eddy Road as an alternative to Route 27	MDOT	Immediate
48	Improve Middle Road sight distance	Safety - improve alignment and sight distance of intersection	MDOT	Mid-term
49	Relocate road in vicinity of McKay Road to remove curves and improve safety	Safety - existing road alignment can be improved by relocating corridor to the east of existing right of way	MDOT	Long-term
50	Improve safety by regrading and straightening between Old County and Mill Roads, north of the Town Office and south of Parsons Point Road	Safety - hills and/or curves create sight distance limitations and encourage lane drift	MDOT	Long-term
51	Evaluate speed limit at Eddy School	Safety - entrance to school is in 50 mph zone, creating potential safety concerns for buses entering and exiting the site	MDOT	Immediate