DRAFT 1-23-14

TRANSPORTATION

INTRODUCTION

The purpose of this section is to plan for the efficient maintenance and improvement of the Town's transportation network in order to accommodate existing and anticipated development within Dresden over the next ten-year period. The format of this chapter follows the State Comprehensive Plan Criteria Rule, as amended on 8/6/11. State provisions are italicized.

OBJECTIVE

To plan, finance and develop an efficient system of public transportation facilities and services to accommodate and facilitate (1) anticipated growth and economic development within the Town of Dresden and (2) anticipated increases in traffic on Rt. 197 and Rt. 27, between Exit 43 on Interstate 295 and Rt. 1 in Wiscasset, related to construction of the new Kennebec River Bridge on Rt. 197.

ASSESSMENT OF EXISTING FACILITIES AND SERVICES

(1) What are the transportation system concerns in the community and region? What, if any, plans exist to address these concerns?

As shown in Figure 1, Dresden has four state highways - Routes 27, 127, 128 and 197 – that provide excellent access to communities to the north, south east and west. However, Dresden lies in the westerly most section of Lincoln County and the only direct access to other communities in Lincoln County is via Route 27 to Wiscasset, the Indian Road to Wiscasset, Blinn Hill Road to Whitefield and the Bog Road to Alna. However, the Bog Road is only a partly improved gravel road that is difficult to use in inclement weather.

Route 27, which is also a designated evacuation route for coastal communities, is the county's most direct connection to the Gardiner-Augusta area and represents an important connection between coastal Lincoln County and inland communities.

MaineDOT defines high crash locations as those locations that experience 8 or more crashes in a 3-year period and have a critical rate factor (CRF) that exceeds 1.0. According to the Department's records, there are no high crash locations in Dresden

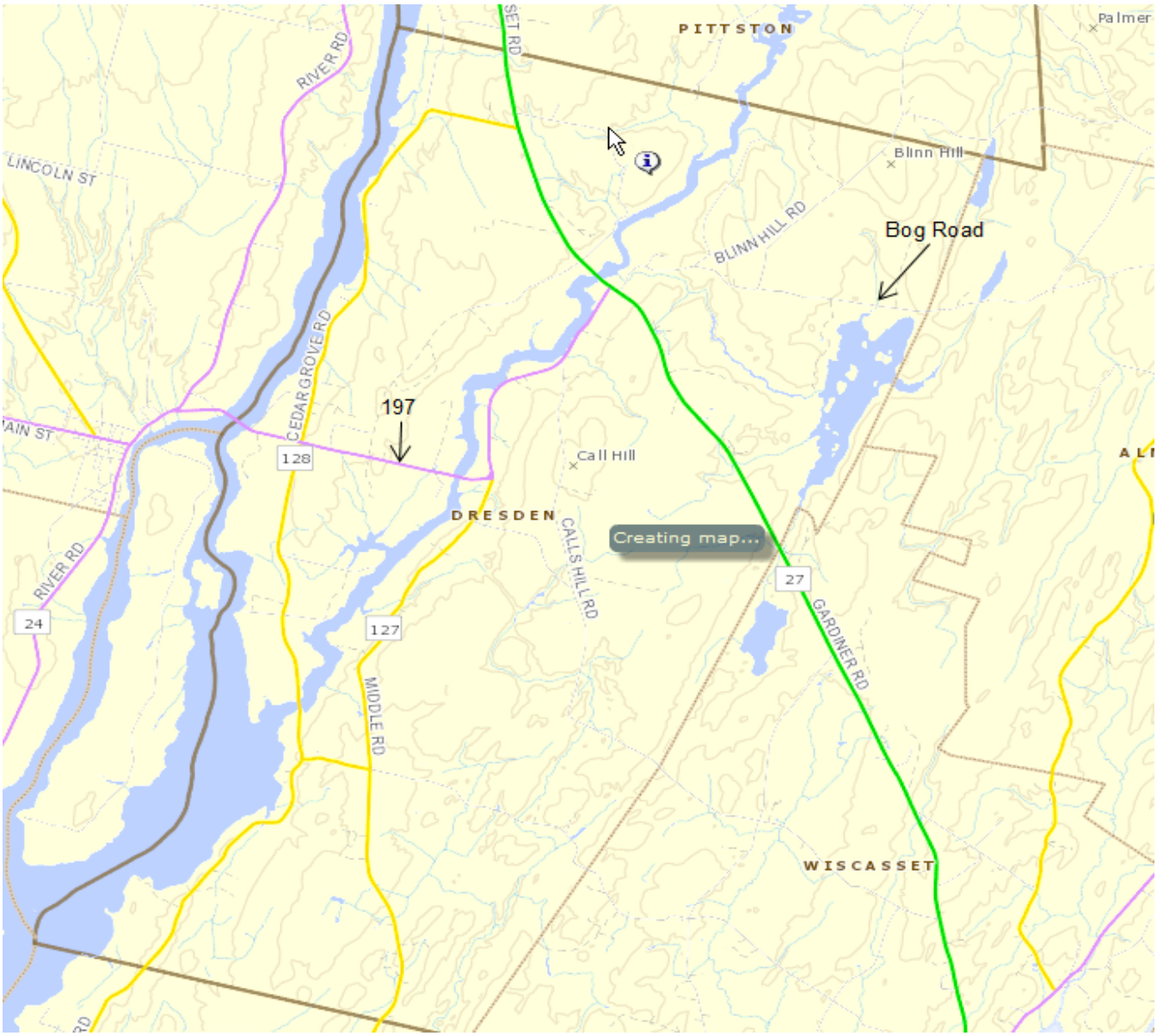
Recent MDOT work on roads in Dresden includes overlays on Routes 127 and 197 and installation of a blinking beacon at the intersection of Routes 128 and 197. Work began in the fall of 2013 to replace of the Route 197 bridge over the Kennebec River. MDOT does not have any current plans to improve other intersections or road segments.

(2) Are conflicts caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?

Route 27 is a relatively high-speed highway with wide paved shoulders. It divides the small, compact village of Dresden Mills that includes the town office and the community's only convenience store and restaurant. While there is some cross-road pedestrian movement in Dresden Mills, this is relatively limited.

Most residential development in Dresden is dispersed along state and local roads with little pedestrian and bicycle traffic. As shown in Table 6, only portions of Route 27 have traffic volumes that exceed 4,000 vehicles trips per day so conflicts between through traffic and vehicles entering and exiting driveways are currently relatively infrequent.

Figure 1 Road Connections – Dresden



Map Courtesy Maine Department of Transportation

(3) To what extent do sidewalks connect residential areas with schools, neighborhood shopping areas and other daily destinations?

Due to the dispersed nature of residential development in Dresden as well as the absence of any significant villages or population centers, there has been no demonstrated need for sidewalks or pedestrian facilities in the community. The elementary school is located in the rural northwestern section of Town near the north end of Route 128 in an area with few residences. If this area experiences further development in the future the Town should evaluate the need to provide an on- or off-site pedestrian facility that would allow students in this area to walk to school.

(4) How are walking and bicycling integrated into the community's transportation network. including access to schools, parks and other community destinations?

Refer to item (3) above.

(5) How do state and regional transportation plans relate to your community?

MDOT recently completed a Highway Corridor Prioritization (HCP) process for all non-local roads within Dresden. Local roads were not evaluated because they do not qualify for state assistance. Customer Service Levels (CSLs) were also completed for all non-local roads utilizing the following factors:

- Crash History. This measure includes the two types of motor vehicle crashes most likely related to the highway- head-on and run-off-road crashes. The A-F scale compares these crash rates with the statewide average.
- Paved Roadway Width. This measure compares total paved width (lane plus shoulder) with minimum acceptable widths by Highway Corridor Priority (not new design standards). If a highway segment fails this minimum, the Safety Customer Service Levels for that segment is decreased one letter grade.
- Pavement Rutting Safety. This measure looks at wheelpath rutting, since excessive rutting holds water and contributes to hydroplaning and icing in winter. The A-F scale set points vary by Highway Corridor Priority, and are based on hydroplane tests.
- Bridge Reliability. This measure is pass/fail. If a highway segment contains a bridge with a Condition Rating of 3 or less (excluding non-overpass decks), the Safety Customer Service Level is decreased one letter grade. These bridges are safe, but may require increased inspection or remedial work that could affect traffic flow.
- Pavement Condition. This measure uses the Pavement Condition Rating (PCR), a 0-5 scale that is composed of International Roughness Index, rutting, and two basic types of cracking. The A-F scale varies by Highway Corridor Priority.
- Roadway Strength. This measure uses the results of the falling weight deflectometer, a device that estimates roadway strength. The A-F scale is uniform across Highway Corridor Priority, since even low-priority roads must support heavy loads in Maine's natural resource-based economy.
- Bridge Condition. This measure converts the 0-9 national bridge inventory (NBI) condition ratings to pass or fail; it is uniform across Highway Corridor Priority.
- Ride Quality. This measure uses the International Roughness Index (IRI), which is expressed in inches per mile of deviation. IRI is the nationally accepted standard for passenger comfort, and the A-F scale varies by Highway Corridor Priority.

- Posted Road. Each year, MaineDOT posts more than 2,000 miles of road during spring thaw to protect their longevity, but some posted roads directly affect Maine's economy.
- Road segments that are permanently posted get a D, those with seasonal postings get a C.
- Posted Bridge. This measure uses load weight restrictions to arrive at an A-F score that varies by Highway Corridor Priority.
- Congestion Service. This measure uses the ratio of peak traffic flows to highway capacity to arrive at an A-F score for travel delay. Peak summer months are specifically considered to capture impacts to Maine's tourism industry. This scale is uniform across Highway Corridor Priority, since tourist travel is system-wide and sitting in traffic affects customer service similarly on all roads.

See http://www.maine.gov/mdot/about/assets/search/ for CSLs for non-local roads in Dresden.

As shown in Table 2, MDOT is responsible for summer maintenance of about 23.3 miles of roads in Dresden. Route 27, which is the busiest road in the community, is classified by MDOT as Highway Corridor Priority (HCP) 3, which, except for Route 1 (HCP 2), is the highest priority classification in Lincoln County. MDOT maintains HCP 3 roads to a high standard ensuring that they receive overlays and rehabilitation on a regular basis. Route 197 is classified as HCP 4 while the other state and state-aid roads are HCP 5. These roads do not receive the same level of summer maintenance as HCP 3 highways. For example, Routes 127 and 128 and Indian Road (HCP 5) will only receive light capital paving and minor drainage work every seven years or so to maintain a reasonable travel surface.

MDOT will continue to rebuild existing roads, as funds are available. However, its top priority will continue to be its pavement preventive maintenance (PPM) program. The condition of a well-paved road tends to be stable for the first 5-10 years. Then, as cracks form and water gets into pavement and base, the rate of deterioration quickens. The PPM program focuses on applying lighter, less expensive pavement treatments earlier and more frequently in a pavement's life, thereby avoiding the point at which the pavement quickly deteriorates and the cost of repair accelerates.

MDOT released its 2012-2015 Statewide Transportation Improvement Plan in October, 2011. The only Dresden projects listed were installation of the Route 197-Route 128 intersection beacon and replacement of the Route 197 bridge over the Kennebec River.

(6) What is the community's current and approximate future budget for road maintenance and improvement?

The Town of Dresden prepares an annual plan for road paving and related work. Historically, the Town's budget for road maintenance and improvements has been $26,000. The Town plans road work based, in part, on the age and condition of road surfaces as described in Table 2.

As part of the preparation of this Comprehensive Plan, the Selectboard have prepared a multi-year capital improvement plan (CIP) for Town roads. Because unforeseen events, including storm damage, weather delays, rising fuel and pavement costs, etc., can have significant impacts on planned projects, the CIP must be viewed as a living document, as opposed to a fixed plan, that is subject to review on an annual basis. The roads portion of the CIP is presented in Table 1.

Table 1
Dresden 10-year Transportation Capital Improvement Plan

Project	Year	Cost	Source of Funding

(7) Are there parking issues in the community?

The only current parking issue that has been identified relates to vehicles parked along the south side of Rt. 27 in Dresden Mills, in front of the Ships Chow Hall restaurant. These vehicles restrict the line of site to the right for vehicles stopped at the end of Rt. 197.

(8) If there are parking standards, do they discourage development in village or downtown areas?

There are no currently identified parking constraints in Town.

Refer to Table 7 for the number and location of public parking spaces.

(9) Do available transit services meet the current and foreseeable needs of community residents? If transit services are not adequate, how will the community address the needs?

There is no fixed route public bus system that serves Dresden. Coastal Trans, Inc. (CTI) is a private, non-profit corporation that provides demand response services to Dresden residents. CTI uses volunteer drivers whenever possible to reduce transportation costs. These drivers use their own vehicles to transport program-qualified people needing non-emergency transportation. Concord Coach provides twice-daily service both north- and south-bound. The bus picks up and drops off customers at Huber's market in Wiscasset but there is no bus service to Dresden.

(10) If the community hosts a transportation terminal, such as an airport passenger rail station or ferry terminal, how does it connect to other transportation modes (e.g. automobile, pedestrian, bicycle, transit)?

Dresden does not host a transportation terminal.

(11) If the community hosts or abuts any public airports, what coordination has been undertaken to ensure that required airspace is protected now and in the future? How does the community coordinate with the owner(s) of private airports?

Not applicable.

(12) If you are a coastal community, are land-side or water-side transportation facilities needed? How will the community address these needs?

Dresden is a coastal community that is limited to tidal river frontage only on the Kennebec and Eastern Rivers.

(13) Does the community have local access management or traffic permitting measures in place?

MDOT has adopted an Access Management Rule that controls the development of driveways and entrances on all state and state-aid roads in Dresden that include Route 27, 127, 128,197 and a portion of the Indian Road. A driveway is an access that serves up to five (5) dwelling units or other uses that generate less than 50 vehicle trips per day while an entrance includes anything that exceeds these driveway thresholds.

Any person proposing a driveway or entrance on one of the state-aid roads must apply for a permit from MDOT. This requirement is in addition to any local permits. All such accesses must meet minimum standards for sight distance, minimum distance to intersections, maximum width, drainage controls and backing up onto the highway, among others.

Because the Access Management Rule is primarily intended to ensure safe use of and access to roadways, towns are encouraged to adopt similar standards for development on municipal roads. Minimum sight distance requirements, drainage improvements and width standards are just as important for the safe use of local roads as for state highways. Some of Dresden's roads, such as portions of Route 127 and 128, Indian Road, Orchard Hill Road, Calls Hill Road, Blinn Hill Road, Alexander Road, Common Road and East Pittston Road have horizontal and vertical curves that limit visibility of vehicles exiting driveways. Dresden's General Performance Standards mandate minimum sight distances for driveways as well as minimum standards governing proximity of new driveways to existing driveways and intersections, maximum grade of driveways entering public roads and other provisions.

(14) Do the local road design standards support the community's desired land use pattern?

The Dresden Road Construction Standards only cover public roads and major sub-divisions. There are not any private road standards. There are no provisions requiring at least two road connections with existing public roads or roads on an approved development plan but the Site Plan Review does require circulation connection between adjacent lots, thereby avoiding unnecessary on-road vehicle movements between lots. There is no maximum dead-end road length.

(15) Do the local road design standards support bicycle and pedestrian transportation?

Except for 4-foot wide walkways along mobile home park roads, local road design standards do not address bicycle and pedestrian transportation.

(16) Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter deadends resulting in compact and efficient subdivision designs?

There have been few new subdivisions constructed in the recent past but those that have been approved did not require creation of road networks. This is principally due to the nature of the terrain and the inability to economically construct street networks.

CONDITIONS AND TRENDS

Minimum data required to address the assessment of existing facilities and services

(1) The community's Comprehensive Planning Transportation Data Set prepared and provided to the community by the Department of Transportation, the State Planning Office or their designees.

Note: This data set has been incorporated and updated in the Transportation Network map and in the Analyses section of this chapter, as well as in the items that follow.

(2) Location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.

The transportation network is dominated by vehicular traffic traveling on the community's network of public and private roads. The maintenance responsibility for these roads depends on the principal use of the roadway and falls on private individuals, the Town of Dresden or the State of Maine.

Figure 2 presents Dresden's public and private road network. As of 2011, there were 44.73 miles of public and private roads in Dresden (tables 2 and 3). These roads vary in function and character from high-speed arterials to private gravel roadways.

Arterial Roadways

Arterial roadways are defined by MDOT as travel routes that carry high speed, long distance traffic usually with a US Route number designation. In Dresden there are 4.85 miles of arterial highway consisting of Route 27.

Collector Roadways

Collector roadways are defined by MDOT as travel routes that collect and distribute traffic from and to arterials, serving places of lower population densities and somewhat removed from main travel routes. In Dresden, the 18.54 miles of collector roadways include Routes 197 (major collector) 127, 128, 197 and that portion of Indian Road between Route 127 and 128 (all minor collectors).

Local Roads

Local roads are defined by MDOT as all roadways not classified as an arterial or collector and include 34 roads totaling 21.42 miles in Dresden. All local roads are maintained by the town.

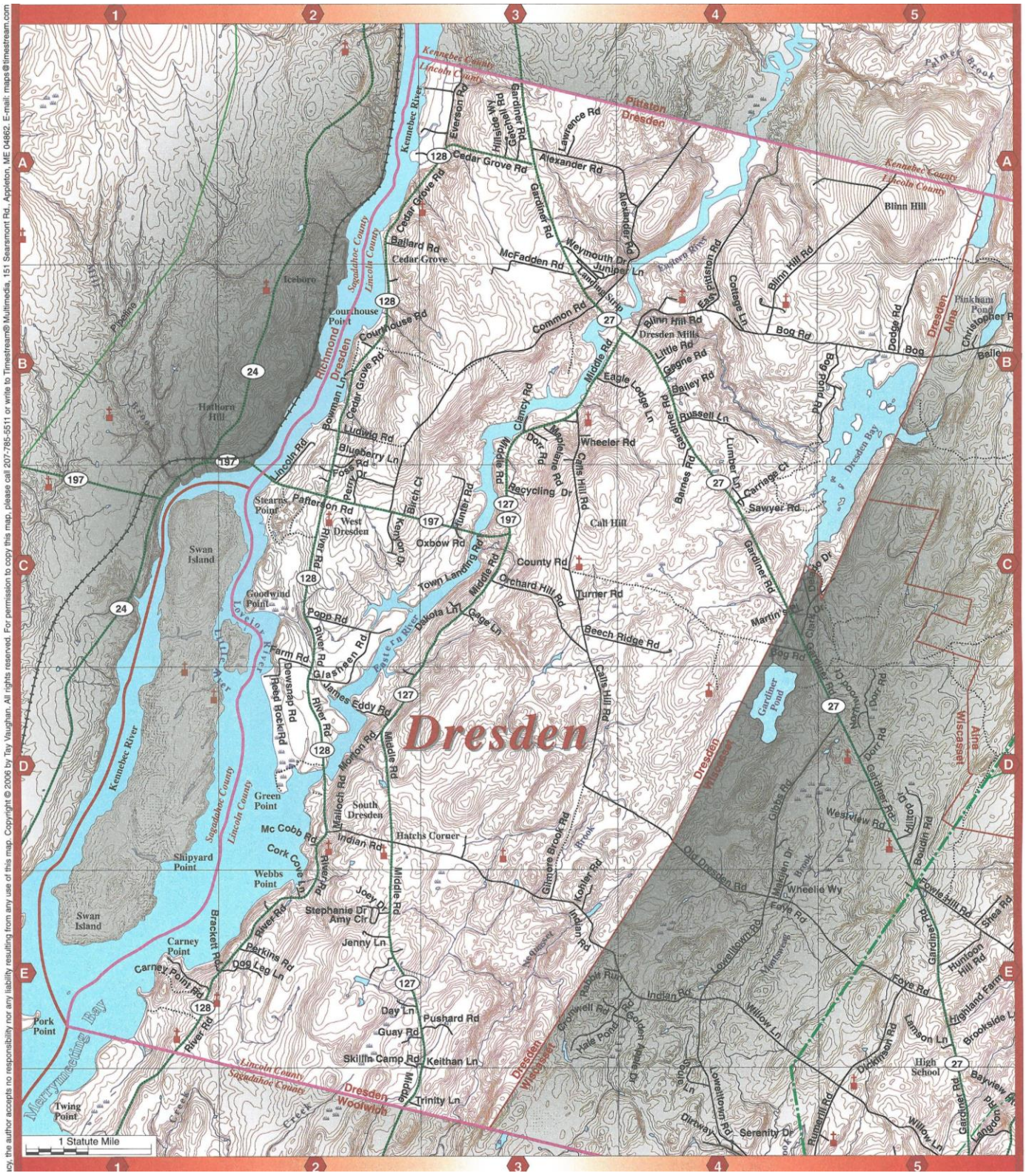
Private Roads

Private roads are maintained by individuals, associations or private businesses and total about 9.45 miles in Dresden.

The Town of Dresden is responsible for summer maintenance of 21.42 miles of roadway. Forty-three percent of town road mileage, or 9.19 miles, is gravel, which represents a very high proportion. As indicated in Table 2, one local road, Ballard Road, and a portion of another, Lawrence Road Easement, are considered to be in poor condition (due to drainage, poor travel surface and width) while Route 128 and the state portion of Indian Road are both in poor to fair condition due to deteriorated pavement, inadequate base and inadequate drainage (Indian Road). Of the remaining local public roads, about 11 miles were rated as being in fair condition while about 9.5 miles were rated in good to very good condition.

Based on the comments provided in Table 2, most of the gravel roads need only continued periodic maintenance while some of the paved roads require overlays and some improvements to drainage and base. By encouraging or permitting development in areas that are served by adequate roads, increased maintenance costs or associated future capital outlays may be avoided or at least delayed. Conversely, substantial development-related increases in traffic on roads that are not adequate may result in accelerated rehabilitation cycles or, in the case of gravel roads, demand by the public for such roads to be paved. For private roads see Table 3.

Figure 2
Dresden Public Roads



Map courtesy of Tay Vaughan, Timestream Multimedia, Appleton, Maine. 207-785-5511

Table 2 - Dresden Public Roads

Public Road	Function	MDOT Highway Corridor Priority	Length (mi)	Town Roads				Cond.	Comments/Required Work	Character/ Scenic Views
				Paved (mi)	Gravel (mi)	Summer Maint. (mi)	Winter Maint. (mi)			
Route 27	Minor Art.	3	4.85					G-VG	Limited areas of vertical cracking, recent rehabilitation	Rural views
Route 127	Minor Col.	5	7.15					VG	New overlay; fair paved shoulders	River views
Route 128	Minor Col.	5	8.87				8.87	P-F	Priority; areas of poor base, sags, significant cracking	Extensive river views, farm views
Route 197	Major Col.	4	1.90					G-VG	Good to new pavement, 2' paved shoulders	Long rural, field views
Indian Road	Minor Col.	5	0.54				0.54	P-F	Priority; many hor and vert cracks, poor base, drainage	
Indian Road	Local	6	2.07	2.07		2.07	2.07	F-VG	New overlay; areas of recent overlay have some cracking due to poor base	
Alexander Road	Local	6	2.02	0.47	1.55	2.02	2.02	F-G	Gravel - good surface, narrow many hor & vert curves; paved - F-G with vert cracking	Some river, long farm views
Ballard Road	Local	6	0.11		0.11	0.11	0.11	P	Gravel; drainage, poor surface, 1-lane	
Beverage Road	Local	6	0.06			0.06	0.06			
Blinn Hill Road	Local	6	3.22	3.22		3.22	3.22	F-VG	VG where new overlay, elsewhere F with areas of poor base, hor and vert cracking	High, long views
Bog Road	Local	6	1.33		1.33	1.33	1.33	F	Gravel, much shading, drainage, many curves, good crown	
Calls Hill Road	Local	6	3.87	3.87		3.87	3.87	F	Mostly F with areas of poor base, much vert cracking	
Clancy Road – Section	Local	6	0.13		0.13	0.13	0.13	G	Gravel, narrow, needs ditching	Rivefront
Common Road – Section	Local	6	0.98	0.98		0.98	0.98	F	Many hor and vert cracks with good sealing, base OK	Long farm, rural views, river views
Court House Road	Local	6	0.14		0.14	0.14	0.14	G	Gravel	
Everson Road	Local	6	0.66		0.66	0.66	0.66	F-G	Gravel, crowned, some drainage issues, needs ditch cleaning	Old field, limited river views
Glasheen Road – Section	Local	6	0.39		0.39	0.39	0.39	F	Gravel, drainage, narrow	Farm, river views
Holly Oaks Easement	Local	6	0.28			0.28	0.28			
Hunter Road – Section	Local	6	0.14		0.14	0.14	0.14	G	Gravel, good surface, narrow	Farm, rural views
Kohler Road – Section	Local	6	0.15		0.15	0.15	0.15	G	1-lane gravel	
Lawrence Road Easement	Local	6	0.14		0.14	0.14	0.14	P-F	Gravel, narrow, drainage	
Lincoln Road – Lower and Upper	Local	6	0.63		0.63	0.63	0.63	F-G	Gravel, very narrow, drainage, some crowning	Riverfront
Ludwig Road – Section	Local	6	0.28		0.28	0.28	0.28	G	Gravel, some vert curves, drainage OK, good surface, narrow, crowned	
Malloch Road – Section	Local	6	0.06		0.06	0.06	0.06	G	1-lane gravel	
Old East Pittston Road – Section	Local	6	1.55		1.55	1.55	1.55	G	Gravel	
Orchard Hill Road	Local	6	1.08	1.08		1.08	1.08	F-G	Recent overlay G, rest F with hor curves, vert cracks, lack of crown	
Oxbow Road – Section	Local	6	0.22		0.22	0.22	0.22	F	Gravel, no crown, narrow, drainage issue at peak	Rural views
Popps Road	Local	6	0.75		0.75	0.75	0.75	G	Gravel, crowned, good drainage, narrow, excessive grade at Route 128	Farm views
Ray-El Acres Easement – Perry Drive	Local	6	0.52		0.52	0.52	0.52	G	Gravel, crowned, good ditching	
Recycling Court	Local	6	0.01	0.01		0.01	0.01	G	Paved	
Sand & Salt Shed – 700'	Local	6	0.13			0.13	0.13			
Thayer Hill Road – Section	Local	6	0.06			0.06	0.06			
Town Landing Road	Local	6	0.14		0.14	0.14	0.14	F	Gravel	
Reed Rock Easement	Local	6	0.30		0.30	0.30	0.30	G	Gravel	Farm views, river view at end
			44.73	11.70	9.19	21.42	30.83			

Table 3 - Dresden Private Roads

Amy Cir.	0.32	Dog Leg Ln.	0.35	McCobb Rd.	0.06
Bailey Rd.	0.15	Dorr Rd.	0.16	McFadden Rd.	0.77
Barnes Rd.	0.17	Eagle Lodge Ln.	0.28	Morton Rd.	0.09
Beech Ridge Rd.	0.73	Farm Rd.	0.23	Noaa Rd.	0.11
Birch Ct.	0.08	Gage Ln.	0.10	North Ln.	0.13
Blueberry Ln.	0.41	Gagne Rd.	0.11	Penibagos Trl.	0.25
Bog Pond Rd.	0.68	Getchell Rd.	0.08	Perkins Rd.	0.21
Bowman Ln.	0.09	Gilmore Brook Rd.	0.22	Pushard Rd.	0.30
Brackett Rd.	0.07	Guay Rd.	0.18	Russell Ln.	0.67
Calistas Way	0.48	Hillside Way	0.17	Sawyer Rd.	0.03
Carney Point Rd.	0.45	James Eddy Rd.	0.26	Skillin Camp Rd.	0.22
Carriage Ct.	0.12	Jenny Ln.	0.24	Stephanie Dr.	0.09
Cork Cove Ln.	0.09	Joey Dr.	0.09	Tall Pine Ridge Rd.	0.07
Cottage Ln	0.01	Juniper Ln.	0.12	Taryn Dr.	0.33
County Rd.	0.06	Keithan Ln.	0.10	Trinity Ln.	0.10
Dakota Ln.	0.17	Kenyon Dr.	0.30	Turner Rd.	0.06
Daves Way	0.65	Little Rd.	0.08	Webb Rd.	0.07
Day Ln.	0.16	Lumber Ln.	0.19	Weymouth Dr.	0.51
Densmore Ln.	0.48	Maki Ln.	0.10	Wheeler Rd.	0.11
Dewsnap Rd.	0.14	Maplelane Rd.	0.05		9.45
Dodge Rd.	0.68	Marino Way	0.08		

Within the overall context of connecting Maine, transportation planning is now done regionally. In 2005, The Lincoln County Planning Office (now LCRPC), the Mid-coast Council for Business Development and Planning (now Mid-coast Council of Governments) and MCEDD prepared a Regional Transportation Assessment (RTA), which identified Corridors of Regional Economic Significance (CRES) and listed potential improvements to the corridors (corridors in this context does not only mean a vehicular roadways but includes related transportation facilities such as bike-ped routes, rail corridors, ferry lines and related support facilities). CRESs in Lincoln County include Routes 1 and 27 and that portion of Route 32 between Routes 1 and 17. To date, Corridor Management Plans (CMPs) have been completed for Route 32 and Route 27 between Routes 1 and 96 on the Boothbay peninsula. LCRPC has tentative plans to invite the communities of Dresden and Wiscasset to develop a CMP for the remainder of Route 27 within the next two years. For an example of a CMP, refer to the Route 27 CMP that was prepared by the Towns of Boothbay, Boothbay Harbor and Edgecomb in 2011 (see http://lcrpc.org/uploads/visual_edit/j98218r27plan11g1-2.pdf).

Bridges

Table 4 lists bridges in Dresden, all but one of which are owned and maintained by the State. MDOT is replacing the Maine Kennebec Bridge connecting Dresden and Richmond in FY13 and FY 14.

Table 4 - Bridges in Dresden, 2012

Location	Name	Topo Feature	Owner/ Maintainer	Year built	Deck Condition	Superstructure Condition	Substructure Condition	Culvert Condition
Route 128	Lower	Eastern River	MDOT	1955	Satisfactory	Good	Good	N/A
Route 197	Middle	Eastern River	MDOT	1936	Satisfactory	Fair	Satisfactory	N/A
Route 27	Upper	Eastern River	MDOT	1991	Good	Good	Very Good	N/A
Route 197	Maine Kennebec	Kennebec River	MDOT	1931	Poor	Poor	Poor	N/A
Blinn Hill Road	Mill Brook	Mill Brook	Town	1996	N/A	N/A	N/A	Very Good

(3) Identify potential on and off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts and other activity centers.

With the exception of paved road shoulders on Route 27, there are no bicycle facilities in Dresden and there are no sidewalks or pedestrian facilities in the community. MDOT has no plans to install paved shoulders on any other state or state-aid road in Dresden and the dispersed nature of residential development in Dresden would not support pedestrian facilities.

(4) Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities, etc. and related hours of operations.

There are few businesses in Dresden and those that do exist have few employees. With the exception of a small restaurant, convenience store and post office in Dresden Mills, there are no retail uses that generate traffic. Other public spaces include the Pownalborough Courthouse on Route 128, the Fire Station/Pownalborough Meeting Hall on Route 197, the town office and two inactive churches in Dresden Mills and the elementary school on Route 128. With the exception of the beginning and end of the school day at the elementary school, none of these uses generate significant traffic.

MDOT counts traffic volume on a rotating schedule. Because traffic counts are taken throughout the non-winter months, they must be statistically adjusted so that they can be made comparable regionally and state-wide. In addition, peak traffic occurs at different times in different areas of the state. The Department, therefore, applies factors to the traffic counts to produce Average Annual Daily Traffic (AADT). The most recent available counts in Dresden are presented in Table 5.

Table 5 - Traffic Counts Dresden

Roadway	Location	AADT[1,2]		Difference
		2000	2007	
Route 27	South of Route 127/197		**4290**	-
Route 27	North of Alexander Road	4560	4060	-8.9%
Route 27	South of Blinn Hill Road	3860	3310	-8.6%
Route 27	Wiscasset Town Line	3960[3]	3160	-20.2%
Blinn Hill Road	Route 27	620	720	16.0%
Indian Road	East of Route 128	1100	1000	-9.1%
Route 127	Woolwich Town Line	2150	2050	-9.5%
Route 127/197	North of Route 197	2400	2240	-6.7%
Route 127	South of Route 197	1710	1600	-6.4%
Route 127/197	South of Route 27	2380	2370	-0.4%
Route 128	Woolwich Town Line	440	430	-2.3%
Route 128	North of Route 197	920	1050	14.1%
Route 128	South of Route 197	1420	1470	3.5%
Route 197	East of Route 128		1640	
Route 197	West of Route 128		3210	
Route 197	West of Route 127		1560	
Route 197	Richmond Town Line	2930[3]	3340	14.0%
[1] Average Annual Daily Traffic	[2] Source MDOT	[3] 2002		

Table 7 indicates that, overall, there does not appear to be an overall pattern to the increases and decreases in average annual daily traffic (AADT) volumes experienced during the study period. While the total volume of traffic at all locations with comparable data decreased 5.8% from 2000 to 2007, the trends for individual roads is less clear with Routes 27 and 127 showing decreases and Routes 197 and 128 mostly showing increases. While adverse weather conditions or road work could have some effect on traffic counts, the fact that reductions were experienced on most of the roads for which comparable data is available is probably an accurate reflection of the overall trend of traffic volumes in Dresden during the period.

It is also important to consider that the latest available traffic counts, taken in 2007, precede the very severe recession that has impacted Lincoln County and the rest of Maine. It is quite likely that traffic volumes since 2007 have decreased even more on the community's roadways. Table 6 presents traffic counts from permanent MDOT traffic counting stations. They record traffic volumes 24-7 year-round so the AADT at these locations is not estimated but actual. Trends in Boothbay, the count location nearest to Dresden, are similar to results from other mid-coast locations. Traffic volumes increased through the 1990s and peaked in the mid-2000s. This pattern is statewide, as shown by the trends in vehicle-miles traveled (VMT) during the same period. Statewide VMT peaked in 2006 and has not fully recovered. The 2010 VMT is not much different than the 2000 VMT.

Table 6 - 24/7 Traffic Counts from Mid-Coast Permanent Counting Stations

Year	Route 27 Boothbay	Route 1 Rockport	Route 3 Trenton	Statewide
2010	6,540	13,090	13,360	14.5 billion
2005	6,650	13,860	13,640	14.9 billion
2000	6,470	14,500	13,460	14.3 billion
Change 2005-2010	-1.7%	-5.6%	-2.0%	-2.7%

(5) Identify policies and standards for the design, construction and maintenance of public and private roads.

Dresden is concerned that all roadways and bridges be well engineered and built to last so that potential damage will be minimized from flooding and adverse weather and vehicular use. Sub-standard design or construction will result in higher costs to taxpayers and/or subdivision associations for repair and remediation. Road damage from flooding, adverse weather conditions and from use, especially heavy trucking activity, requires that roads be built to appropriate standards, including sufficient sub-bases, drainage systems and grading. While this may result in higher development costs upfront, in the long-term it will reduce costs for the taxpayers, residents, and business owners, all of whom depend on the road network.

The Dresden Land Use and Development Ordinance includes road construction standards for town roads. The following are highlights of the standards:

- Minimum ROW width – 50 feet
- Minimum road surface width – 18 ft.
- Minimum road surface construction –
  - Graveled: the traveled way shall be surfaced to 20 (or 18) feet in width, with crushed gravel to a depth of four (4) inches. No stone in the traveled surface will have a diameter greater than two (20 inches; or
  - Paved (necessary for acceptance by Town): pavement shall be a minimum of hot plant mix bituminous pavement, grade B, applied at a uniform compacted thickness of two inches, plus ½ inch finish coat.
  - The road shall be suitably crowned.
- Minimum road base width – 24 feet
- Minimum road base construction –
  - The top six (6) inches of all organic material shall be removed for the full width of the actual road base plus ditching
  - The road base shall consist of a minimum of eighteen (18) inches of gravel, no stone being bigger than six inches in diameter.
- Shoulders - shoulder width shall be a minimum of two (2) feet on either side of the traveled way. The slope of the shoulders will be ½ inch per foot.
- Ditching – all ditching must be graded and seeded or otherwise stabilized. The ditching must be sufficient to handle the runoff of the area. Slope shall be at a minimum of ¼ inch per foot.
- Turnarounds – adequate turnaround areas (minimum of sixty (60) feet in diameter if circular) shall be built at any temporary or permanent dead-ends.
- Culverts – culverts shall be of adequate size and their size, type and installation shall be approved by the Town Road Commissioner.
- Road banks shall be no steeper than a slope of two (2) horizontal to one (1) vertical and shall be graded and stabilized in accordance with the provision for erosion and sedimentation control
- Road grades shall be no greater than ten (10) percent except for short segments of less than two hundred (200) feet.
- In order to prevent road surface drainage from directly entering water bodies, roads shall be designed, constructed and maintained to empty onto an unscarified buffer strip at least fifty (50) feet plus two times the average slope, in width, between the outflow point of the ditch or culvert and the normal highwater line of a water body, tributary stream, or upland

edge of a wetland. Road surface drainage which is directed to an unscarified buffer strip shall be diffused or spread out to promote infiltration of the runoff and to maximize channelized flow of the drainage through the buffer strip.

- Ditch relief (cross drainage) culverts, drainage dips and water turnouts shall be installed in a manner effective in directly drainage onto unscarified buffer strips before the flow in the road or ditches gains sufficient volume or head to erode the road or ditch. To accomplish this the following shall apply:
  - Ditch relief culverts, drainage drops and associated water turnouts shall be spaced along the road at intervals no greater than indicated in the following table:

Road Grade Percent	Spacing Feet
0 - 2	250
3 - 5	200 - 135
6 - 10	100 - 80
11 - 15	80 - 60
16 - 20	60 - 45
21+	40

  - Drainage dips may be used in place of ditch relief culverts only where the road grade is ten (10) percent or less
  - On road sections having slopes greater than ten (10) percent, ditch relief culverts shall be placed across the road at approximately a thirty (30) degree angle down slope from a line perpendicular to the centerline of the road
  - Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning and their inlet and outlet ends shall be stabilized with appropriate materials.
- Ditches, culverts, bridges, dips, water turnouts and other storm water runoff control installations associated with roads shall be maintained on a regular basis to assure effective functioning.
- Road crossings of watercourses shall be kept to a minimum number necessary
- Bottoms of culverts shall be installed at stream bed elevation
- All cut or fill banks and areas of exposed mineral soil shall be re-vegetated or otherwise stabilized
- Bridges or culverts of adequate size and design shall be provided for all road crossings or watercourses. The requirement for bridge or culvert may be waived for winter use forest management by obtaining a permit from the Planning Board.

(6) List and locate municipal parking areas including capacity and usage.

Table 7 - Public Parking Spaces in Dresden

Location	Number	Type
Bridge Academy	12 (est).	Off-street
New Fire Station	30	Off-street
Dresden Historical Society	3	Along highway
Pownalborough Courthouse	15	Off street
School	26	Off-street
Town Office	10 (est.)	Off-street
DFD Jewett Station	4	Off-street
US Post Office	21	Off-street

Dresden Masons Lodge	8	Along highway
Old Town Hall	4	Off-street
Dresden Recycling Center	6	On-street

(7) Identify airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances in place.

There are no general aviation airports in Dresden. The closest airport that serves the community is the Wiscasset Airport. Other airports are the Maine State Airport in Augusta, the Knox County Regional Airport, the Portland International Jetport and Bangor International Airport. The Augusta, Bangor, Knox County and Portland airports offer scheduled air service. Various improvements are planned at these airports as part of MDOT's Six-Year Plan.

(8) Identify bus and van services.

There are no bus or van services other than those provided by Coastal Trans as discussed in Section B.9

(9) Identify existing and proposed marine and rail terminals within your community including potential expansions.

The Rockland Branch, which is owned by the Department of Transportation and operated by the Maine Eastern Railroad, is the closest railroad to Dresden. The railroad provides limited freight service and seasonal passenger rail service from a station located off Water Street in Wiscasset. Wiscasset has developed plans to create a multi-modal transportation facility on Railroad Avenue. The facility would include a new passenger rail station, bus loading and unloading areas and a parking lot.

(10) If a coastal community identify public ferry service and private boat transportation support facilities (may be covered under Marine Resources with cross reference) including related water-side (docks/piers/wharves) and land-side (parking) facilities.

N/A

(11) Environmental Impacts of Transportation Facilities

There has been very little development of new roads in Dresden in the past 30-40 years except for those serving several small residential subdivisions. Most other private roads have been in place for many years. The History of Growth Maps presented in the Land Use chapter demonstrate that most recent residential construction has occurred along the town's state and state-aid roads with additional development in residential subdivisions and lot-by-lot development along private roads. Dresden does not have provisions encouraging open space subdivisions, which can be an effective tool in preserving undivided open space when residential subdivisions are developed and reducing the amount of road construction necessary to support new development. Increasing the existing one-acre minimum lot size in rural areas but allowing lot sizes to be reduced if open space is permanently preserved may be a consideration in the future.

No records are maintained regarding transportation-related wildlife mortality. Given the relatively high speeds on state highways in Dresden, however, there is probably relatively high wildlife mortality.

Dresden does not specifically exempt from regulation noise generated by transportation activities but it does have regulations that address maximum sound levels at property boundaries. There have been few transportation-related noise complaints over the years.

(12) Traffic Control Devices

The only traffic control devices employed in Dresden are stop signs at all intersections and a flashing beacon at the intersection of Routes 197 and Route 128. The flashing beacon was installed in 2013 and MDOT has indicated there is no need to install additional traffic control devices within the community.

(13) Land Use

Dresden historically consisted of five well-defined village areas as shown in Figure 3, which presents portions of the 1891 and 1892 USGS Maps showing the road network and locations of principal structures. Almost all residential development is located in these villages or is widely spaced along rural roads, which is typical of farming communities.

As shown on the History of Growth Maps presented in the Land Use chapter, most residential development up to the 1970's in Dresden was clustered in or in proximity to West Dresden, Cedar Grove, Dresden Mills, South Dresden and Hatch's Corner with some additional mostly farm-related low density development along state highways. By 2007, residences in Dresden had more than doubled with many located within previously rural wooded and agricultural areas of the community.

Figure 3 1891 -1892 USGS Map

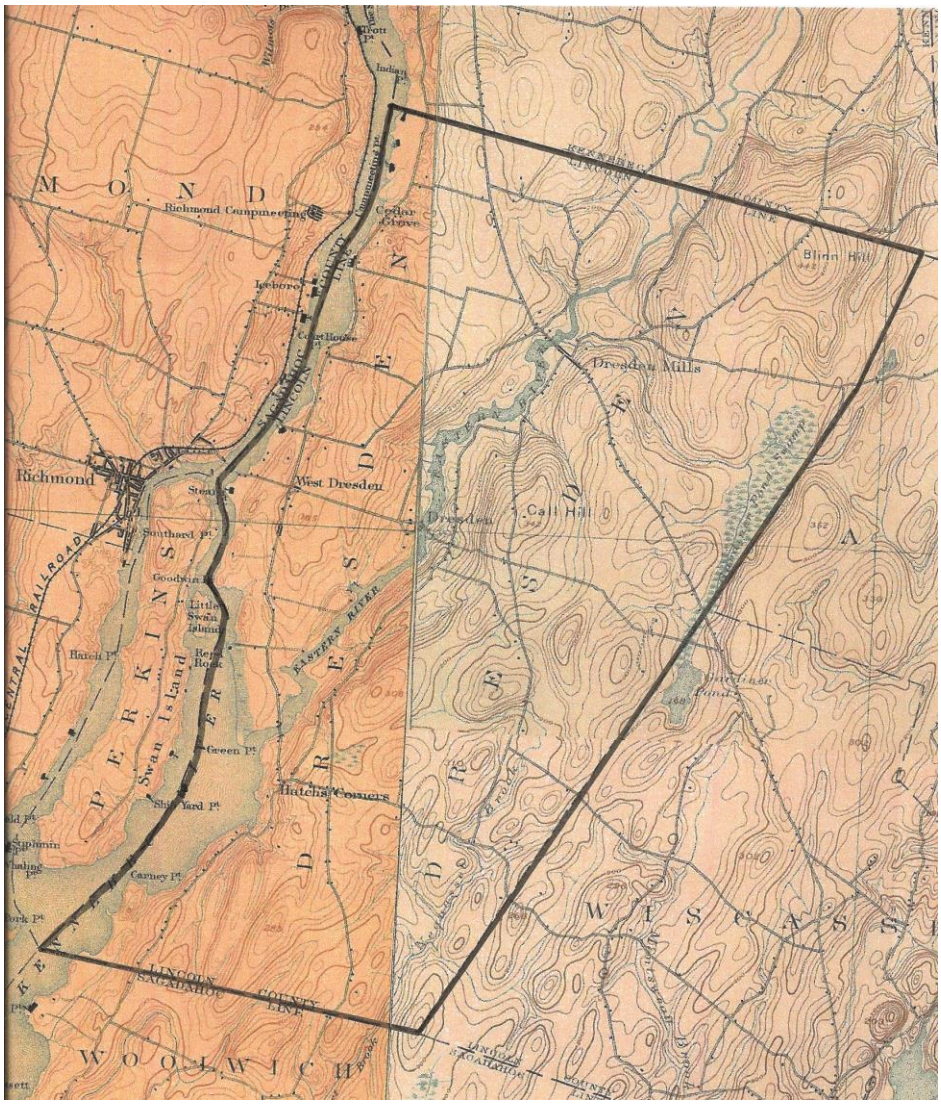


Table 3 documents that Dresden has an extensive private road network with 9.45 miles of private roads. Many of these roads were developed incrementally over time and do not meet basic road construction standards. Almost all private roads have a non-paved surface. Because these roads satisfy the standard for road frontage, additional lot-by-lot development can occur on them without improvements.

As shown in table 8, relative to its size, Dresden has fewer linear miles of road per square mile of land area requiring summer or winter maintenance than all but one of the listed communities. In addition, Dresden has the highest number of linear miles of gravel roads per square mile of land than any other listed community.

(14) Scenic Byways and Special Views

There are no State identified scenic byways in Dresden. Roads with scenic character are identified in Table 2.

Table 8
Comparison of Public and Private Road Statistics in Selected Communities

Town	Land Area[1]	All Public Roads		Town Roads								Private Roads		Ratio Public To Private Roads
				Summer Maintenance		Winter Maintenance[2]		Paved		Gravel				
	mi^2	total miles	miles/ mi^2	total miles	miles/ mi^2	total miles	miles/ mi^2	total miles	miles/ mi^2	total miles	miles/ mi^2	total miles	miles/ mi^2	
Dresden	30.5	44.73	1.47	21.42	0.70	30.83	1.01	11.17	.37	9.19	.30	9.45	.31	4.73
Damariscotta	18.1	26.36	1.46	15.77	0.87	21.75	1.20	21.75	1.20	0.0	0.0	25.4	1.40	1.04
Jefferson	52.7	67.21	1.28	30.7	0.58	48.45	0.92	26.59	0.5	4.19	0.08	53	1.01	.99
Whitefield	46.8	66.86	1.43	39.23	0.84	58.91	1.24	28.58	0.61	10.65	0.23	n/a	n/a	
Newcastle	29	53.72	1.85	28.77	0.99	42.16	1.45	27.38	0.94	4.56	0.16	n/a	n/a	
Alna	20.9	30.42	1.46	14.76	0.71	30.42	1.46	9.46	0.45	5.3	0.25	2.22	0.11	13.70
S Bristol	13.2	26.3	1.99	15.27	1.16	26.18	1.98	15.96	1.21	0.24	0.02	28.41	2.15	.92
Nobleboro	19	36.69	2.09	25.7	1.35	32.69	1.72	24.43	1.29	1.27	0.07	36.29	1.91	1.01
Boothbay Harbor	6.5	31.8	4.89	23.2	3.57	32.05	4.82	22.90	3.52	0.30	.05	11.90	1.83	2.67

[1] Does not include water bodies
[2] Includes state roads

15. Midcoast Economic Development District

The Lincoln County Planning Office, now part of the Lincoln County Regional Planning Commission, the Mid-Coast Council for Business Development and Planning, now the Mid-Coast Council of Governments, and MCEDD prepared the 2005 Regional Transportation Assessment with the assistance of MDOT. The purposes of the Assessment included:

- Identification and prioritization of major transportation corridors within the MCEDD region
- Inventory of significant land uses, economic conditions and transportation facilities
- Identification of local and regional concerns related to the corridors
- Identification of significant constituencies such as freight carriers, transit riders and business and tourism interests

A survey was developed and distributed it to a wide variety of local officials and conducted two forums. The purposes of the forum were to review and comment on the results of the survey, the preliminary prioritization of corridors and objectives of each corridor. The Assessment was based on the following assumptions:

- Maine's population will continue to grow, resulting in more people using the same roads.
- Migration of people from cities to rural areas will continue, resulting in more frequent and longer trips to work and shop.
- Vehicle miles of travel and traffic will continue to grow faster than the population.

- There will be increased traffic delays and congestion.
- Insufficient planning will continue to be a problem. Some municipalities have comprehensive plans that designate growth areas on arterials. Other communities have no long-range plans.
- Public transportation will continue to be absent in many areas.
- Strip commercial development along Route 1 and some other arterials will result in more curb cuts, turning vehicles, reduced speed limits and more accidents.
- BIW and BNAS (since closed) will continue, but if not, there could be more traffic resulting from any redevelopment of the properties.
- Funds for new road construction will be limited.

The significant transportation corridors identified in the Assessment are, in order of priority:

- Route 1 corridor
- Route 24 corridor
- Route 196 corridor
- Route I-295 corridor
- Route 27 corridor
- Route 32 corridor

The only corridor within Dresden is Route 27, which is a minor arterial highway.

POLICIES

Minimum policies required to address State goals:

(1) To prioritize community and regional needs associated with safe, efficient and optimal use of transportation systems.

(2) To safely and efficiently preserve or improve the transportation system.

(3) To promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize increases in vehicle miles traveled.

(4) To meet the diverse transportation needs of residents (including children, the elderly and disabled) and through travelers by providing a safe, efficient, and adequate transportation network for all types of users (motor vehicles, pedestrians, bicyclists).

(5) To promote fiscal prudence by maximizing the efficiency of the state or state-aid highway network.

STRATEGIES

1. Develop or continue to update a prioritized improvement, maintenance, and repair plan for the community's transportation network.
2. Prepare and update a multi-year road improvement program to include maintenance, upgrading and rebuilding priorities by year, as well as costs for these

projects, for all roads. See the Capital Investment Plan of this Comprehensive Plan for recommended projects and estimated costs.

3. Communicate with MDOT with regard to road safety concerns that include, but are not limited to, the following:
   a. The need for a flashing red and yellow light at the intersection of Rt. 27 and Rt. 197 in Dresden Mills
   b. Flashing school warning lights near the elementary school on Rt. 128
   c. A deep ditch alongside the inside curve at the east side of Rt. 127 between the Indian Road and Rt. 197
   d. The elimination of a short passing zone on Rt. 127 in the area of the Dresden Recycling Center
   e. Parking along the side of Rt. 27 in Dresden Mills, close to the intersection with Rt. 127
4. Initiate or actively participate in regional and state transportation efforts.
5. Maintain, enact or amend local ordinances as appropriate to address or avoid conflicts with:
   a. Policy objectives of the Sensible Transportation Policy Act (23 MRSA §73);
   b. State access management regulations pursuant to 23 MRSA §704;
   c. In order to maintain and improve traffic flows, and improve safety, future land use ordinance provisions should be in harmony with access management performance standards set in current State regulations.
   d. State traffic permitting regulations for large developments pursuant to 23 MRSA §704-A.
6. Maintain, enact or amend ordinance standards for subdivisions and for public and private roads as appropriate to foster transportation-efficient growth patterns and provide for future street and transit connections.
7. Impact Fee: Investigate, and implement if warranted, an impact fee system that applies to all new major development that affects traffic use of the Town's roadways to assist in providing funds to upgrade these roadways while reducing the property tax burden for such improvements.
8. Pedestrians and Bicycles: Through public participation and in agreement with landowners the Town will prioritize potential projects in the future that promote pedestrian and bicycle safety by creating multi-use walking and bicycling paths, bicycles lanes, sidewalks, by extending existing paths where best suited and by installing modern warning signs where appropriate. The Town will then seek CDBG infrastructure funds, Maine DOT Enhancement funds and other sources for these proposed projects. Public support for these project proposals will be obtained before the Town commits resources.
9. Transit Service: Work with Coastal Trans, Inc. to better meet the needs of elderly and disabled residents who lack their own transportation, by providing carpools, van/jitney, to stores and services within Town and on the mainland.

10. Parking:
    a. Consider acquisition of property adjacent to Town Office in Dresden Mills for additional parking and future expansion possibilities.
    b. Consider development of a Park & Ride lot for BIW, State and other workers and seek CDBG infrastructure funds, Maine DOT Enhancement funds and other sources.
    c. Provide better signage at the Pownalbourgh Fire Station to encourage public parking at the west side of building, away from the main entrance to the fire station.