Concept Plan for Plum Creek's Lands in the Moosehead Lake Region

Appendices

April 2006

Plum Creek

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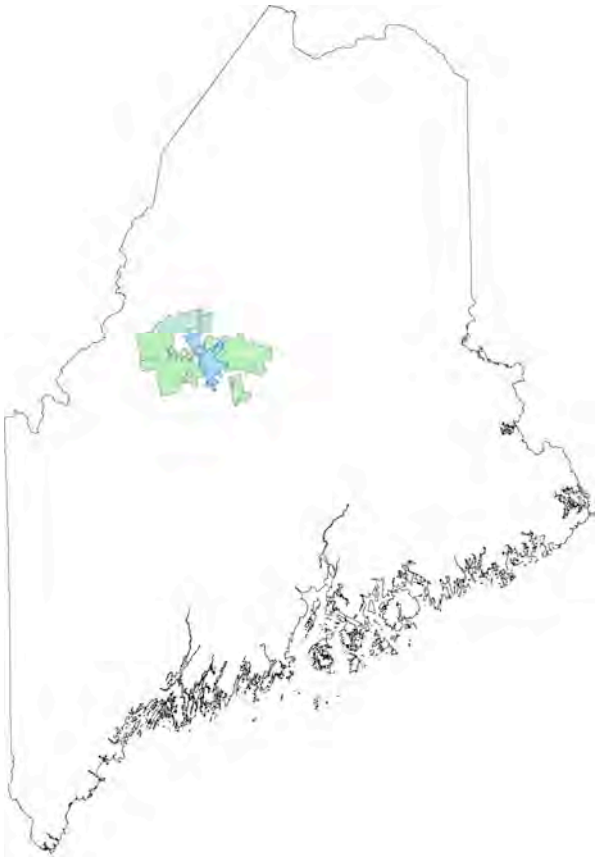
Estimated Economic Impacts of Implementing The Proposed 2006 Plum Creek Rezoning Plan In the Moosehead Lake Area



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Preface to the 2006 Revision to the August 2005 Economic Impacts Report

This March 2006 Report revises the August 2005 Estimated Economic Impacts Report on Plum Creek Timber Company's 2005 Plan Application to the Land Use Regulation Commission (LURC), to rezone 421,000 acres in the Moosehead Lake area. Compared with the 2005 Plan, the revised 2006 Plan Application:

- reduces the shorefront lots from 575 to 480 including 332 in Somerset County, and 148 in Piscataquis County, and reduces the number of pond and lakes on which there would be shorefront development from 15 to 7;
- increases the backland lots from 400 to 495, including 155 in Somerset County, and 340 in Piscataquis County;
- removes all (30) lots from Moose River and also removes 30 lots from remote ponds;
- removes previously proposed sporting camp development;
- removes previously proposed campground development;
- removes previously proposed campground stores;
- removes previously proposed trail hut development;
- relocates a proposed tourism facility to Big Moose Mountain in Piscataquis County, and adds other recreational uses and accommodations to the facility;
- relocates and delays for 7 years a proposal for a tourism facility in the Lily Bay area;
- includes on-site employee housing at the tourism facilities;
- adds 12 more miles of trails, for a total of 144 miles of donated trails;
- adds a community fund for schools and recreational amenities, financed incrementally by a fee being the greater of $1,000 or 1% of the sales price of the shorefront and backland lots, estimated to be approximately $1,000,000;
- donates upon Plan approval a permanent working forest conservation easement, over 61,000 acres in the Plan area, including 11 miles of shorefront;
- offers, upon Plan approval, a 5-year option to a qualified conservation entity to purchase a working forest conservation easement over an additional 269,000 acres;
- Creates a 30-year no-development buffer of 25,000 acres;
- Increases total potential shoreland conservation to 69 lakes and ponds, with up to 88% of all shoreland in the Plan Area (205 miles of shoreland) permanently protected.

In addition, certain assumptions, such as anticipated average daily tourist expenditures, estimated number of visitor days, and the degree of the "multiplier effect," are revised in response to more recently available data.

Summary

This March 2006 Report presents an analysis of the economic impacts that may result from implementation of the 2006 Plum Creek rezoning Plan for the lands in the Moosehead Lake region owned by Plum Creek Timber Company. This Plan, if approved and implemented as envisioned, would result in three types of development: residential, industrial, and tourism and recreation related development. Development would take place over a number of years, and the effects in the economy would not become fully apparent for at least a decade and possibly longer.

The total economic effects of these development elements are inevitably uncertain at this stage. Since the Plan only proposes a zoning change, it is not what development will take place where and at what pace. Market conditions may change, and separate elements of the Plan will be subject to further regulatory review. The proposed zoning establishes limits on the type and quantity of development, but the degree to which these limits are reached will depend on subsequent subdivision or site plan application approvals, and on markets that are not fully predictable.

However, it is possible to construct an analysis of the economic and demographic effects on the Moosehead Lake region based on what is known about the residential development component of the proposed Plan and based on reasonable assumptions about the size and scope of the recreation-tourism and industrial components. This type of scenario planning is an essential part of understanding the possible consequences of the decisions regarding the proposed rezoning Plan.

A substantial amount of information is available regarding the residential development proposal in terms of the number of units, where they are located, their possible value, and approximately what the development time table will be. The residential development scenarios examined here are based on information from Plum Creek about the number and types of properties to be developed, and the proposed phasing of site plan and subdivision applications. Assumptions about the timing of actual development were made to simulate likely market behavior over an extended period.

The industrial development is likely to consist of a saw mill or a similar wood products manufacturing facility, but the exact size and timing of this facility are unknown. A rezoning application for a $60 million sawmill in Sapling Township came before the Land Use Regulation Commission in 2004 and was projected to contribute 100 new jobs to the local economy. This proposal is the basis for the analysis of an industrial facility which might be developed within that part of the proposed rezoning.

The plan for recreation related facility improvements is very specific about the improvements that will be made in trail systems and related facilities, as well as the possible development of two lodging facilities in the region. The combination of recreational amenity improvements plus lodging facilities will likely result in a significant increase in tourist activities in the region, but the estimation of actual levels of

changes in both tourists and spending levels is also very uncertain. There is sparse baseline data in Maine or in the north woods region on user levels or expenditures and thus the effects on attracting additional recreationists and their subsequent economic impact are estimated using best judgment about possible changes in expenditures in the region from tourists. The assumptions were informed by data on comparable activities from other states, and from data provided in a September 2005 FERMATA, Inc. report to the state, entitled the "Strategic Plan for Implementing the Maine Nature Tourism Initiative."

In the analysis of tourism and recreation, two scenarios are presented. A baseline scenario is defined using an estimate of an increase of 250,000 visitor days per year once all recreational amenities and facilities are built in accordance with the assumptions used. A peak scenario based on an assumption of 535,000 visitor days per year is used to show the economic effects of an increase similar to that used in the analysis of the public service impacts of the Plum Creek proposal which has been undertaken by the Eastern Maine Development Corporation (available separately from Plum Creek).

The scenario analysis examined here traces effects over the period 2007-2030, with an assumption that implementation begins in 2007. The choice of these periods is arbitrary and only for analytic purposes. This time period represents a planning horizon in which all of the elements of the Plan could be implemented.

Major conclusions from this analysis based on the assumptions used for the residential development, industrial, and baseline tourism scenarios include:

- Over the period 2007-2030 the economic effects of the implemented Plan would support an average of 1300 employees per year. About 32% of these jobs would be in Kennebec-Somerset Counties each year, and 59% would be in Penobscot-Piscataquis Counties. The balance would be in other counties.

- An average of $61 million per year in personal income would be supported by activity related to the Plum Creek Plan, of which $7.8 million would be in Kennebec-Somerset Counties and $42.7 million in Penobscot-Piscataquis Counties. The balance would be in other counties.

- The peak year for employment and personal income growth would occur while residential development is under way, a sawmill was built and operating, and new tourism lodging facilities were under construction. In the analysis this would occur in 2014, and would result in total employment effects of 1,860 for Maine, 460 of which would be in Kennebec-Somerset Counties, and 1,270 of which would be in Penobscot-Piscataquis Counties. The balance would be in other counties.

- Economic impacts would occur in concentric rings, with the primary impacts occurring in the Greenville-Dover-Foxcroft area, the secondary impacts in the Bangor region, and the third in the remainder of the state.

- Revenues to the State of Maine (including the State as Administrator of the Unorganized Territory Fund) would be cumulative, increasing by an average of an additional $6.41 million each year.

- At full build out, and excluding tree growth withdrawal penalties of an estimated $6.6 million (based on $6,750 per lot removed from tree growth or an estimated $506,000 per year), property taxes to the Unorganized Territory would be increased by $1.4 million per year from residential development alone. This increase would be approximately evenly split between the two counties. These estimates do not take into account gains in market (assessed) values that would likely occur over the twenty years, and so should be considered an *under*-estimate of the actual property taxes received.

- Property tax revenues from industrial facility development will likely be affected by state incentive programs, such as Pine Tree Zones and the Business Equipment Tax Reimbursement program. Depending on how the industrial facility is assessed, tax revenues in any year could range from zero to $170,000. The potential property tax revenues from a forest products facility are not included in the figures because it is reasonable to assume that such a facility would qualify for some tax forgiveness incentives.

- The potential annual property tax revenues are estimated to be $354,000 for the two resort facilities. These estimates are in 2006 dollars, and based on 2006 estimated values, and so should be considered an under-estimate of the actual property taxes received.

- These property tax revenues would add up to a $1.38 million increase in revenues in the Unorganized Territory for the two counties (compared with 2004 tax revenues of $8.0 million), or permit property tax reductions of up to 17% in the two counties. Presumably there would be some mix of increased public expenditures, paid with Unorganized Territory tax revenue, and reduced tax rates compared with what they would otherwise be.

Construction-related employment will dominate the employment effects in the first 10 years of the assumed effects pattern. Tourism and recreation jobs in the retail, accommodation, dining, and recreation services industries will generate the largest employment effects in the long term.

Overall, the Plum Creek rezoning Plan would likely have significant positive effects on a regional economy that has been experiencing economic difficulty, although the precise magnitude of these effects cannot be completely estimated at this time The development components of the Plan are consistent with the economic development policies of the State of Maine, which are directed in part on the long term need to bolster rural economies that have historically relied primarily on extractive resource industries; industries which are now having an increasingly difficult time succeeding in the market.

This analysis is presented as an aid in decision making, and not a specific forecast of the future economy of the region. The estimates presented here are based on the best information available about the plans for residential development and illustrative information about the industrial and tourism-recreation development that is possible under the Plan. Different assumptions regarding levels of activity, size of facilities, and the timing of development will yield different estimates which may be significantly lower or higher than those presented here. Given the assumptions used, this analysis should be considered a guide to possible effects from development rather than a definitive statement of a specific future outcome.

The long term sustainability of this type of development depends on market success, the soundness of the Plan's resource planning components, and adherence to appropriate sustainable tourism principles, all of which assure that the resources and amenities, such as outdoor recreation opportunities, which make the region attractive, are not degraded by uncontrolled and more intensive use of the resources. It is thus in the context of a market-driven shift towards more productive, prosperous, and diversified rural economies that LURC reviews Plum Creek's rezoning Plan.

1. Introduction: Plum Creek Plan Proposal

Plum Creek proposes to convert 1.0% of its 421,000 acres of land holdings in Somerset County and Piscataquis County, Maine for development and for dedication to recreational uses. There will also be a substantial commitment of shoreland on lakes in their ownership to permanent conservation by deed. Plum Creek will convey a working forest conservation easement over 61,000 acres, and will give a 5-year option to a qualified conservation entity to purchase a working forest conservation easement over another 269,000 acres, and a 5-year option to the State to purchase 27,000 acres in the Roach Ponds area. The Plan provides an opportunity to create up to 368,000 acres of permanent conservation (91% of the Plan Area). For more information, see *Concept Plan for Plum Creek Gateway Lands in the Moosehead Lake Region,* available from the Plum Creek Timber Company or the Land Use Regulation Commission**.** The full Plan Application will also be available on the Plum Creek and LURC Websites.

This report assumes that *all* of the components of the Plan as proposed by Plum Creek will ultimately be implemented within the 30-year Plan period and analyzes the effects over the period from 2007 to 2030. According to the proposal, the only Plan components that are certain to occur upon approval by the Land Use Regulation Commission are some of the conservation and land donation components, including the trails and the conveyance of a working forest conservation easement over 61,000 acres of the Plan Area. Any development component of the Plan, including the residential lots, the tourist facilities, and forest products facility, will require further LURC review and approval of subsequently filed subdivision and/or site plan applications. It should also be noted that Plum Creek has also indicated that it does not intend to be, itself, the developer of a forest products industrial facility or tourist facilities. The rezoning Plan only provides for zones where such uses would be permitted.

For purposes of this analysis, the socioeconomic effects of the Plan implementation can be examined in terms of three major elements:

Residential development
Industrial development
Tourism and recreation related development

The following sections consider each of these. The effects of the Plum Creek Plan will unfold over a number of years and there are necessarily some assumptions that are required in order to conduct the analysis of each of the three elements. These are indicated in each of the sections.

2. The Affected Region

The development components of the Plan would take place in a region which has lagged significantly behind the rest of the State in economic growth. The principal economic impacts from the proposed development will occur in the four-county region comprising Somerset, Kennebec, Piscataquis, and Penobscot Counties. While the proposed development will be concentrated in Somerset and Piscataquis Counties, the neighboring counties of Kennebec and Penobscot serve as service centers for Somerset and Piscataquis, so that secondary economic impacts will be felt in these counties as well.

Table 1 Income in Affected Area

	Per Capita Personal Income (2003)	Rank among counties	Per cent of State average
Somerset	$23,524	14	81%
Kennebec	$28,421	7	97%
Piscataquis	$23,392	16	80%
Penobscot	$26,780	9	92%
Maine	$29,164		

Source: Bureau of Economic Analysis

As Table 1 shows, all of the counties in the four-county region are below the State average in per capita personal income, and Somerset and Piscataquis Counties ranked 14th and 15th among Maine's sixteen counties in per capita personal income in 2002. All of the counties lagged behind the State in employment growth and population growth from 1990-2003 (Table 3). Over this period, Piscataquis and Somerset Counties lost a total of more than 2,800 jobs in the manufacturing sector of employment (32%).

The regional economy surrounding Moosehead Lake has experienced a number of economic dislocations in the last three years, including the closings of the Dexter Shoe Company plants in Milo and Dexter, the bankruptcy filing by Bangor and Aroostook Railroad, and the bankruptcy filing and plant closings by Great Northern Paper Company in Millinocket and East Millinocket. While Great Northern has partially reopened, the cumulative effect of these and other dislocations have resulted in the additional loss of more than 1,700 jobs in manufacturing in Somerset and Piscataquis Counties from 2000-2003, a decline of 24%. [1]

Population has actually declined since 1990 in both Penobscot and Piscataquis Counties. Piscataquis County has been steadily losing population since its population peak of 20,554 in 1920 for a total population loss over the last 82 years of about 3,341 people.[2] Piscataquis, the State's least populous county, is experiencing a sustained period of natural decrease (more deaths than births).[3] Compounding the natural decrease is "a net out-migration of people, making the county a loser of people on two fronts."[4] Piscataquis County's population loss can partly be attributed to the protracted loss of young people to urban areas or to other counties, which has caused the ranks of potential

parents to be depleted and the rate of natural increase to subsequently fall. When the loss of area young people is combined with a rising number of older people at greater risk of mortality, deaths soon exceed births.[5] Piscataquis County has experienced a net population loss of over 1,200 people over the thirteen year period.

While Somerset County has not seen the same types of population loss as Piscataquis and Penobscot Counties, Somerset County has encountered a slower rate of growth as compared to some other rural Maine counties and has also experienced two ten year periods during which net population decreased from the start of one decade to the next.[6] The U.S. Census Bureau estimated that Somerset County's percent population change between April 1, 2000 and July 1, 2003 was 3%. During the same period the State of Maine, located in the slowest growing region of the United States, the northeast[7] was estimated to have experienced a 6% overall population change.

Table 2 Employment and Population Levels and Changes since 1990 in Region

	Total Employment*		Population	
	1990	2003	1990	2003
Somerset	23,840	25,787	49,946	51,376
Kennebec	72,929	75,749	116,293	119,602
Piscataquis	8,668	8,690	18,690	17,454
Penobscot	83,576	91,191	147,046	148,044
Somerset and Piscataquis	32,508	34,549	68,636	68,216
Maine	706,689	806,429	1,231,719	1,308,205
	Total Employment Change 1990-2003		Population Change 1990-2003	
	Actual Change	Per cent change	Actual Change	Per cent change
Somerset	1,947	8%	1,430	3%
Kennebec	2,820	4%	3,309	3%
Piscataquis	22	0%	-1,236	-7%
Penobscot	7,615	9%	998	1%
Somerset and Piscataquis	2,041	6%	-420	-1%
Maine	99,740	14%	76,486	6%

Source: Bureau of Economic Analysis, U.S. Census

* Total employment includes all employment sectors, including, for example, manufacturing, service, construction and government sectors.

Thus, the Plum Creek Plan proposal is being made in an area where economic growth significantly lags behind the rest of Maine and where population decline or very slow growth has been the case.

3. Economic Analysis Approach

The analysis of the potential magnitude of the Plan's economic effects are undertaken using an econometric model developed by Regional Economic Models, Inc.

(REMI) of Amherst, Massachusetts and maintained by the USM Center for Business and Economic Research. These models are widely used for this type of analysis throughout the United States. Maine models are maintained by CBER and the State Planning Office.

The CBER version of the REMI model has nine separate regional models based on county or multi-county regions. The two regions affected by the Plum Creek proposal in the model are the Kennebec-Somerset and Penobscot-Piscataquis County regions. While the actual development components of the Plum Creek Plan will take place in Somerset and Piscataquis Counties, the affected economies extend beyond those two counties. For example, retail sales in Somerset and Piscataquis Counties will be supplied from wholesale and distribution centers in Kennebec and Penobscot Counties.

The analysis of economic effects in the REMI model takes place by comparing a forecast of the economy and population in each region to a "simulation forecast" in which specified changes representing the proposed development are made. The differences between the "base" and "simulation" forecasts are considered the economic impacts. The REMI model is a dynamic model which estimates impacts over a period as long as 50 years. The period chosen for analysis of the Plum Creek Plan is 2007 to 2030. This time span is the period in which major elements of the Plan are most likely to be put into place. Estimates of impacts in 2030 may be assumed to continue on into subsequent years.

Two principal measures of economic impact are used: changes in employment and changes in personal income. The employment measure used in the analysis is "total employment", which includes both self-employment and wage and salary employment. Because it includes self employment, the figures are not comparable to the estimates of wage and salary employment published by the Maine Department of Labor; total employment estimates are calculated on a larger base.

Employment is measured without regard to full or part-time status and without regard to full-year or part-year status. For this reason, job impact estimates should be treated with caution, particularly for estimates of construction-related impacts. Construction jobs are normally highly seasonal in Maine, particularly in residential construction. In addition, large construction projects in areas such as the Moosehead Lake region attract both local and commuter populations because of the seasonal nature of the work. It is not possible to estimate the proportion of local residents and commuters who will fill these jobs because the proportions are likely to change from year to year, perhaps even from month to month.

The other measure used is the change in personal income, defined as the income earned from all sources in the region. The principal component of personal income is wages and salaries, but personal income also includes the income earned by proprietors of small businesses and other labor income such as benefits paid. It is thus a broader measure of the increased flow of money in the economy than just wages and salaries.

One of the major reasons to use economic models such as the REMI model is to estimate what is often called the "multiplier" effect. This is the change (positive or negative) in regional economic activity which results from the purchases of goods and services within the region by the "direct" activity such as that associated with the development envisioned by Plum Creek. It is also the product of the spending of incomes within the regional economy by the employees of the direct economic activity. The purchase of goods and services is known as the indirect effect, while the spending of incomes is the induced effect. The two added together comprise the multiplier effect.

Multiplier effects need to be interpreted with caution. When a project results in the creation of a large number of direct jobs, the multiplier effect estimated by the econometric model will show an additional number of jobs also "created." For example, a project with a multiplier of 1.5 that adds 100 jobs to an economy is said to "create" an additional 50 jobs.

It is important to understand the nature of employment effects as estimated by economic models. Employment growth includes both new employment positions created and support of existing employment directly or indirectly affected by the economic change analyzed. Additional jobs estimated to be "created" by the multiplier effect are often small portions of employment in other industries or regions supported by the "direct" activity and its employment. This is particularly the case with construction impacts, which, as noted, are usually highly seasonal and often filled by commuter populations.

The spending on new construction does indeed create new jobs in a region, but those jobs are typically not of sufficient duration to cause people to move into the area. The Plan's proposed limitation of lot creation to no more than 125 lots per calendar year plus assumptions that some lots would not be developed immediately by purchasers will spread out the construction activity over a projected approximate 10 to 15-year period, providing a steady demand for construction jobs, which may provide the employment needed to keep residents in the area, without substantially increasing the population that could support, in turn, an expansion of retail and service industries in the region. Jobs in retail and services are indeed supported by the economic activity of construction, but they are not always entirely new jobs in the sense that they would not exist without the construction activity.

It is thus more appropriate to say that the multiplier effect from projects such as those associated with the Plum Creek Plan results in the support of jobs in other industries and regions beyond the direct effects. This characterization is particularly important in the case of the impacts of the Plum Creek proposal because of the high proportion of impacts that will result from construction activity.

In addition to employment and personal income, tax revenues at the State level are estimated for all of the development elements and for property and other taxes to the Unorganized Territory for the residential, industrial, and tourist facility development elements. The State tax revenues are estimated by the REMI model using average rates;

they should be considered very rough and conservative estimates. Actual revenues, particularly revenues from income taxes, will depend on individual circumstances and cannot be analyzed at the aggregate regional level used here. Property and other tax impacts are discussed in the sections below.

4. Residential Development Impacts

There are two aspects to the residential development proposal. The first is to make 975 lots available for sale, primarily for seasonal housing (though some may be occupied on a year-round basis). The total number of proposed lots by county is shown in Table 3. In conducting the analysis, these lots are assumed to become available at a rate of 75 lots per year (although Plum Creek may seek LURC subdivision approval, under the terms of the Plan, of up to 125 lots per year), beginning in 2007. Of these lots, 10 lots each year are assumed to be retained by owners for speculative purposes and not developed for a period of five years from the time of sale. Using these assumptions, sales of residential lots are assumed to occur from 2007 to 2019, while construction activity will extend from 2007 to 2024, at which point all lots are assumed to be developed.

Table 3 Proposed Lots for Housing Development

	Waterfront	Back	Total
Somerset	332	155	487
Piscataquis	148	340	488
Total	480	495	975

The lots are assumed to be valued at $125,000 for lots with water frontage and $80,000 for lots without water frontage. Residences are assumed to average 1,500 square feet and to cost $125 per square foot to construct, for a total average value of $187,500 for structures. These figures are means; actual land prices and construction costs will vary above and below these figures, and may increase with overall market conditions. The values are held constant over the period and thus resulting effects on property taxes should be considered conservative (that is, actual revenues may be higher).

The second element of the residential development proposal is a commitment by Plum Creek to set aside up to 100 acres of land for affordable housing. To date, an estimated 60 units are needed in, or close to, Greenville, Rockwood, and/or Jackman. For this study, the 60 housing units are assumed to be valued at up to $100,000 per unit[8] and these units are developed at an equal rate of 15 units per-year for four years beginning in 2007.

The economic impacts from residential development will result from an increase in the demand for construction services in Somerset and Piscataquis Counties of an average of $10.5 million a year from 2007 to 2019 and $1 million a year from 2020 to 2024 (as the remainder of speculative lots are developed). Construction activity is assumed to peak during the period 2012-2016 during which $14 million in construction value will be put in place per year. These figures include both second home and Greenville affordable housing activity.

Table 4 shows the employment, income, and tax effects from residential lot development based on the planning assumptions currently used by Plum Creek. Because the development of residential properties will take place over 2007-2024, the economic impacts from development activity are shown up to 2020 (2024 and 2020 impacts are essentially identical). Direct construction industry jobs will average about 250-300 in each region per year during the period of most active construction.

Table 4 Employment and Personal Income Generated from Residential Development

Employment	**2007**	**2010**	**2015**	**2020**
Maine	290	302	296	65
Kennebec & Somerset	108	114	130	29
Penobscot & Piscataquis	164	165	143	26
Rest of Maine	18	23	24	9
Personal Income				
Maine	$8,816,000	$12,280,000	$15,790,000	$7,477,000
Kennebec & Somerset	$3,192,000	$4,424,000	$6,466,000	$3,005,000
Penobscot & Piscataquis	$4,439,000	$6,018,000	$6,861,000	$3,068,000
Rest of Maine	$1,185,000	$1,838,000	$2,463,000	$1,404,000

To assess property tax impacts in the Unorganized Territory in each county, the following values were used:

Waterfront lots with structures	$312,500
Non-waterfront lots with structures	$267,500
Waterfront lots undeveloped	$125,000
Non waterfront lots undeveloped	$ 80,000

Over the period from 2007 to 2024, lots are brought onto the tax rolls in each county at these values and on the schedule of purchase and development described above. By 2024, all lots are assumed to be sold and developed. Real estate values are assumed to be held constant in 2005 dollars and are not adjusted upwards for inflation or overall increases in market values. This simplifies the analysis, but results in an *under*-estimate of the future tax values.

Table 5 Estimated Tax Impacts from Residential Development

Taxes	**2007**	**2010**	**2015**	**2020**
Sales Tax on Construction	$409,725	$695,375	$398,075	$75,530
Other State Revenues	$921,275	$1,110,625	$2,093,925	$1,096,470
Total Tax State Revenues	$1,186,000	$4,755,000	$2,492,000	$1,172,000
Property Tax to Unorganized Territory				
Maine	$661,958	$1,255,050	$2,001,293	$1,875,137
Somerset County	$355,618	$772,650	$1,114,491	$993,313
Piscataquis County	$306,340	$704,344	$1,005,199	$896,672
Total State and Local Tax Revenues	$1,847,958	$6,010,050	$4,493,293	$3,047,137

In addition to the property tax paid on the developed property, there is an additional revenue source in the form of tree growth withdrawal penalties. These are estimated by Plum Creek to equal $6,750 per lot. These penalties are included in the estimated revenues based on the lot sales assumptions discussed above.

Table 5 shows the estimated tax revenue effects for selected years out to 2020. A major feature of the effects on state revenues is the sales tax on construction materials related to the development. This is estimated by subtracting labor costs from the average $187,500 construction value based on the 1997 Input/Output tables and assuming the remainder is taxable construction materials. Other state revenues are estimated by the REMI model on the income and spending generated and, as noted above, this is done at average rates.

The property tax estimates are based on the above property value estimates and the 2003 property tax rates for the Unorganized Territory in Somerset and Piscataquis Counties. To put these changes in context, Table 6 shows the changes in property tax rates in the Unorganized Territory in Somerset and Piscataquis Counties that would occur given 2003 valuations and tax rates if the Plum Creek-associated development of the year shown were in place and no changes in expenditures were undertaken. Property tax rates in the Unorganized Territory of the two counties could fall by as much as 17% at full build out of the Plum Creek proposal. Alternatively, expenditures for services to Unorganized Territory residents could rise by a like amount if all of the additional tax revenue was spent. Past experience indicates that the actual effects will likely lie somewhere between the two extremes; additional revenues will support *both* increased spending for public services and reductions in tax rates.

Table 6 Changes in Unorganized Property Tax Rates/Revenues from Residential Construction

	2007	2010	2015	2020	2030
Somerset County	-2.0%	-11.4%	-20.1%	-23.7%	-24.0%
Piscataquis County	-1.9%	-11.7%	-22.3%	-27.5%	-28.0%

Note: Includes tree growth penalties but excludes property taxes on industrial and recreational facilities.

Such development as proposed by the Plum Creek Plan often raises questions about the adequacy of local infrastructure and the possibility of having to increase local government services to accommodate the needs of the new population. This study did not include a detailed assessment of the capacity of local infrastructure, such as solid waste, roads, or schools. An infrastructure impact assessment is made in a separate report from the Eastern Maine Development Corporation (EMDC).

5. Industrial Development

The industrial development envisioned as permitted in the proposed Plan consists of a sawmill or similar forest products manufacturing facility to be built in Somerset County at some point in the future by a company yet to be identified. For purposes of this analysis, a sawmill or similar forest products industrial facility is assumed to be built in 2007, with start up in 2008. It is assumed that 200 people will be required to construct the forest products facility and 100 people will be required to operate it from 2008 forward.

Property tax revenues from a sawmill would depend on a number of unknown factors, including the amount of land used, the size of buildings, and the value of equipment. Moreover, a sawmill could be subject to various economic development incentive programs such as Pine Tree Zones and the Business Equipment Tax Reimbursement program, and tax increment financing treatment. The actual property tax liability in any given year would depend on a number of factors which cannot reasonably be foreseen at this stage. However, information from the previously proposed sawmill indicates that property tax revenues could range as high as $170,000 per year. These potential property tax revenues are not included in the figures because of uncertainty about both the size and tax treatment of these facilities.

The estimated economic impact effects of a potential sawmill development are shown in Table 7.

Table 7 Employment and Income Effects of Potential Forest Products Facility Development

Employment	2007	2010	2015	2020	2030
Maine	330	285	295	310	344
Penobscot & Piscataquis	298	233	240	250	273
Rest of Maine	33	53	56	60	72
Personal Income					
Maine	$10,800,000	$13,290,000	$17,230,000	$21,760,000	$34,730,000
Penobscot & Piscataquis	$8,533,000	$9,645,000	$12,400,000	$15,580,000	$24,500,000
Taxes					
State Revenues	$1,578,000	$2,216,000	$2,705,000	$2,705,000	$3,465,000

In addition to the economic impact of a proposed new forest products related manufacturing facility, Plum Creek's wood harvesting operations in the Plan Area currently provides jobs to approximately 250 people, according to the company. Plum Creek also sells logs and pulpwood from the Plan Area to 60 mills in Maine that employ approximately 10,000 people, yielding annual employment income of approximately $17,000,000. Upon LURC approval of this rezoning Plan, Plum Creek will convey a permanent working forest conservation easement over 61,000 acres in the Plan Area. Plum Creek will also give the State or a qualified conservation entity, a 15-year option to purchase a working forest conservation easement over another 269,000 acres in the Plan

Area. To the extent these areas in the Plan are conserved by working forest conservation easements, the Plan makes clear that timber resources will continue to be available, and removes a level of uncertainty about supply to the forest products industry that should contribute to confidence to continued employment and income benefits and increased investment.

6. Tourism and Recreation Related Development

There are two elements to the Plum Creek proposed Plan that will enhance tourism and recreation in the Moosehead Lake region. First, Plum Creek proposes to allow for a number of enhancements and expansions to hiking and snowmobile trail networks in the region around Moosehead Lake. These recreational improvements will have the effect of attracting more visitors to the region on a year round basis, in addition to increasing the attractiveness of the region to those who purchase seasonal housing.

The recreational enhancements on Plum Creek lands are proposed to be by permanent easement, rather than by continued informal granting of access as is common among forest land owners in Maine. This proposal for permanent trail easements may be particularly important as it will remove uncertainties about access that currently affect much of the informal access to private lands in the North Woods. Permanently accessible lands will encourage businesses that rely on this resource to invest in permanent upgrades of their facilities and services. These investments, in turn, are more likely to attract tourists and recreationists than lands as to which access remains uncertain.

The second element is enhancement of lodging services in the area. It is expected that Plum Creek will make land available for development by others (although the ownership of the facilities does not affect the level of economic impacts). It is anticipated that these lodging facilities will comprise a large recreational resort facility to be located near the property of the Big Moose (formerly Big Squaw) ski facility located in Piscataquis County. It is anticipated that this may include lodges and related facilities comprising 500 resort accommodations. In addition, land will be made available for development of a smaller facility in the Lily Bay area of Piscataquis County, comprising up to 250 resort accommodations.

An estimate of the economic impact from these proposals begins with an estimate of increased spending by tourists and recreationists in the region as a result of the enhanced recreation and lodging facilities. Ideally, this would be done by estimating an increase from current use levels. Unfortunately, there are no measures in Maine of the number of visitors to the region currently, nor is there any current data on the spending patterns of hiking, fishing, hunting or snowmobiling visitors. In fact, the general field of recreational use and spending patterns is very poorly understood in most of Maine.

In the absence of baseline information, assumptions based on data from similar tourism amenities elsewhere in Maine and the United States are required. Total spending in the region is the product of the average amount spent per day times the number of

visitor days. Studies of spending by tourists in regions such as Moosehead Lake reveal a wide variety of daily spending rates. The following represents a sample of recent studies:

a. backpackers (Montana): $92.61[9]
b. hikers (Rangeley): $42.00 [10]
c. campers: $27.70 [11]
d. park visitors: $165 per carload per night[12]
e. canoeists: $15 [13]
f. hunters (nationally): $23 [14]
g. small game hunters (northeast region): $36.73 [15]
h. big game hunters (northeast region): $42.18 [16]
i. average angler (nationally): $26 [17]
j. river angler (Maine): $42 [18]
k. snowmobiling: $88.30 [19] - $101 [20]
l. cyclists: $25-$115 [21]
m. alpine skiers: $100 [22]

The level of visitor spending depends on whether or not visitors stay overnight in the region. For the most part, day trippers obviously spend less than overnight tourist, though this is not always the case as hikers carrying their own equipment can be quite low in terms of regional economic impact. The protection and development of land for recreation purposes will begin attracting additional visitors to the region relatively quickly, but the timing and exact dimensions of the resort development are highly uncertain. Both the timing and dimensions of the accommodation development are very important to the economic effects related to tourism and recreation. Both the numbers of visitors and the spending in the region will increase when the accommodations become available.

The analysis of tourism and recreation related economic impacts is divided into two scenarios. The baseline scenario, which is included in totals reported in the next section, is based on a total increase of 250,000 visitor days once the two resort facilities are built and in operation. An alternative peak scenario is also examined, with an assumed total visitor day increase of 535,000 at full build out. This peak scenario is examined to provide a perspective on the economic activity associated with the analysis of public service demands potentially created by the Plum Creek proposed Plan that is being undertaken by the Eastern Maine Development Corporation. Examination of service impacts from highly seasonal activity, such as tourism, is appropriately done on a peak demand basis in order to be sure that adequate capacity is provided to handle the maximum demand. However, the baseline (lower) scenario is more appropriate for comparison with the analysis of other activities, which are examined without distinguishing between average and peak levels of activity.

1. Tourism Baseline Scenario

To account for this effect, the spending estimates to be examined are divided between "pre" and "post" resort development. Per person spending is assumed to be $50 per day prior to the construction of the tourism facilities, and $125 per day after the facilities are constructed. An additional 50,000 visitors per year in the region are assumed prior to the construction of the resorts, rising to 250,000 visitors per year after. Using these assumptions, visitor spending in the region is $2.5 million per year prior to the construction of the resorts, rising to $25.0 million per year if the two tourism facilities are built as assumed.

Table 8 shows the distribution of the assumed spending levels distributed by county and industry. Tourist spending will be concentrated in three industries: general retail, food and accommodations, and amusement and recreation services (guides, etc.) The preponderance of spending will be in Greenville and Piscataquis County as both tourism facilities zones are located in Piscataquis County [although the forest products facility is located in Somerset County]. After construction of both tourism facilities, the proportion of spending going to food and accommodation spending will increase. The figures in Table 8 are estimates designed to represent the major factors affecting tourism and recreation-related economic impacts. The precise levels chosen are somewhat arbitrary and the exact levels of economic impacts may be significantly different.

Table 8 Distribution of Assumed Recreation Spending

	Visitor Distribution			Spending Amount		
	Before Resorts	After Resorts	Spending Type	Spending Distribution	Before Resorts	After Resorts
Kennebec & Somerset	30%	15%	Retail	20%	$150,000	$500,000
			Food & Accommodation Services	60%	$450,000	$1,500,000
			Amusement & Recreation Services	20%	$150,000	$500,000
			TOTAL		$750,000	$2,500,000
Penobscot & Piscataquis	70%	85%	Retail	20%	$350,000	$4,500,000
			Food & Accommodation Services	60%	$1,050,000	$13,500,000
			Amusement & Recreation Services	20%	$350,000	$4,500,000
			TOTAL		$1,750,000	$22,500,000
TOTAL					$2,500,000	$25,000,000

The Plum Creek Plan proposes a larger tourism facility at Big Moose Mountain consisting of 500 accommodations, and a smaller facility at Lily Bay consisting of 250 accommodations. Table 9 shows the assumptions used to estimate the economic impacts of the tourism facilities. The Big Moose facility will be built first, and the Lily Bay facility second. In Table 8, spending patterns are divided into two phases, before and after the resorts are built. The actual analysis uses three phases. The first (2007-2010) is for the period up to the completion of the Big Moose facility, when only the improved recreational amenities are in place to attract visitors. The second phase (2010-2014) shows a growth in visitor days related to the Big Moose facility and the recreational amenities. The third phase (2015 on) is a combination of both hotel facilities and the amenity improvements. The first and third phases are shown in Table 8.

Table 9 Assumed Information on Proposed Lodging Facilities

	Big Moose	Lily Bay
Construction Costs (millions)	$75	$50
Construction Period	2009-2010	2013-2014
Operating Employment	100	50
Operating Period	2011 on	2015 on

The estimated economic impacts of lodging facilities are shown in Table 10. In this table, the impacts in 2010 include the construction activity for the tourism facilities at Big Moose Mountain, while the impacts in 2014 include the impacts of the tourism facility at Lily Bay, which, under the terms of the Plan, would not begin to be constructed for at least 7 years after Plan approval. Both projects are assumed to take 2 years to build, with half of the construction costs expended in each year. Impacts shown for 2010 and 2014 include both construction activities for the respective facilities plus other increased tourism spending from the expanded recreational amenities in the region.

Table 10 Employment and Income Effects of Tourism and Recreation Development

Employment	**2007**	**2010**	**2014**	**2020**	**2025**	**2030**
Maine	78	1344	1273	713	702	697
Kennebec & Somerset	23	92	92	81	79	79
Penobscot & Piscataquis	52	1188	1117	594	583	576
Rest of Maine	3	64	64	38	40	42
Personal Income (Nominal Dollars)						
Maine	$1,381,000	$40,180,000	$46,300,000	$33,260,000	$40,110,000	$49,420,000
Kennebec & Somerset	$369,100	$2,661,000	$3,726,000	$3,923,000	$4,701,000	$5,759,000
Penobscot & Piscataquis	$825,400	$32,980,000	$37,060,000	$25,070,000	$30,260,000	$37,230,000
Rest of Maine	$186,500	$4,539,000	$5,514,000	$4,267,000	$5,149,000	$6,431,000
Taxes (2004 Dollars)	$60,120	$376,500	$516,200	$528,800	$566,900	$604,600

The potential annual property tax revenues are estimated to be $240,000 for the Big Moose Mountain facility, based on an estimated assessed value, when built, of $30,000,000; and $116,000 for the Lily Bay facility, based on an estimated assessed value, when built, of $15,000,000. Mil rates for these estimates are computed based on 2003 valuations and expenditures in Piscataquis County and include changes in valuation estimated from residential construction as discussed above. These estimated property tax revenues do not account for any changes in the market value of the property, and probably under estimate future actual revenues.

2. Tourism Peak Scenario

In order to assess the impacts on public facilities and services in the region, Eastern Maine Development Corporation has undertaken an analysis of the proposed Plum Creek Plan. That analysis uses a level of 535,000 visitor days at build out of all tourism and recreation-related development, compared with 250,000 visitor days in the baseline scenario. The difference between the two scenarios is primarily determined in the assumptions about occupancy rates at the lodging facilities. The peak scenario assumptions are otherwise the same as the baseline scenario with respect to spending levels and distribution. The results of the changed and constant assumptions are shown in Table 11.

Table 11 Input Assumptions- Tourism Peak Scenario

	Visitor Distribution				Spending Amount	
	Before Resorts	After Resorts	Spending Type	Spending Distribution	Before Resorts	After Resorts
Kennebec & Somerset	30%	15%	Retail	20%	$150,000	$1,337,500
			Food & Accommodation Services	60%	$450,000	$4,012,500
			Amusement & Recreation Services	20%	$150,000	$1,337,500
			TOTAL		$750,000	$6,687,500
Penobscot & Piscataquis	70%	85%	Retail	20%	$350,000	$12,037,500
			Food & Accommodation Services	60%	$1,050,000	$36,112,500
			Amusement & Recreation Services	20%	$350,000	$12,037,500
			TOTAL		$1,750,000	$60,187,500
TOTAL					$2,500,000	$66,875,000

Table 12 shows the estimated economic effects for the peak tourism scenario using the same years and the same assumptions as to timing of development discussed above under the baseline scenario.

Table 12 Effects of Tourism and Recreation: Peak Tourism Scenario

Employment	2007	2010	2014	2020	2025	2030
Maine	78	2043	2489	1885	1833	1810
Kennebec & Somerset	23	200	229	213	207	205
Penobscot & Piscataquis	52	1754	2142	1573	1526	1499
Rest of Maine	3	89	118	99	100	106
Personal Income (Nominal Dollars)						
Maine	$1,381,000	$54,000,000	$81,540,000	$85,070,000	$102,400,000	$125,300,000
Kennebec & Somerset	$369,100	$4,757,000	$8,213,000	$10,180,000	$12,160,000	$14,800,000
Penobscot & Piscataquis	$825,400	$42,990,000	$63,380,000	$64,080,000	$77,260,000	$94,440,000
Rest of Maine	$186,500	$6,253,000	$9,947,000	$10,810,000	$12,980,000	$16,060,000
Taxes (2004 Dollars)	$60,120	$687,100	$1,144,000	$1,347,000	$1,456,000	$1,553,000

7. Total Impacts of All Development

Employment and personal income[23] effects from all aspects of the proposed development components of the Plan are shown in Table 13. Impacts are estimated for the Kennebec-Somerset County region, the Penobscot-Piscataquis County region and for the State of Maine as a whole. The peak year for employment and personal income impacts under the assumptions is 2010; this is the year in which construction activity is at a peak in the residential market and the largest facility envisioned for the region, the large tourism facility at Big Moose Mountain, is under construction.

Table 13 Sum of Employment and Income for all Elements of the Plum Creek Plan

Employment	2007	2010	2020	2030
Maine	666	1879	1809	1027
Kennebec & Somerset	132	206	222	110
Penobscot & Piscataquis	513	1586	1499	892
Rest of Maine	21	87	87	25
Personal Income				
Maine	$20,997,000	$65,750,000	$62,497,000	$74,840,000
Kennebec & Somerset	$3,561,100	$7,085,000	$6,928,000	$4,701,000
Penobscot & Piscataquis	$13,797,400	$48,643,000	$43,718,000	$54,760,000
Rest of Maine	$3,638,500	$10,022,000	$11,851,000	$15,379,000

Tax impacts are shown in Table 14. State revenues (sales, income, and other taxes) are estimated at average tax rates applied to gains in business and personal income. Property tax revenues are estimated at 2003 property tax rates for the Unorganized Territory in Somerset and Piscataquis Counties and exclude industrial property development, but include tourism facility development**.** Property tax revenues peak in 2024 and stay constant after year leaving adjustments for market value aside. Tax revenues prior to 2025 include tree growth withdrawal penalties. Tree growth penalties decline after 2019 because of the assumptions about the rate of lot development.

Table 14 Summary of Tax Impacts

	2007	2010	2020	2030
State Revenues	$2,930,120	$4,306,500	$4,285,800	$4,541,900
Unorganized Territory Property Tax Revenues*	$157,531	$879,273	$1,541,026	$1,815,164
Total Tax Revenues	$3,087,651	$5,185,773	$5,826,826	$6,357,064

Table 15 Contributions of Elements of the Plum Creek Plan to Total Economic Impacts

	2010			2020			2030		
	Employment	Personal Income (Millions)	Tax Revenues (Millions)	Employment	Personal Income (Millions)	Tax Revenues (Millions)	Employment	Personal Income (Millions)	Tax Revenues (Millions)
Residential	302	$12.28	$2.59	296	$7.48	$2.87			$2.32
Industrial	285	$13.29	$2.22	310	$21.76	$2.71	344	$34.73	$3.47
Tourism	1344	$40.18	$0.38	713	$33.26	$0.53	702	$40.11	$0.60
Residential	16%	19%	50%	22%	12%	47%			36%
Industrial	15%	20%	43%	23%	35%	44%	33%	46%	54%
Tourism	70%	61%	7%	54%	53%	9%	67%	54%	9%

Note: Totals do not sum to data in Table 15. Data in that table is based on a combined analysis of all elements of the Plum Creek Plan; the economic interactions of the combined elements yield different estimates than the sum of the elements.

Table 15 provides a comparison of the different elements of the Plum Creek Plan to show the contributions that the different elements make to the overall economic impacts. It is apparent that the contribution of each element depends on which measure is used and which year is selected. Over the long term, tourism provides the largest job impacts, while the industrial facility provides the largest impact on personal income and taxes. This is primarily because industrial facility has the largest effect on the regional economy because of its purchases of inputs from such industries as logging and transportation.

The economic impacts from the proposed development may be thought of as occurring in four concentric rings:

1. The first is the area in the immediate vicinity of the economic activity, including the residential or commercial development. In this case, this is likely to be a very small part of the direct and indirect effects because the proposals are for small and geographically dispersed activities.

2. The second area includes the service centers of the region. These communities will include Greenville, Jackman, Skowhegan, and Dover-Foxcroft. These communities will probably see most of the impacts.

3. The third ring consists of the major trade and service centers within the region. Bangor is the most important, with Waterville and Augusta next.

4. Finally, there will be impacts in other parts of Maine as firms within the affected region interact with firms throughout the rest of the State and as those who earn incomes in Piscataquis and Somerset Counties buy from other areas.

The bulk of the impacts estimated here will occur in the first three rings, but it is not possible to separate the exact level of impacts among them. However, it is likely that the largest impacts will occur in the second ring of communities, and the next largest in the third ring (particularly Bangor).

Notes

[1] Source: Maine Department of Labor
[2] Curtis Meadow and Frank Wihbey, "Maine Census Data: Population Totals", 2001, <http://www.library.umaine.edu/census/countysearch.asp>.
[3] Deirdre M. Mageean, Gillian AvRuskin, and Richard Sherwood, "*Wither Maine's Population," Maine Policy Review* 9(1) (2000): 28-42.
[4] *Ibid.*
[5] *Ibid.*
[6] *Ibid.* Population decreased in Somerset County from 39,111 people in 1930 to 38,245 people in 1940 and from 39,785 people in 1950 to 39,749 people in 1960.
[7] *Ibid.*
[8] The $100,000 average valuation estimate is based on an analysis entitled, "Greenville at the Crossroads: The Dire Need to Grow Our Population and To Enrich Our Community", prepared by Greenville Town Manager, John Simko. This analysis states that the goal of the Greenville Action plan is to "[i]ncrease available single-family housing, both rental and for purchase, by at least 30 units each (60 units total) by 2010", and to do this by developing a "partnership with Maine State Housing Authority, Community Development Block Grant Program, Rural Development, and local developers and contractors to devise a program to increase middle-income, single-family housing". Thus, the valuation of $100,000 takes into account both affordable housing and middle-income housing.
[9] A Montana survey of tourists found that those interested in wildland based activities spent 25-50% more per day than non-wildland tourists while visiting Montana. The amount varied by activity of interest. Backpackers, anglers, and nature study travelers spent $92.61, $101.44, and $83.03 per day, respectively; non-wildland visitors only averaged $64.44 per day. Pamela A. White, "North American Ecotourists: Market Profile and Trip Characteristics," (Sage Publications: Tousand Oaks, CA, 1996) pp. 10, 12.
[10] Maine Audubon Society, *Conservation Works!,* "Rangeley Region's Economy: Current Situation and Future Outlook" (The Irland Group:Winthrop, Maine, 2001) p. 79.
[11] *Ibid., p. 48.* This figure represents average spending per person per day for campers in the Northeast region.
[12] Visitor spending per party (carload) per night is $165 at Acadia National Park. Daniel J. Stylesand Ya-Yen Sun, "Economic Impacts of National Park Visitor Spending on Gateway Communities: Systemwide Estimates for 2001," (Michigan State University and National Park Service Social Science Program: 2003) p. 15. See http://www.prr.msu.edu/mgm2/NPSSystem2001.pdf.
[13] Canoeists visiting Maine's St. Croix River spend an average of $15 per day. Anglers visiting Maine's St. Croix River spend an average of $42 per day. U.S. Department of the Interior National Park Service "Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors: A Resource Book" (Rivers, Trails and Conservation Assistance National Park Service: 1995, Fourth Edition Revised) Table 5-3, p. 5-14. See http://www.nps.gov/pwro/rtca/econ_all.pdf.
[14] The 2001 *National Survey of Fishing, Hunting, and Wild-life Associated Recreation* conducted by the U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau shows that nationally anglers spend an average of $26 per day fishing while the average hunter spends $23 per day. See http://www.census.gov/prod/2002pubs/FHW01.pdf.
[15] Maine Audubon Society, *Conservation Works!,* "Rangeley Region's Economy: Current Situation and Future Outlook" (The Irland Group: Winthrop, Maine June 25, 2001) p. 48.
[16] *Ibid.*
[17] The 2001 *National Survey of Fishing, Hunting, and Wild-life Associated Recreation* conducted by the U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau shows that nationally anglers spend an average of $26 per day fishing while the average hunter spends $23 per day. See http://www.census.gov/prod/2002pubs/FHW01.pdf.
[18] Canoeists visiting Maine's St. Croix River spend an average of $15 per day. Anglers visiting Maine's St. Croix River spend an average of $42 per day. U.S. Department of the Interior National Park Service "Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors: A Resource Book" (Rivers, Trails and Conservation Assistance National Park Service: 1995, Fourth Edition Revised) Table 5-3, p. 5-14. See http://www.nps.gov/pwro/rtca/econ_all.pdf.

[19] According to the International Snowmobiling Manufacturers' Association, an average snowmobiler spends $88.30 per day while snowmobiling, see www.snowmobile.org, "Snowmobiling Growing in Importance as a Job Generator," August 27, 2004.

[20] An economic analysis of the Rangeley Region estimated an average per person per day spending figure of $101 per snowmobiler. Maine Audubon Society, *Conservation Works!,* "Rangeley Region's Economy: Current Situation and Future Outlook" (The Irland Group: Winthrop, Maine June 25, 2001) p. 60.

[21] In Maine bicycle tourists spend an average of $55 per day for visitors on self-guided tours, $115 per day for cyclists on guided tours, $25 per day for cyclists on day trips, and local Maine residents spend an average of $4 per day on cycling trips in Maine. Julie Fraietta "Cycle Tourism Research Summary" (Alberta Economic Development: Alberta, May 2004) p. 4. See http://www.alberta-canada.com/td/pdf/cycleTourism.pdf.

[22] This figure is based on a 1996/97 economic assessment of the Saddleback ski area. Saddleback sees about 50,000 visitors per year who spend an average of $100 per visit. Maine Audubon Society, *Conservation Works!,* "Rangeley Region's Economy: Current Situation and Future Outlook" (The Irland Group: Winthrop, Maine June 25, 2001) p. 14.

[23] Additions to personal income include gains in wages and salaries, other labor income, proprietor's income, dividends, interest and rents and any reductions in transfer payments. Personal income estimates are in nominal dollars (including inflation).

Appendix B

Plum Creek Rezoning Proposal: Infrastructure and Community Impact Analysis

This report by the Eastern Maine Development Council is not available at this time but will be submitted shortly.

Traffic Impact Study
for the Community Impact & Infrastructure Analysis
of the Plum Creek Re-zoning Proposal

Prepared for:

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Traffic Impact Study
for the Community Impact & Infrastructure Analysis
of the Plum Creek Re-zoning Proposal

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Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer Consulting Engineers, Inc. was retained by Eastern Maine Development Corporation to complete a Traffic Impact Study for the Community Impact & Infrastructure Analysis of the Plum Creek Re-zoning Proposal in the Moosehead Region. The proposed development is expected to start construction in 2009 with completion of construction in 2017.

Proposed for the site are 975 residential lots and a 250 and 500 room resort and a 90-acre sawmill. The proposed development is spread throughout the Moosehead Region and will have several access points as noted in the report.

Based on this study, our office has determined the following:

1. The proposed development is forecast to generate 1,568 trip ends and 1,353 trip ends for the weekday PM and Saturday peak hours, respectively. It is important to note that the trip generation forecasts above are conservative since they assume that all of the trips destined to and from the proposed development would be occurring during the PM peak hour. It is our opinion given that the majority of the development is likely to be recreational in nature, that they will be arriving at the development throughout the day and not all arriving during the PM peak hour. However for the purposes of the study we have assumed that all of the trips will be occurring during the PM peak hour unless otherwise noted.

   This level of trip generation would typically require a traffic permit from the MaineDOT, however this project falls underneath the jurisdiction of LURC. Therefore it is our understanding that a MaineDOT permit will not be required, however this study has been completed in accordance with the MaineDOT requirements.

2. The capacity analyses show that with the improvements proposed by MaineDOT as well as those associated with this project, the majority of the intersections within they study area the operate at an overall LOS of 'C' or better. At the intersection of Main Street/Pritham/Lily Bay Road we have recommended the installation of a traffic signal when the warrants are met, as well as the addition of turn lanes. Our analysis indicates that the intersection of Main Street / Pritham (Route 6/15) / Lily Bay Road will meet a traffic signal warrant with the full build out of the proposed development, based on the assumptions that have been made in this traffic study. It is our recommendation that the intersection be monitored by the developer and that a traffic signal be installed once the traffic volumes meet a traffic signal warrant.

3. Gorrill-Palmer Consulting Engineers, Inc. referenced the MaineDOT High Crash listings to determine if there were any high crash locations in the project

vicinity. Based on a review of the published history, there was one location within the greater Moosehead Lake Region located on Route 6/15 in Monson that is listed as a high crash location. The collision reports for this location indicate that of the thirteen crashes, five were due to snowy/icy roads and 5 were due to collision with animals. Therefore it is our opinion that there are not any correctable patterns to the collisions that are occurring at this location.

There are several roads in the Moosehead Lake Region that already have warning signs to watch for moose in the roadway. It is our recommendation that the developer work with MaineDOT to review the locations where the moose collisions are occurring and that additional signage be added if warranted.

4. Based on the increase in Average Annual Daily Traffic (AADT) on Lily Bay Road due to background growth and the increase in traffic due to the proposed development, Lily Bay Road at the Greenville town line and Lily Bay Road south of Village Street are forecast to have an AADT above 4,000 vehicles, which is the MaineDOT threshold for paving shoulders when they have a project along a roadway without paved shoulders. The sections of Lily Bay Road forecast to reach this level are in the vicinity of the Greenville town line and in the vicinity of Village Street. It is our recommendation that these locations be monitored and that if the AADT increases above the threshold due to the proposed development that the developer work with the MaineDOT and the towns to pave the shoulders.

5. Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the proposed driveways in accordance with MaineDOT standards. Since formal site plans did not exist at the time this traffic study was completed, the driveway locations were determined from location maps and therefore are approximate. Before the construction or during the completion of construction plans for the driveways/intersections, the sight lines should be reevaluated and the locations adjusted to provide at least the minimum sight lines recommended in the body of the report.

   Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right-of-way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction when heavy equipment is entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the local street system can accommodate the traffic generated by the proposed development with the proposed improvements.

I. *Existing and Proposed Site*

The project is located in the Moosehead Lake Region in the following towns and townships:

Big W TWP	Sapling TWP
West Middlesex Canal Grant	Chase Stream TWP
Soldiertown TWP T2 R3 NBKP	Indian Stream TWP
Thorndike TWP	Big Moose TWP
Brassua TWP	Harfords Point TWP
Long Pond TWP	Elliotsville TWP
Rockwood Strip T1 R1 NBKP	Bowdoin College Grant West TWP
Rockwood Strip T2 R1 NBKP	Beaver Cove
Sandwich Academy TWP	Lily Bay TWP
Taunton & Raynham Academy Grant	Days Academy TWP
Sandbar Tract TWP	Spencer Bay TWP
Misery Gore TWP	Frenchtown TWP
Misery TWP	Shawtown TWP

The proposed development will consist of several parcels of land throughout the Moosehead Lake Region as listed above. The development includes 975 residential building lots, 500-room and 250-room resorts and a 90-acre sawmill.

The majority of the development will be accessed via Route 6/15 though Greenville and it is also expected that some traffic will utilize Route 201. In addition, it is expected that the proposed lots on Indian Pond will be accessed from Route 201 in The Forks via an existing road that leads to the FPL Dam on Indian Pond.

II. *Background Traffic Conditions*

Gorrill-Palmer Consulting Engineers, Inc. based the study on the following information:

- An overall plan for the proposed development from Eastern Maine Development Corporation (EMDC) prepared by Kent Associates dated February 2006.
- High Crash Listings for 2002-2004 provided by the Maine Department of Transportation.
- Turning movement volumes collected in August 2005 and September 2005 at the following locations for the midday and pm peak:
  - Main Street(Route 15/6)/Eveleth Street
  - Main Street(Route 15/6)/Lilly Bay Road/Pritham Avenue(Route 15/6)
  - Pritham Avenue(Route 15/6)/Eveleth Street/Lakeview Street
  - Lily Bay Road/Pleasant Street
  - Lily Bay Road/State Park Road

- Route 15/6 / Rockwood Road
- Route 15/6 / Williams Mountain Road
- Route 15/6 /Route 6 Cutoff
- Route 15 / Route 201

➢ Based on these counts it was determined that the pm peak hour volumes were higher then the midday peak hour volumes, and therefore the pm peak hour was utilized for this study.

➢ Speed limits in the vicinity based on a map prepared by Eastern Maine Development Corporation (EMDC).

➢ Trip generation for a sawmill similar to the one proposed as part of this project provided by EMDC.

Route 201 and Route 6/15 from Greenville south are both classified as principal arterial roadways by the MaineDOT. Significant portions of Route 201 from Jackman to the south have been improved over the last several years, therefore this roadway is generally in good condition and typically has shoulders of five feet in width or greater. Route 6/15 south of Greenville typically is in fair condition and generally has shoulders that are five feet in width or greater. Route 6/15 north of Greenville is classified by MaineDOT as a major collector and is in fair condition with the majority of the shoulders appearing to be gravel. The section of Route 6/15 from Rockwood to Jackman appears to be in poor condition and is currently listed in the MaineDOT Biannual Transportation Improvement Plan (BTIP) for reconstruction of some sections. Lily Bay Road is also a major collector with gravel shoulders. The Annual Average Daily Traffic volumes as recorded by the MaineDOT are as follows:

AADT Volumes for Select Locations

Town	Location	2004
Beaver Cove	LILY BAY RD @ GREENVILLE TL	1060
Greenville	LILY BAY RD NE/O SR 6/15 (WEST ST)	5690
Greenville	LILY BAY RD S/O VILLAGE ST	3160
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) @ RR OVERPASS	4940
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) S/O SR 6/15	6150
Greenville	SR 6/15 W/O SR 6/15 (MOOSEHEAD LK RD)	5810
Jackman	SR 6/15 @ LONG POND TWP TL	810
Jackman	SR 6/15 E/O US 201	1180
Jackman	SR 6/US 201 NW/O SR 6/15	3200
Sandwich Academy Grant	SR 6/15 W/O Demo Road (GPCEI ATR DATA)	410
Jackman	SR 201 S/O Route 6 Cutoff (GPCEI ATR DATA)	1267
Greenville	SR 6/15 W/O Eveleth Street (GPCEI ATR DATA)	2426
Greenville	SR 6/15 S/O Lily Bay Road (GPCEI ATR DATA)	5391
Greenville	Lily Bay Road S/O Lily Bay State Park (GPCEI ATR DATA)	1451

Note: Compiled by MaineDOT unless noted

Predevelopment Traffic Volumes

Seasonal Adjustment

MaineDOT utilizes highway classifications of I, II, or III for state and local roadways. Type I roadways are defined as urban roadways, or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Type II roadways, or arterial roadways are those that see a combination of commuter and recreational traffic and therefore experience moderate fluctuations during the year. Type III roadways, or recreational roadways are typically used for recreational purposes and experience dramatic seasonal fluctuation.

The roadways in the study area are considered Type III roadways by MaineDOT. Typically, volumes are adjusted to reflect the thirtieth highest hour (typically occurring in July or August) of traffic volumes in accordance with MaineDOT guidelines. Since the turning volumes referenced in Section II were collected at the end of August and in September, they were increased to the 30th highest hour by a factor of one and fourteen percent respectively.

The adjusted volumes are enclosed in Appendix C of this report.

Annual Growth

The proposed redevelopment of this site is anticipated to begin in 2009 and be completed over an eight year period with completion in 2017. Based on historic count data in the vicinity of the site, volumes have generally increased over the last twenty years at a rate of approximately one and a half percent per year. This background growth rate was applied to the raw volumes to result in 2017 volumes, resulting in an increase of twenty percent.

Other Development

Approved projects that are not yet constructed as well as projects for which applications have been filed are required to be included in the predevelopment volumes for this project. Gorrill-Palmer Consulting Engineers, Inc. has contacted Keith Smith at LURC to determine what projects may affect traffic volumes in the vicinity of this project. Mr. Smith identified a proposed development called Burnt Jacket, which is located in the Beaver Cove area which will initially consist of 70 lots and another 80 lots in the future. From our discussions with LURC, it is our understanding that this project is still in the rezoning process; however for the purposes of this traffic study we have included this project as other development even though it has not yet completed its permitting process. In addition our office contacted Dick Gould at the Town of Greenville regarding other development in the project area. Mr. Gould identified an additional 123 lots which would have access via Lily Bay Road and Pleasant Street. Mr. Gould also identified additional lots that would access Route 15 near the Greenville/Shirley town line, which are not forecast to enter the study area.

The raw volumes shown in Figures 2A, 2B, and 2C were seasonally and annually adjusted to result in the 2017 adjusted volumes, shown on Figures 3A, 3B, and 3C of Appendix A for the PM peak hours. Traffic from the other development, shown on Figures 4A, 4B, and 4C of Appendix A was combined with the adjusted volumes to result in the 2017 predevelopment volumes, as shown on Figures 5A, 5B, and 5C of Appendix A.

III. *Trip Generation*

The proposed project will consist of the following development:

975 residential building lots
500-room resort
250-room resort
90-acre sawmill

For the purposes of trip generation, Gorrill-Palmer Consulting Engineers, Inc. utilized the Institute of Transportation Engineers (ITE) publication *Trip Generation*, 7th Edition. Since data for recreational homes is not available, Gorrill-Palmer Consulting Engineers, Inc. utilized Land Use Code 210, Single Family Detached Housing, which should provide a conservative (high) estimate for this type of development. Gorrill-Palmer Consulting Engineers, Inc. also utilized Land Use Code 310, Hotel, for the resort.

Information was also provided by EMDC for a similar sized sawmill regarding trip generation for the proposed sawmill. The information provided by EMDC is as follows:

One 85 person shift 6:30 AM - 3:30 PM and a second shift with seven people.
30 log trucks/day arriving
15 lumber trucks/day leaving
15 chip trucks/day leaving
15 bark/mulch trucks/week leaving

Based on this information we assumed that 85 employees would be leaving and seven arriving during the PM peak hour yielding 92 trip ends (ins and outs). In addition, we estimate that there would be 60 trucks arriving and departing per day for a total of 120 truck trip ends per day with an additional 30 mulch truck trip end over the course of a week. For the purposes of this study we assumed that 10 percent of the daily truck trip ends would be occurring during the PM peak hour, resulting in 12 trip ends. A summary of the total estimated trip generation is presented below:

Trip Generation

Land Use Code	PM Peak Hour	Weekday	Saturday Peak Hour	Saturday
LUC 210: Single Family Detached Housing	1006	9481	813	10008
LUC 310: Hotel (For the Resort)	458	6128	540	6143
Sawmill	104	310	n/a	n/a
Total	**1568**	**15919**	**1353**	**16151**

It is important to note that the trip generation forecasts above are conservative (high) since they assume that all of the trips destined to and from the proposed development would be occurring during the pm peak hour. It is our opinion given that the majority of the development is likely to be recreational in nature that they will be arriving at the development throughout the day and not all arriving during the PM peak hour. However for the purposes of the study we have assumed that all of the trips will be occurring during the PM peak hour unless otherwise noted.

This level of trip generation would typically require a traffic permit from the MaineDOT, however this project falls underneath the jurisdiction of LURC. Therefore it is our understanding that a MaineDOT permit will not be required, however this study has been completed in accordance with the MaineDOT requirements.

The following Table summarizes the trip generation by the location of the proposed development.

Trip Generation Summary by Proposed Development Area

	Residential Lots	Resort	PM Peak Hour		
			Total	Enter	Exit
Intersection 1					
Lily Bay Heights A	128	0	131	85	46
Subtotal	**128**	**0**	**131**	**85**	**46**
Intersection 2					
Stevens Point	6	0	6	4	2
Lily Bay Resort	0	250	153	99	54
Lily Bay Heights B	20	0	20	13	7
Carleon Point	10	0	10	7	3
Subtotal	**36**	**250**	**189**	**123**	**66**
Intersection 3					
Beaver Cove A	24	0	24	16	8
Subtotal	**24**	**0**	**24**	**16**	**8**
Intersection 4					
Beaver Cove B	7	0	7	5	2
Northeast Highlands	16	0	16	10	6
Northeast Shore	17	0	17	11	6
Upper Wilson Pond West Shore	33	0	34	22	12
East Side Upper Wilson	17	0	17	11	6
Prong Pond West Shore	2	0	2	1	1
Subtotal	**92**	**0**	**93**	**60**	**33**
Intersection 5					
Prong Pond West Shore(1 or 2 driveways by town office)	10	0	10	7	3
Subtotal	**10**	**0**	**10**	**7**	**3**
Intersection 6					
South Shore	6	0	6	4	2
Subtotal	**6**	**0**	**6**	**4**	**2**
Intersection 7					
Moose Bay Village	68	0	69	45	24
Subtotal	**68**	**0**	**69**	**45**	**24**
Intersection 8					
Sapling	14	0	14	9	5
Subtotal	**14**	**0**	**14**	**9**	**5**
Intersection 9					
East Outlet Highlands A	25	0	26	17	9
East Outlet Highlands B	5	0	5	3	2
Burnham Pond North	15	0	15	10	5
Subtotal	**45**	**0**	**60**	**39**	**21**
Intersection 10					
Deep Cove Shore	33	0	34	22	12
Subtotal	**33**	**0**	**34**	**22**	**12**
Intersection 11					
Deep Cove Highlands	35	0	36	23	13
Subtotal	**35**	**0**	**36**	**23**	**13**
Intersection 12					
Big Moose Resort	0	500	305	198	107
Burnham Pond South	11	0	11	7	4
Road to Indian Pond	31	0	32	21	11
Subtotal	**42**	**500**	**348**	**226**	**122**

Trip Generation Summary by Proposed Development Area

	Residential Lots	Resort	PM Peak Hour		
			Total	Enter	Exit
Intersection 13					
Rockwood Village A&B	25	0	26	17	9
Subtotal	**25**	**0**	**26**	**17**	**9**
Intersection 14					
Rockwood/Kineo View	35	0	36	23	13
Subtotal	**35**	**0**	**36**	**23**	**13**
Intersection 15					
West Outlet C	5	0	5	3	2
Subtotal	**5**	**0**	**5**	**3**	**2**
Intersection 16					
West Outlet Highlands A	25	0	26	17	9
West Outlet Highlands B	5	0	5	3	2
Subtotal	**30**	**0**	**31**	**20**	**11**
Intersection 17					
South East Highlands	10	0	10	7	3
Subtotal	**10**	**0**	**10**	**7**	**3**
Intersection 18					
South Peninsula	132	0	135	88	47
Subtotal	**132**	**0**	**135**	**88**	**47**
Intersection 19					
Northwest Shore (Via Long Shore Road)	21	0	21	14	7
North Central Shore (Via Long Shore Road)	24	0	24	16	8
Northeast Shore (Via Long Shore Road)	29	0	30	20	10
Brassua Lake West Shore A-E	69	0	70	46	24
Subtotal	**143**	**0**	**145**	**96**	**49**
Intersection 20					
Big W North	15	0	15	10	5
Big W South	20	0	20	13	7
Subtotal	**35**	**0**	**35**	**23**	**12**
Smaller intersections					
Sandbar Tract	2	0	2	1	1
South East Shore Brassua Lake	3	0	3	2	1
South Shore Long Pond	5	0	5	3	2
Southeast shore on Indian Pond	13	0	13	8	5
Brassua Lake in the vicinity of Pages Point/Moose River	4	0	4	3	1
Subtotal	**27**	**0**	**27**	**17**	**10**
Sawmill	**0**	**0**	**104**	**13**	**91**
Total	**975**	**750**	**1568**	**966**	**602**

IV. *Trip Distribution*

Gorrill-Palmer Consulting Engineers, Inc. has obtained the ratio of entering and exiting traffic from the Institute of Transportation Engineers publication *Trip Generation,* 7th Edition for Land Use Code 210, Single Family Detached Housing and Land Use Code 310, Hotel. The ratio of entering and exiting traffic for the

sawmill was based on the information provided by EMDC for a sawmill of similar size.

LUC 210, Single Family Detached Housing

	PM Peak Hour:	65% Entering, 35% Exiting
	Saturday Peak Hour:	55% Entering, 45% Exiting
LUC 310, Hotel		
	PM Peak Hour:	60% Entering, 40% Exiting
	Saturday Peak Hour:	55% Entering, 45% Exiting
Saw Mill	PM Peak Hour:	13% Entering, 87% Exiting

V. *Trip Composition*

Gorrill-Palmer Consulting Engineers, Inc. has estimated that 100% of trips are new to the area and surrounding roadway system.

Primary Trips

The primary trip assignment is shown on Figures 6A, 6B and 6C for the PM peak hours.

VI. *Trip Assignment*

The trip assignment percentages are based on the population distribution within New England and the available routes that exist to access the site, primarily Route 6/15 and Route 201. The trip assignment is shown on Figures 6A, 6B, and 6C of Appendix A for the PM peak hour.

VII. *2017 Postdevelopment Traffic*

The anticipated year 2017 predevelopment traffic shown in Figures 5A, 5B, and 5C of Appendix A has been combined with the traffic forecast for the development shown in Figures 6A, 6B, and 6C of Appendix A to yield the 2017 postdevelopment traffic shown in Figures 7A, 7B, and 7C of Appendix A for the PM peak hours.

VIII. *Study Area*

The study area for this report includes the following intersections and connecting roadways:

- Main Street(Route 15/6)/Eveleth Street

- Main Street(Route 15/6)/Lily Bay Road/Pritham Avenue(Route 15/6)
- Pritham (Route 15/6)/Eveleth Street/Lakeview Street
- Lily Bay Road/Pleasant Street
- Lily Bay Road/State Park Road
- Route 15/6 / Rockwood Road
- Route 15/6 / Williams Mountain Road
- Route 15/6 /Route 6 Cutoff
- Route 15 / Route 201
- Intersections of the major site driveways with town/state roads.

IX. *Capacity Analyses*

Gorrill-Palmer Consulting Engineers, Inc. completed capacity analyses for the intersections listed in Section VIII.

The analysis was completed utilizing the Highway Capacity Software (HCS) for the unsignalized intersections. The Synchro capacity analysis software was utilized for intersections where traffic signalization was considered or recommended. Levels of service rankings are similar to the academic ranking system where an 'A' is very good with little control delay and an 'F' represents very poor conditions. A level of service 'D' and higher is desirable for a signalized intersection. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if a traffic signal is warranted.

The following table summarizes the relationship between delay and level of service for a signalized intersection:

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

The following table summarizes the relationship between delay and level of service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

For the predevelopment condition, analyses were completed with existing roadway configurations. The postdevelopment analyses were completed with the following additional improvements, which are also depicted on Figure 8 in the Appendix C:

- Restripe Pritham Street (Route 6/15) at the intersection of Main Street to provide a separate northbound left turn lane and through lane. This would require the removal of some on street parking
- Restripe Main Street at the intersection of Pritham Street to provide a separate right and left turn lane. This would require the removal of some on street parking. It is our recommendation that the developer work with the Town of Greenville to identify areas where new parking spaces could be created to offset the lost spaces.
- Install a fully-actuated traffic signal at the intersection of Main Street/Pritham Ave/Lily Bay Road. The existing traffic volumes at the intersection currently do not meet the traffic signal warrants. The intersection should be monitored and a traffic signal should be installed once one or more of the traffic signal warrants are met. Please see the traffic signal warrant discussion in Section XI.

It is important to note that the trip generation information utilized in this study is conservative since it was assumed that all of the trips destined to and from the proposed development would be occurring during the PM peak hour. As discussed in the trip generation section above, this is unlikely to be the case, since many of the trips destined to the proposed developments are likely to arrive at different time periods since a majority of the development is likely to be recreation in nature. Therefore it is our recommendation that the above intersection should be monitored and the above improvements implemented when/if they are required.

The results of the capacity analyses are summarized as follows; with the detailed analyses sheets are included in Appendix B.

Level of Service for Route 15 at Lily Bay Road (Signalized in Post Development)

Approach/Movement	2017 PM Peak Hour					
	Predevelopment		Postdevelopment with 100% Development Traffic		Postdevelopment with 50% Development Traffic	
	Delay	LOS	Delay	LOS	Delay	LOS
Route 15 EB LR	137	F	-	-	47	D
Route 15 EB L	-	-	65	E	-	-
Route 15 EB R	-	-	11	B	-	-
Lily Bay Road NB LT	9	A	-	-	-	-
Lily Bay Road NB L	-	-	63	E	42	D
Lily Bay Road NB T	-	-	5	A	12	B
Lily Bay Road SB TR	<1	A	74	E	52	D
Overall	-	-	41	D	37	B

As can be seen from the above capacity analyses the intersection of Main Street/Pritham/Lily Bay Road is forecast to operate at a low level of service in the postdevelopment condition. As stated above it is our opinion that the trip generation is conservative since all of the trips have been assumed to arrive during the peak hour, while in reality the trips are expected to arrive spread out throughout the day. Therefore we have also completed a capacity analysis for this intersection assuming that half of the trips will arrive at this intersection during the PM peak hour. As can be seen from the table for this analysis this intersection operates at a significantly improved level of service under this condition.

It is our understanding that the there has been discussion regarding the use of Eveleth Street as a bypass for some traffic to the intersection of Main Street/Pritham/Lily Bay Road. Eveleth Street currently is a residential street which traverses a hillcrest. Heading northbound on Eveleth Street approaching Main Street (Route 6/15) there is a significant grade that would need to be reduced if Eveleth Street were to be designated as a bypass route. Reduction of the grades on Eveleth Street would have significant impacts to the abutting driveways, side streets, properties, and would likely require the taking of several buildings. Therefore it is our opinion that the use and designation of Eveleth Street is not feasible.

Unsignalized Intersections

Level of Service for Lily Bay Road at State Park

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	7	A	8	A
State Park EB LR	9	A	10	A

Level of Service for Route 15 at 20 Mile Road

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 EB LT	7	A	8	A
20 Mile Road SB LR	9	A	12	B

Level of Service for Route 15 at Demo Road

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 EB LTR	8	A	8	A
Route 15 WB LTR	7	A	7	A
Demo Rod SB LTR	9	A	10	B

Level of Service for Route 15 at Route 6 Cutoff

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 EB LT	7	A	7	A
Route 6 Cutoff NB LR	9	A	9	A

Level of Service for Route 15 at Route 201

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 201 SB LT	8	A	8	A

Level of Service for Beaver Cove (Other Development)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	7	A	8	A
Burnt Jacket Road EB LR	9	A	10	A

Level of Service for Lily Bay Road at Pleasant Street

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LTR	8	A	9	A
Parking Lot EB LTR	18	C	45	E
Lily Bay Road SB LTR	9	A	10	B
Pleasant Street WB LTR	32	D	>60	F

Level of Service for Pritham Avenue at Eveleth Street

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Eveleth Street NB LTR	20	C	>60	F
Pritham Ave EB LTR	8	A	11	B
Eveleth Street SB LTR	16	C	>60	F
Pritham Ave WB LTR	8	A	9	A

Level of Service for Main Street at Eveleth Street

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Main Street NB LT	8	A	11	B
Eveleth Street EB LR	17	C	>60	F

Level of Service for Lily Bay Road at Intersection 1 (Lily Bay Heights A)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	-	-	7	A
Intersection 1 EB LR	-	-	9	A

Level of Service for Lily Bay Road at Intersection 2(Lily Bay Resort)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	-	-	8	A
Intersection 2EB LR	-	-	9	A

Level of Service for Lily Bay Road at Intersection 3 (Beaver Cove A)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	-	-	8	A
Intersection 3 EB LR	-	-	9	A

Level of Service for Lily Bay Road Intersection 4 (Beaver Cove B)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road SB LT	-	-	8	A
Intersection 4 WB LR	-	-	12	B

Level of Service for Lily Bay Road at Intersection 5 (Prong Pond)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road NB LT	-	-	8	A
Intersection 5 WB LR	-	-	13	B

Level of Service for Lily Bay Road at Intersection 6 (South Shore)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Lily Bay Road SB LT	-	-	8	A
Intersection 6 EB LR	-	-	13	B

Level of Service for Route 15 at Intersection 7 (Moose Bay Village)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	10	B
Intersection 7 WB LR	-	-	>60	F

Level of Service for Route 15 at Intersection 8 (Sapling)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	9	A
Intersection 8 WB LR	-	-	23	C

Level of Service for Route 15 at Intersection 9 (Highlands)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LTR	-	-	9	A
Route 15 SB LTR	-	-	9	A
Intersection 9 WB LTR	-	-	37	E
Intersection 9 EB LTR	-	-	13	B

Level of Service for Route 15 at Intersection 10 (Deep Cove Shore)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	9	A
Intersection 10 WB LR	-	-	29	D

Level of Service for Route 15 at Intersection 11 (Deep Cove Highlands)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	10	A
Intersection 11 WB LR	-	-	52	F

Level of Service for Route 15 at Intersection 12 (Big Moose Resort)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB L	-	-	10	B
Intersection 12 EB LR	-	-	16	C

Level of Service for Route 15 Intersection 13 (Rockwood Village)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	8	A
Intersection 13 WB LR	-	-	10	A

Level of Service for Route 15 at Intersection 14 (Rockwood/Kineo View)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	8	A
Intersection 14 WB LR	-	-	21	C

Level of Service for Route 15 at Intersection 15 (West Outlet C)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	9	A
Intersection 15 WB LR	-	-	18	C

Level of Service for Route 15 at Intersection 16 (West Outlet Highlands)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	9	A
Intersection 16 EB LR	-	-	15	C

Level of Service for Route 15 at Intersection 17 (Southeast Highlands)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	8	A
Intersection 17 WB LR	-	-	10	A

Level of Service for Route 15 at Intersection 18 (South Peninsula)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	8	A
Intersection 18 EB LR	-	-	11	B

Level of Service for Demo Road at Intersection 19 (Long Shore Road)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Demo Road NB LTR	-	-	7	A
Demo Road SB LTR	-	-	7	A
Intersection 19 WB LTR	-	-	10	A
Intersection 19 EB LTR	-	-	8	A

Level of Service for Demo Road at Intersection 20 (Big W)

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Demo Road SB LT	-	-	7	A
Intersection 20 WB LR	-	-	9	A

Level of Service for Route 15 at Sawmill

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	9	A
Sawmill EB LR	-	-	20	C

Level of Service for Route 15 at Sandbar Tract

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 SB LT	-	-	9	A
Sandbar Tract WB LR	-	-	23	C

Level of Service for Route 15 at Brassua Lake in the Vicinity of Pages Point/Moose River

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	8	A
Pages Point EB LR	-	-	11	B

Level of Service for Route 15 at Southeast Shore Brassua Lake

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	8	A
Brassua Lake EB LR	-	-	11	B

Level of Service for Route 15 at South Shore Long Pond

Approach/Movement	2017 PM Peak Hour			
	Predevelopment		Postdevelopment	
	Delay	LOS	Delay	LOS
Route 15 NB LT	-	-	7	A
Long Pond EB LR	-	-	9	A

As can be seen from the above table the majority of the intersections are forecast to operate at a level of service 'C' or better. There are a couple of the intersections at which the movements exiting the proposed site driveways/side streets are forecast to operate at a level of service 'F', which is not uncommon at intersections where low volume roads intersect higher volume roadways. The first approach to address the low level of service is to consider separate left and right turn lanes exiting the minor approaches. Since at the majority of the proposed driveways the forecast traffic is expected to either turn right or left, separate exiting lanes are not justified. The second approach is to consider signalization, however the volumes exiting the proposed development driveways and the volumes on the major roadways are not high enough to warrant signalization. Therefore the level of service 'F' operation is acceptable at these locations.

X. *Lane Warrant Analyses*

Our office utilized the postdevelopment volumes included in the appendix to determine the need for left turn lanes entering proposed site access roads. MaineDOT utilizes the attached Figures 8-17 and 8-18 to assess the need for turn lanes. Based on the forecast volumes the two intersections that were considered for left turn treatments were the two intersections at which the resorts are proposed, intersections two and twelve on Lily Bay Road and Rockwood Road, respectively. Based on this analysis, left turn treatment is recommended for intersection twelve, on Rockwood Road which is where the 500 room resort is proposed based on the forecast volumes. Our office recommends that left turn bypass lanes be constructed in accordance with the MaineDOT Design Guide.

XI. *Signal Warrant Analysis*

Gorrill-Palmer Consulting Engineers, Inc. completed a signal warrant analysis for the intersection of Main Street / Pritham (Route 6/15) / Lily Bay Road. In order for a traffic signal to be installed, the location must meet one or more of the traffic signal warrants published in the 2003 Edition of the Manual on Uniform Traffic Control Devices, which are listed below:

Warrant #	Description
1	Eight-Hour Vehicular Volume
2	Four-Hour Vehicular Volume
3	Peak Hour
4	Pedestrian Volume
5	School Crossing
6	Coordinated Signal System
7	Crash Experience
8	Roadway Network

Gorrill-Palmer Consulting Engineers, Inc. utilized information from the turning movements completed at this intersection in August 2005. The volumes were not adjusted to represent average volumes since it is expected that the traffic signal will only be in operation during the peak seasons. We have also included in Appendix C a copy of the signal warrant evaluation sheets. Warrants 2 and 3 are the warrants that were examined as discussed below:

Warrant #2: *Four-Hour Vehicular Volume* – This warrant requires that for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor-street approach (one direction only) all fall above the applicable curve in figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours. To evaluate this warrant forecasted traffic from the development were added to the existing traffic volumes at the intersection. Based on the forecast volumes and our assumptions the volumes are expected to satisfy one hour of the warrant, this warrant **is satisfied.**

Warrant #3: *Peak Hour* – This warrant requires that the criteria in either of the following two categories are met:

1. If all three of the following condition exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

    a. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and

    b. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and

    c. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches.

2. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any for consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Based on the 2005 collected volumes, the plotted points for the peak hour of the intersection meets the curves on the table for the 2017 postdevelopment conditions. Therefore this warrant **is satisfied** for the Main Street / Pritham (Route 6/15) / Lily Bay Road based on the assumptions that have been made in this traffic study.

It is our recommendation that the intersection be monitored by the developer and that a traffic signal be installed once the traffic volumes meet a traffic signal warrant.

XII. *Forecast Summer Average Daily Traffic*

The table below summarizes the 2004 Summer Average Daily Traffic (SADT) from the Maine DOT and the SADT based on the information that was collected by our office in 2005. We estimate based on past trends that these volumes will increase by 1.5% annually. We have estimated the 2017 volumes using this growth rate, which is present in the column titled 2017 without development. In addition, the 2017 SADT with the proposed development was forecast based on the ITE Trip Generation Manual and is presented in the far right column of the table.

Town	Location	2004	2017 without Development	2017 with Development
Beaver Cove	LILY BAY RD @ GREENVILLE TL	1342	1624	6195
Greenville	LILY BAY RD NE/O SR 6/15 (WEST ST)	7203	8716	13287
Greenville	LILY BAY RD S/O VILLAGE ST	4000	4840	9255
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) @ RR OVERPASS	6254	7568	21475
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) S/O SR 6/15	7785	9420	23828
Greenville	SR 6/15 W/O SR 6/15 (MOOSEHEAD LK RD)	7355	8900	18738
Jackman	SR 6/15 @ LONG POND TWP TL	1026	1242	2351
Jackman	SR 6/15 E/O US 201	1494	1808	1808
Jackman	SR 6/US 201 NW/O SR 6/15	4051	4902	4902
Sandwich Academy Grant	SR 6/15 W/O Demo Road (GPCEI ATR DATA)	519	623	1624
Jackman	SR 201 S/O Route 6 Cutoff (GPCEI ATR DATA)	1604	1925	6526
Greenville	SR 6/15 W/O Eveleth Street (GPCEI ATR DATA)	3071	3686	13534
Greenville	SR 6/15 S/O Lily Bay Road (GPCEI ATR DATA)	6825	8190	22578
Greenville	Lily Bay Road S/O Lily Bay State Park (GPCEI ATR DATA)	1837	2205	6806

The MaineDOT has a policy when they overlay or complete improvements to a roadway that has an SADT of 4,000 or greater to pave the shoulders. As can be seen in the above table several of the 2004 SADT are already above the 4,000 SADT threshold and it should be noted that Route 6/15 already has paved shoulders at several locations. The forecasted 2017 SADT with development increases Lily Bay Road at the Greenville town line and Lily Bay Road south of Village Street above the 4,000 SADT thresholds which would not occur without the development. It is our recommendation that these locations be monitored and that if the SADT increases above the threshold due to the proposed development that the developer work with the MaineDOT and the towns to pave the shoulders.

There are currently sidewalks along Main Street, Lily Bay Road, and on Pritham (Route 6/15) in the downtown area of Greenville. The existing sidewalks appear to be adequate to serve the existing business in the downtown area and would not be justified beyond these areas.

XIII. *Crash Data*

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:
2. A minimum of 8 crashes over a three-year period.

The following tables summarize the crash data provided by MaineDOT:

MaineDOT Crash Data for 2002-2004: Intersections

Node	Town	Intersection	# of Collisions	CRF	HCL?
7052	Monson	Route 6 & Bray Road	2	1.10	No
1280	Greenville	Washington & Prospect	1	2.91	No

MaineDOT Crash Data for 2002-2004: Road Segments

Nodes	Town	Street	From	To	# of Collisions	CRF	HCL?
1875-7047	Abbot	Route 6	Prides Loop	Monson Jct	4	1.11	No
7049-8999	Monson	Tenny Hill Rd	Monson/Abbot TL	1.8 m from TL	9	.82	No
7056-7057	**Monson**	**Greenville Rd**	**1.4 M SO of TL**	**Town line**	**13**	**1.24**	**Yes**
7059-8958	Shirley	Greenville Rd	U. Shirley Cor	Rt 15 Loop	6	1.07	No
6072-6073	Greenville	West Street	Beech St	Greenville/Little Squaq TL	2	1.29	No
6077-6078	Big Squaw	Route 6 & 15	South of the Forest Office		1	1.41	No
1299-1301	Greenville	Main Street	Foss St	Preo St	1	1.18	No
1098-1118	Greenville	Main Street	Scammon Rd	Townline	16	.72	No
7210-7240	Lily Bay	Lily Bay Road	Storehouse Rd	Southbrook Rd	1	1.41	No
7242-7244	Lily Bay	Lily Bay Road	North Shore Rd	Spencer Bay Rd	3	1.79	No

Based on the published history, one location within the study area is considered a High Crash Location, Greenville Road south of the town line in Monson. Our office requested the collision reports for this location from the MaineDOT. They indicated that of the 13 crashes 5 were due to snowy/icy roads and 5 were due to collision with animals. Therefore it is our opinion that they are not any correctable patterns to the collisions that are occurring at this location.

The data requested from the MaineDOT included data for 232 collisions of which there was only one collision involving a pedestrian and one collision involving a bicycle. In addition 47 of the collisions were with Moose, 22 of them with deer and 60 ran off the road collisions. There are several roads in the Moosehead Lake Region that already have warning signs to watch for Moose in the roadway. It is our

recommendation that they developer work with MaineDOT to review the locations where the moose collisions are occurring and that additional signage be added if warranted.

Crash data is provided in Appendix C of this report.

XIV. *Sight Line Analysis*

The Maine Department of Transportation has guidelines for sight distances at driveways, which are shown on the following table:

Basic Safety Standards for Sight Distance

Posted Speed (mph)	MaineDOT Standard
25	200
30	250
35	305
40	360
45	425
50	495
55	570

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the majority of the proposed driveways in accordance with MaineDOT standards. Since formal site plans did not exist at the time this traffic study was completed the driveway locations were located from location maps only, therefore they are approximate only. Before the construction or during the completion of construction plans for the driveways/intersections the sight lines should be reevaluated and the locations adjusted to provide the minimum sight lines recommended in the above table or greater where feasible.

The MaineDOT standards are as follows:

Driveway observation point:	10 feet off major street travelway
Height of eye at driveway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

Based on our observations, sight distances at the site driveways are as follows:

Locations	Posted Speed Limit MPH	Available Sight Distance		Recommended Sight Distance
		Looking Left	Looking Right	
Intersection 1-Lily Bay Heights A-(Intersection should be moved to the north to be at pole 417S/348S to obtain sight lines listed.)	45	425'±	425'±	425'
Intersection 2-Lily Bay Resort-(Casey's Road)	45	550'±	> 600'	425'
Intersection 3-Beaver Cove A-(Pole 276/207)	45	>450'	>450'	425'
Intersection 4 –Beaver Cove B-(B-52 Site, tree by pole 258 needs to be removed)	45	>425'	>425'	425'
Intersection 5-Prong Pond-(Assumes access will be shared with the existing Beaver Cove Town Office driveway)	45	425'±	425'±	425'
Intersection 6-South Shore-(Driveway should be located across from marina driveway)	45	>425'	>425'	425'
Intersection 7-Moose Bay Village-(Assumes Williams Brook Road is access point for development)	45	425'±	425'±	425'
Intersection 8-Sapling	55	>570	>570'	520'
Intersection 9-Highlands-(Intersection will need to be field located with a profile of Route 6/15 completed to locate the driveway to obtain the optimal sight lines.)	55	520'±	520'±	520'
Intersection 10-Deep Cove Shore-(recommend moving intersection to the vicinity of pole 267/164 to increase sight lines)	55	520'±	520'±	520'
Intersection 11-Deep Cove Highlands-(Intersections should be aligned with intersection 12)	55	>570	>570	520'
Intersection 12-Big Moose Resort	55	>570	>570	520'
Intersection 13-Rockwood Village-(Intersection will need to be located approximately 200' to the east of Dam Road to obtain the recommended sight lines)	55	600'±	600'±	520'
Intersection 14-Rockwood/Kineo View-(pole 7/25/472)	55	>800'	>800'	520'
Intersection 15-West Outlet C-(Price Road)	55	>570'	>570'	520'
Intersection 16-West Outlet Highlands	55	>570'	>570'	520'
Intersection 17-Southeast Highlands-(Intersection should be relocated to the north as close to the guardrail as practicable)	55	570'±	>800'	520'
Intersection 18-South Peninsula	55	700'±	700'±	520'
Intersection 19-Long Shore Road (The hillcrest in Demo Road will need to be lowered to obtain the recommended sight lines)	Not posted assumed 45	425'±	425'±	425'
Intersection 20 –Big W-No Speed was posted (Williams Brook Road)	Not posted assumed 45	425'±	425'±	425'
Exiting Demo Road onto Route 6/15	55	700±	670±	520
Exiting 20 Mile Road onto Route 6/15 at Bridge	25	>200	>200	200
Intersection for Sandbar Tract lots (Mastermen Farm Road)	55	>800'	>570'	520'
Intersection of Sawmill/Route 6/15 - Speed 55 mph	55	>520'	>520'	520'
Intersection of Route 6/15 / Route 6 Cutoff	55	>570'	>570'	520'
Intersection of Route 201/6/15	35	600'±	800'±	305'
Intersection of Route 201/Route 6 Cutoff	55	700'±	570'±	520'
Route 201/Lake Moxie Road	25	350'±	350'±	200'

Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is

entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

XV. *Conclusions*

Proposed for the site are 975 residential lots and a 250 and 500 room resort and a 90-acre sawmill. The proposed development is spread throughout the Moosehead Region and will have several access points as noted in the report.

Based on this study, our office has determined the following:

1. The proposed development is forecast to generate 1,568 trip ends and 1,353 trip ends for the weekday PM and Saturday peak hours, respectively. It is important to note that the trip generation forecasts above are conservative since they assume that all of the trips destined to and from the proposed development would be occurring during the pm peak hour. It is our opinion given that the majority of the development is likely to be recreational in nature, that they will be arriving at the development throughout the day and not all arriving during the PM peak hour. However for the purposes of the study we have assumed that all of the trips will be occurring during the PM peak hour unless otherwise noted.

   This level of trip generation would typically require a traffic permit from the MaineDOT, however this project falls underneath the jurisdiction of LURC. Therefore it is our understanding that a MaineDOT permit will not be required, however this study has been completed in accordance with the MaineDOT requirements.

2. The capacity analyses show that with the improvements proposed by MaineDOT as well as those associated with this project, the majority of the intersections within they study area the operate at an overall LOS of 'C' or better. At the intersection of Main Street/Pritham/Lily Bay Road we have recommended the installation of a traffic signal when the warrants are met, as well as the addition of turn lanes. Our analysis indicates that the intersection of Main Street / Pritham (Route 6/15) / Lily Bay Road will meet a traffic signal warrant with the full build out of the proposed development, based on the assumptions that have been made in this traffic study. It is our recommendation that the intersection be monitored by the developer and that a traffic signal be installed once the traffic volumes meet a traffic signal warrant.

3. Gorrill-Palmer Consulting Engineers, Inc. referenced the MaineDOT High Crash listings to determine if there were any high crash locations in the project vicinity. Based on a review of the published history, there was one location within the greater Moosehead Lake Region located on Route 6/15 in Monson that is listed as a high crash location. The collision reports for this location indicate that of the thirteen crashes, five were due to snowy/icy roads and 5 were due to collision with animals. Therefore it is our opinion that there are not any correctable patterns to the collisions that are occurring at this location.

   There are several roads in the Moosehead Lake Region that already have warning signs to watch for moose in the roadway. It is our recommendation that

the developer work with MaineDOT to review the locations where the moose collisions are occurring and that additional signage be added if warranted.

4. Based on the increase in Average Annual Daily Traffic (AADT) on Lily Bay Road due to background growth and the increase in traffic due to the proposed development, Lily Bay Road at the Greenville town line and Lily Bay Road south of Village Street are forecast to have an AADT above 4,000 vehicles, which is the MaineDOT threshold for paving shoulders when they have a project along a roadway without paved shoulders. The sections of Lily Bay Road forecast to reach this level are in the vicinity of the Greenville town line and in the vicinity of Village Street. It is our recommendation that these locations be monitored and that if the AADT increases above the threshold due to the proposed development that the developer work with the MaineDOT and the towns to pave the shoulders.

5. Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the proposed driveways in accordance with MaineDOT standards. Since formal site plans did not exist at the time this traffic study was completed, the driveway locations were determined from location maps and therefore are approximate. Before the construction or during the completion of construction plans for the driveways/intersections, the sight lines should be reevaluated and the locations adjusted to provide at least the minimum sight lines recommended in the body of the report.

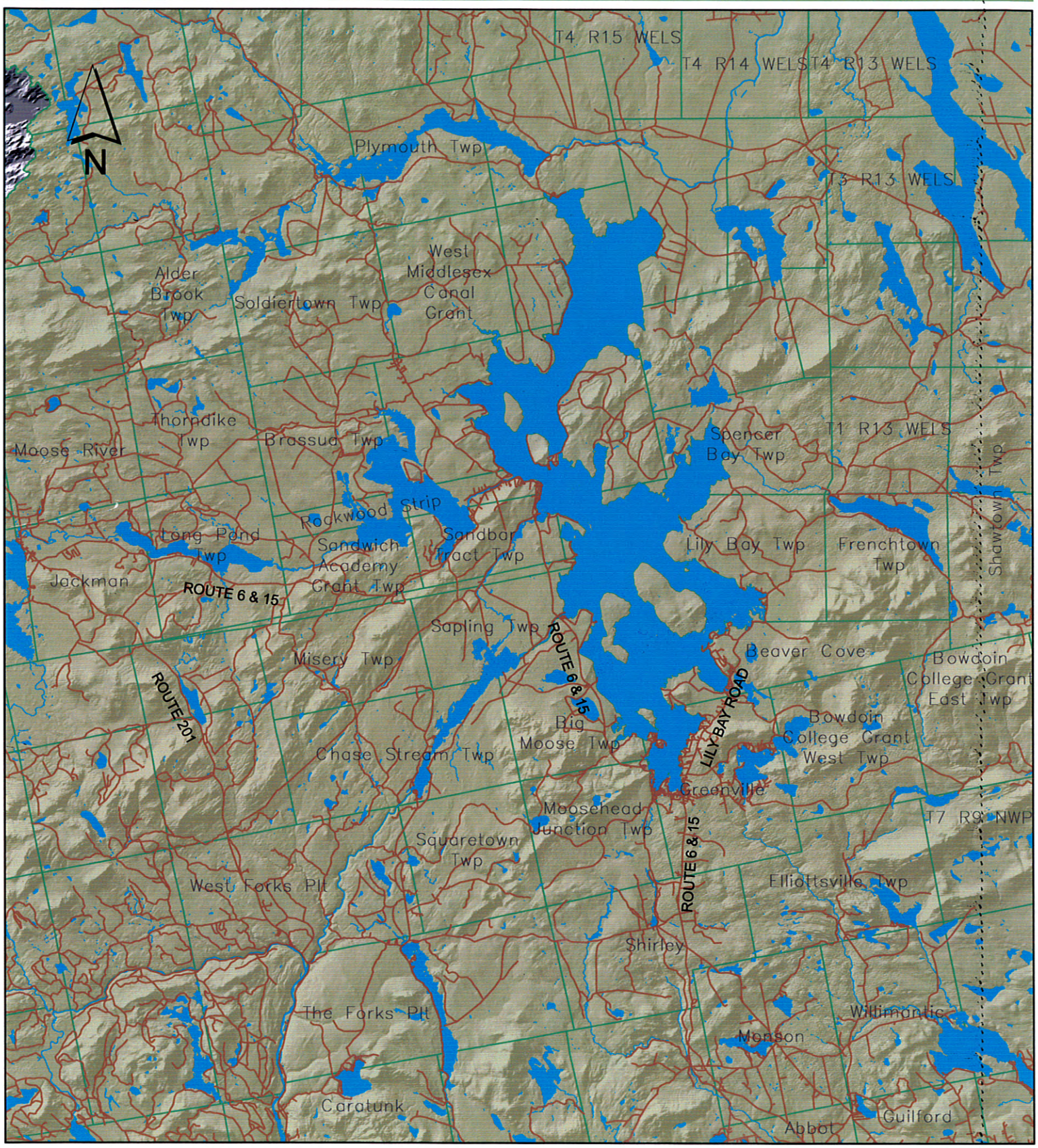
   Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right-of-way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction when heavy equipment is entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the local street system can accommodate the traffic generated by the proposed development with the proposed improvements.

Appendix A

Vicinity Map

Figure No. 1



PLUM CREEK'S REZONING PROPOSAL, MOOSEHEAD LAKES REGION, MAINE

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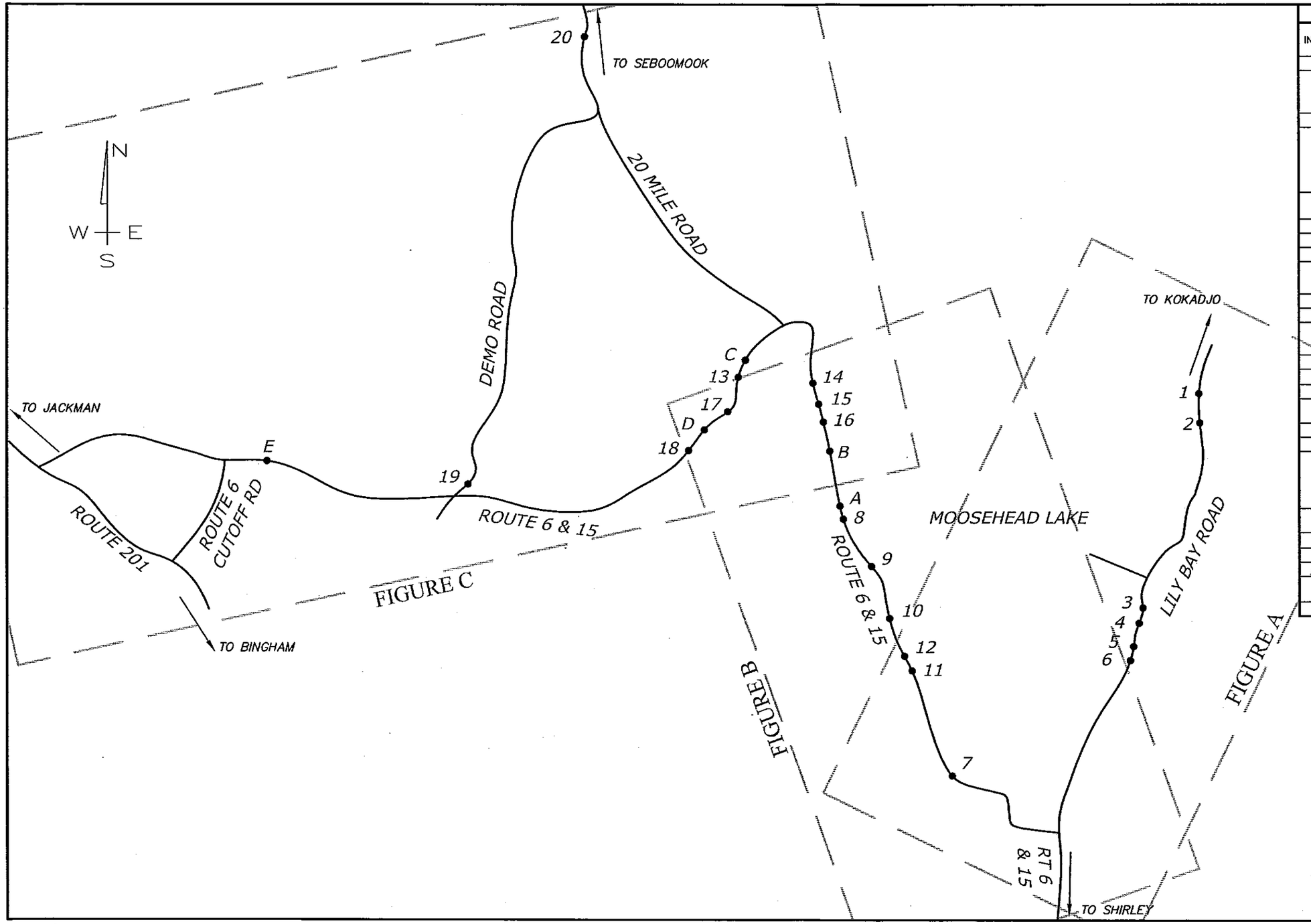
JN: 1381.01
DATE: MAR 2006
SOURCE: MAINE GIS WEBSITE

Key Map

Figure No. 1



DEVELOPMENT KEY

INTERSECTION	DEVELOPMENT NAME	NO. LOTS/ROOMS
1	Lily Bay Heights A	128
2	Stevens Point Lily Bay Resort Lily Bay Heights B Carleon Point	36/250
3	Beaver Cove A	24
4	Beaver Cove B Northeast Highlands Northeast Shore Upper Wilson Pond West Shore East Side Upper Wilson Prong Pond West Shore	92
5	Prong Pond West Shore (1 or 2 driveways by town office)	10
6	South Shore	6
7	Moose Bay Village	68
8	Sapling	14
9	East Outlet Highlands A East Outlet Highlands B Burnham Pond North	45
10	Deep Cove Shore	33
11	Deep Cove Highlands	35
12	Big Moose Resort Burnham Pond South Road to Indian Pond	42/500
13	Rockwood Village A&B	25
14	Rockwood/Kineo View	35
15	West Outlet C	5
16	West Outlet Highlands A West Outlet Highlands B	30
17	South East Highlands	10
18	South Peninsula	132
19	Northwest Shore (Via Long Shore Road) North Central Shore (Via Long Shore Road) Northeast Shore (Via Long Shore Road) Brassua Lake West Shore A-E	143
20	Big W North Big W South	35
A	Sawmill	N/A
B	Sandbar Tract	2
C	South East Shore Brassua Lake	3
D	Brassua Lake in the vicinity of Pages Point/Moose River	4
E	South Shore Long Pond	5

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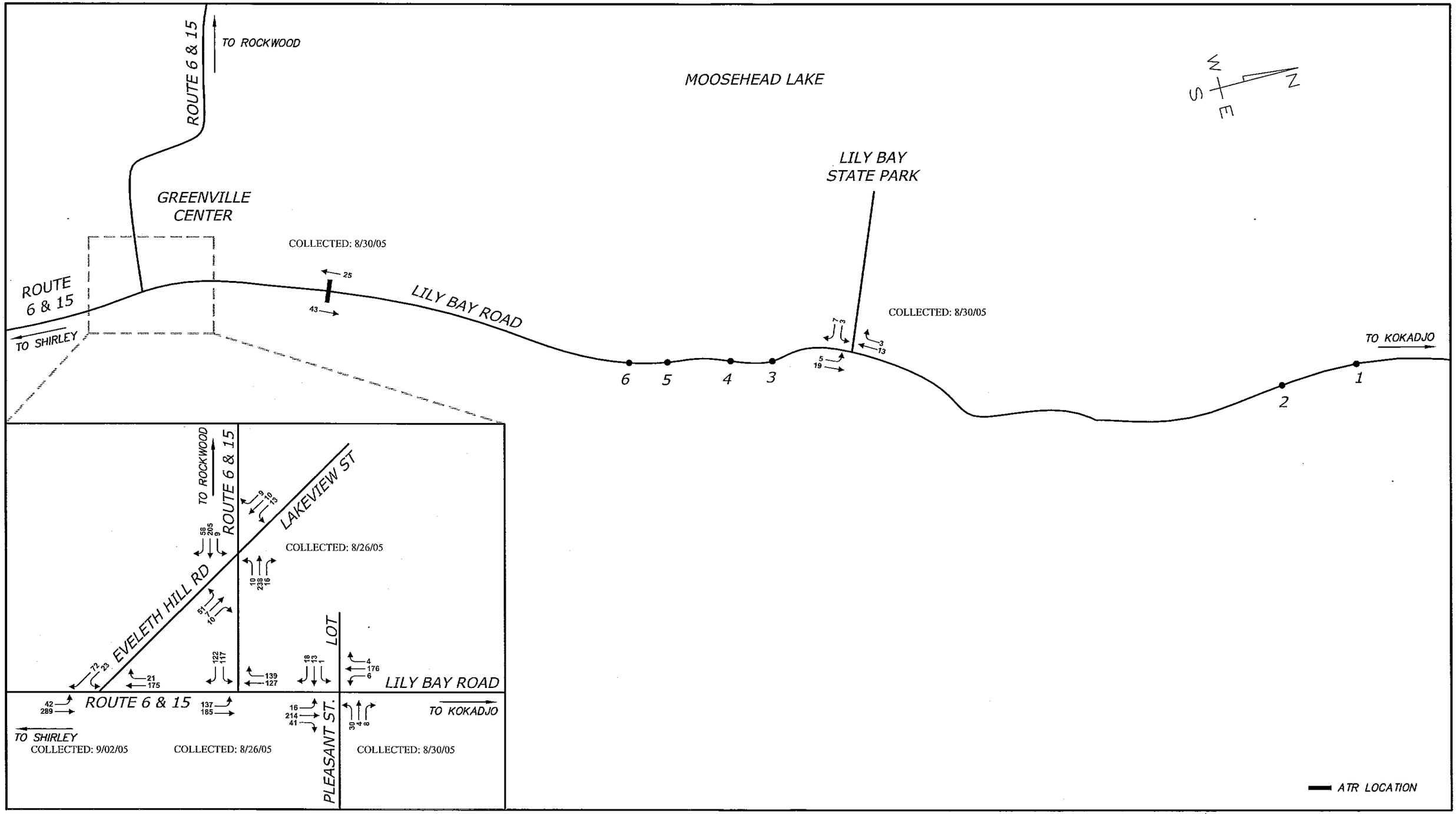
PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: RJB
Draft: DB
Checked: RCN
Date: MARCH 2006
File Name: 1381-01_TRAF.dwg

Raw Volumes

Figure No. 2A



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PLUM CREEK'S REZONING PROPOSAL
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Draft: DB
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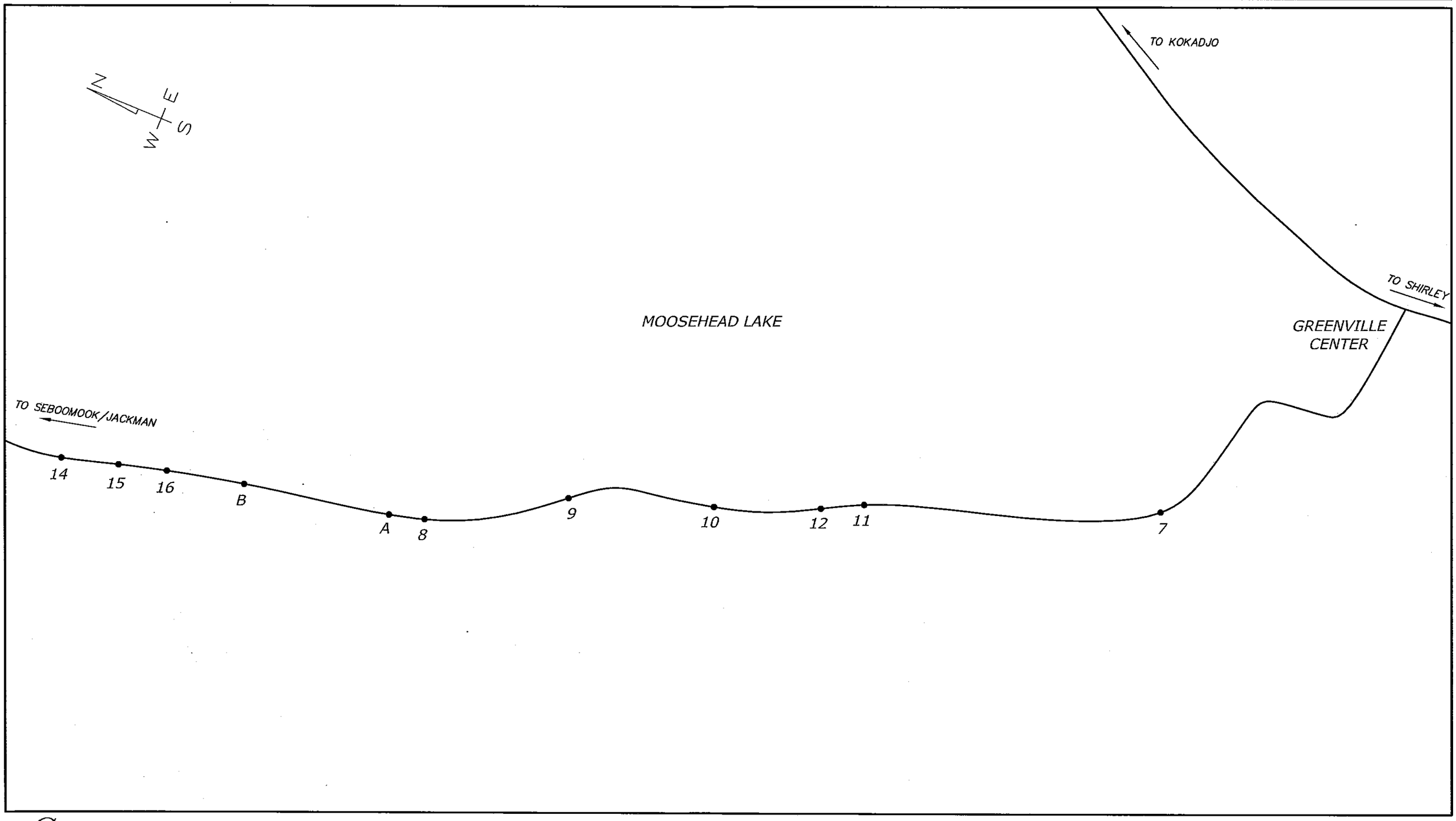
Date: MARCH 2006
File Name: 1381-01_TRAF.dwg



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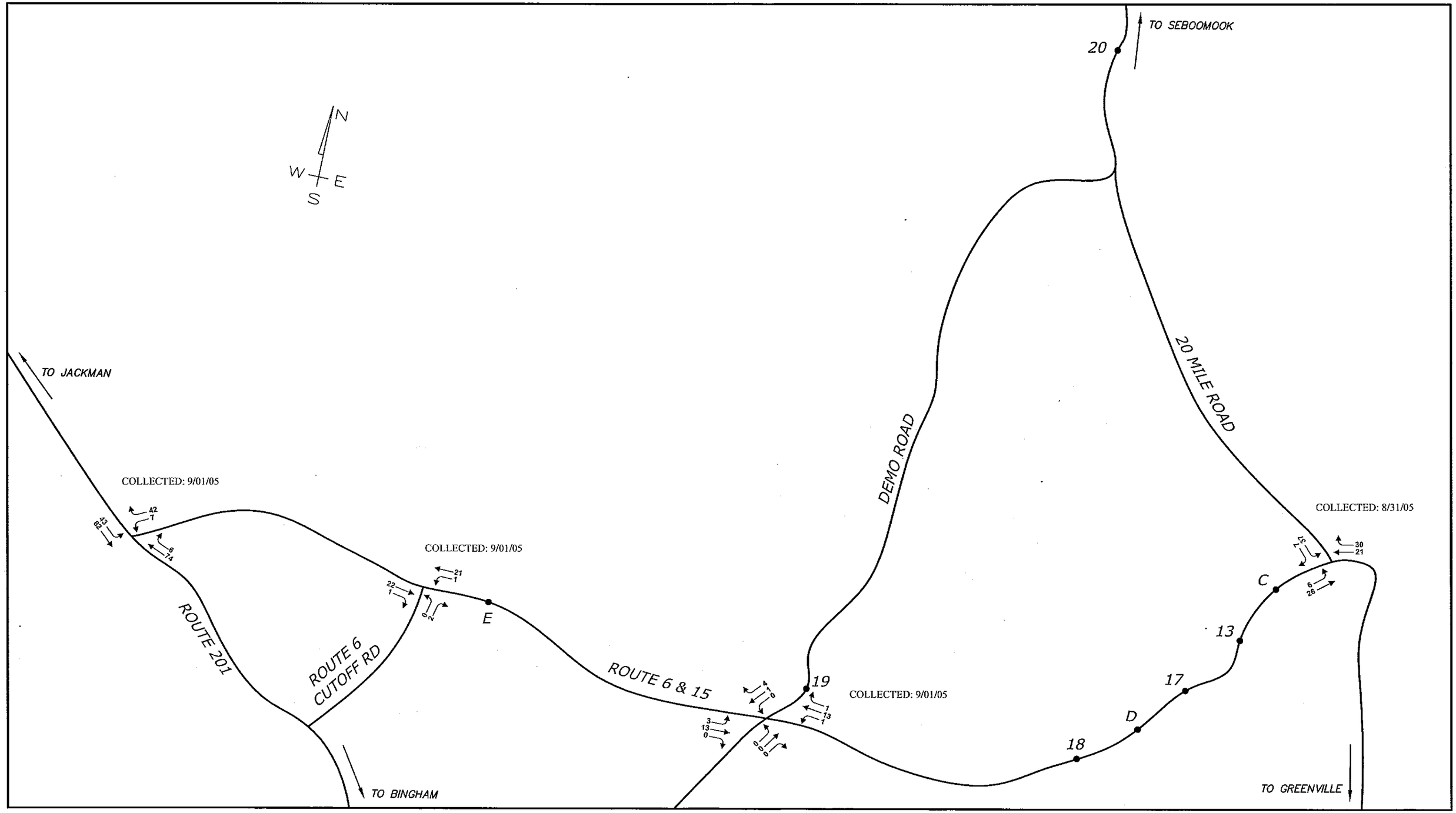
PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: RJB
Draft: DB
Checked: RCN
Date: MARCH 2006
File Name: 1381-01_TRAF.dwg



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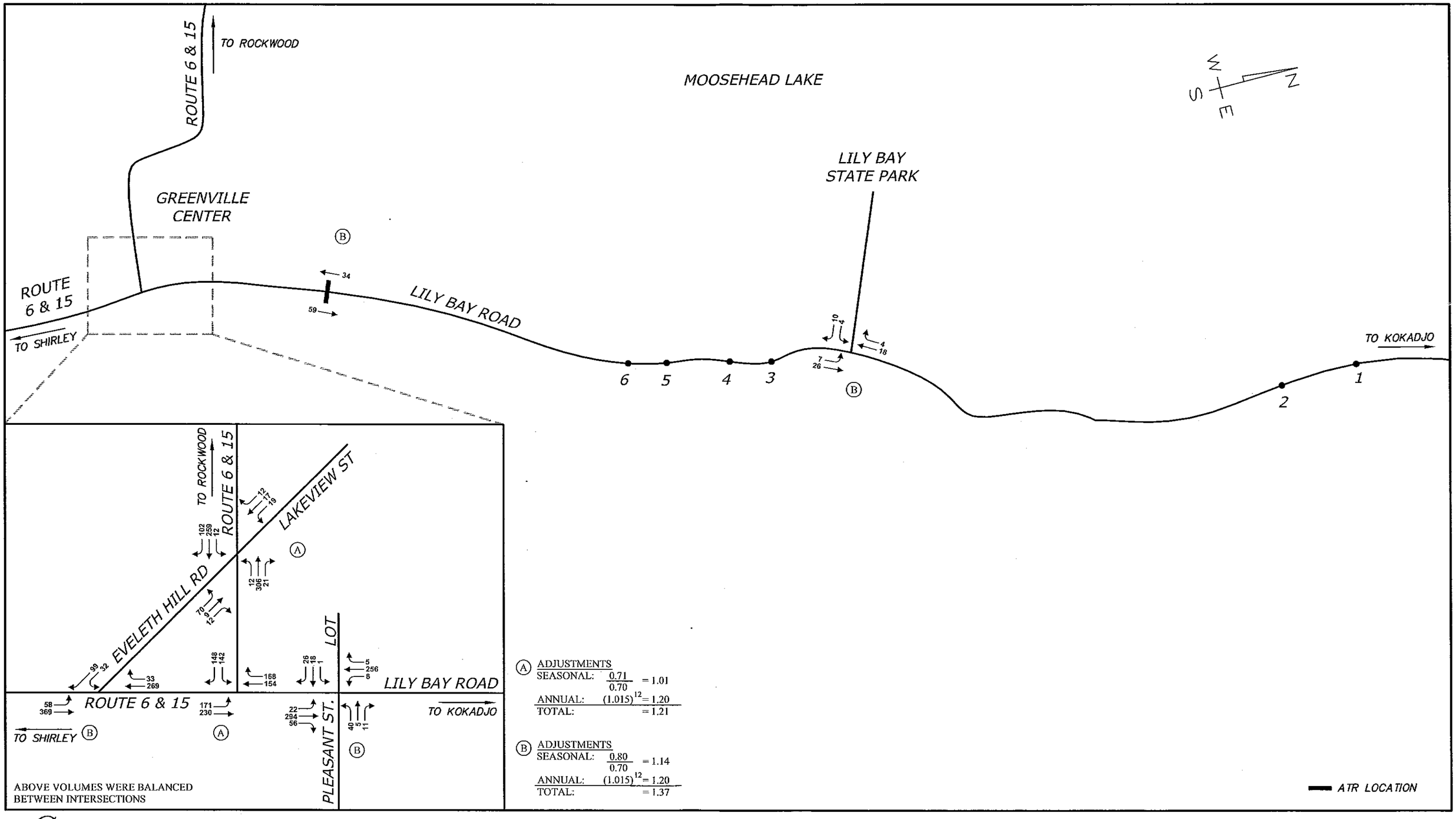
Adjusted Volumes

Figure No. 3A



ABOVE VOLUMES WERE BALANCED BETWEEN INTERSECTIONS

(A) ADJUSTMENTS

SEASONAL: $\frac{0.71}{0.70} = 1.01$

ANNUAL: $(1.015)^{12} = 1.20$

TOTAL: $= 1.21$

(B) ADJUSTMENTS

SEASONAL: $\frac{0.80}{0.70} = 1.14$

ANNUAL: $(1.015)^{12} = 1.20$

TOTAL: $= 1.37$

ATR LOCATION

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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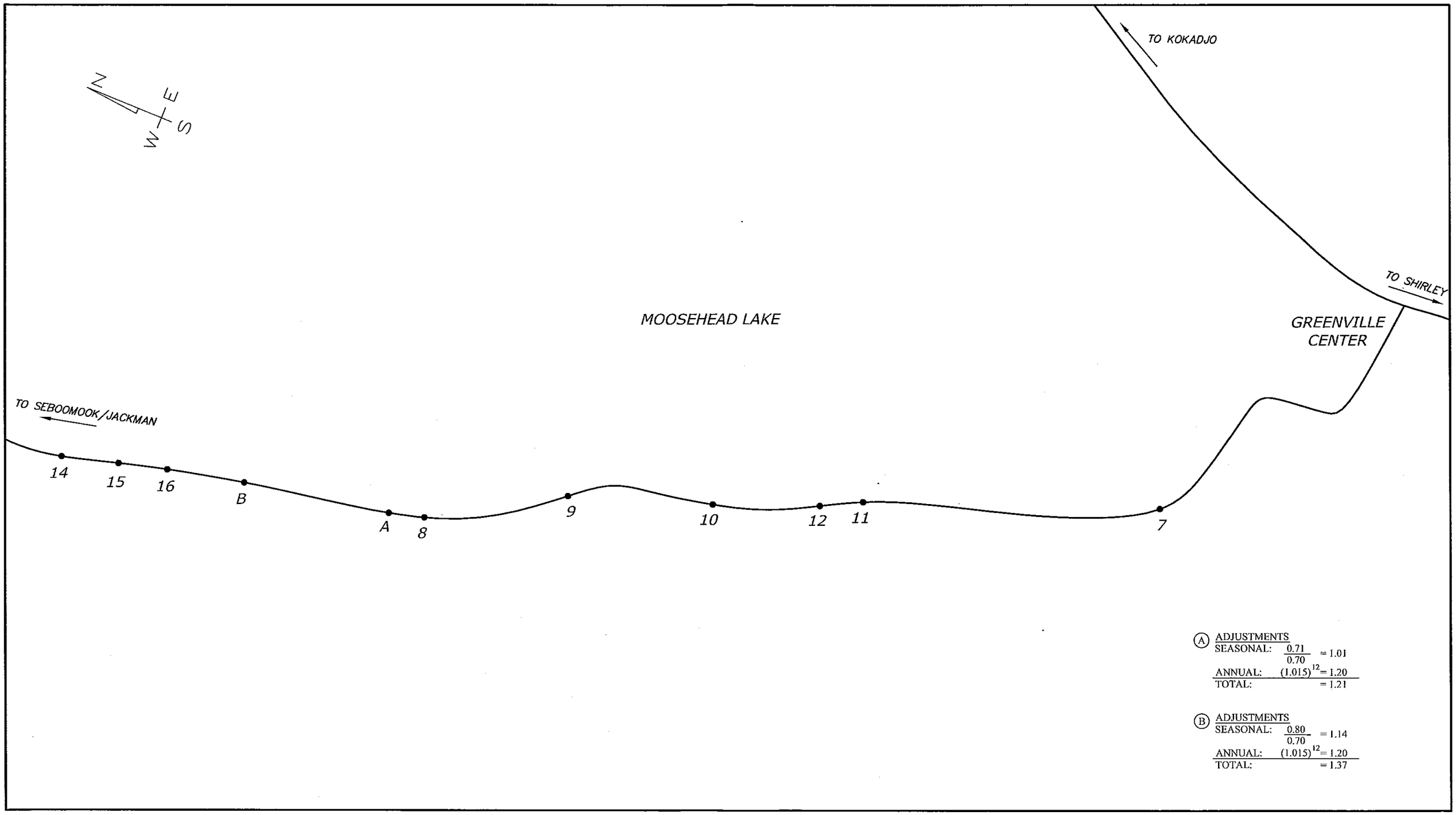
File Name: 1381-01_TRAF.dwg

Adjusted Volumes

Figure No. 3B



Ⓐ ADJUSTMENTS
SEASONAL: $\frac{0.71}{0.70} = 1.01$
ANNUAL: $(1.015)^{12} = 1.20$
TOTAL: $= 1.21$

Ⓑ ADJUSTMENTS
SEASONAL: $\frac{0.80}{0.70} = 1.14$
ANNUAL: $(1.015)^{12} = 1.20$
TOTAL: $= 1.37$

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: RJB
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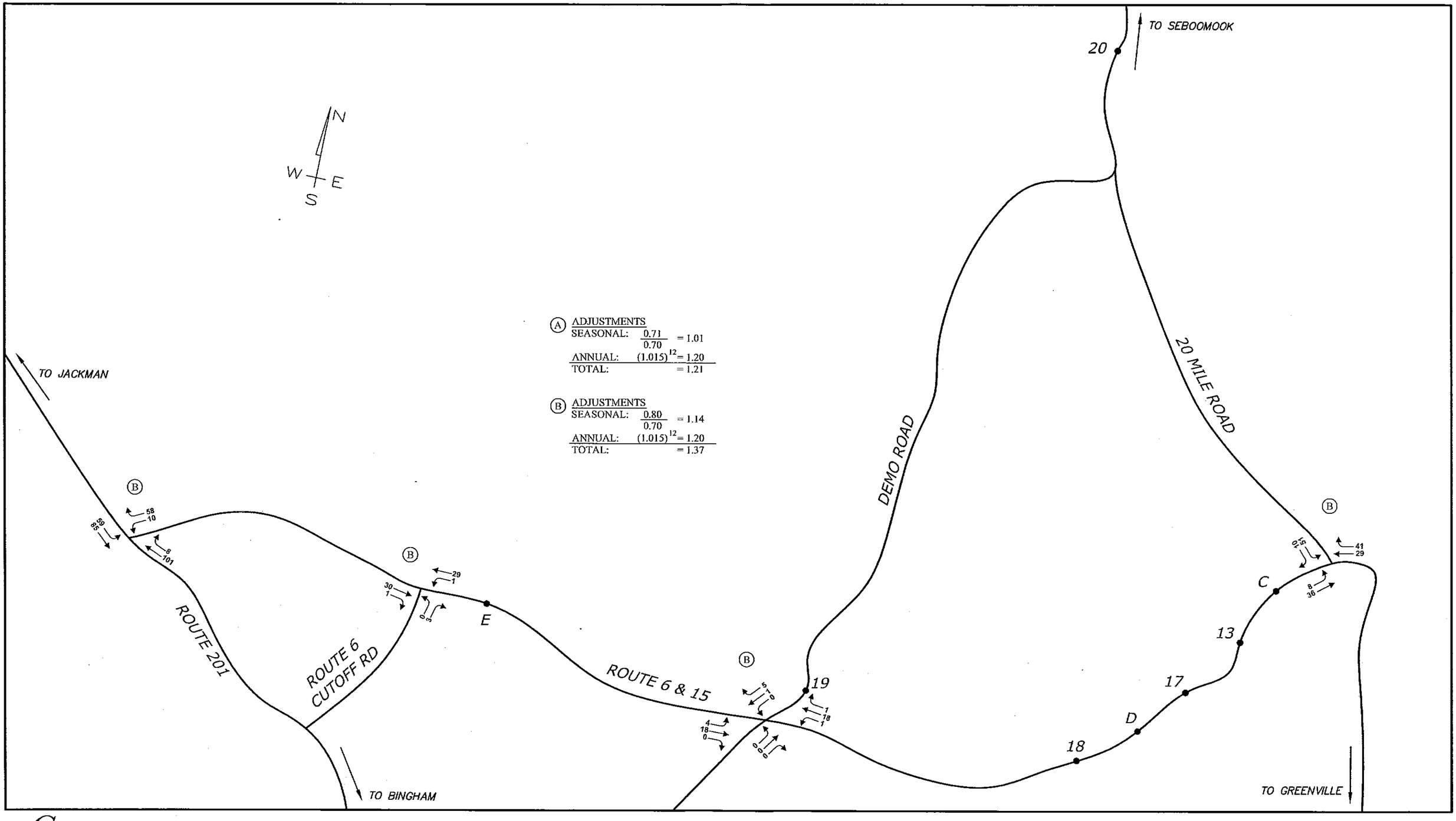
Adjusted Volumes

Figure No. 3C



(A) ADJUSTMENTS
SEASONAL: $\frac{0.71}{0.70} = 1.01$
ANNUAL: $(1.015)^{12} = 1.20$
TOTAL: $= 1.21$

(B) ADJUSTMENTS
SEASONAL: $\frac{0.80}{0.70} = 1.14$
ANNUAL: $(1.015)^{12} = 1.20$
TOTAL: $= 1.37$

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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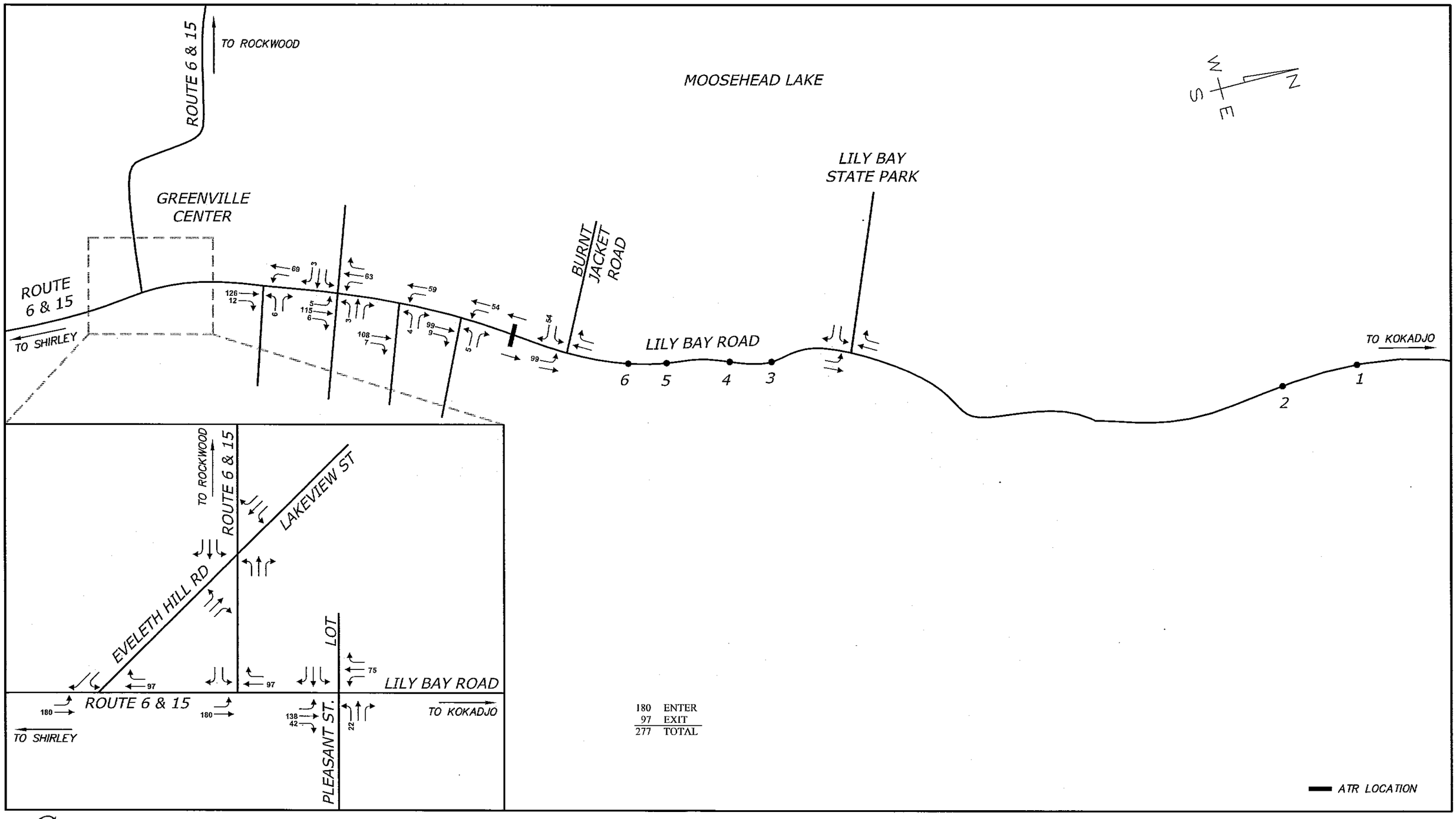

180	ENTER
97	EXIT
277	TOTAL

ATR LOCATION

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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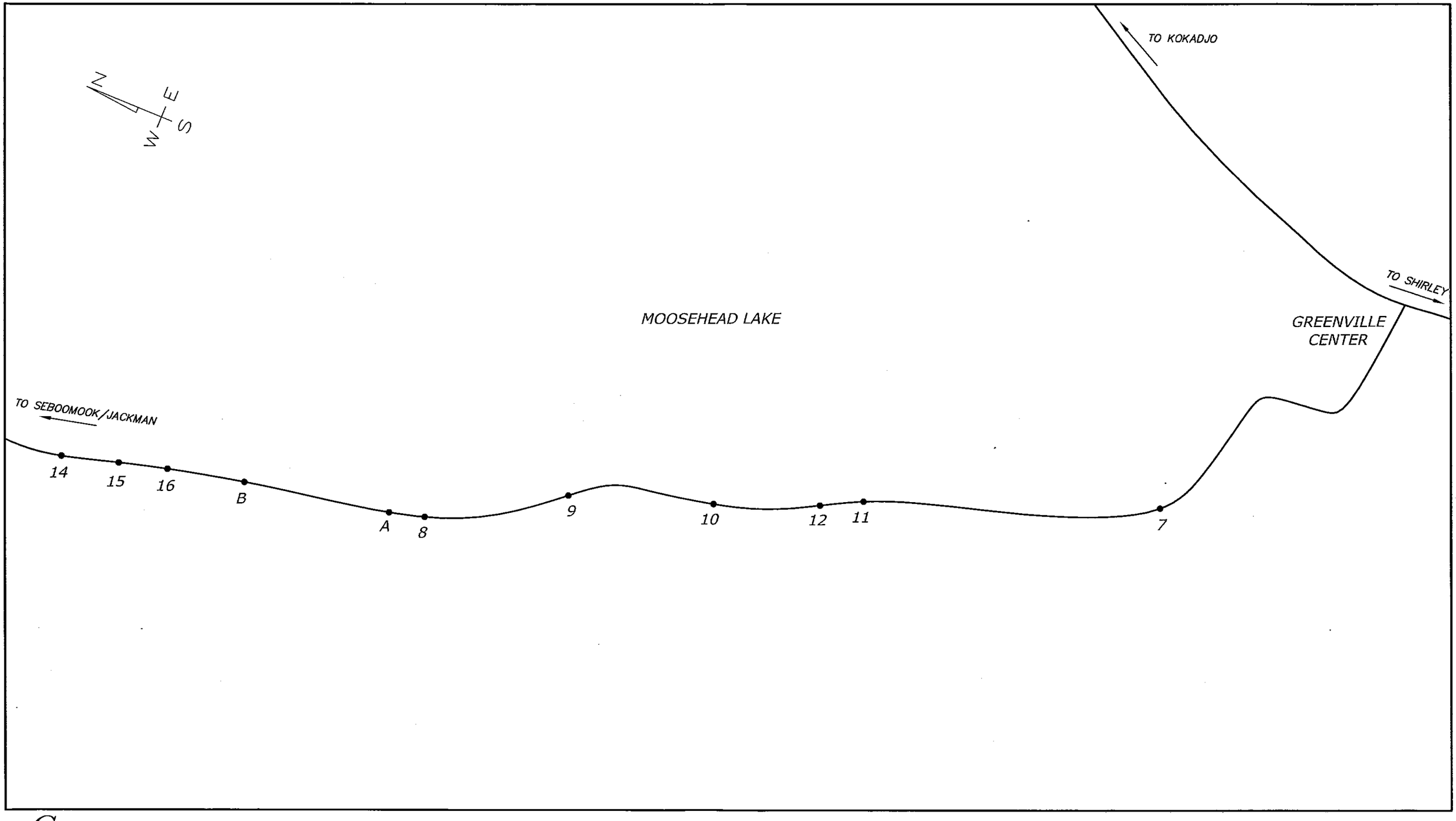
Other Development

Figure No. 4B



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MOOSEHEAD LAKES REGION, MAINE

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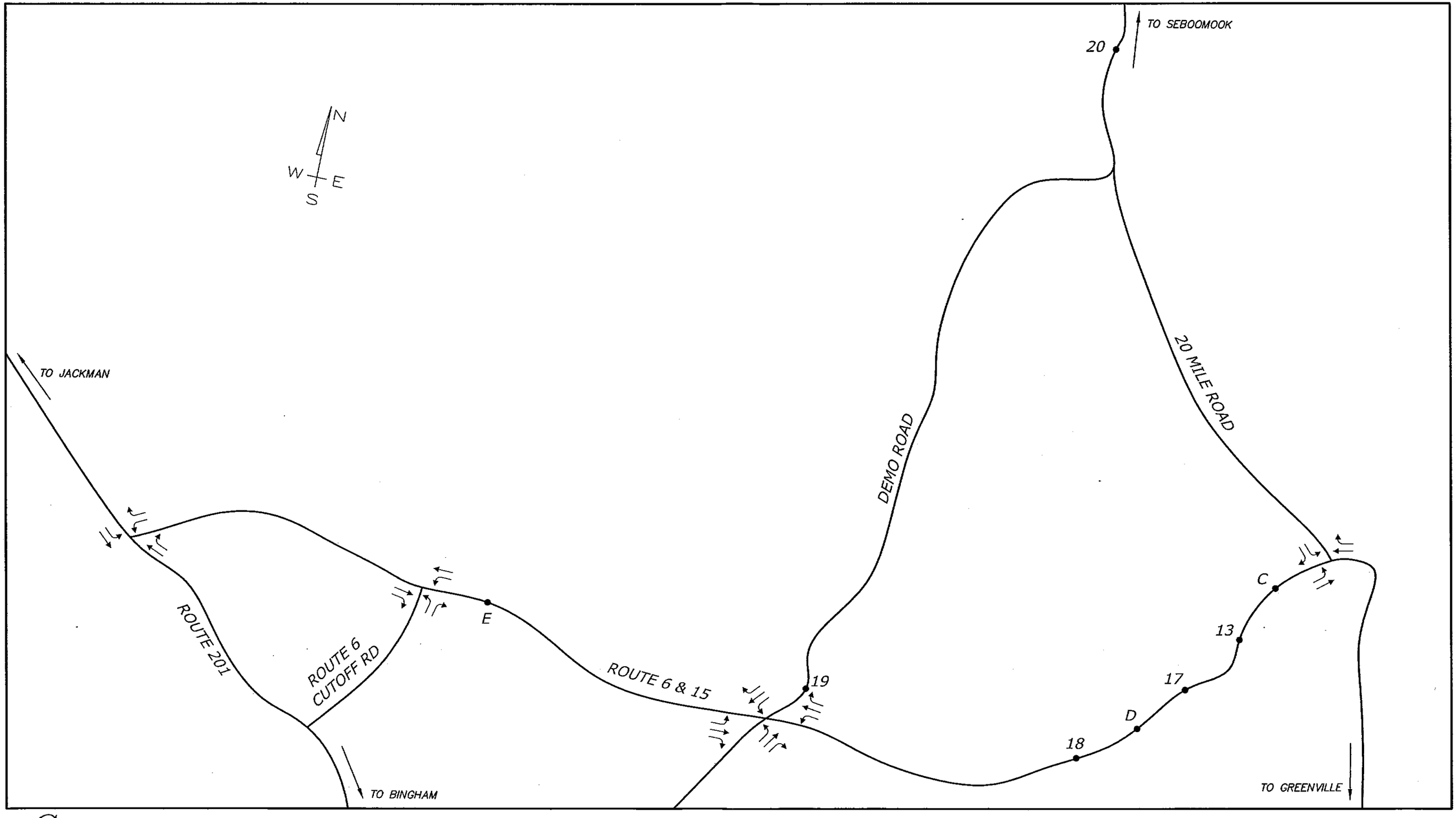

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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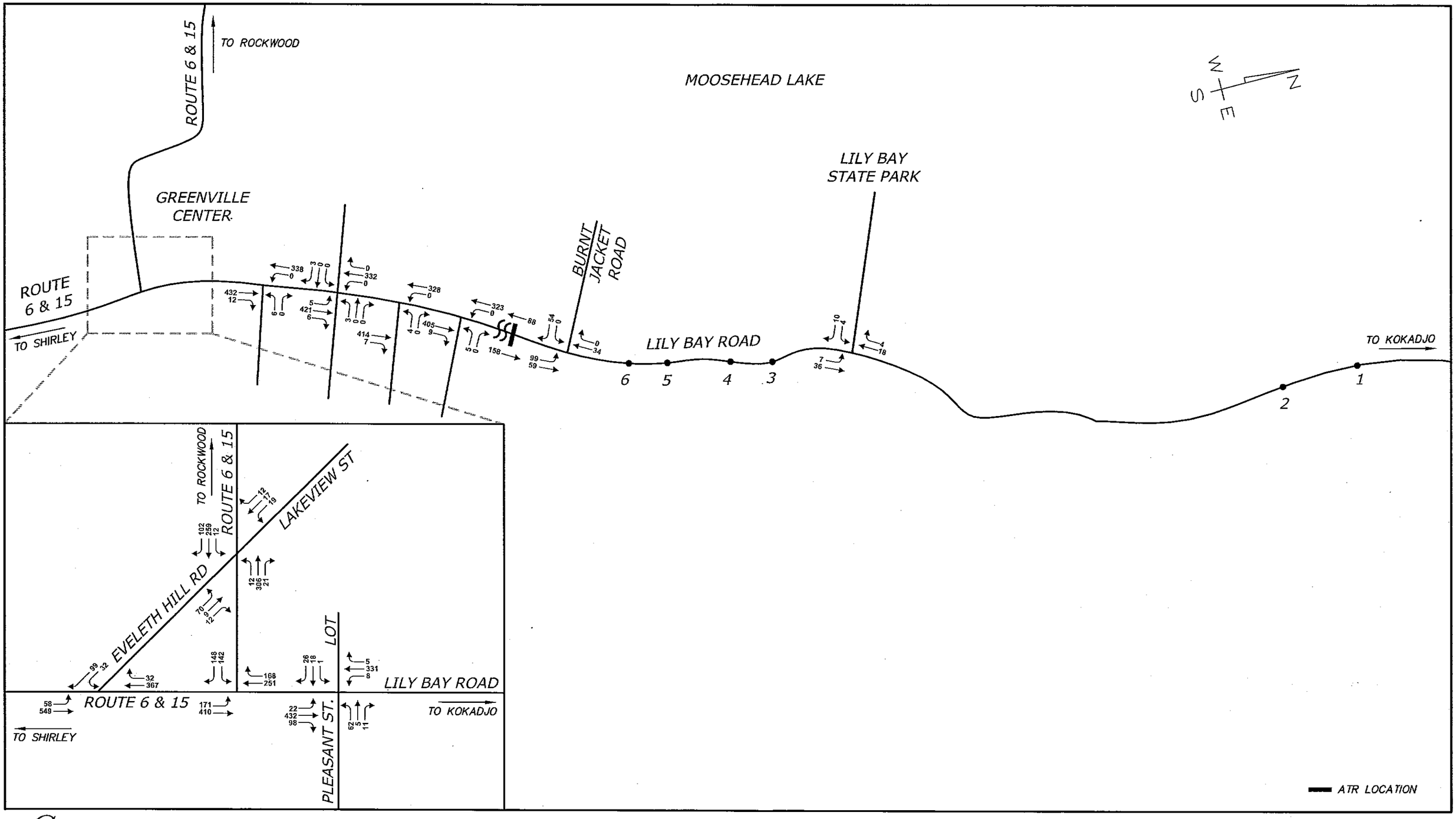
Predevelopment Volumes

Figure No. 5A



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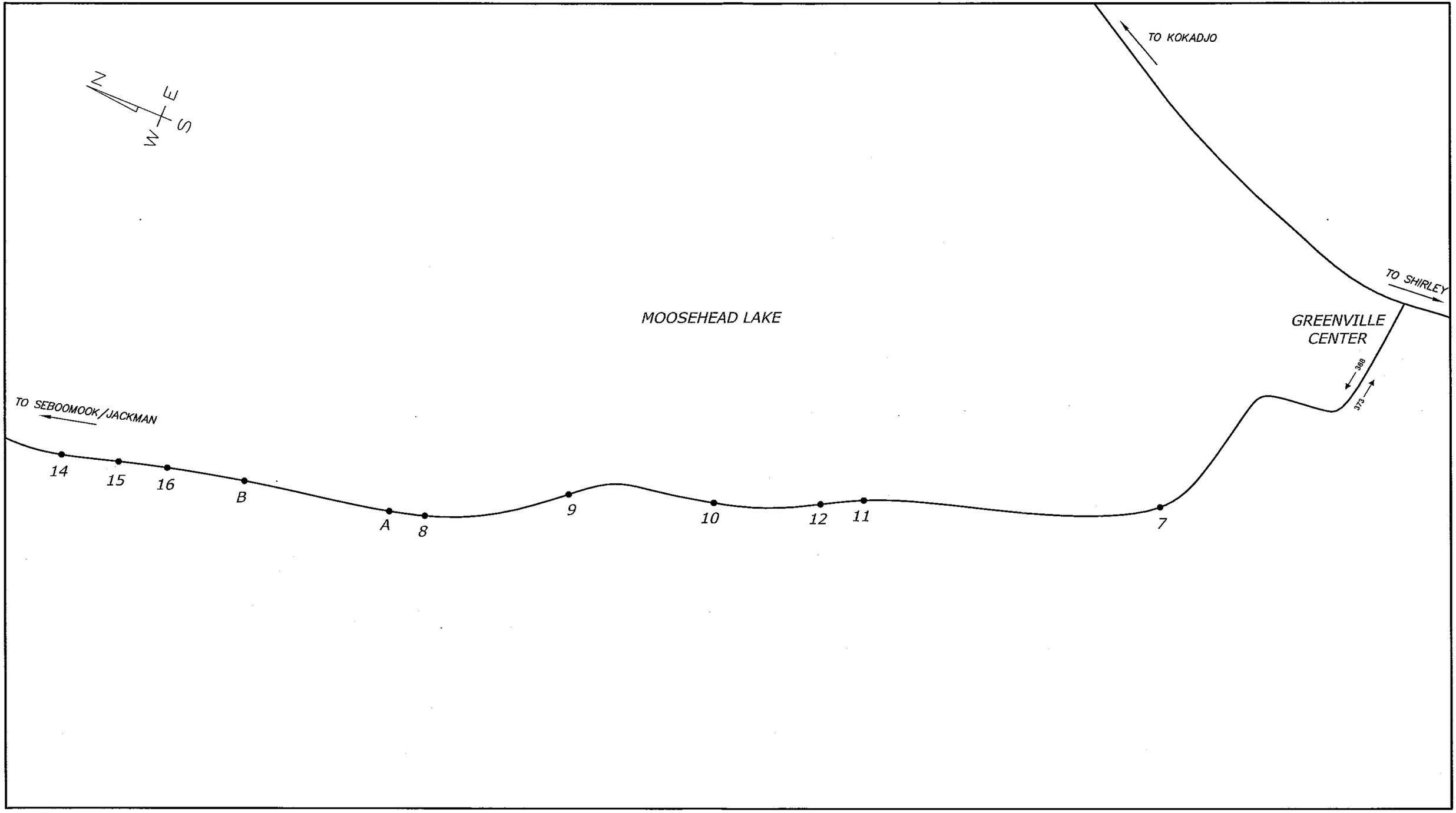
Predevelopment Volumes

Figure No. 5B



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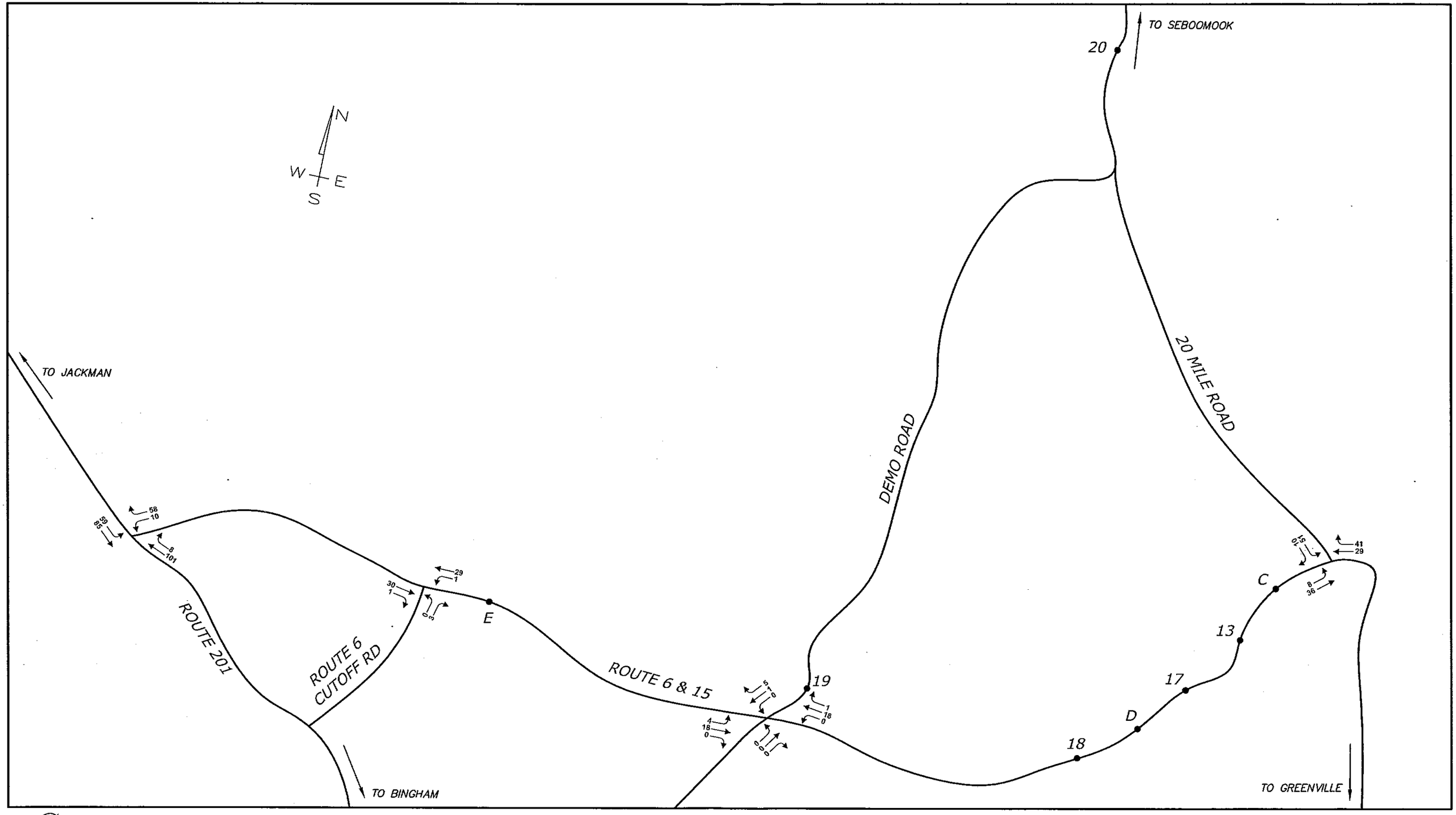

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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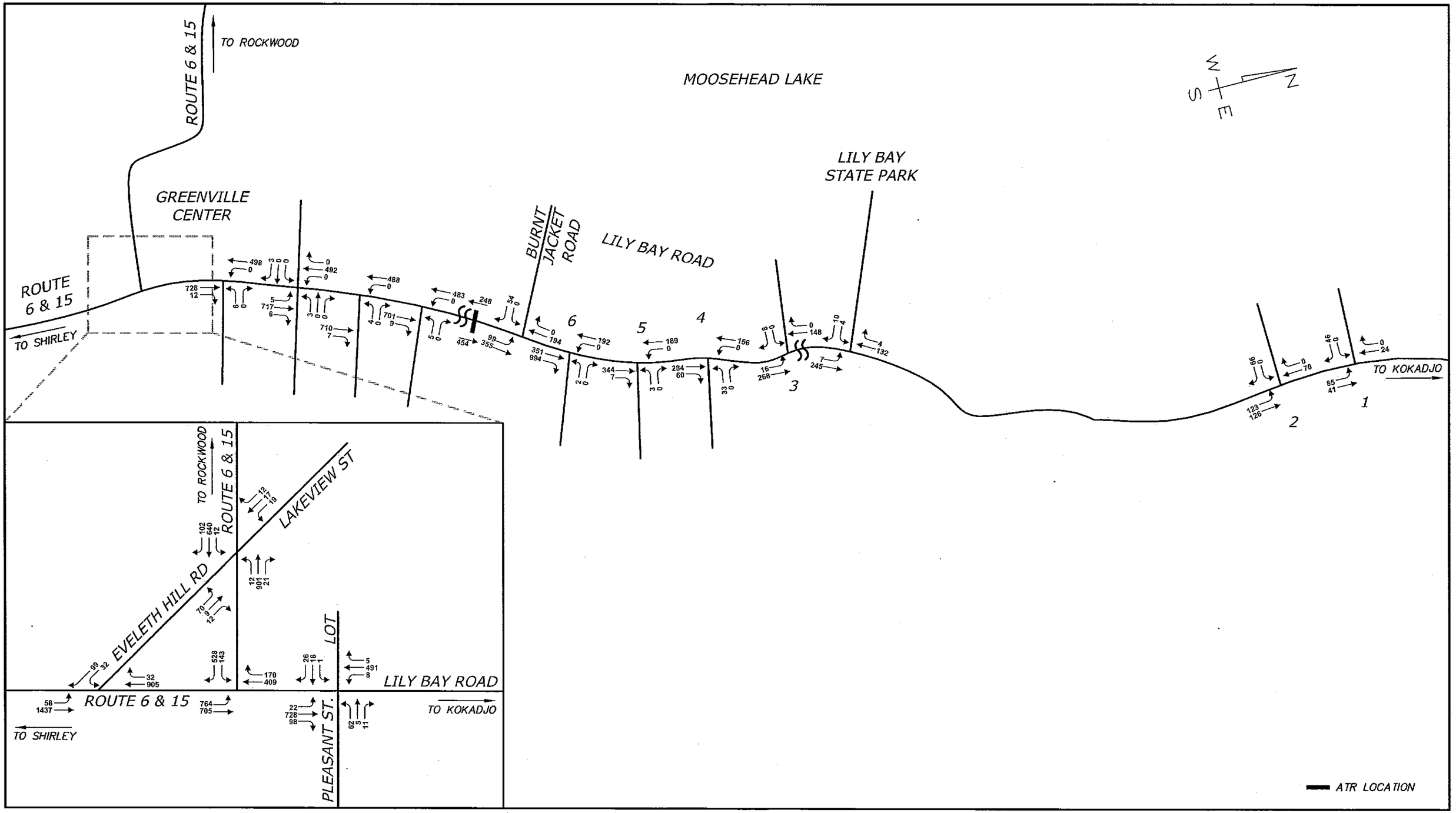
Postdevelopment Volumes

Figure No. 7A



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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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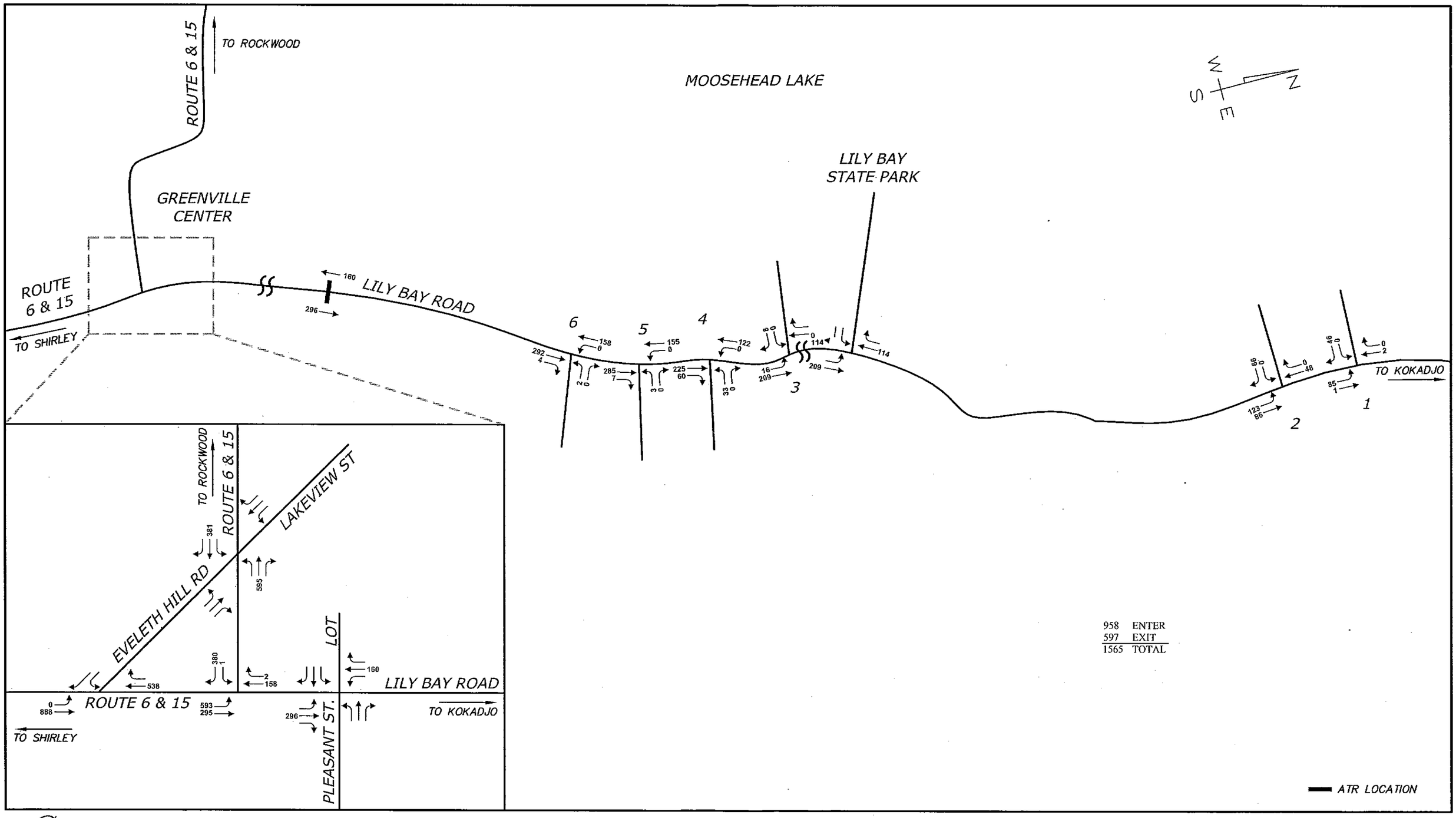
Trip Assignment

Figure No. 6A



958 ENTER
597 EXIT
1565 TOTAL

ATR LOCATION

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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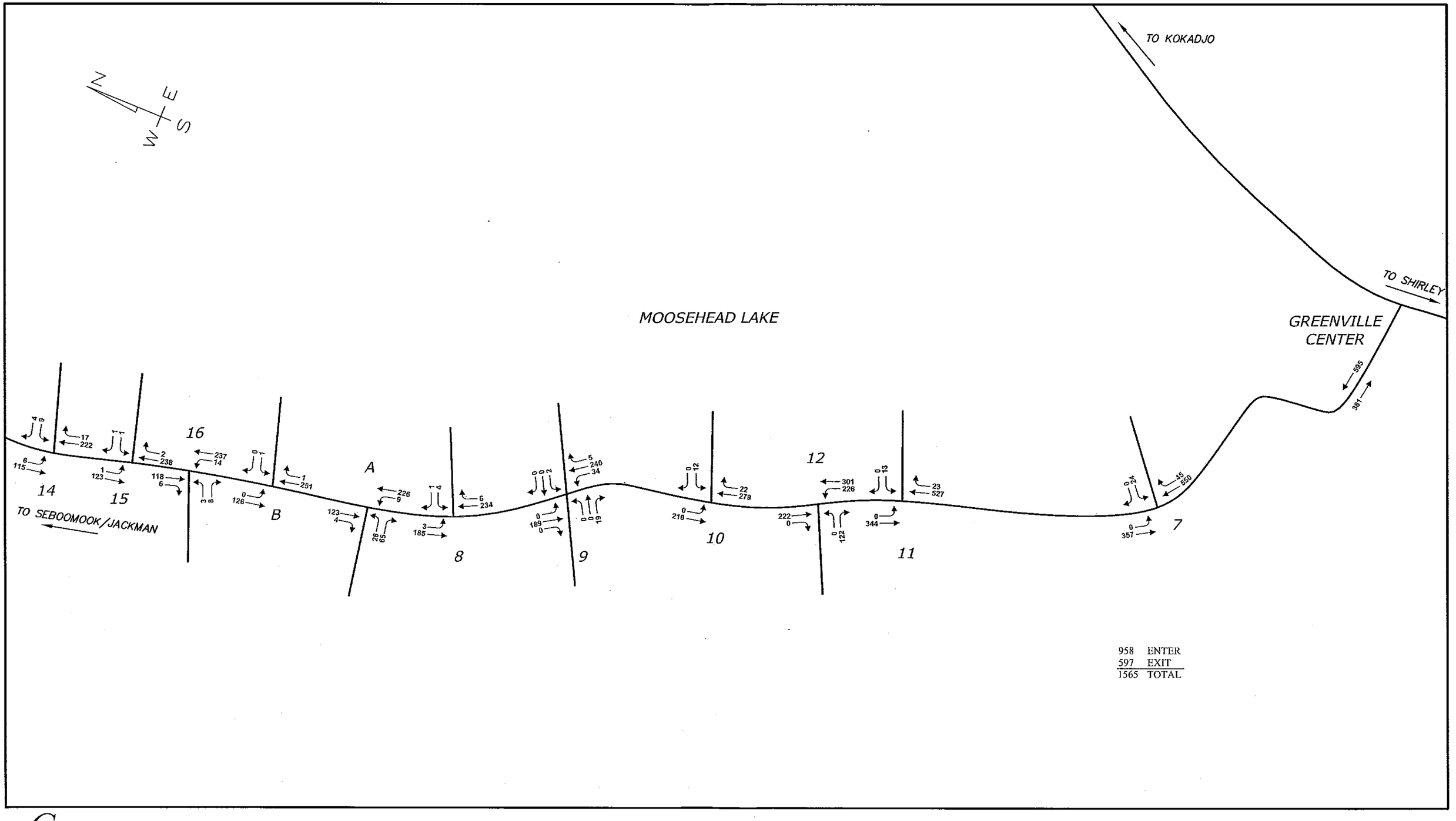
Trip Assignment

Figure No. 6B



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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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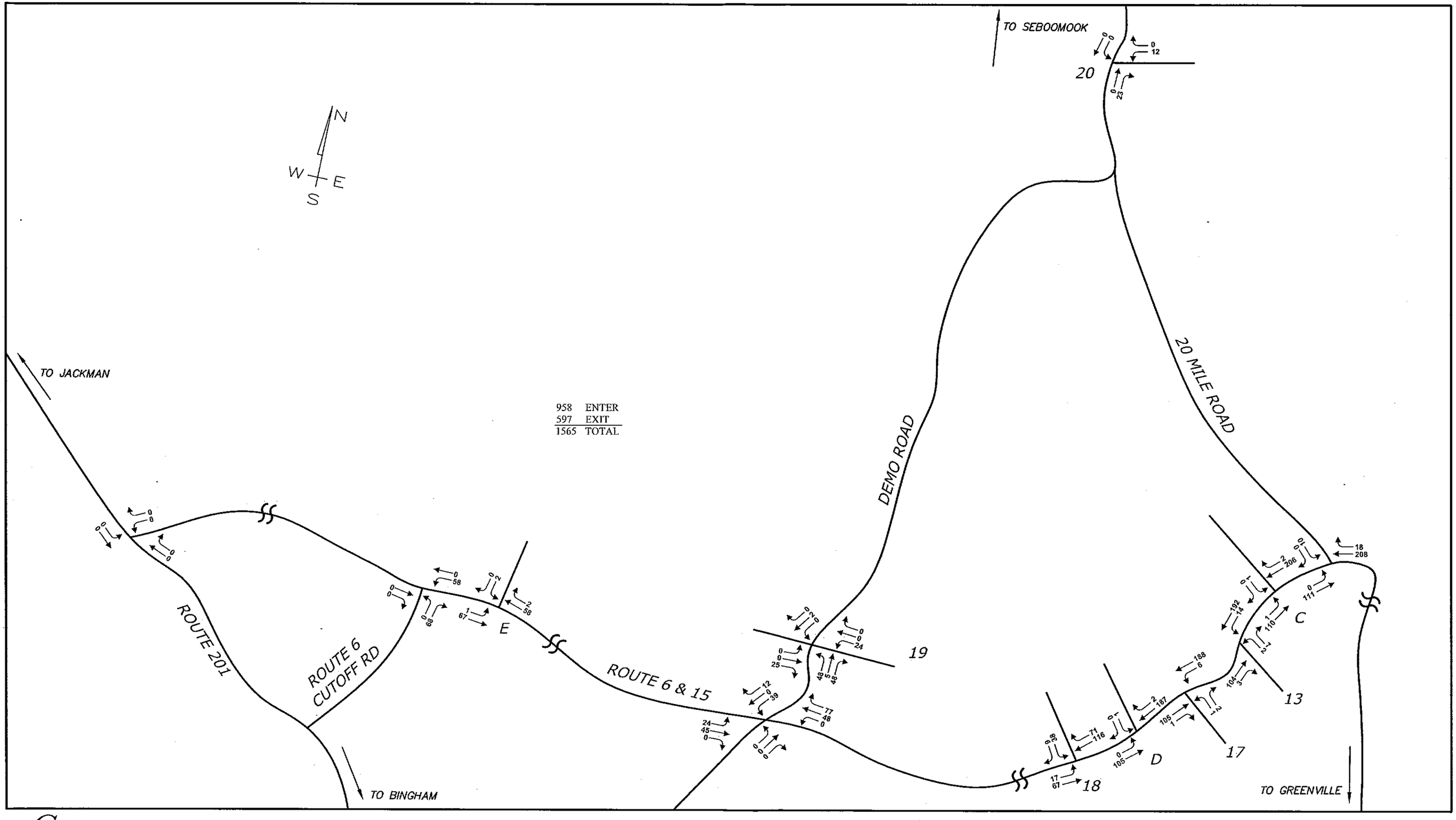
Trip Assignment

Figure No. 6C



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MOOSEHEAD LAKES REGION, MAINE

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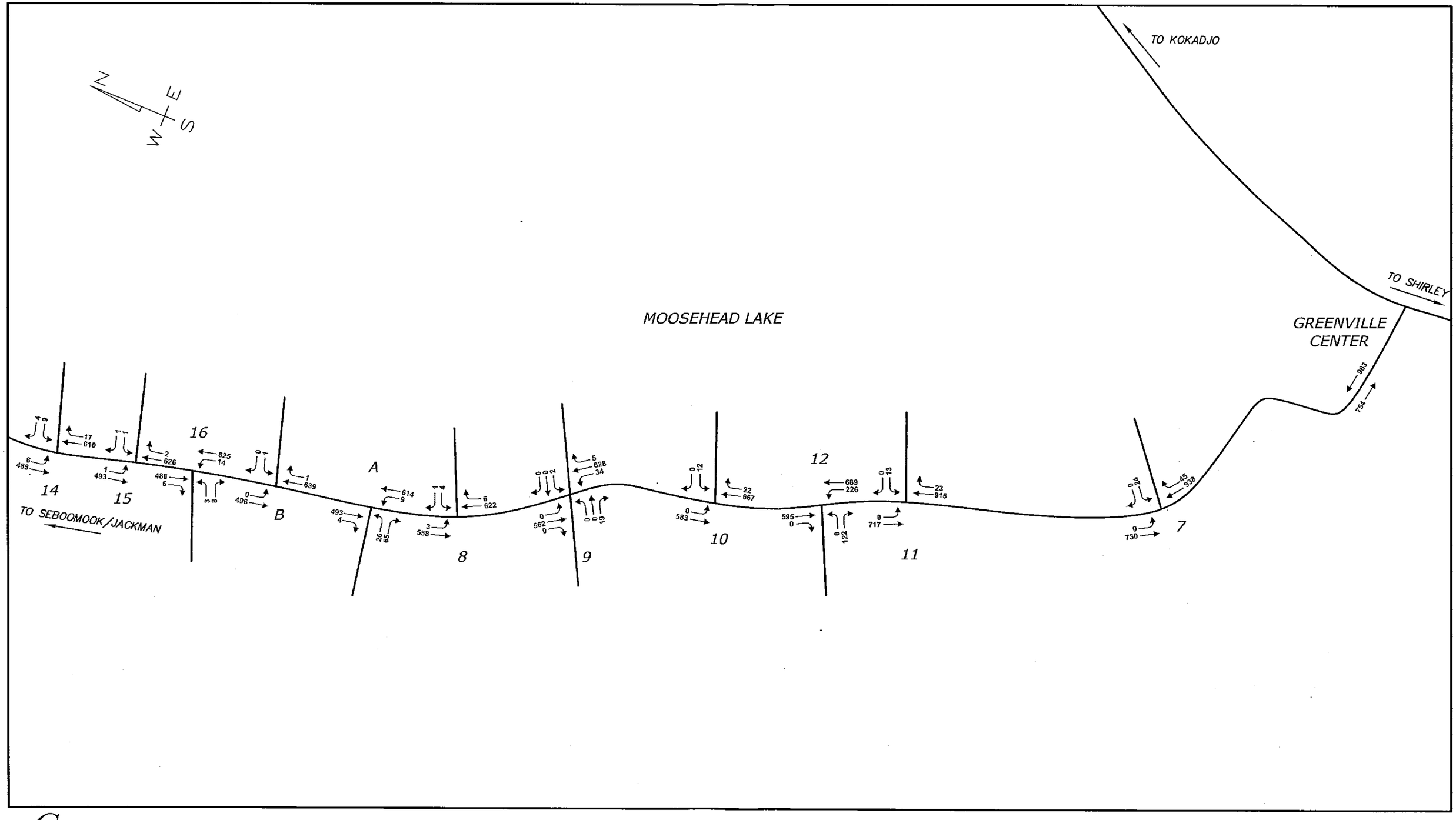

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PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

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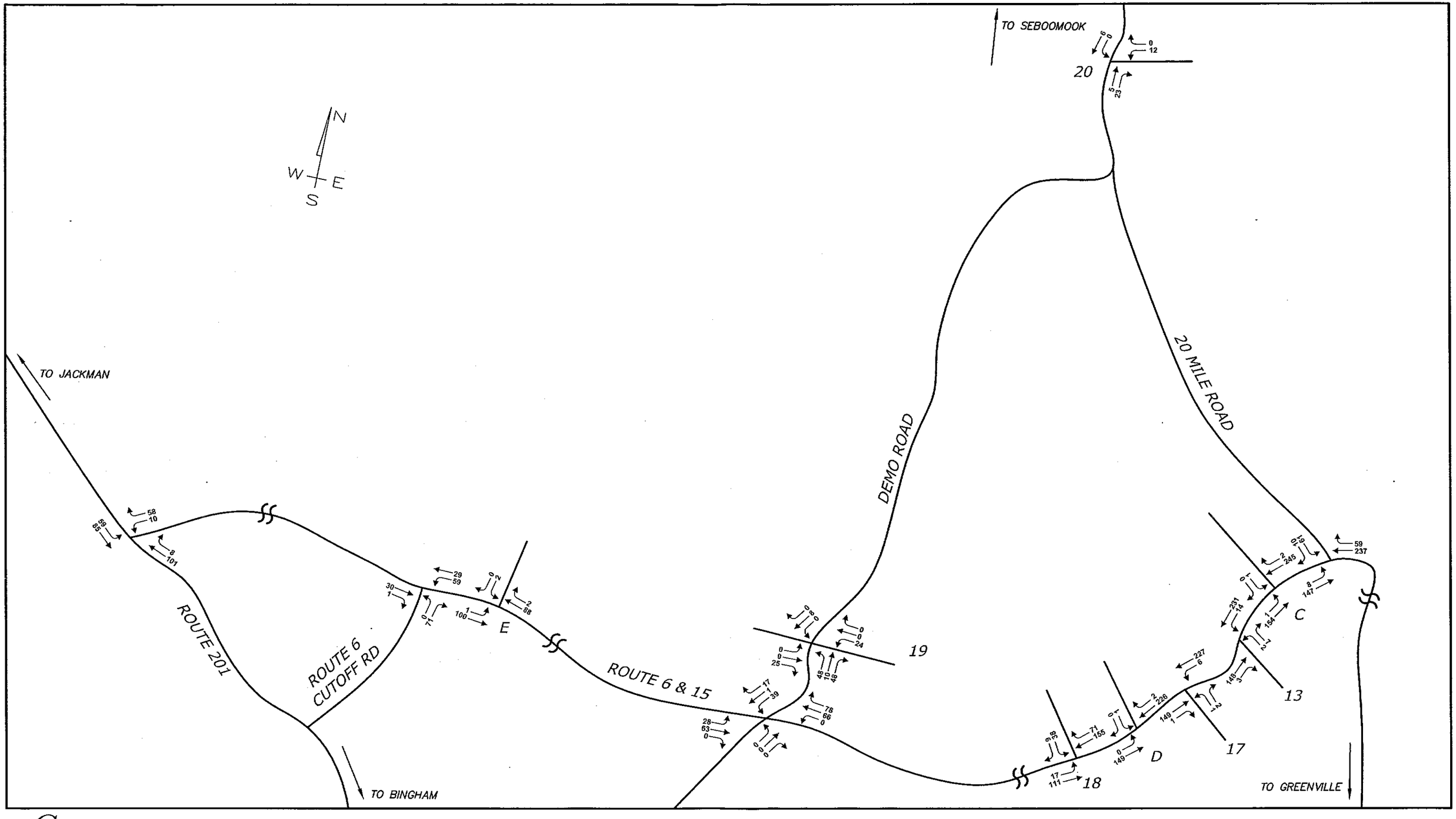

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MOOSEHEAD LAKES REGION, MAINE

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Appendix B

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*P. Ostrowski*	Intersection	*Eveleth St. @ Route 15_3 Leg*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/9/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN1381.01 - 2017 Predevelopment*
East/West Street: *Eveleth Street*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*58*	*549*	*0*	*0*	*367*	*32*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*63*	*596*	*0*	*0*	*398*	*34*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*32*	*0*	*99*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*34*	*0*	*107*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*63*						*141*	
C (m) (vph)	*1138*						*430*	
v/c	*0.06*						*0.33*	
95% queue length	*0.18*						*1.41*	
Control Delay	*8.3*						*17.4*	
LOS	*A*						*C*	
Approach Delay	--	--					*17.4*	
Approach LOS	--	--					*C*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*P. Ostrowski*
Agency/Co.	*Gorrill-Palmer*
Date Performed	*3/9/2006*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Eveleth @ Route 15_4 Leg*
Jurisdiction	
Analysis Year	*2017*
Project ID	*JN1381.01 - 2017 Predevelopment*

East/West Street: *Route 15* | North/South Street: *Eveleth Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*12*	*259*	*102*	*12*	*306*	*21*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*13*	*281*	*110*	*13*	*332*	*22*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*70*	*9*	*12*	*19*	*17*	*12*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*76*	*9*	*13*	*20*	*18*	*13*
Percent Heavy Vehicles	*1*	*0*	*8*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*13*	*13*		*98*			*51*	
C (m) (vph)	*1216*	*1179*		*332*			*367*	
v/c	*0.01*	*0.01*		*0.30*			*0.14*	
95% queue length	*0.03*	*0.03*		*1.21*			*0.48*	
Control Delay	*8.0*	*8.1*		*20.3*			*16.4*	
LOS	*A*	*A*		*C*			*C*	
Approach Delay	--	--		*20.3*			*16.4*	
Approach LOS	--	--		*C*			*C*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*P. Ostrowski*	Intersection	*Route 15 @ Lily Bay Road*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/9/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN1381.01 - 2017 Predevelopment*		
East/West Street:	*Route 15*	North/South Street:	*Lily Bay Road*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*171*	*410*	*0*	*0*	*251*	*168*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*185*	*445*	*0*	*0*	*272*	*182*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*142*	*0*	*148*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*154*	*0*	*160*
Percent Heavy Vehicles	*0*	*0*	*0*	*8*	*0*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*185*						*314*	
C (m) (vph)	*1107*						*276*	
v/c	*0.17*						*1.14*	
95% queue length	*0.60*						*13.48*	
Control Delay	*8.9*						*136.4*	
LOS	*A*						*F*	
Approach Delay	--	--				*136.4*		
Approach LOS	--	--				*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*P. Ostrowski*	Intersection	*Pleasant St. @ Lily Bay Rd.*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/9/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN1381.01 - 2017 Predevelopment*
East/West Street: *Pleasant Street*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*22*	*432*	*98*	*8*	*331*	*5*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*23*	*469*	*106*	*8*	*359*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*62*	*5*	*11*	*1*	*18*	*26*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*67*	*5*	*11*	*1*	*19*	*28*
Percent Heavy Vehicles	*3*	*75*	*25*	*0*	*67*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*23*	*8*		*83*			*48*	
C (m) (vph)	*1206*	*1008*		*216*			*319*	
v/c	*0.02*	*0.01*		*0.38*			*0.15*	
95% queue length	*0.06*	*0.02*		*1.70*			*0.52*	
Control Delay	*8.0*	*8.6*		*31.7*			*18.3*	
LOS	*A*	*A*		*D*			*C*	
Approach Delay	--	--	*31.7*			*18.3*		
Approach LOS	--	--	*D*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ State Park*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Predevelopment*
East/West Street: *Lily Bay State Park*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*7*	*36*	*0*	*0*	*18*	*4*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*7*	*39*	*0*	*0*	*19*	*4*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*4*	*0*	*10*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*4*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*7*						*14*	
C (m) (vph)	*1605*						*1021*	
v/c	*0.00*						*0.01*	
95% queue length	*0.01*						*0.04*	
Control Delay	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay	--	--					*8.6*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ 20 Mile Road*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN 1381.01 - 2017 Predevelopment*

East/West Street: *Route 15* | North/South Street: *20 Mile Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*36*	*0*	*0*	*29*	*41*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*8*	*39*	*0*	*0*	*31*	*44*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*51*	*0*	*10*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*55*	*0*	*10*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*11*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*8*						*65*	
Capacity, c_m (vph)	*1537*						*884*	
v/c ratio	*0.01*						*0.07*	
Queue length (95%)	*0.02*						*0.24*	
Control Delay (s/veh)	*7.4*						*9.4*	

LOS	A							A				
Approach delay (s/veh)	--	--						9.4				
Approach LOS	--	--						A				

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Demo Road*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN 1381.01 - 2017 Predevelopment*

East/West Street: *Route 15* | North/South Street: *Demo Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*4*	*18*	*0*	*0*	*18*	*1*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*4*	*19*	*0*	*0*	*19*	*1*
Proportion of heavy vehicles, P_{HV}	*100*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*1*	*5*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*1*	*5*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*25*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
Volume, v (vph)	*4*	*0*		*0*			*6*	
Capacity, c_m (vph)	*1139*	*1611*					*967*	
v/c ratio	*0.00*	*0.00*					*0.01*	
Queue length (95%)	*0.01*	*0.00*					*0.02*	
Control Delay (s/veh)	*8.2*	*7.2*					*8.7*	

LOS	A		A							A		
Approach delay (s/veh)	--		--							8.7		
Approach LOS	--		--							A		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R. Barnes*
Agency/Co.	*Gorrill-Palmer*
Date Performed	*3/6/2006*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Route 15 @ Route 6 Cutoff*
Jurisdiction	
Analysis Year	*2017*

Project Description *JN 1381.01 - 2017 Predevelopment*

East/West Street: *Route 15* | North/South Street: *Route 6 Cutoff*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*30*	*1*	*1*	*29*	*0*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*32*	*1*	*1*	*31*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*3*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*3*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*50*	*0*	*0*	*0*
Percent grade (%)	*0*			*0*		
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
Volume, v (vph)		*1*		*3*				
Capacity, c_m (vph)		*1592*		*920*				
v/c ratio		*0.00*		*0.00*				
Queue length (95%)		*0.00*		*0.01*				

Control Delay (s/veh)		7.3		8.9				
LOS		A		A				
Approach delay (s/veh)	--	--	8.9					
Approach LOS	--	--	A					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Route 201*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Predevelopment*		
East/West Street:	*Route 15*	North/South Street:	*Route 201*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*101*	*8*	*59*	*85*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*109*	*8*	*64*	*92*	*0*
Percent Heavy Vehicles	*0*	--	--	*12*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*10*	*0*	*58*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*10*	*0*	*63*	*0*	*0*	*0*
Percent Heavy Vehicles		*0*	*5*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*			*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*			*LR*	
v (vph)		*64*		*73*			*0*	
C (m) (vph)		*1412*						
v/c		*0.05*						
95% queue length		*0.14*						
Control Delay		*7.7*						
LOS		*A*						
Approach Delay	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Beaver Cove*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Predevelopment*
East/West Street: *Beaver Cove*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*99*	*59*	*0*	*0*	*34*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*107*	*64*	*0*	*0*	*36*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*54*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*58*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*107*						*58*	
C (m) (vph)	*1588*						*1042*	
v/c	*0.07*						*0.06*	
95% queue length	*0.22*						*0.18*	
Control Delay	*7.4*						*8.7*	
LOS	*A*						*A*	
Approach Delay	--	--					*8.7*	
Approach LOS	--	--					*A*	

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1671	1568	1787	1881	1778	0
Flt Permitted	0.950		0.098			
Satd. Flow (perm)	1671	1568	184	1881	1778	0
Satd. Flow (RTOR)		193			21	
Volume (vph)	143	528	764	705	409	170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	3%	1%	1%	2%	4%
Lane Group Flow (vph)	155	574	830	766	630	0
Turn Type		pm+ov	pm+pt			
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Total Split (s)	20.0	49.0	49.0	90.0	41.0	0.0
Act Effct Green (s)	13.8	62.9	86.1	86.1	37.0	
Actuated g/C Ratio	0.13	0.58	0.80	0.80	0.34	
v/c Ratio	0.72	0.58	1.02	0.51	1.01	
Control Delay	64.7	11.4	63.1	5.4	73.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.7	11.4	63.1	5.4	73.8	
LOS	E	B	E	A	E	
Approach Delay	22.8			35.4	73.8	
Approach LOS	C			D	E	
Queue Length 50th (ft)	104	150	~575	156	~462	
Queue Length 95th (ft)	#177	249	#824	227	#691	
Internal Link Dist (ft)	545			862	125	
Turn Bay Length (ft)						
Base Capacity (vph)	243	994	816	1501	624	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.64	0.58	1.02	0.51	1.01	

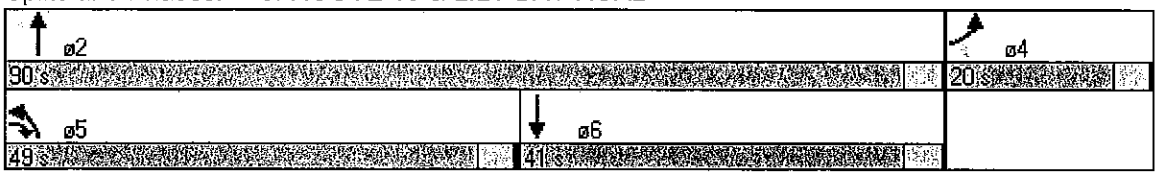
Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 107.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 40.5 Intersection LOS: D
Intersection Capacity Utilization 92.1% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: ROUTE 15 & LILY BAY ROAD

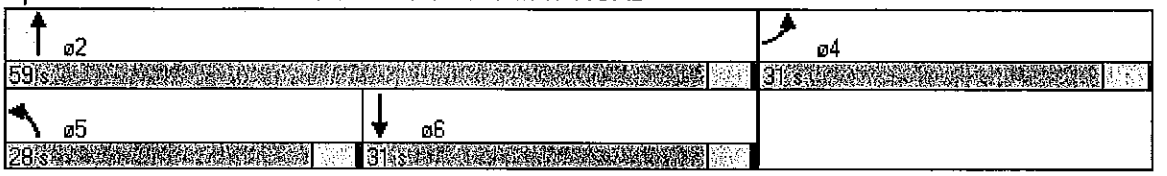


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1621	0	1787	1881	1757	0
Flt Permitted	0.985		0.129			
Satd. Flow (perm)	1621	0	243	1881	1757	0
Satd. Flow (RTOR)	135				34	
Volume (vph)	143	338	468	558	287	169
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	3%	1%	1%	2%	4%
Lane Group Flow (vph)	522	0	509	607	496	0
Turn Type			pm+pt			
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	31.0	0.0	28.0	59.0	31.0	0.0
Act Effct Green (s)	24.2		51.6	51.6	24.7	
Actuated g/C Ratio	0.29		0.61	0.61	0.29	
v/c Ratio	0.93		0.89	0.53	0.92	
Control Delay	47.1		41.9	11.7	51.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	47.1		41.9	11.7	51.8	
LOS	D		D	B	D	
Approach Delay	47.1			25.5	51.8	
Approach LOS	D			C	D	
Queue Length 50th (ft)	218		224	181	253	
Queue Length 95th (ft)	#414		#417	267	#442	
Internal Link Dist (ft)	545			862	125	
Turn Bay Length (ft)						
Base Capacity (vph)	602		587	1188	579	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.87		0.87	0.51	0.86	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 84
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 36.9 Intersection LOS: D
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: ROUTE 15 & LILY BAY ROAD



TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*P. Ostrowski*	Intersection	*Eveleth St. @ Route 15_3 Leg*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/9/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN1381.01 - 2017 Postdevelopment*

East/West Street: *Eveleth Street*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*58*	*1437*	*0*	*0*	*905*	*32*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*63*	*1561*	*0*	*0*	*983*	*34*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*32*	*0*	*99*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*34*	*0*	*107*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*63*						*141*	
C (m) (vph)	*690*						*74*	
v/c	*0.09*						*1.91*	
95% queue length	*0.30*						*12.58*	
Control Delay	*10.7*						*545.8*	
LOS	*B*						*F*	
Approach Delay	--	--				*545.8*		
Approach LOS	--	--				*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*P. Ostrowski*
Agency/Co.	*Gorrill-Palmer*
Date Performed	*03/06/2006*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Eveleth St. @ Route 15_4 Leg*
Jurisdiction	
Analysis Year	*2017*
Project ID	*JN1381.01 - 2017 Postdevelopment*

East/West Street: *Route 15* North/South Street: *Route 15*

Intersection Orientation: *East-West* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*12*	*640*	*102*	*12*	*901*	*21*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*13*	*695*	*110*	*13*	*979*	*22*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*1*	

Minor Street	Northbound			Southbound		
Movement	*7*	8	9	10	11	12
	L	T	R	L	T	R
Volume	*70*	*9*	*12*	*19*	*17*	*12*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*76*	*9*	*13*	*20*	*18*	*13*
Percent Heavy Vehicles	*1*	*0*	*8*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*13*	*13*		*98*			*51*	
C (m) (vph)	*656*	*828*		*39*			*59*	
v/c	*0.02*	*0.02*		*2.51*			*0.86*	
95% queue length	*0.06*	*0.05*		*10.78*			*3.90*	
Control Delay	*10.6*	*9.4*		*907.0*			*192.6*	
LOS	*B*	*A*		*F*			*F*	
Approach Delay	--	--	*907.0*			*192.6*		
Approach LOS	--	--	*F*			*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*P. Ostrowski*	Intersection	*Pleasant St. @ Lily Bay Road*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*03/06/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN1381.01 - 2017 Postdevelopment*

East/West Street: *Pleasant Street* | North/South Street: *Lily Bay Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*22*	*728*	*98*	*8*	*491*	*5*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*23*	*791*	*106*	*8*	*533*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*1*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*62*	*5*	*11*	*1*	*18*	*26*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*67*	*5*	*11*	*1*	*19*	*28*
Percent Heavy Vehicles	*3*	*75*	*25*	*0*	*67*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*23*	*8*		*83*			*48*	
C (m) (vph)	*1040*	*692*		*67*			*136*	
v/c	*0.02*	*0.01*		*1.24*			*0.35*	
95% queue length	*0.07*	*0.04*		*6.67*			*1.45*	
Control Delay	*8.5*	*10.3*		*293.7*			*45.3*	
LOS	*A*	*B*		*F*			*E*	
Approach Delay	--	--	*293.7*			*45.3*		
Approach LOS	--	--	*F*			*E*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ State Park*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postevelopment*
East/West Street: *Lily Bay State Park*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*7*	*244*	*0*	*0*	*138*	*4*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*7*	*265*	*0*	*0*	*149*	*4*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*4*	*0*	*10*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*4*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*7*						*14*	
C (m) (vph)	*1440*						*780*	
v/c	*0.00*						*0.02*	
95% queue length	*0.01*						*0.05*	
Control Delay	*7.5*						*9.7*	
LOS	*A*						*A*	
Approach Delay	--	--				*9.7*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ 20 Mile Road*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN 1381.01 - 2017 Postdevelopment*

East/West Street: *Route 15* | North/South Street: *20 Mile Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*147*	*0*	*0*	*237*	*59*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*8*	*159*	*0*	*0*	*257*	*64*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*61*	*0*	*10*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*66*	*0*	*10*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*8*	*0*	*0*	
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*8*						*76*	
Capacity, c_m (vph)	*1250*						*564*	
v/c ratio	*0.01*						*0.13*	
Queue length (95%)	*0.02*						*0.46*	
Control Delay (s/veh)	*7.9*						*12.4*	

LOS	A									B		
Approach delay (s/veh)	--	--								12.4		
Approach LOS	--	--								B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R. Barnes*
Agency/Co.	*Gorrill-Palmer*
Date Performed	*3/6/2006*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Route 15 @ Demo Road*
Jurisdiction	
Analysis Year	*2017*

Project Description *JN 1381.01 - 2017 Postdevelopment*

East/West Street: *Route 15* | North/South Street: *Demo Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*28*	*63*	*0*	*0*	*66*	*78*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*30*	*68*	*0*	*0*	*71*	*84*
Proportion of heavy vehicles, P_{HV}	*14*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*39*	*1*	*17*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*42*	*1*	*18*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*5*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
Volume, v (vph)	*30*	*0*		*0*			*61*	
Capacity, c_m (vph)	*1355*	*1546*					*758*	
v/c ratio	*0.02*	*0.00*					*0.08*	
Queue length (95%)	*0.07*	*0.00*					*0.26*	
Control Delay (s/veh)	*7.7*	*7.3*					*10.2*	

LOS	A		A							B		
Approach delay (s/veh)	--		--							10.2		
Approach LOS	--		--							B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R. Barnes*
Agency/Co.	*Gorrill-Palmer*
Date Performed	*3/6/2006*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Route 15 @ Route 6 Cutoff*
Jurisdiction	
Analysis Year	*2017*

Project Description *JN 1381.01 - 2017 Postdevelopment*

East/West Street: *Route 15* | North/South Street: *Route 6 Cutoff*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*30*	*1*	*59*	*29*	*0*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*32*	*1*	*64*	*31*	*0*
Proportion of heavy vehicles, P_{HV}	*100*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*71*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate (veh/h)	*0*	*0*	*77*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*4*	*0*	*0*	*25*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
Volume, v (vph)		*64*		*77*				
Capacity, c_m (vph)		*1592*		*1036*				
v/c ratio		*0.04*		*0.07*				
Queue length (95%)		*0.13*		*0.24*				

Control Delay (s/veh)		7.4		8.8				
LOS		A		A				
Approach delay (s/veh)	--	--	8.8					
Approach LOS	--	--	A					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Route 201*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Route 15*	North/South Street:	*Route 201*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*101*	*8*	*59*	*85*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*109*	*8*	*64*	*92*	*0*
Percent Heavy Vehicles	*0*	--	--	*12*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*10*	*0*	*58*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*10*	*0*	*63*	*0*	*0*	*0*
Percent Heavy Vehicles		*0*	*5*	*100*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*64*		*73*				
C (m) (vph)		*1412*						
v/c		*0.05*						
95% queue length		*0.14*						
Control Delay		*7.7*						
LOS		*A*						
Approach Delay	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Beaver Cove*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN 1381.01 - 2017 Postdevelopment*

East/West Street: *Beaver Cove*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*99*	*355*	*0*	*0*	*194*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*107*	*385*	*0*	*0*	*210*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*54*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*58*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*107*						*58*	
C (m) (vph)	*1373*						*835*	
v/c	*0.08*						*0.07*	
95% queue length	*0.25*						*0.22*	
Control Delay	*7.8*						*9.6*	
LOS	*A*						*A*	
Approach Delay	--	--				*9.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 1*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 1*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*85*	*41*	*0*	*0*	*24*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*92*	*44*	*0*	*0*	*26*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*46*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*49*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*92*						*49*	
C (m) (vph)	*1601*						*1056*	
v/c	*0.06*						*0.05*	
95% queue length	*0.18*						*0.15*	
Control Delay	*7.4*						*8.6*	
LOS	*A*						*A*	
Approach Delay	--	--					*8.6*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 2*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 2*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*123*	*126*	*0*	*0*	*70*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*133*	*136*	*0*	*0*	*76*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*66*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*71*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*133*						*71*	
C (m) (vph)	*1536*						*991*	
v/c	*0.09*						*0.07*	
95% queue length	*0.28*						*0.23*	
Control Delay	*7.6*						*8.9*	
LOS	*A*						*A*	
Approach Delay	--	--				*8.9*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 3*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 3*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*16*	*268*	*0*	*0*	*148*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*17*	*291*	*0*	*0*	*160*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*8*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*8*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*17*						*8*	
C (m) (vph)	*1432*						*890*	
v/c	*0.01*						*0.01*	
95% queue length	*0.04*						*0.03*	
Control Delay	*7.5*						*9.1*	
LOS	*A*						*A*	
Approach Delay	--	--					*9.1*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 4*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 4*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*284*	*60*	*0*	*156*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*308*	*65*	*0*	*169*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*33*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*35*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*35*				
C (m) (vph)		*1197*		*528*				
v/c		*0.00*		*0.07*				
95% queue length		*0.00*		*0.21*				
Control Delay		*8.0*		*12.3*				
LOS		*A*		*B*				
Approach Delay	--	--	*12.3*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 5*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description *JN 1381.01 - 2017 Postdevelopment*

East/West Street: *Intersection 5* | North/South Street: *Lily Bay Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*344*	*7*	*0*	*189*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*373*	*7*	*0*	*205*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*3*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*3*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*3*				
C (m) (vph)		*1190*		*479*				
v/c		*0.00*		*0.01*				
95% queue length		*0.00*		*0.02*				
Control Delay		*8.0*		*12.6*				
LOS		*A*		*B*				
Approach Delay	--	--	*12.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Lily Bay Road @ Intersection 6*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 6*	North/South Street: *Lily Bay Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*351*	*4*	*0*	*192*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*381*	*4*	*0*	*208*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*2*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*2*				
C (m) (vph)		*1185*		*473*				
v/c		*0.00*		*0.00*				
95% queue length		*0.00*		*0.01*				
Control Delay		*8.0*		*12.6*				
LOS		*A*		*B*				
Approach Delay	--	--	*12.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 7*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Intersection 7*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*938*	*45*	*0*	*730*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*1019*	*48*	*0*	*793*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*24*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*26*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*26*				
C (m) (vph)		*661*		*84*				
v/c		*0.00*		*0.31*				
95% queue length		*0.00*		*1.16*				
Control Delay		*10.4*		*66.0*				
LOS		*B*		*F*				
Approach Delay	--	--	*66.0*					
Approach LOS	--	--	*F*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 8*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Intersection 8*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*622*	*6*	*3*	*558*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*676*	*6*	*3*	*606*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*4*	*0*	*1*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*4*	*0*	*1*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*3*		*5*				
C (m) (vph)		*920*		*206*				
v/c		*0.00*		*0.02*				
95% queue length		*0.01*		*0.07*				
Control Delay		*8.9*		*22.9*				
LOS		*A*		*C*				
Approach Delay	--	--	*22.9*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 9*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Intersection 9*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*34*	*628*	*5*	*0*	*562*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*36*	*682*	*5*	*0*	*610*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*2*	*0*	*0*	*0*	*0*	*19*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*0*	*0*	*0*	*0*	*20*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*36*	*0*		*2*			*20*	
C (m) (vph)	*979*	*916*		*113*			*498*	
v/c	*0.04*	*0.00*		*0.02*			*0.04*	
95% queue length	*0.11*	*0.00*		*0.05*			*0.13*	
Control Delay	*8.8*	*8.9*		*37.4*			*12.5*	
LOS	*A*	*A*		*E*			*B*	
Approach Delay	--	--	*37.4*			*12.5*		
Approach LOS	--	--	*E*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 10*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 10*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*667*	*22*	*0*	*583*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*724*	*23*	*0*	*633*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*12*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*13*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*13*				
C (m) (vph)		*870*		*163*				
v/c		*0.00*		*0.08*				
95% queue length		*0.00*		*0.26*				
Control Delay		*9.1*		*29.0*				
LOS		*A*		*D*				
Approach Delay	--	--	*29.0*					
Approach LOS	--	--	*D*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 11*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 11*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*915*	*23*	*0*	*717*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*994*	*24*	*0*	*779*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*13*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*14*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*14*				
C (m) (vph)		*689*		*91*				
v/c		*0.00*		*0.15*				
95% queue length		*0.00*		*0.52*				
Control Delay		*10.2*		*51.6*				
LOS		*B*		*F*				
Approach Delay	--	--	*51.6*					
Approach LOS	--	--	*F*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 12*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 12*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*226*	*689*	*0*	*0*	*595*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*245*	*748*	*0*	*0*	*646*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*122*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*132*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LR*	
v (vph)	*245*						*132*	
C (m) (vph)	*949*						*475*	
v/c	*0.26*						*0.28*	
95% queue length	*1.03*						*1.13*	
Control Delay	*10.1*						*15.5*	
LOS	*B*						*C*	
Approach Delay	--	--				*15.5*		
Approach LOS	--	--				*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 13*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 13*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*148*	*3*	*13*	*231*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*160*	*3*	*14*	*251*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*2*	*0*	*7*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*0*	*7*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*14*		*9*				
C (m) (vph)		*1428*		*790*				
v/c		*0.01*		*0.01*				
95% queue length		*0.03*		*0.03*				
Control Delay		*7.5*		*9.6*				
LOS		*A*		*A*				
Approach Delay	--	--	*9.6*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 14*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 14*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*610*	*17*	*6*	*485*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*663*	*18*	*6*	*527*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*9*	*0*	*4*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*9*	*0*	*4*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*6*		*13*				
C (m) (vph)		*921*		*244*				
v/c		*0.01*		*0.05*				
95% queue length		*0.02*		*0.17*				
Control Delay		*8.9*		*20.6*				
LOS		*A*		*C*				
Approach Delay	--	--	*20.6*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 15*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 15*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*626*	*2*	*1*	*493*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*680*	*2*	*1*	*535*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*1*	*0*	*1*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*1*	*0*	*1*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*1*		*2*				
C (m) (vph)		*920*		*279*				
v/c		*0.00*		*0.01*				
95% queue length		*0.00*		*0.02*				
Control Delay		*8.9*		*18.0*				
LOS		*A*		*C*				
Approach Delay	--	--	*18.0*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 16*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 16*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*14*	*625*	*0*	*0*	*488*	*6*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*15*	*679*	*0*	*0*	*530*	*6*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*3*	*0*	*8*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*3*	*0*	*8*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*15*						*11*	
C (m) (vph)	*1042*						*365*	
v/c	*0.01*						*0.03*	
95% queue length	*0.04*						*0.09*	
Control Delay	*8.5*						*15.2*	
LOS	*A*						*C*	
Approach Delay	--	--					*15.2*	
Approach LOS	--	--					*C*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 17*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 17*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*149*	*1*	*6*	*227*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*161*	*1*	*6*	*246*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*1*	*0*	*2*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*1*	*0*	*2*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*6*		*3*				
C (m) (vph)		*1429*		*761*				
v/c		*0.00*		*0.00*				
95% queue length		*0.01*		*0.01*				
Control Delay		*7.5*		*9.7*				
LOS		*A*		*A*				
Approach Delay	--	--	*9.7*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Intersection 18*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 18*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*17*	*111*	*0*	*0*	*155*	*71*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*18*	*120*	*0*	*0*	*168*	*77*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*38*	*0*	*9*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*41*	*0*	*9*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*18*						*50*	
C (m) (vph)	*1333*						*661*	
v/c	*0.01*						*0.08*	
95% queue length	*0.04*						*0.24*	
Control Delay	*7.7*						*10.9*	
LOS	*A*						*B*	
Approach Delay	--	--				*10.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Demo Road @ Intersection 19*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 19*	North/South Street: *Demo Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*48*	*10*	*48*	*0*	*8*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*52*	*10*	*52*	*0*	*8*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*24*	*0*	*0*	*0*	*0*	*25*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*26*	*0*	*0*	*0*	*0*	*27*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*52*	*0*		*26*			*27*	
C (m) (vph)	*1625*	*1554*		*768*			*1080*	
v/c	*0.03*	*0.00*		*0.03*			*0.03*	
95% queue length	*0.10*	*0.00*		*0.11*			*0.08*	
Control Delay	*7.3*	*7.3*		*9.9*			*8.4*	
LOS	*A*	*A*		*A*			*A*	
Approach Delay	--	--	*9.9*			*8.4*		
Approach LOS	--	--	*A*			*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Demo Road @ Intersection 20*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Intersection 20*	North/South Street: *Demo Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*5*	*23*	*0*	*6*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*5*	*24*	*0*	*6*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*12*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*13*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*13*				
C (m) (vph)		*1597*		*998*				
v/c		*0.00*		*0.01*				
95% queue length		*0.00*		*0.04*				
Control Delay		*7.3*		*8.7*				
LOS		*A*		*A*				
Approach Delay	--	--	*8.7*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Sawmill*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Sawmill*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*9*	*614*	*0*	*0*	*493*	*4*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*9*	*667*	*0*	*0*	*535*	*4*
Percent Heavy Vehicles	*11*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*26*	*0*	*65*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*28*	*0*	*70*
Percent Heavy Vehicles	*0*	*0*	*0*	*12*	*0*	*12*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*9*						*98*	
C (m) (vph)	*985*						*346*	
v/c	*0.01*						*0.28*	
95% queue length	*0.03*						*1.14*	
Control Delay	*8.7*						*19.5*	
LOS	*A*						*C*	
Approach Delay	--	--				*19.5*		
Approach LOS	--	--				*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Sandbar Tract*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Sandbar Tract*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*639*	*1*	*0*	*496*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*694*	*1*	*0*	*539*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*1*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*1*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (vph)		*0*		*1*				
C (m) (vph)		*910*		*197*				
v/c		*0.00*		*0.01*				
95% queue length		*0.00*		*0.02*				
Control Delay		*9.0*		*23.4*				
LOS		*A*		*C*				
Approach Delay	--	--	*23.4*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Point-Moose River*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *Point-Moose River*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*1*	*154*	*0*	*0*	*245*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*1*	*167*	*0*	*0*	*266*	*2*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*1*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*1*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*1*						*1*	
C (m) (vph)	*1307*						*581*	
v/c	*0.00*						*0.00*	
95% queue length	*0.00*						*0.01*	
Control Delay	*7.8*						*11.2*	
LOS	*A*						*B*	
Approach Delay	--	--				*11.2*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ Brassua Lake*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		
Project Description	*JN 1381.01 - 2017 Postdevelopment*		
East/West Street:	*Southeast Shore Brassua Lake*	North/South Street:	*Route 15*
Intersection Orientation:	*North-South*	Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*149*	*0*	*0*	*226*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*161*	*0*	*0*	*245*	*2*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*1*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*1*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*0*						*1*	
C (m) (vph)	*1331*						*604*	
v/c	*0.00*						*0.00*	
95% queue length	*0.00*						*0.00*	
Control Delay	*7.7*						*11.0*	
LOS	*A*						*B*	
Approach Delay	--	--					*11.0*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R. Barnes*	Intersection	*Route 15 @ S. Shore Long Pond*
Agency/Co.	*Gorrill-Palmer*	Jurisdiction	
Date Performed	*3/6/2006*	Analysis Year	*2017*
Analysis Time Period	*PM Peak Hour*		

Project Description	*JN 1381.01 - 2017 Postdevelopment*
East/West Street: *South Shore Long Pond*	North/South Street: *Route 15*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*1*	*100*	*0*	*0*	*88*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*1*	*108*	*0*	*0*	*95*	*2*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*2*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (vph)	*1*						*2*	
C (m) (vph)	*1509*						*966*	
v/c	*0.00*						*0.00*	
95% queue length	*0.00*						*0.01*	
Control Delay	*7.4*						*8.7*	
LOS	*A*						*A*	
Approach Delay	--	--					*8.7*	
Approach LOS	--	--					*A*	

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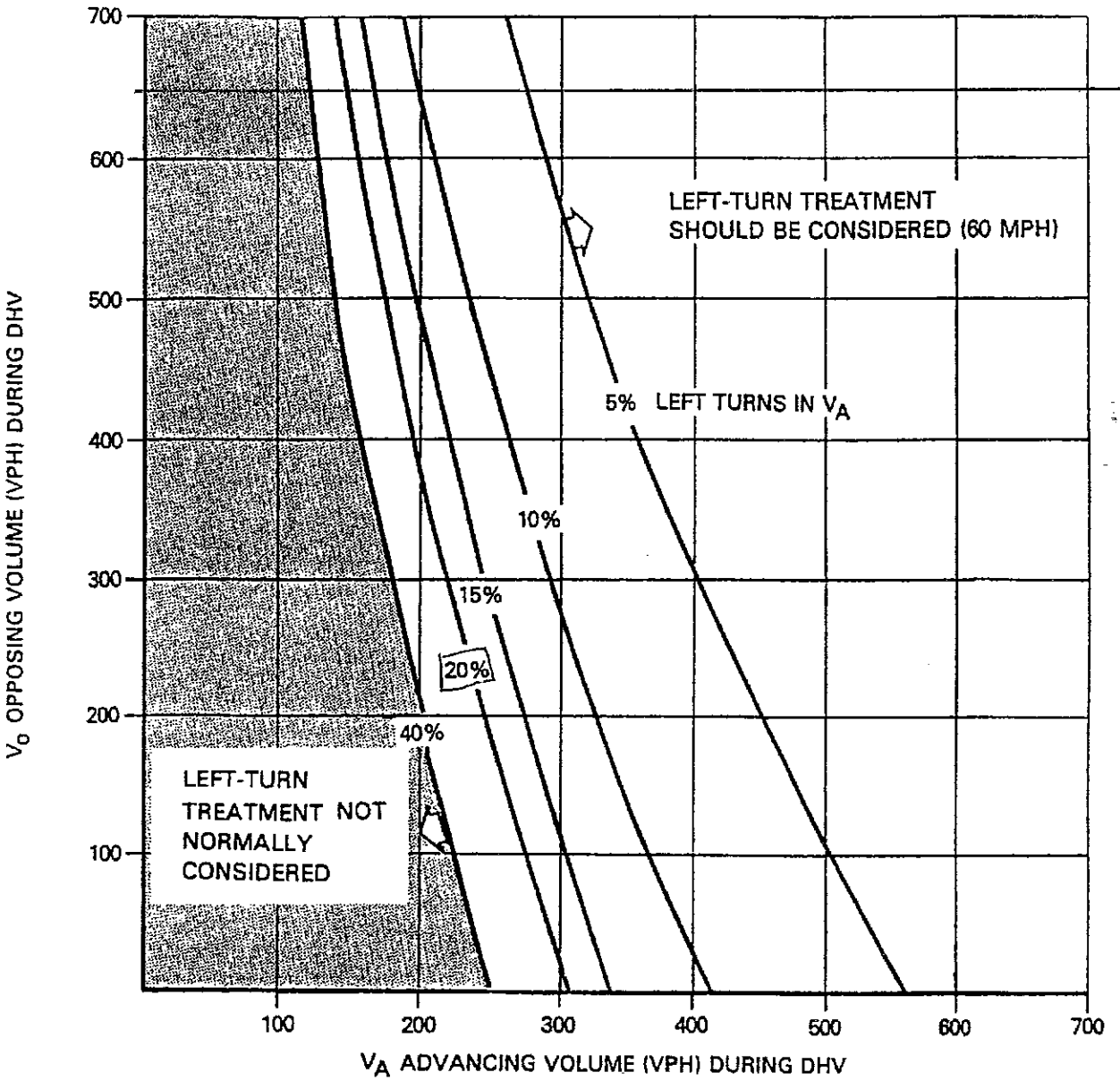
Appendix C

MaineDOT Historic AADT Traffic Volumes

Town	Location	1982	1984	1999	2004	% Change	Annual % Increase
Beaver Cove	LILY BAY RD @ GREENVILLE TL		665		1060	59%	2.4%
Beaver Cove	LILY BAY RD NE/O IR 2103		415		630	52%	2.1%
Beaver Cove	LILY BAY RD S/O IR 2103		460		880	91%	3.3%
Big Moose TWP	SR 6 @ BR #3824		810		1130	40%	1.7%
Frenctown TWP	IR 306 @ BR #0917		275		430	56%	2.3%
Greenville	LILY BAY RD N/O PLEASANT ST.		3980		4320	9%	0.4%
Greenville	LILY BAY RD N/O SCAMMAN RD		1200		1710	43%	1.8%
Greenville	LILY BAY RD NE/O SR 6/15 (WEST ST)		4875		5690	17%	0.8%
Greenville	LILY BAY RD S/O SCAMMAN RD		1490		2020	36%	1.5%
Greenville	LILY BAY RD S/O VILLAGE ST		2895		3160	9%	0.4%
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) S/O WASHINGTON ST		3575				
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) @ RR OVERPASS		2775		4940	78%	2.9%
Greenville	SR 6/15 (MOOSEHEAD LAKE RD) S/O SR 6/15		5070		6150	21%	1.0%
Greenville	SR 6/15 (WEST ST) E/O SPRUCE ST		4915		5070	3%	0.2%
Greenville	SR 6/15 (WEST ST) SE/O BIRCH ST		4235		4340	2%	0.1%
Greenville	SR 6/15 (WEST ST) W/O CRAFT ST		4860	6070		25%	1.5%
Greenville	SR 6/15 (WEST ST) W/O SPRUCE ST		5005		5150	3%	0.1%
Greenville	SR 6/15 W/O SR 6/15 (MOOSEHEAD LK RD)		5280		5810	10%	0.5%
Jackman	SR 6/15 @ LONG POND TWP TL	529			810	53%	2.0%
Jackman	SR 6/15 E/O US 201	865			1180	36%	1.4%
Jackman	SR 6/US 201 N/O IR 990 (AIRPORT RD)						
Jackman	SR 6/US 201 NW/O IR 970 (COBURN AVE)	3188			4130	30%	1.2%
Jackman	SR 6/US 201 NW/O SR 6/15	2349			3200	36%	1.4%
Jackman	SR 6/US 201 S/O IR 710	2291			3490	52%	1.9%
Moose River	SR 6/US 201 N/O IR 704 PLEASANT ST			2210	2210	0%	0.0%
Moose River	SR 6/US 201 S/O IR 704 PLEASANT ST	1591			2510	58%	2.1%
Moosehead Jct.	SR 6/15 W/O IR 754		1045	1390		33%	1.9%
Rockwood Strip T1 R1 Nbkp	SR 6/15 E/O OR 759	1121			1300	16%	0.7%
Rockwood Strip T1 R1 Nbkp	SR 6/15 W/O IR 759	679			980	44%	1.7%
Shirley	SR 6/15 N/O IR 488		1550		2620	69%	2.7%
Shirley	SR 6/15 N/O IR 489		1190		2500	110%	3.8%
Shirley	SR 6/15 SE/O IR 493 (BLANCHARD RD)		1510		2550	69%	2.7%
						AVERAGE ANNUAL INCREASE =	**1.5%**



Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.

2. Read V_A and V_O into the chart and locate the intersection of the two volumes.

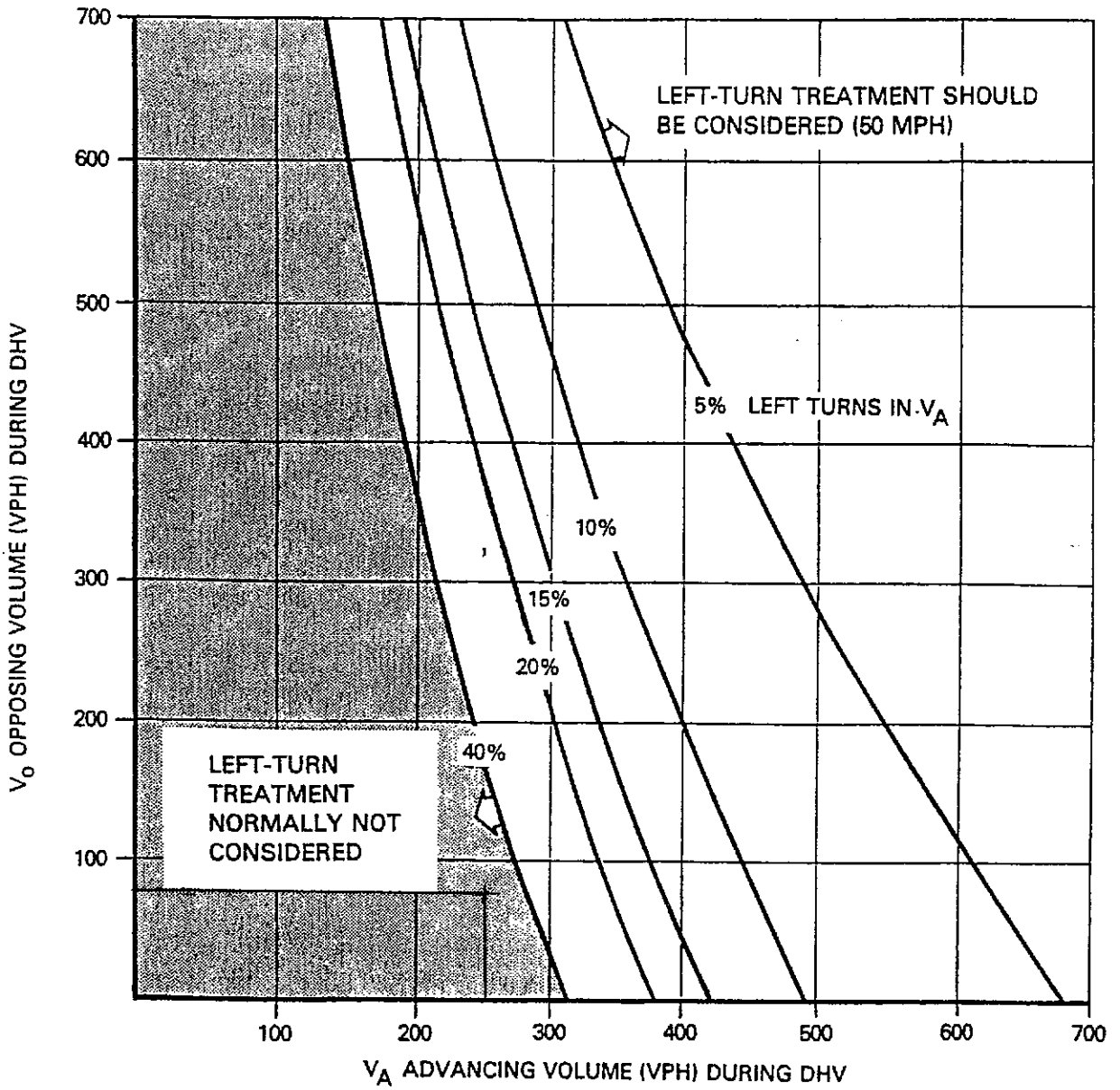
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

INTERSECTION 12
V_A - 856
V_O - 646
% LTS - 26%

VOLUME WARRANTS FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (60 mph)

Figure 8-17

WARRANT MET



Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.

2. Read V_A and V_O into the chart and locate the intersection of the two volumes.

3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

VOLUME WARRANTS FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (50 mph)

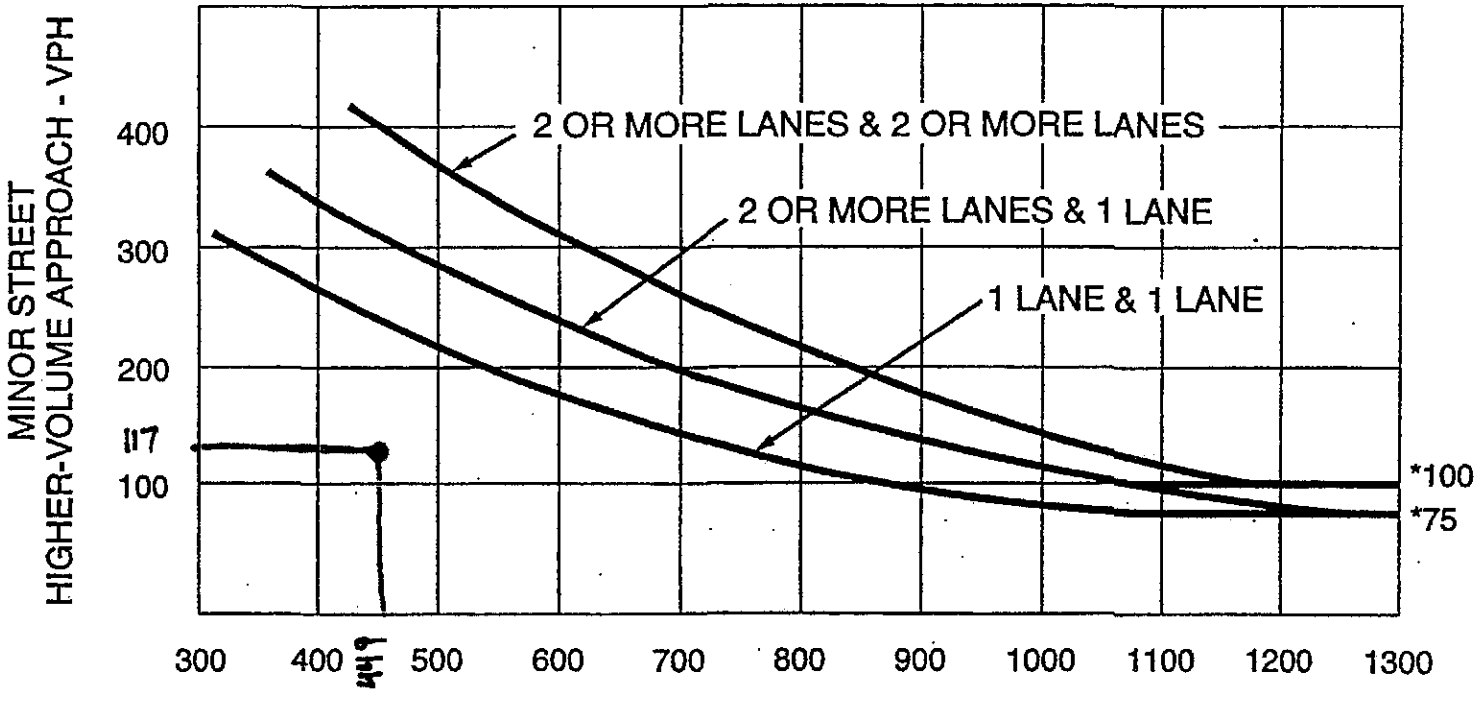
Figure 8-18

INTERSECTION 2
V_A - 248
V_O - 76
% LEFTS - 50%
WARRANT NOT MET

ROUTE 15 @ LILY BAY ROAD
EXISTING VOLUMES

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

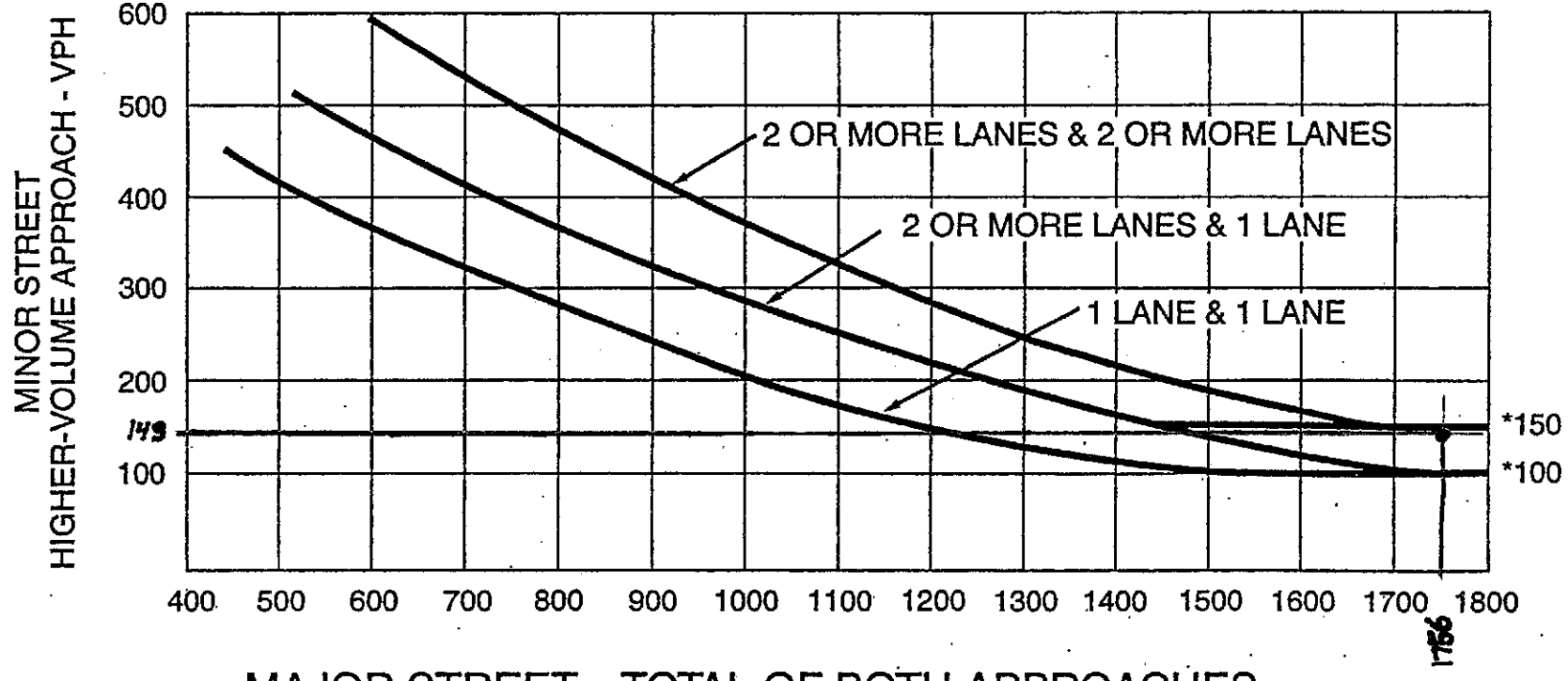
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-3. Warrant 3, Peak Hour

ROUTE 15 @ LILY BAY ROAD
POST DEVELOPMENT



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

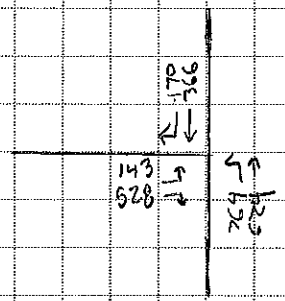
GORRILL-PALMER
CONSULTING ENGINEERS, INC.
P.O. Box 1237
GRAY, MAINE 04039
(207) 657-6910
FAX (207) 657-6912

JOB 1381.01 - MOOSEHEAD
SHEET NO. _____ OF _____
CALCULATED BY RJB DATE 3/8/06
CHECKED BY _____ DATE _____
SCALE _____

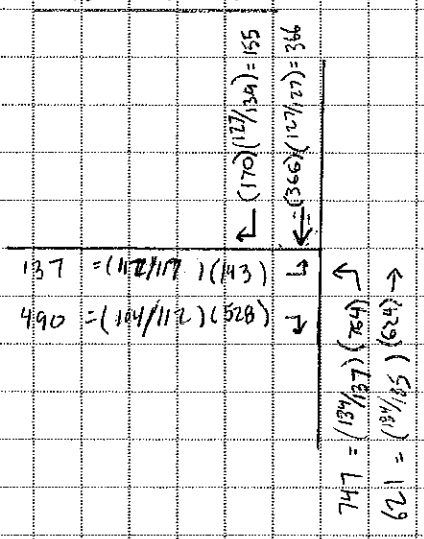
TASK : PERFORM 4 HOUR SIGNAL WARRANT FOR ROUTE 15 @ CITY BAY ROAD

ASSUMPTIONS - PEAK HOUR VOLUMES ADJUSTED BASED ON EXISTING HOURLY VARIATION AT THE INTERSECTION.

3:45 → 4:45 (PEAK HOUR)



4:45 → 5:45



GORRILL-PALMER
CONSULTING ENGINEERS, INC.
P.O. Box 1237
GRAY, MAINE 04039
(207) 657-6910
FAX (207) 657-6912

JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

10:30 - 11:30

(170)(146/139) = 179
(366)(161/127) = 463

143 = (117 /117)(143)
372 = (79 /112)(528)

658 = (118 /137)(764)
631 (187 /185)(524)

11:45 → 12:45

(170)(173/139) = 212
(366)(134/127) = 377

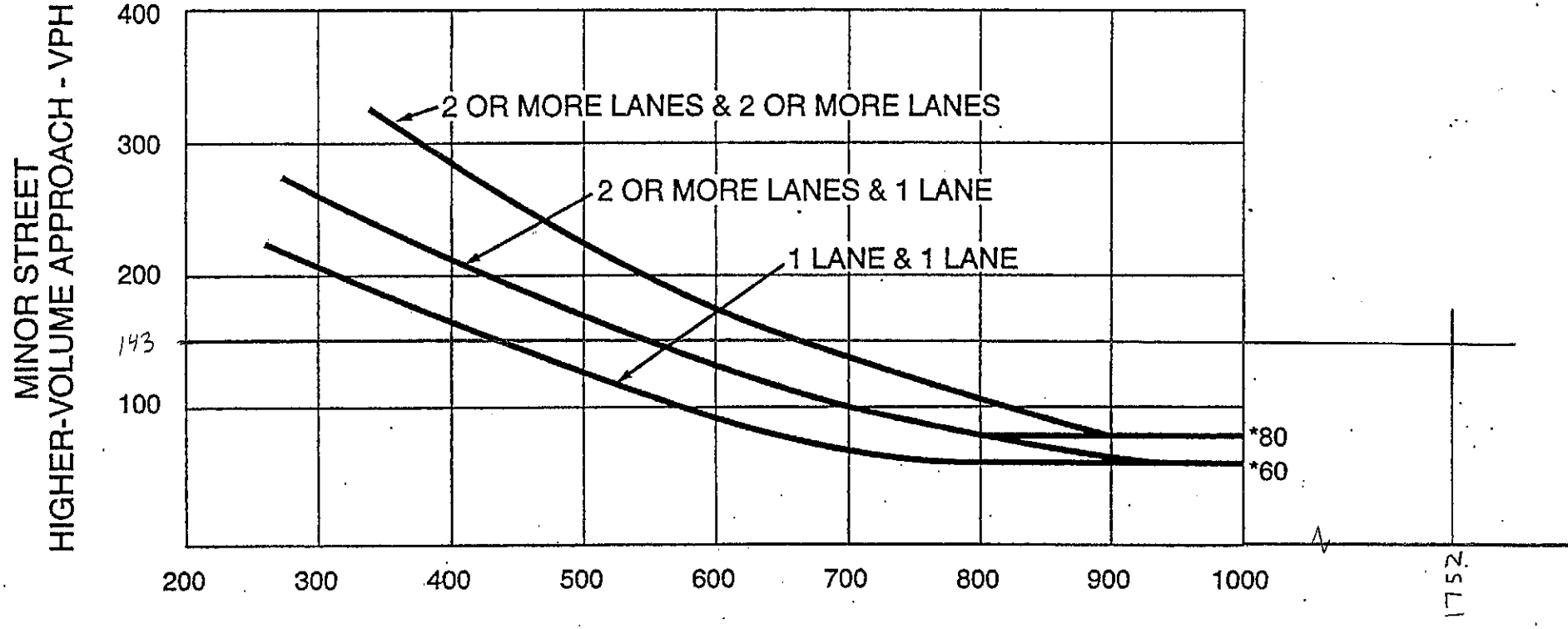
165 = (135/117)(143)
509 = (108/112)(528)

792 = (143/137)(764)
569 = (201/165)(524)

10:30 → 11:30

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

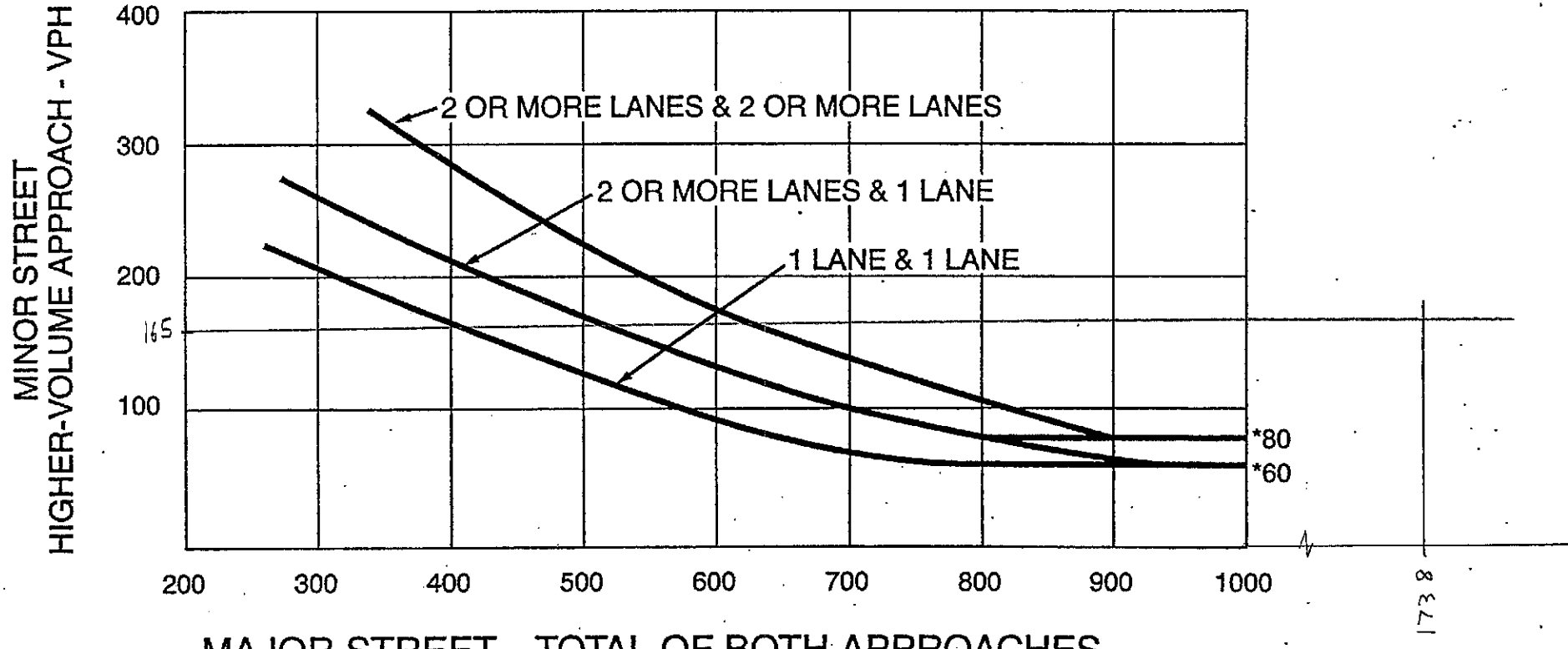


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

11:45 → 12:45

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

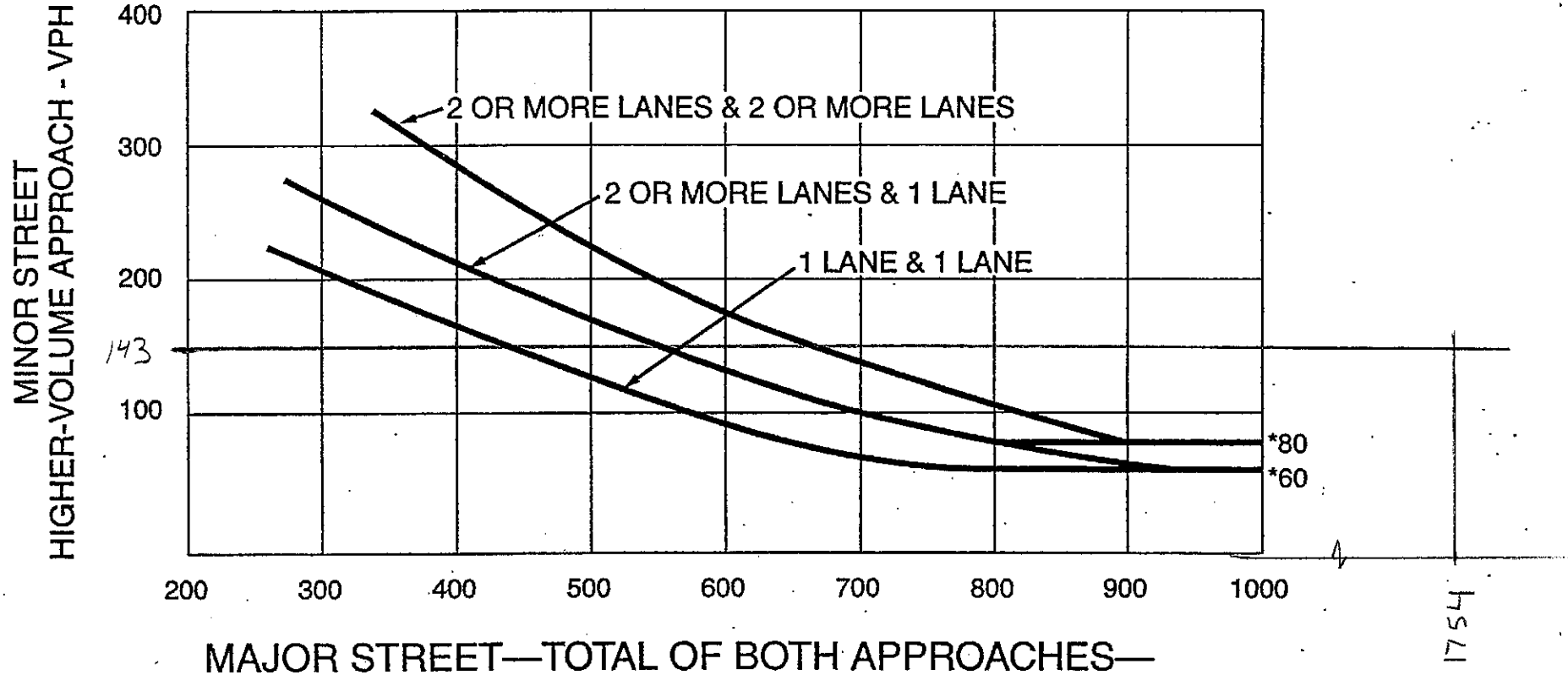


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

3:45 → 4:45

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

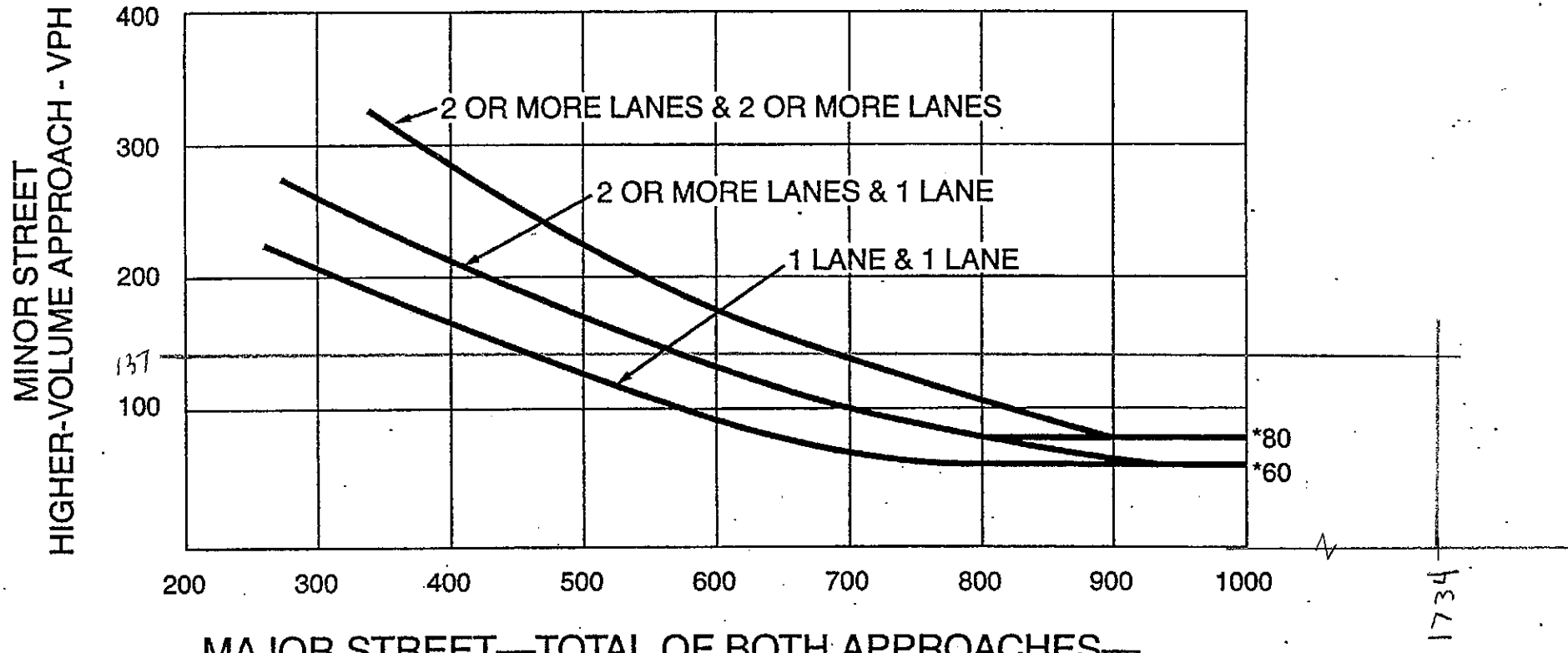


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

4:45 → 5:45

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Gorrill-Palmer Consulting Engineers
15 Shaker Road PO Box 1237
Gray, ME 04039

Location: Greenville
Counter: SF
DB-400
Weather: Clear

File Name : Rte 15 @ Main St - Mid
Site Code : 00001381
Start Date : 9/2/2005
Page No : 1

Groups Printed- Cars - Single Unit Trucks - Combination Vehicles

	MAIN ST From North					RTE 15 From East					MAIN ST From South					RTE 15 From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
10:30 AM	1	37	46	7	91	0	0	1	6	7	27	51	1	1	80	32	0	21	2	55	233
10:45 AM	0	44	48	8	100	0	0	0	1	1	27	54	0	0	81	29	0	24	1	54	236
Total	1	81	94	15	191	0	0	1	7	8	54	105	1	1	161	61	0	45	3	109	469
11:00 AM	0	43	21	0	64	0	1	0	3	4	39	49	1	0	89	28	0	18	5	51	208
11:15 AM	0	37	31	1	69	0	0	0	0	0	25	33	0	0	58	28	0	16	5	49	176
11:30 AM	0	32	31	5	68	0	0	0	6	6	28	41	1	0	70	39	0	29	1	69	213
11:45 AM	1	34	44	2	81	0	0	0	2	2	35	47	0	2	84	38	0	21	5	64	231
Total	1	146	127	8	282	0	1	0	11	12	127	170	2	2	301	133	0	84	16	233	828
12:00 PM	0	37	43	5	85	0	0	0	0	0	44	58	1	0	103	28	0	22	4	54	242
12:15 PM	0	26	48	12	86	0	0	0	5	5	28	50	0	2	80	37	0	30	2	69	240
12:30 PM	0	34	38	0	72	0	1	0	1	2	35	46	0	0	81	32	0	35	2	69	224
12:45 PM	0	31	46	1	78	0	0	0	9	9	30	45	0	3	78	26	0	21	0	47	212
Total	0	128	175	18	321	0	1	0	15	16	137	199	1	5	342	123	0	108	8	239	918
Grand Total	2	355	396	41	794	0	2	1	33	36	318	474	4	8	804	317	0	237	27	581	2215
Apprch %	0.3	44.7	49.9	5.2		0	5.6	2.8	91.7		39.6	59	0.5	1		54.6	0	40.8	4.6		
Total %	0.1	16	17.9	1.9	35.8	0	0.1	0	1.5	1.6	14.4	21.4	0.2	0.4	36.3	14.3	0	10.7	1.2	26.2	
Cars	2	339	381	38	760	0	2	1	30	33	285	456	4	8	753	302	0	213	24	539	2085
% Cars	100	95.5	96.2	92.7	95.7	0	100	100	90.9	91.7	89.6	96.2	100	100	93.7	95.3	0	89.9	88.9	92.8	94.1
Single Unit Trucks	0	13	13	3	29	0	0	0	3	3	17	15	0	0	32	13	0	9	3	25	89
% Single Unit Trucks	0	3.7	3.3	7.3	3.7	0	0	0	9.1	8.3	5.3	3.2	0	0	4	4.1	0	3.8	11.1	4.3	4
Combination Vehicles	0	3	2	0	5	0	0	0	0	0	16	3	0	0	19	2	0	15	0	17	41
% Combination Vehicles	0	0.8	0.5	0	0.6	0	0	0	0	0	5	0.6	0	0	2.4	0.6	0	6.3	0	2.9	1.9

Gorrill-Palmer Consulting Engineers

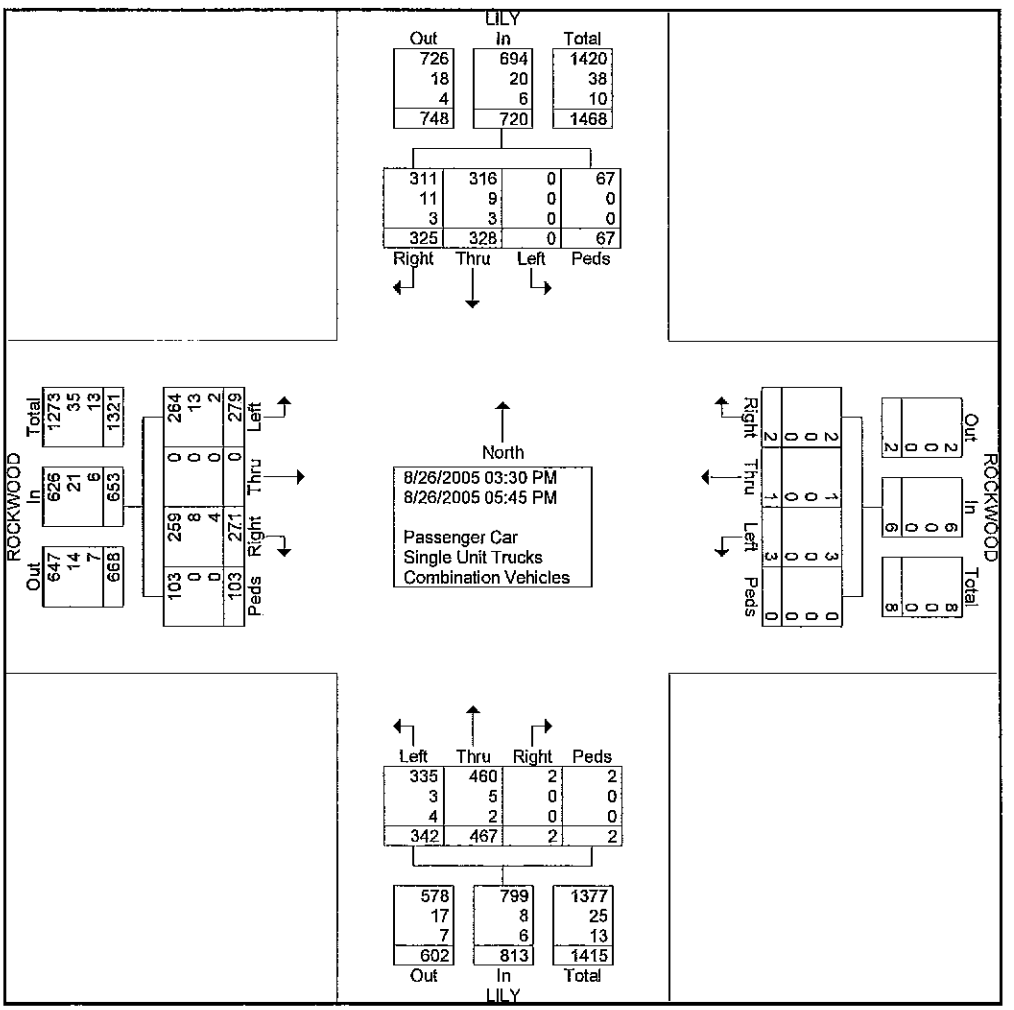
15 Shaker Road PO Box 1237
Gray, ME 04039

Location: Greenville, Maine
Counted By: CAP
DB-400
Weather: Clear

File Name : 8-26-05 FRI-PM
Site Code : 00001381
Start Date : 8/26/2005
Page No : 1

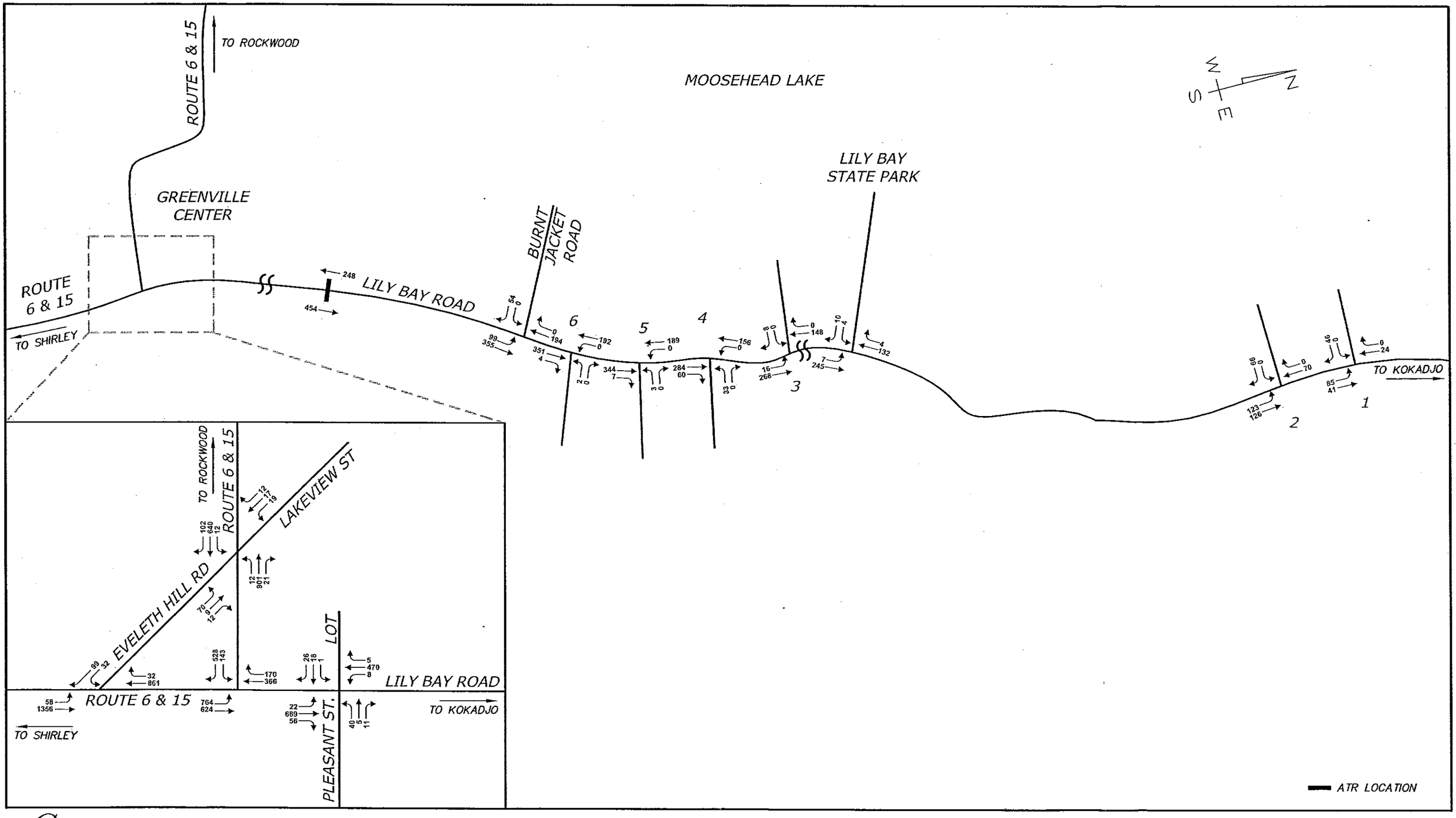
Groups Printed- Passenger Car - Single Unit Trucks - Combination Vehicles

	LILY From North					ROCKWOOD From East					LILY From South					ROCKWOOD From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
03:30 PM	0	46	28	8	82	0	0	0	0	0	37	48	0	0	85	19	0	26	4	49	216
03:45 PM	0	34	38	17	89	0	0	0	0	0	38	47	0	1	86	36	0	35	23	94	269
Total	0	80	66	25	171	0	0	0	0	0	75	95	0	1	171	55	0	61	27	143	485
04:00 PM	0	40	32	2	74	3	0	1	0	4	38	50	2	0	90	34	0	24	11	69	237
04:15 PM	0	28	30	13	71	0	0	0	0	0	31	41	0	0	72	21	0	35	11	67	210
04:30 PM	0	25 127	39 139	2	66	0	1	1	0	2	30 137	47 185	0	0	77	26 117	0	28 122	18	72	217
04:45 PM	0	32	41	6	79	0	0	0	0	0	35	42	0	1	78	20	0	24	10	54	211
Total	0	125	142	23	290	3	1	2	0	6	134	180	2	1	317	101	0	111	50	262	875
05:00 PM	0	41	41	2	84	0	0	0	0	0	42	44	0	0	86	34	0	30	8	72	242
05:15 PM	0	27	24	11	62	0	0	0	0	0	28	58	0	0	86	29	0	23	9	61	209
05:30 PM	0	27 127	21 127	4	52	0	0	0	0	0	29 134	40 184	0	0	69	29 112	0	27 104	5	61	182
05:45 PM	0	28	31	2	61	0	0	0	0	0	34	50	0	0	84	31	0	19	4	54	199
Total	0	123	117	19	259	0	0	0	0	0	133	192	0	0	325	123	0	99	26	248	832
Grand Total	0	328	325	67	720	3	1	2	0	6	342	467	2	2	813	279	0	271	103	653	2192
Apprch %	0	45.6	45.1	9.3		50	16.7	33.3	0		42.1	57.4	0.2	0.2		42.7	0	41.5	15.8		
Total %	0	15	14.8	3.1	32.8	0.1	0	0.1	0	0.3	15.6	21.3	0.1	0.1	37.1	12.7	0	12.4	4.7	29.8	
Passenger Car	0	316	311	67	694	3	1	2	0	6	335	460	2	2	799	264	0	259	103	626	2125
% Passenger Car	0	96.3	95.7	100	96.4	100	100	100	0	100	98	98.5	100	100	98.3	94.6	0	95.6	100	95.9	96.9
Single Unit Trucks	0	9	11	0	20	0	0	0	0	0	3	5	0	0	8	13	0	8	0	21	49
% Single Unit Trucks	0	2.7	3.4	0	2.8	0	0	0	0	0	0.9	1.1	0	0	1	4.7	0	3	0	3.2	2.2
Combination Vehicles	0	3	3	0	6	0	0	0	0	0	4	2	0	0	6	2	0	4	0	6	18
% Combination Vehicles	0	0.9	0.9	0	0.8	0	0	0	0	0	1.2	0.4	0	0	0.7	0.7	0	1.5	0	0.9	0.8



Postdevelopment Volumes

Figure No. 7A



Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: RJB
Draft: DB
Checked: RCN
Date: MARCH 2006
File Name: 1381-01_TRAF.dwg

MAR 2,2006 AT 08:12

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: INT OF RTE 6/15 & LILY BAY RD AREA
TOWN: GREENVILLE

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
01459	21	07064	1	0.00	01266	06060	1	0.00
01354		07065	1	0.00	01280	01280	0	0.00
01459		06060	1	0.00	01267	01267	0	0.00
01349		07066	1	0.00	01284	01284	0	0.00
01474		01266	1	0.00	01349	01892	0	0.00
01463		01892	1	0.00	06061	06061	1	0.00
00484		01896	1	0.00	01283	07291	0	0.00
02236		07291	1	0.00	07292	07292	0	0.00
00482		01098	1	0.00	01112	01114	0	0.00
00481		01112	1	0.00	01111	01111	0	0.00
01546		01111	1	0.00	01108	01108	1	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21	01266	GRVL,	LAKEVIEW, LAKEVIEW	1	0		0	0	0	0	0	0.0		0.691		0.00	0.63	0.00
21	01280	GRVL,	WASHINGTON, PROSPEC	1	1		0	0	1	0	0	100.0		0.179		1.86	0.64	2.91
21	01267	GRVL,	HIGH, LAKEVIEW ST.	1	0		0	0	0	0	0	0.0		0.186		0.00	0.64	0.00
21	01284	GRVL,	MINDEN ST, END	1	0		0	0	0	0	0	0.0		0.076		0.00	0.12	0.00
21	01349	GRVL,	RD.1474, .31 BK.OLI	1	0		0	0	0	0	0	0.0		0.117		0.00	0.47	0.00
21	01892	GRVL,	PARK, OLIVER, LAKEVI	1	0		0	0	0	0	0	0.0		0.117		0.00	0.47	0.00
21	01283	GRVL,	PLEASANT, SHAW ST.	1	0		0	0	0	0	0	0.0		0.385		0.00	0.76	0.00
21	01281	GRVL,	PLEASANT, PROSPECT	1	0		0	0	0	0	0	0.0		0.336		0.00	0.77	0.00
21	01097	GRVL,	PLEASANT, .13 BK.PR	1	0		0	0	0	0	0	0.0		0.283		0.00	0.78	0.00
21	01108	GRVL,	RD.484, RD.1546	1	0		0	0	0	0	0	0.0		0.248		0.00	0.77	0.00
21	07291	GRVL,	RD 484, SCOTT RD	1	0		0	0	0	0	0	0.0		0.109		0.00	0.43	0.00
21	07292	GRVL,	SCOTT RD, PRIV.BRDG	1	0		0	0	0	0	0	0.0		0.042		0.00	0.90	0.00
21	01112	GRVL,	PYGENSKY FARM, SCAM	1	0		0	0	0	0	0	0.0		0.115		0.00	0.46	0.00
21	01114	GRVL,	SCAMMON RD, END	1	0		0	0	0	0	0	0.0		0.029		0.00	2.08	0.00
21	01111	GRVL,	PYGENSKY FARM RD, R	1	0		0	0	0	0	0	0.0		0.124		0.00	0.63	0.00
			NODE SUBTOTALS-		1		0	0	1	0	0	100.0		3.037		0.11	0.47	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21090	01266	07064	LAKEVIEW ST.	1	0	0.10	0	0	0	0	0	0.0	0.00069		0.00		997.15	0.00
	01266	06060		1	0	0.08	0	0	0	0	0	0.0	0.00045		0.00		1095.76	0.00
	01280	07065	WASHINGTON ST.	1	1	0.24	0	0	0	0	1	0.0	0.00044		757.58		1100.70	0.00
	01267	06060	LAKEVIEW ST.	1	0	0.16	0	0	0	0	0	0.0	0.00032		0.00		1164.96	0.00
	01284	07066	MINDEN ST.	1	0	0.05	0	0	0	0	0	0.0	0.00008		0.00		1004.05	0.00
	01266	01349	LAKEVIEW MANOR	1	0	0.24	0	0	0	0	0	0.0	0.00032		0.00		1164.96	0.00
	01349	01892		1	0	0.31	0	0	0	0	0	0.0	0.00031		0.00		1170.59	0.00
	01892	06061	OLIVER RD	1	0	0.24	0	0	0	0	0	0.0	0.00012		0.00		1184.10	0.00
	01283	01896	PLEASANT ST.	1	0	0.17	0	0	0	0	0	0.0	0.00063		0.00		792.51	0.00
	01281	01283		1	0	0.05	0	0	0	0	0	0.0	0.00016		0.00		852.91	0.00
	01097	01281		1	0	0.13	0	0	0	0	0	0.0	0.00038		0.00		863.17	0.00
	01097	01108	00484	1	0	1.39	0	0	0	0	0	0.0	0.00381		0.00		508.45	0.00
	01108	07291		1	1	1.32	0	0	0	0	1	0.0	0.00154		216.45		814.88	0.00
	07291	07292	SCOTT RD	1	0	0.67	0	0	0	0	0	0.0	0.00056		0.00		1046.09	0.00
	01098	01112	SCAMMON RD	1	2	1.33	0	0	0	0	2	0.0	0.00146		456.62		826.22	0.00
	01112	01114	SCAMMON RD.	1	0	1.05	0	0	0	0	0	0.0	0.00061		0.00		1026.13	0.00
	01111	01112	PYGENSKY FARM	1	0	0.87	0	0	0	0	0	0.0	0.00044		0.00		1100.70	0.00
	01108	01111	01546	1	0	0.58	0	0	0	0	0	0.0	0.00061		0.00		797.67	0.00
			LINK SUBTOTALS-		4	8.98	0	0	0	0	4	0.0	0.01293		103.11		444.73	0.00
			GRAND TOTALS-		5	8.98	0	0	1	0	4	20.0	0.01293	3.037	128.89		492.73	0.26

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---A M---												HOUR OF DAY						---P M---							
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M
TUESDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	T
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	W
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	0	5	T

	YEAR			
	TOTAL	2002	2003	2004
JANUARY	1	1	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	1	1	0	0
JUNE	1	1	0	0
JULY	0	0	0	0
AUGUST	1	0	1	0
SEPTEMBER	0	0	0	0
OCTOBER	1	0	1	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
UNKNOWN	0	0	0	0
TOTAL	5	3	2	0

TYPE OF UNIT

01-2 DOOR	1	10-BOBTAIL	0
02-4 DOOR	1	20-2ADT	0
03-CONVERTBLE	0	30-3ASU	1
04-STAT WGN	0	40-4ASU	0
05-VAN/CAMPER	0	21-2ASA	0
06-PICKUP TRK	4	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	1
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	1	35-3AT1A2ATR	0
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	0	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
07-SUV	0	82-3AX CM BUS	0
99-UNK/OTH	0	98-FARM/TRAC	0
	TOTAL	9	

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	1	0	0	0	0	0	0	0	0	1
HEAD-ON/SIDESWIPE	0	1	0	0	0	0	0	0	0	1
INTERSECTION MOVEMENT	0	0	0	0	0	0	0	0	0	0
PEDESTRIANS	0	0	0	0	0	0	0	0	0	0
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	0	0	0	0	0	0	0	0	0	0
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	0	0	0	0	0	0	0	0	0	0
MOOSE	1	0	0	0	0	0	0	0	0	1
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	1	0	0	0	0	0	0	1
OTHER	0	0	0	0	0	1	0	0	0	1
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	2	1	1	0	0	1	0	0	0	5

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	0	0
B	1	1
C	0	0
PD	4	
TOTAL	5	1

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	0
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	0
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	0
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	0
OTHER	0
UNKNOWN	0
TOTAL	0

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	0
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	1
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	0
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	4
OTHER	0
UNKNOWN	0
TOTAL	5

ROAD CHARACTER

LEVEL STRAIGHT	2
LEVEL CURVED	0
ON GRADE STRAIGHT	1
ON GRADE CURVED	1
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	1
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	5

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	2	2	0	0	0	0	4
FAIL TO YIELD R-WAY	0	0	0	0	0	0	0
ILLEGAL UNSAFE SPEED	1	0	0	0	0	0	1
FOLLOW TOO CLOSE	0	0	0	0	0	0	0
DISREGARD TRAF CONTROL	0	0	0	0	0	0	0
DRIVING LEFT OF CENTER	1	0	0	0	0	0	1
IMPROPER PASSING	0	0	0	0	0	0	0
IMPROPER LANE CHANGE	0	0	0	0	0	0	0
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	1	0	0	0	0	1
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	1	0	0	0	0	0	1
DRIVER INATTENTION	0	0	0	0	0	0	0
DRIVER INEXPERIENCE	0	0	0	0	0	0	0
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	0	0	0	0	0	0	0
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	0	0	0	0	0	0
OTHER HUMAN FACTOR	0	0	0	0	0	0	0
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	0	1	0	0	0	0	1
TOTAL	5	4	0	0	0	0	9

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	5	3	0	0	0	0	8
UNDER THE INFLUENCE	0	0	0	0	0	0	0
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	0	0	0	0	0	0	0
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	0	1	0	0	0	0	1
TOTAL	5	4	0	0	0	0	9

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	1	0	0	0	1
10-14	0	0	0	0	0	0
15-19	2	0	0	0	0	2
20-24	1	0	0	0	0	1
25-29	0	0	0	0	0	0
30-39	2	0	0	0	0	2
40-49	1	0	0	0	0	1
50-59	2	0	0	0	0	2
60-69	0	0	0	0	0	0
70-79	0	0	0	0	0	0
80-OVER	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0
TOTAL	8	1	0	0	0	9

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

ROAD SURFACE

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	2	0	0	1	1	0	0	0	0	0	4
(5)	DUSK	1	0	0	0	0	0	0	0	0	0	1
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	0
DAYLIGHT	4
DUSK	1
DARK-LIGHTS	0
DARK NO LIGHTS	0
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	5

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		3	0	0	1	1	0	0	0	0	0	5

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: INT OF RTE 6/15 & LILY BAY RD AREA
TOWN: GREENVILLE

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
01459	21	07064	1	0.00	01266	06060	1	0.00
01354		07065	1	0.00	01280	01280	0	0.00
01459		06060	1	0.00	01267	01267	0	0.00
01349		07066	1	0.00	01284	01284	0	0.00
01474		01266	1	0.00	01349	01892	0	0.00
01463		01892	1	0.00	06061	06061	1	0.00
00484		01896	1	0.00	01283	07291	0	0.00
02236		07291	1	0.00	07292	07292	0	0.00
00482		01098	1	0.00	01112	01114	0	0.00
00481		01112	1	0.00	01111	01111	0	0.00
01546		01111	1	0.00	01108	01108	1	0.00

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS
21090	LAKEVIEW ST.	01266	07064	0.0	0	0	0	0	0	0	
	00484	01280	07065	0.1	1	0	0	0	0	1	200324395
	SCOTT RD	01108	07291	0.1	1	0	0	0	0	1	200332507
		01098	01112	0.8	1	0	0	0	0	1	200214987
	01546			0.9	1	0	0	0	0	1	200200227
				TOTALS-	4	0	0	0	0	4	

MAR 2,2006 AT 08:12

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: LILY BAY RD
TOWN: GREENVILLE - LILY BAY TOWNSHIP

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
00306	21	07067	1	0.00	01896	01784	0	0.00

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21	01896	GRVL,LILY BAY RD,PLEASA		1	1		0	0	0	0	1	0.0		2.011		0.17	0.43	0.00
21	01287	GRVL.LILY BAY RD,NORRIS		1	0		0	0	0	0	0	0.0		1.491		0.00	0.46	0.00
21	01288	GRVL,LILY BAY RD,COTTAG		1	0		0	0	0	0	0	0.0		1.310		0.00	0.47	0.00
21	01291	GRVL,LILY BAY RD,LINCOL		1	1		0	0	0	0	1	0.0		1.250		0.27	0.48	0.00
21	01295	GRVL,LILY BAY RD,VILLAG		1	0		0	0	0	0	0	0.0		1.153		0.00	0.48	0.00
21	01297	GRVL,LILY BAY RD,MURRAY		1	0		0	0	0	0	0	0.0		1.107		0.00	0.49	0.00
21	01299	GRVL,LILY BAY RD,FOSS S		1	0		0	0	0	0	0	0.0		1.076		0.00	0.49	0.00
21	01301	GRVL,LILY BAY RD,PREO S		1	0		0	0	0	0	0	0.0		1.047		0.00	0.49	0.00
21	01303	GRVL,LILY BAY RD,MILL S		1	0		0	0	0	0	0	0.0		1.010		0.00	0.50	0.00
21	01884	GRVL,LILY BAY RD,LEISUR		1	0		0	0	0	0	0	0.0		0.969		0.00	0.50	0.00
21	01310	GRVL,LILY BAY RD,LAWREN		1	0		0	0	0	0	0	0.0		0.938		0.00	0.51	0.00
21	01311	GRVL,LILY BAY RD,MCAFFE		1	0		0	0	0	0	0	0.0		0.865		0.00	0.51	0.00
21	07226	GRVL,LILY BAY RD,BIRCH		1	0		0	0	0	0	0	0.0		0.837		0.00	0.52	0.00
21	01098	GRVL,LILY BAY RD,SCAMMO		1	1		0	0	0	0	1	0.0		0.735		0.45	0.53	0.00
21	01118	TL GREENVILLE-BEAVER CO		1	0		0	0	0	0	0	0.0		0.505		0.00	0.55	0.00
21	01765	BEA.CO,RD 306,COVESIDE		1	0		0	0	0	0	0	0.0		0.390		0.00	0.56	0.00
21	01768	BEA.CO,LILLY BAY RD,CIR		1	0		0	0	0	0	0	0.0		0.388		0.00	0.56	0.00
21	01769	BEA.CO,RD 306,NORTH RDG		1	0		0	0	0	0	0	0.0		0.376		0.00	0.56	0.00
21	07298	BEA.CO,RD 306,CIRCLE LA		1	0		0	0	0	0	0	0.0		0.325		0.00	0.56	0.00
21	01773	BEA.CO,RD 306,STATE PAR		1	0		0	0	0	0	0	0.0		0.319		0.00	0.56	0.00
21	01781	BEA.CO,RD.306,1337		1	0		0	0	0	0	0	0.0		0.229		0.00	0.52	0.00
21	01813	TL,LILY BAY TWP-BEAVER		1	0		0	0	0	0	0	0.0		0.219		0.00	0.51	0.00
21	01838	TL,BEAVER COVE,LILY BAY		1	0		0	0	0	0	0	0.0		0.213		0.00	0.51	0.00
21	01783	TL,BEAVER COVE-LILY BAY		1	0		0	0	0	0	0	0.0		0.210		0.00	0.51	0.00
21	07212	L.BAY,RD 306,RD 2107 PW		1	0		0	0	0	0	0	0.0		0.204		0.00	0.50	0.00
21	07240	LIL.BAY,IR#306,SOUTH BR		1	0		0	0	0	0	0	0.0		0.202		0.00	0.50	0.00
21	07210	L.BAY,STOREHOUSE RD,RD.		1	0		0	0	0	0	0	0.0		0.197		0.00	0.49	0.00
21	07242	LIL.BAY,IR#306,NORTH SH		1	0		0	0	0	0	0	0.0		0.191		0.00	0.48	0.00
21	07244	LIL.BAY,IR#306,SPENCER		1	0		0	0	0	0	0	0.0		0.199		0.00	0.49	0.00
21	01814	L.BAY,RD.306,RD.2262 PW		1	0		0	0	0	0	0	0.0		0.157		0.00	0.42	0.00
21	01784	TL,FRENCHTOWN-LILY BAY		1	0		0	0	0	0	0	0.0		0.151		0.00	0.41	0.00
		NODE SUBTOTALS-			3		0	0	0	0	3	0.0		20.274		0.05	0.24	0.00

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
	01896	07067	LILY BAY RD	1	0	0.03	0	0	0	0	0	0.0	0.00062		0.00		637.27	0.00
	01287	01896		1	1	0.07	0	0	0	0	1	0.0	0.00110		303.03		567.92	0.00
	01287	01288		1	1	0.10	0	0	0	1	0	100.0	0.00132		252.53		544.18	0.00
	01288	01291		1	0	0.05	0	0	0	0	0	0.0	0.00063		0.00		635.57	0.00
	01291	01295		1	0	0.05	0	0	0	0	0	0.0	0.00058		0.00		644.12	0.00
	01295	01297		1	0	0.06	0	0	0	0	0	0.0	0.00067		0.00		628.84	0.00
	01297	01299		1	0	0.08	0	0	0	0	0	0.0	0.00087		0.00		597.83	0.00
	01299	01301		1	1	0.04	0	0	1	0	0	100.0	0.00042		793.65		670.26	1.18
	01301	01303		1	0	0.24	0	0	0	0	0	0.0	0.00245		0.00		465.90	0.00
	01303	01884		1	0	0.07	0	0	0	0	0	0.0	0.00068		0.00		627.19	0.00
	01310	01884		1	0	0.01	0	0	0	0	0	0.0	0.00009		0.00		270.93	0.00
	01310	01311		1	0	0.05	0	0	0	0	0	0.0	0.00044		0.00		667.38	0.00
	01311	07226		1	0	0.17	0	0	0	0	0	0.0	0.00142		0.00		534.67	0.00
	01098	07226		1	0	0.07	0	0	0	0	0	0.0	0.00052		0.00		654.42	0.00
	01098	01118		1	16	4.54	0	1	2	3	10	37.5	0.02834		188.19		262.09	0.00
21037	01118	01765		1	1	0.36	0	0	0	0	1	0.0	0.00139		239.81		537.45	0.00
	01765	01768		1	0	0.38	0	0	0	0	0	0.0	0.00146		0.00		531.06	0.00
	01768	01769		1	0	0.25	0	0	0	0	0	0.0	0.00091		0.00		592.20	0.00
	01769	07298		1	0	0.31	0	0	0	0	0	0.0	0.00096		0.00		585.42	0.00
	01773	07298		1	0	1.85	0	0	0	0	0	0.0	0.00594		0.00		371.09	0.00
	01773	01781		1	2	0.74	0	0	0	0	2	0.0	0.00170		392.16		511.42	0.00
	01781	01813		1	0	0.54	0	0	0	0	0	0.0	0.00120		0.00		556.61	0.00
21815	01813	01838		1	0	0.25	0	0	0	0	0	0.0	0.00054		0.00		651.00	0.00
21037	01783	01838		1	0	0.32	0	0	0	0	0	0.0	0.00068		0.00		627.19	0.00
21815	01783	07212	00306	1	0	0.71	0	0	0	0	0	0.0	0.00148		0.00		529.30	0.00
	07212	07240		1	0	0.36	0	0	0	0	0	0.0	0.00072		0.00		620.66	0.00
	07210	07240		1	1	0.18	0	0	0	0	1	0.0	0.00035		952.38		677.74	1.41
	07210	07242		1	0	0.11	0	0	0	0	0	0.0	0.00021		0.00		650.32	0.00
	07242	07244		1	3	0.52	0	0	1	0	2	33.3	0.00095		1052.63		586.75	1.79
	01814	07244		1	0	1.57	0	0	0	0	0	0.0	0.00258		0.00		459.72	0.00
	01784	01814		1	5	3.17	0	0	1	1	3	40.0	0.00474		351.62		392.88	0.00
			LINK SUBTOTALS-		31	17.25	0	1	5	5	20	35.5	0.06596		156.66		227.30	0.00
			GRAND TOTALS-		34	17.25	0	1	5	5	23	32.3	0.06596	20.274	171.82		268.84	0.64

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---AM---												HOUR OF DAY					---PM---								
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	4	S
MONDAY	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	4	M
TUESDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	4	T
WEDNESDAY	0	0	1	0	0	0	1	1	0	1	2	0	0	1	0	0	0	0	2	0	0	0	0	0	0	9	W
THURSDAY	1	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	T
FRIDAY	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	F
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	1	0	0	0	1	0	0	6	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	2	0	1	0	0	0	2	2	2	4	2	2	4	1	3	1	1	0	4	0	1	1	1	0	0	34	T

	YEAR			
	TOTAL	2002	2003	2004
JANUARY	4	0	3	1
FEBRUARY	1	0	0	1
MARCH	1	1	0	0
APRIL	1	1	0	0
MAY	2	0	1	1
JUNE	5	3	2	0
JULY	4	1	2	1
AUGUST	4	1	1	2
SEPTEMBER	3	0	0	3
OCTOBER	4	0	1	3
NOVEMBER	5	2	2	1
DECEMBER	0	0	0	0
UNKNOWN	0	0	0	0
TOTAL	34	9	12	13

TYPE OF UNIT

01-2 DOOR	5	10-BOBTAIL	0
02-4 DOOR	8	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	1
04-STAT WGN	3	40-4ASU	0
05-VAN/CAMPER	2	21-2ASA	0
06-PICKUP TRK	17	22-2ATA	0
12-SCHOOL BUS	0	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	0
14-MOTORCYCLE	0	33-3ATR	1
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	0	35-3AT1A2ATR	1
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	0	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
07-SUV	8	82-3AX CM BUS	0
99-UNK/OTH	0	98-FARM/TRAC	1
TOTAL	48		

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	0	0	0	0	0	0	0	0	0
REAR END/SIDESWIPE	2	0	1	0	0	3	0	0	0	6
HEAD-ON/SIDESWIPE	0	0	0	0	0	0	0	0	0	0
INTERSECTION MOVEMENT	0	0	1	0	0	2	0	0	0	3
PEDESTRIANS	0	0	0	0	0	0	0	0	0	0
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	9	3	0	1	0	1	0	0	0	14
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	1	0	0	0	0	0	0	0	0	1
MOOSE	6	0	0	0	0	0	0	0	0	6
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	0	0	0	0	0	0
OTHER	4	0	0	0	0	0	0	0	0	4
NON COLLISION	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	22	3	2	1	0	6	0	0	0	34

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	0	0
A	1	2
B	5	5
C	5	6
PD	23	
TOTAL	34	13

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	1
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	2
SIGN POST	0
MAIL BOXES	1
OTHER POLES/POSTS	0
FIRE PLUG/PARK METER	1
TREE/SHRUBBERY	3
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	0
OTHER GUARDRAILS	0
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	7
BUILDING WALL	0
ROCK OUTCROPPING/LEDGE	1
OTHER	1
UNKNOWN	0
TOTAL	17

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	0
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	2
YIELD SIGN	0
CURVE SIGN	0
OFFICER /SCHOOL PAT	2
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	0
NONE	30
OTHER	0
UNKNOWN	0
TOTAL	34

ROAD CHARACTER

LEVEL STRAIGHT	16
LEVEL CURVED	2
ON GRADE STRAIGHT	13
ON GRADE CURVED	3
TOP OF HILL STRAIGHT	0
TOP OF HILL CURVED	0
BOTTOM OF HILL STRAIGHT	0
BOTTOM OF HILL CURVED	0
UNKNOWN	0
TOTAL	34

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	16	9	0	0	0	0	25
FAIL TO YIELD R-WAY	3	1	0	0	0	0	4
ILLEGAL UNSAFE SPEED	3	0	0	0	0	0	3
FOLLOW TOO CLOSE	1	0	0	0	0	0	1
DISREGARD TRAF CONTROL	1	0	0	0	0	0	1
DRIVING LEFT OF CENTER	0	0	0	0	0	0	0
IMPROPER PASSING	1	0	0	0	0	0	1
IMPROPER LANE CHANGE	0	0	0	0	0	0	0
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	0	0	0	0	0	0	0
UNSAFE BACKING	0	2	0	0	0	0	2
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	3	0	0	0	0	0	3
DRIVER INEXPERIENCE	1	0	0	0	0	0	1
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	3	0	0	0	0	0	3
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	0	0	0	0	0	0	0
VISION OBSCURED OTHER	0	1	0	0	0	0	1
OTHER HUMAN FACTOR	2	0	0	0	0	0	2
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	0	0	0	0	0	0	0
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	0	0	0	0	0	0	0
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	1	0	0	0	0	1
UNKNOWN	0	0	0	0	0	0	0
TOTAL	34	14	0	0	0	0	48

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	28	14	0	0	0	0	42
UNDER THE INFLUENCE	3	0	0	0	0	0	3
DRINKING	0	0	0	0	0	0	0
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	2	0	0	0	0	0	2
FATIGUED	0	0	0	0	0	0	0
ILL	0	0	0	0	0	0	0
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	1	0	0	0	0	0	1
TOTAL	34	14	0	0	0	0	48

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	6	0	0	0	0	6
20-24	3	0	0	0	0	3
25-29	3	0	0	0	0	3
30-39	5	0	0	0	0	5
40-49	13	0	0	0	0	13
50-59	11	0	0	0	0	11
60-69	4	0	0	0	0	4
70-79	2	0	0	0	0	2
80-OVER	1	0	0	0	0	1
UNKNOWN	0	0	0	0	0	0
TOTAL	48	0	0	0	0	48

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MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

ROAD SURFACE

WEATHER	LIGHT CONDITION	DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	0	0	2	0	0	0	0	0	0	0	2
	DAYLIGHT	13	0	0	0	0	0	0	1	0	0	14
(18)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	2	0	0	0	0	0	0	0	0	0	2
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	2	0	0	0	0	0	0	0	0	2
(4)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	2	0	0	0	0	0	0	0	0	2
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	1	0	1
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	1	0	1
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	2
DAYLIGHT	24
DUSK	0
DARK-LIGHTS	0
DARK NO LIGHTS	8
DARK LIGHTS OFF	0
OTHER	0
UNKNOWN	0
TOTAL	34

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	1	0	0	0	1	0	0	2
(2)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	5	0	0	0	0	0	0	0	0	0	5
(8)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	3	0	0	0	0	0	0	0	0	0	3
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		23	4	2	1	0	0	0	2	2	0	34

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL

STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: LILY BAY RD
TOWN: GREENVILLE - LILY BAY TOWNSHIP

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
00306	21	07067	1	0.00	01896	01784	0	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS		
	LILY BAY RD	01896	07067	0.0	0	0	0	0	0	0			
		01287	01896	0.1	1	0	0	0	0	1	200419248		
		01287	01288	0.1	1	0	0	0	1	0	200331637		
		01299	01301	0.1	1	0	0	1	0	0	200428365		
		01098	01118	0.1	3	0	1	0	0	2	200321986	200423212	200427193
				0.2	1	0	0	0	1	0	200315880		
				0.4	1	0	0	1	0	0	200404664		
				0.5	1	0	0	0	0	1	200206401		
				0.6	1	0	0	0	0	1	200300054		
				0.8	2	0	0	0	0	2	200403418	200428728	
				1.1	1	0	0	0	1	0	200333672		
				1.2	1	0	0	0	0	1	200439652		
				1.7	1	0	0	0	0	1	200217057		
				2.4	1	0	0	0	0	1	200215109		
				2.5	1	0	0	0	1	0	200321985		
				2.6	1	0	0	0	0	1	200428364		
				3.0	1	0	0	1	0	0	200237471		
21037		01118	01765	0.1	1	0	0	0	0	1	200425279		
		01773	01781	0.4	1	0	0	0	0	1	200334270		
21815	00306			0.7	1	0	0	0	0	1	200219041		
		07210	07240	0.1	1	0	0	0	0	1	200300689		
		07242	07244	0.2	1	0	0	0	0	1	200224167		
				0.4	1	0	0	1	0	0	200202871		
				0.5	1	0	0	0	0	1	200414679		
		01784	01814	0.7	1	0	0	0	0	1	200317094		
				0.9	1	0	0	1	0	0	200425410		
				1.9	1	0	0	0	1	0	200323282		
				2.5	1	0	0	0	0	1	200213369		
				2.8	1	0	0	0	0	1	200424243		
				TOTALS-	31	0	1	5	5	20			

MAR 2,2006 AT 08:12

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: RTE 6/15
TOWN: GUILFORD - JACKMAN

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0006X	21	07042	0	0.00	07043	06083	0	0.00
	25	06230	0	0.00	06229	06190	0	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21	07042		TL,ABBOT-GUILFORD	1	0		0	0	0	0	0	0.0		1.299		0.00	0.47	0.00
21	07043		ABB,RTE 6,GALES RD	1	0		0	0	0	0	0	0.0		1.274		0.00	0.47	0.00
21	08962		ABB,RTE 6,MONUMENT RD	1	1		0	0	1	0	0	100.0		1.266		0.26	0.47	0.00
21	07044		ABB,RTE 6,RTE 16	1	0		0	0	0	0	0	0.0		1.498		0.00	0.46	0.00
21	08941		ABB,RTE 6,TRANSFER STA	1	0		0	0	0	0	0	0.0		1.305		0.00	0.47	0.00
21	07045		ABB,RTE 6,POND RD	1	1		0	0	1	0	0	100.0		1.277		0.26	0.47	0.00
21	07046		ABB,RT 6,HOWARD SDG,PRI	1	0		0	0	0	0	0	0.0		1.118		0.00	0.49	0.00
21	01875		ABB,RTE 6,PRIDES LOOP	1	0		0	0	0	0	0	0.0		1.003		0.00	0.50	0.00
21	07047		ABB,RTE 6,MONSON JCT RD	1	0		0	0	0	0	0	0.0		0.993		0.00	0.50	0.00
21	07048		ABB,RTE 6,MOOSEHORN RD	1	0		0	0	0	0	0	0.0		0.976		0.00	0.50	0.00
21	07049		TL,MONSON-ABBOT	1	0		0	0	0	0	0	0.0		0.941		0.00	0.51	0.00
21	08999		MON,RTE 6,1.80 BK BLANC	1	0		0	0	0	0	0	0.0		0.932		0.00	0.51	0.00
21	07050		MON,RTE 6,BLANCHARD RD	1	0		0	0	0	0	0	0.0		1.087		0.00	0.49	0.00
21	07051		MON,RTE 6,NO.GUILFORD R	1	0		0	0	0	0	0	0.0		1.443		0.00	0.46	0.00
21	08961		MON,RTE 6,WATER ST	1	0		0	0	0	0	0	0.0		1.452		0.00	0.46	0.00
21	01125		MON,RTE 6,HEBRON ST	1	0		0	0	0	0	0	0.0		1.268		0.00	0.47	0.00
21	07052		MON,RTE.6,BRAY RD.	1	2		0	0	0	1	1	50.0		1.253		0.53	0.48	1.10
21	08943		MON,RTE 6,CENTER ST,HOM	1	0		0	0	0	0	0	0.0		1.144		0.00	0.49	0.00
21	07053		MON,RTE 6,ELLIOTSVILLE	1	1		0	0	0	0	1	0.0		1.084		0.31	0.49	0.00
21	07054		MON,RTE 6,PW 496	1	0		0	0	0	0	0	0.0		0.958		0.00	0.50	0.00
21	08959		SHIR,RTE 6+15,RTE 15 LO	1	0		0	0	0	0	0	0.0		0.951		0.00	0.50	0.00
21	07055		MON,RTE.6,OLD RTE.15	1	0		0	0	0	0	0	0.0		0.947		0.00	0.50	0.00
21	07056		MON,RTE.6,1.04 BK.OLD R	1	0		0	0	0	0	0	0.0		0.940		0.00	0.51	0.00
21	07057		TL SHIRLEY-MONSON,RTE 6	1	0		0	0	0	0	0	0.0		0.932		0.00	0.51	0.00
21	07058		SHIR,RTE 6+15,LWR SHIRL	1	0		0	0	0	0	0	0.0		0.972		0.00	0.50	0.00
21	07059		SHIR,RTE 6+15,UPR SHIRL	1	1		0	0	0	1	0	100.0		0.983		0.34	0.50	0.00
21	08958		SHIR,RT 6,OLD RT 15 (SO	1	1		0	0	0	1	0	100.0		0.967		0.34	0.50	0.00
21	08957		SHIR,RTE 6+15,RTE 15 LO	1	0		0	0	0	0	0	0.0		0.980		0.00	0.50	0.00
21	07060		TL GREENVILLE-SHIRLEY,R	1	0		0	0	0	0	0	0.0		1.003		0.00	0.50	0.00
21	08956		GRVL,RTE.6,OLD RTE.15	1	0		0	0	0	0	0	0.0		1.054		0.00	0.49	0.00
21	07061		GRVL,RTE.6,OLD RTE.15	1	0		0	0	0	0	0	0.0		1.113		0.00	0.49	0.00
21	07062		GRVL,RTE.6,MARSH FARM R	1	0		0	0	0	0	0	0.0		1.425		0.00	0.46	0.00
21	07063		GRVL,RTE.6,RR#847760	1	0		0	0	0	0	0	0.0		1.755		0.00	0.44	0.00
21	08942		GRVL,MAIN,SHERWOOD ST.	1	0		0	0	0	0	0	0.0		1.925		0.00	0.43	0.00
21	07064		GRVL,MAIN,S.MAIN,LAKEVI	1	0		0	0	0	0	0	0.0		2.310		0.00	0.41	0.00
21	07065		GRVL,MAIN,WASHINGTON ST	1	0		0	0	0	0	0	0.0		2.078		0.00	0.42	0.00
21	07066		GRVL,MAIN,MINDEN ST.	1	0		0	0	0	0	0	0.0		2.270		0.00	0.41	0.00
21	07067		GRVL,RTE 6,LILY BAY RD	1	1		0	0	0	0	1	0.0		3.221		0.10	0.38	0.00
21	06059		GRVL,RTE.6,RR#847781	1	0		0	0	0	0	0	0.0		2.109		0.00	0.42	0.00
21	06060		GRVL,WEST,LAKEVIEW ST.	1	1		0	0	0	0	1	0.0		2.500		0.13	0.40	0.00
21	01882		GRVL,WEST ST,PRITHAN PA	1	1		0	0	0	0	1	0.0		2.095		0.16	0.42	0.00
21	06061		GRVL,WEST,SCHOOL ST,OLI	1	0		0	0	0	0	0	0.0		1.978		0.00	0.43	0.00
21	06062		GRVL,WEST,LEWIS ST.	1	0		0	0	0	0	0	0.0		1.892		0.00	0.43	0.00
21	06063		GRVL,SPRUCE,WEST ST.	1	0		0	0	0	0	0	0.0		1.942		0.00	0.43	0.00
21	06986		GRVL,WEST,PINE ST.	1	1		0	0	0	1	0	100.0		1.878		0.18	0.43	0.00
21	06985		GRVL,WEST,CRAFTS ST.	1	0		0	0	0	0	0	0.0		1.881		0.00	0.43	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY I

COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21	06064		GRVL,WEST,MURRAY ST.	1	1		0	0	0	0	1	0.0		1.806		0.18	0.44	0.00
21	06065		GRVL,WEST,DOAN,HOSPITAL	1	0		0	0	0	0	0	0.0		1.834		0.00	0.44	0.00
21	06066		GRVL,WEST,HOSPITAL ST.	1	0		0	0	0	0	0	0.0		1.775		0.00	0.44	0.00
21	06067		GRVL,WEST,GREEN ST.	1	0		0	0	0	0	0	0.0		1.730		0.00	0.44	0.00
21	06068		GRVL,WEST,DORR ST.	1	0		0	0	0	0	0	0.0		1.684		0.00	0.44	0.00
21	06069		GRVL,WEST,WIGGINS ST.	1	0		0	0	0	0	0	0.0		1.653		0.00	0.45	0.00
21	06070		GRVL,WEST,BIRCH ST.	1	0		0	0	0	0	0	0.0		1.613		0.00	0.45	0.00
21	06071		GRVL,WEST,MAPLE ST.	1	0		0	0	0	0	0	0.0		1.558		0.00	0.45	0.00
21	06072		GRVL,WEST,BEECH ST.	1	1		0	0	1	0	0	100.0		1.494		0.22	0.46	0.00
21	06073		TL,GREENVILLE-LITTLE SQ	1	0		0	0	0	0	0	0.0		1.257		0.00	0.48	0.00
21	01250		LIL.SQ,RTE 6,RD 1502	1	0		0	0	0	0	0	0.0		0.779		0.00	0.52	0.00
21	07207		LIL.SQ,RTE.6,TOWER RD.	1	0		0	0	0	0	0	0.0		0.728		0.00	0.53	0.00
21	06074		TL,LITTLE SQUAW TWP-COV	1	0		0	0	0	0	0	0.0		0.691		0.00	0.53	0.00
21	06075		TL,COVE PT.TWP-LITTLE S	1	0		0	0	0	0	0	0.0		0.646		0.00	0.54	0.00
21	08955		LIL.SQ,RTE.6,HARTFORD P	1	0		0	0	0	0	0	0.0		0.609		0.00	0.54	0.00
21	06076		TL,BIG SQUAW-LITTLE SQU	1	0		0	0	0	0	0	0.0		0.520		0.00	0.55	0.00
21	06077		BIG SQ.TWP,RTE.6,15,RD.	1	0		0	0	0	0	0	0.0		0.512		0.00	0.55	0.00
21	06078		BIG SQ.TWP,RTE.6,BR.589	1	0		0	0	0	0	0	0.0		0.498		0.00	0.56	0.00
21	01762		BIG SQ.TWP,RTE.6,15,RD.	1	0		0	0	0	0	0	0.0		0.489		0.00	0.56	0.00
21	07237		BIGSQU,RT6+15,OLD RT 15	1	0		0	0	0	0	0	0.0		0.471		0.00	0.56	0.00
21	06079		BIG SQ.TWP,RTE.6,RD.212	1	0		0	0	0	0	0	0.0		0.423		0.00	0.56	0.00
21	06080		BIG.SQ,6X,.25 BK.RD.224	1	0		0	0	0	0	0	0.0		0.416		0.00	0.56	0.00
21	06081		BIG SQ,6X,1.47 BK.RD.21	1	0		0	0	0	0	0	0.0		0.425		0.00	0.56	0.00
21	06082		BIG SQ,RTE.6,RD.2121 PW	1	0		0	0	0	0	0	0.0		0.434		0.00	0.56	0.00
21	06083		TL,BIG SQUAW TWP-SAPLIN	1	0		0	0	0	0	0	0.0		0.219		0.00	0.51	0.00
25	06230		TL,SAPLING-BIG SQUAW,CL	1	0		0	0	0	0	0	0.0		0.281		0.00	0.55	0.00
25	06229		SAP,RT 6,IR 740	1	0		0	0	0	0	0	0.0		0.504		0.00	0.55	0.00
25	06228		SAP,RT 6,BR # 3256	1	0		0	0	0	0	0	0.0		0.445		0.00	0.56	0.00
25	06227		TL MIS.SAP.GORE-SAPLING	1	0		0	0	0	0	0	0.0		0.443		0.00	0.56	0.00
25	06226		MSG,RTE 6,.23S/O TAUNT.	1	0		0	0	0	0	0	0.0		0.440		0.00	0.56	0.00
25	06225		TL MIS.SAP.GORE-TAUNT.&	1	0		0	0	0	0	0	0.0		0.436		0.00	0.56	0.00
25	06224		TAU RAY,RTE 6,PW 1602	1	0		0	0	0	0	0	0.0		0.432		0.00	0.56	0.00
25	06223		TAU RAY,RTE 6,PW 3113	1	0		0	0	0	0	0	0.0		0.429		0.00	0.56	0.00
25	06222		TA&RA,RTE 6,TRANS.STA.,	1	0		0	0	0	0	0	0.0		0.440		0.00	0.56	0.00
25	06220		TL ROCKWOOD-TAUNTON,RT	1	0		0	0	0	0	0	0.0		0.518		0.00	0.55	0.00
25	06219		RKWD,RTE 6,ROCKWOOD LOO	1	0		0	0	0	0	0	0.0		0.675		0.00	0.54	0.00
25	07343		RKWD,ROCKWOOD LOOP,RTE	1	0		0	0	0	0	0	0.0		0.727		0.00	0.53	0.00
25	06218		ROC,RT 6,.49 AHD IR 140	1	0		0	0	0	0	0	0.0		0.655		0.00	0.54	0.00
25	06217		ROC,RT 6,.17 AHD IR 140	1	0		0	0	0	0	0	0.0		0.640		0.00	0.54	0.00
25	06216		ROC,HARRIMAN,RT 6	1	0		0	0	0	0	0	0.0		0.633		0.00	0.54	0.00
25	02220		ROC,RT 6,TESSIER	1	0		0	0	0	0	0	0.0		0.642		0.00	0.54	0.00
25	02218		ROC,RT 6,TESSIER	1	0		0	0	0	0	0	0.0		0.642		0.00	0.54	0.00
25	06215		ROC,RT 6,PITTSTON FARM	1	0		0	0	0	0	0	0.0		0.558		0.00	0.55	0.00
25	06214		TL,ROCKWOOD-TAUNTON,RT	1	0		0	0	0	0	0	0.0		0.195		0.00	0.49	0.00
25	06213		TAU RAY,RTE 6,PW 1858	1	0		0	0	0	0	0	0.0		0.249		0.00	0.54	0.00
25	06211		TAU RAY,RTE 6,PW 1857	1	0		0	0	0	0	0	0.0		0.247		0.00	0.53	0.00

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COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
25	06210	TAU RAY,RTE 6,PW 1855		1	0		0	0	0	0	0	0.0		0.190		0.00	0.48	0.00
25	06209	TAU RAY,RTE 6,PW 1719		1	0		0	0	0	0	0	0.0		0.188		0.00	0.48	0.00
25	06208	TAU RAY,RTE 6,.51 BK PW		1	0		0	0	0	0	0	0.0		0.184		0.00	0.47	0.00
25	06207	TAU RAY,RTE 6,RR 847792		1	0		0	0	0	0	0	0.0		0.182		0.00	0.47	0.00
25	06206	TAU.RAY.,TERRATINE RD,E		1	0		0	0	0	0	0	0.0		0.181		0.00	0.47	0.00
25	06205	TL,TAUTON&RAYNHAM-SANDW		1	0		0	0	0	0	0	0.0		0.177		0.00	0.46	0.00
25	06204	SNDW,RT 6,1.12 BK TO TL		1	0		0	0	0	0	0	0.0		0.175		0.00	0.46	0.00
25	06203	TL SAND.ACC-MIS.SAP.GOR		1	0		0	0	0	0	0	0.0		0.175		0.00	0.46	0.00
25	06202	TL SAND.ACC-MIS.SAP.GOR		1	0		0	0	0	0	0	0.0		0.173		0.00	0.46	0.00
25	06201	SNDW,RT 6,.62 AHD TO 62		1	0		0	0	0	0	0	0.0		0.171		0.00	0.45	0.00
25	06200	SNDW,RT 6,.62 BK TO 620		1	0		0	0	0	0	0	0.0		0.169		0.00	0.45	0.00
25	06199	SNDW,RT 6,.42 AHD TO 61		1	0		0	0	0	0	0	0.0		0.166		0.00	0.44	0.00
25	06198	SNDW,RT 6,.42 BK TO 619		1	0		0	0	0	0	0	0.0		0.164		0.00	0.44	0.00
25	06999	SNDW,RT 6,1.02 AHD TO 6		1	0		0	0	0	0	0	0.0		0.162		0.00	0.43	0.00
25	06197	SNDW,RT 6,.61 AHD TO TL		1	0		0	0	0	0	0	0.0		0.160		0.00	0.43	0.00
25	06196	TL,SANDWICH ACD.-LONG P		1	0		0	0	0	0	0	0.0		0.160		0.00	0.43	0.00
25	06195	LON,RT 6,1.83 AHD TO 61		1	0		0	0	0	0	0	0.0		0.173		0.00	0.46	0.00
25	06194	LON,RT 6,1.60 AHD TO 61		1	0		0	0	0	0	0	0.0		0.197		0.00	0.49	0.00
25	06193	LON,RT 6,0.79 AHD TO 61		1	0		0	0	0	0	0	0.0		0.219		0.00	0.51	0.00
25	06192	LON,RT 6 .74 AHD TO 619		1	0		0	0	0	0	0	0.0		0.241		0.00	0.53	0.00
25	06191	LON,RT 6,0.74 BK TO 619		1	0		0	0	0	0	0	0.0		0.263		0.00	0.54	0.00
25	06190	TL.LONG PD-JACKMAN,RT 1		1	0		0	0	0	0	0	0.0		0.284		0.00	0.55	0.00
		NODE SUBTOTALS-			13		0	0	3	4	6	53.8		104.321		0.04	0.18	0.00

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COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
21010	07042	07043	RTE 6	1	6	1.58	0	1	0	0	5	16.7	0.01915		104.44		233.34	0.00
	07043	08962		1	5	1.20	0	0	0	2	3	40.0	0.01529		109.00		245.34	0.00
	07044	08962		1	1	0.15	0	0	0	0	1	0.0	0.00178		187.27		420.06	0.00
	07044	08941		1	1	0.25	0	0	0	1	0	100.0	0.00330		101.01		359.41	0.00
	07045	08941		1	2	0.73	0	0	0	0	2	0.0	0.00933		71.45		275.73	0.00
	07045	07046		1	1	0.40	0	0	0	0	1	0.0	0.00438		76.10		333.98	0.00
	01875	07046		1	0	0.39	0	0	0	0	0	0.0	0.00393		0.00		343.50	0.00
✓	01875	07047		1	4	0.34	0	0	0	0	4	0.0	0.00336		396.83		357.74	1.11
	07047	07048		1	4	1.31	0	0	0	0	4	0.0	0.01277		104.41		255.75	0.00
	07048	07049		1	1	0.40	0	0	0	0	1	0.0	0.00378		88.18		346.98	0.00
21150	07049	08999	RTE 6+15	1	9	1.57	0	1	1	0	7	22.2	0.01473		203.67		247.44	0.00
	07050	08999		1	7	1.80	0	1	2	3	1	85.7	0.01669		139.80		240.54	0.00
	07050	07051		1	0	0.29	0	0	0	0	0	0.0	0.00315		0.00		363.76	0.00
	07051	08961		1	1	0.05	0	0	0	1	0	100.0	0.00072		462.96		505.88	0.00
	01125	08961		1	0	0.05	0	0	0	0	0	0.0	0.00063		0.00		515.24	0.00
	01125	07052		1	1	0.04	1	0	0	0	0	100.0	0.00050		666.67		526.92	1.27
	07052	08943		1	0	0.20	0	0	0	0	0	0.0	0.00233		0.00		392.94	0.00
	07053	08943		1	1	0.30	0	0	0	0	1	0.0	0.00325		102.56		360.83	0.00
	07053	07054		1	1	0.74	0	0	0	1	0	100.0	0.00716		46.55		294.47	0.00
	07054	08959		1	0	1.09	0	0	0	0	0	0.0	0.01034		0.00		268.93	0.00
	07055	08959		1	0	0.29	0	0	0	0	0	0.0	0.00273		0.00		377.41	0.00
	07055	07056		1	1	1.03	0	0	0	0	1	0.0	0.00974		34.22		272.85	0.00
✓	07056	07057		1	13	1.49	0	1	2	3	7	46.2	0.01392		311.30		250.67	1.24
21190	07057	07058	GREENVILLE RD	1	4	1.54	0	0	0	0	4	0.0	0.01433		93.04		249.00	0.00
	07058	07059		1	6	1.67	0	0	2	1	3	50.0	0.01524		131.23		245.52	0.00
✓	07059	08958		1	6	0.64	1	0	1	0	4	33.3	0.00612		326.80		306.43	1.07
	08957	08958		1	3	0.32	0	0	0	0	3	0.0	0.00308		324.68		365.88	0.00
	07060	08957		1	1	0.81	0	0	0	0	1	0.0	0.00798		41.77		286.58	0.00
21090	07060	08956	MOOSEHEAD LK RD	1	3	0.92	0	0	1	1	1	66.7	0.00940		106.38		275.23	0.00
	07061	08956		1	2	0.73	0	0	1	0	1	50.0	0.00783		85.14		287.94	0.00
	07061	07062		1	2	0.49	0	0	0	0	2	0.0	0.00554		120.34		314.33	0.00
	07062	07063		1	7	1.48	0	0	1	0	6	14.3	0.02528		92.30		220.01	0.00
	07063	08942		1	1	0.17	0	0	0	0	1	0.0	0.00307		108.58		366.18	0.00
	07064	08942		1	0	0.10	0	0	0	0	0	0.0	0.00198		0.00		409.26	0.00
	07064	07065		1	1	0.07	0	0	0	0	1	0.0	0.00128		260.42		453.54	0.00
	07065	07066		1	0	0.09	0	0	0	0	0	0.0	0.00193		0.00		411.85	0.00
	07066	07067		1	0	0.03	0	0	0	0	0	0.0	0.00067		0.00		511.12	0.00
	06059	07067	0006X	1	1	0.03	0	0	1	0	0	100.0	0.00064		520.83		633.88	0.00
	06059	06060	WEST ST	1	2	0.09	0	0	0	0	2	0.0	0.00189		352.73		497.94	0.00
	01882	06060		1	0	0.27	0	0	0	0	0	0.0	0.00578		0.00		373.64	0.00
	01882	06061		1	0	0.12	0	0	0	0	0	0.0	0.00239		0.00		468.89	0.00
	06061	06062		1	0	0.05	0	0	0	0	0	0.0	0.00095		0.00		586.75	0.00
	06062	06063	WEST ST.	1	0	0.10	0	0	0	0	0	0.0	0.00185		0.00		500.65	0.00
	06063	06986		1	0	0.12	0	0	0	0	0	0.0	0.00226		0.00		475.70	0.00
	06985	06986		1	0	0.02	0	0	0	0	0	0.0	0.00037		0.00		676.17	0.00
	06064	06985		1	0	0.07	0	0	0	0	0	0.0	0.00126		0.00		550.25	0.00

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	06064	06065		1	0	0.08	0	0	0	0	0	0.0	0.00143		0.00		533.76	0.00
	06065	06066		1	0	0.03	0	0	0	0	0	0.0	0.00053		0.00		652.71	0.00
	06066	06067		1	0	0.04	0	0	0	0	0	0.0	0.00069		0.00		625.54	0.00
	06067	06068		1	1	0.08	0	0	0	1	0	100.0	0.00135		246.91		541.25	0.00
	06068	06069		1	0	0.07	0	0	0	0	0	0.0	0.00115		0.00		562.15	0.00
	06069	06070		1	0	0.07	0	0	0	0	0	0.0	0.00111		0.00		566.74	0.00
	06070	06071		1	0	0.07	0	0	0	0	0	0.0	0.00107		0.00		571.50	0.00
	06071	06072		1	0	0.12	0	0	0	0	0	0.0	0.00177		0.00		506.26	0.00
	06072	06073		1	2	0.06	0	0	0	0	2	0.0	0.00086		775.19		599.26	1.29
21816	01250	06073	0006X	1	0	0.03	0	0	0	0	0	0.0	0.00024		0.00		666.42	0.00
	01250	07207		1	0	0.14	0	0	0	0	0	0.0	0.00103		0.00		576.41	0.00
	06074	07207		1	0	0.58	0	0	0	0	0	0.0	0.00411		0.00		407.51	0.00
21805	06074	06075		1	0	0.47	0	0	0	0	0	0.0	0.00317		0.00		435.82	0.00
21816	06075	08955		1	2	0.53	0	0	0	0	2	0.0	0.00327		203.87		432.32	0.00
	06076	08955		1	0	1.06	0	0	0	0	0	0.0	0.00561		0.00		376.45	0.00
21801	06076	06077		1	2	0.60	0	0	0	1	1	50.0	0.00307		217.16		439.46	0.00
	06077	06078		1	1	0.07	0	0	0	0	1	0.0	0.00035		952.38		677.74	1.41
	01762	06078		1	0	0.08	0	0	0	0	0	0.0	0.00040		0.00		672.89	0.00
	01762	07237		1	1	0.84	0	0	0	0	1	0.0	0.00399		83.54		410.63	0.00
	06079	07237		1	0	0.48	0	0	0	0	0	0.0	0.00208		0.00		485.94	0.00
	06079	06080		1	2	2.10	0	1	0	0	1	50.0	0.00866		76.98		338.33	0.00
	06080	06081		1	1	1.57	0	0	0	0	1	0.0	0.00659		50.58		361.61	0.00
	06081	06082		1	1	1.47	0	0	0	1	0	100.0	0.00633		52.66		365.24	0.00
	06082	06083		1	3	0.89	0	0	0	1	2	33.3	0.00390		256.41		413.06	0.00
25851	06229	06230		1	0	0.07	0	0	0	0	0	0.0	0.00039		0.00		674.08	0.00
	06228	06229		1	1	0.40	0	0	0	1	0	100.0	0.00178		187.27		505.55	0.00
	06227	06228		1	1	1.76	0	0	0	0	1	0.0	0.00784		42.52		346.54	0.00
25837	06226	06227		1	0	0.35	0	0	0	0	0	0.0	0.00155		0.00		523.31	0.00
	06225	06226		1	1	0.23	0	0	1	0	0	100.0	0.00101		330.03		578.93	0.00
25803	06224	06225		1	0	1.52	0	0	0	0	0	0.0	0.00660		0.00		361.48	0.00
	06223	06224		1	1	0.63	0	0	0	0	1	0.0	0.00271		123.00		453.90	0.00
	06222	06223		1	0	0.20	0	0	0	0	0	0.0	0.00085		0.00		600.71	0.00
	06220	06222		1	0	1.09	0	0	0	0	0	0.0	0.00462		0.00		395.47	0.00
25844	06219	06220		1	0	0.24	0	0	0	0	0	0.0	0.00147		0.00		530.18	0.00
	06219	07343		1	0	0.40	0	0	0	0	0	0.0	0.00246		0.00		465.41	0.00
	06218	07343		1	0	0.51	0	0	0	0	0	0.0	0.00331		0.00		430.96	0.00
	06217	06218		1	0	0.32	0	0	0	0	0	0.0	0.00211		0.00		484.16	0.00
	06216	06217		1	0	0.17	0	0	0	0	0	0.0	0.00105		0.00		573.93	0.00
	02220	06216		1	0	0.58	0	0	0	0	0	0.0	0.00366		0.00		419.89	0.00
	02218	02220		1	0	0.08	0	0	0	0	0	0.0	0.00051		0.00		656.11	0.00
	02218	06215		1	0	0.05	0	0	0	0	0	0.0	0.00032		0.00		678.77	0.00
	06214	06215		1	1	1.78	0	0	0	0	1	0.0	0.00351		94.97		424.46	0.00
25803	06213	06214		1	1	0.42	0	0	0	0	1	0.0	0.00081		411.52		606.63	0.00
	06211	06213		1	0	0.06	0	0	0	0	0	0.0	0.00018		0.00		621.15	0.00
	06210	06211		1	0	1.83	0	0	0	0	0	0.0	0.00347		0.00		425.72	0.00
	06209	06210		1	2	1.00	0	0	0	1	1	50.0	0.00190		350.88		497.27	0.00

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COUNTY TOWN#	LOW NODE	HIGH NODE	STREET NAME OR ROUTE #	U/R	TOTAL ACCTS	LINK LENGTH	INJURY ACCIDENTS K	A	B	C	PD	PERCENT INJURY	ANNUAL HM VEH-MILES	ANNUAL M ENT-VEHS	ACCIDENT-RATES LINK	NODE	CRITI RATE	CRF
	06208	06209		1	0	0.51	0	0	0	0	0	0.0	0.00095		0.00		586.75	0.00
	06207	06208		1	0	0.25	0	0	0	0	0	0.0	0.00046		0.00		664.31	0.00
	06206	06207		1	0	0.31	0	0	0	0	0	0.0	0.00057		0.00		645.84	0.00
	06205	06206		1	0	0.59	0	0	0	0	0	0.0	0.00106		0.00		572.71	0.00
25849	06204	06205		1	1	1.12	0	0	0	1	0	100.0	0.00196		170.07		493.36	0.00
	06203	06204		1	0	0.54	0	0	0	0	0	0.0	0.00095		0.00		586.75	0.00
25837	06202	06203		1	0	0.23	0	0	0	0	0	0.0	0.00040		0.00		672.89	0.00
25849	06201	06202		1	0	0.42	0	0	0	0	0	0.0	0.00072		0.00		620.66	0.00
	06200	06201		1	0	0.62	0	0	0	0	0	0.0	0.00106		0.00		572.71	0.00
	06199	06200		1	1	0.82	0	0	0	0	1	0.0	0.00138		241.55		538.39	0.00
	06198	06199		1	0	0.42	0	0	0	0	0	0.0	0.00069		0.00		625.54	0.00
	06198	06999		1	0	1.39	0	0	0	0	0	0.0	0.00228		0.00		474.62	0.00
	06197	06999		1	1	1.02	0	0	0	0	1	0.0	0.00164		203.25		516.03	0.00
	06196	06197		1	1	0.61	0	0	0	1	0	100.0	0.00098		340.14		582.79	0.00
25833	06195	06196		1	0	0.41	0	0	0	0	0	0.0	0.00066		0.00		630.51	0.00
	06194	06195		1	1	1.83	0	0	0	0	1	0.0	0.00341		97.75		427.65	0.00
	06193	06194		1	1	1.60	0	0	0	0	1	0.0	0.00333		100.10		430.29	0.00
	06192	06193		1	1	0.79	0	0	0	0	1	0.0	0.00182		183.15		502.72	0.00
	06191	06192		1	0	0.70	0	0	0	0	0	0.0	0.00176		0.00		506.99	0.00
	06190	06191		1	1	1.79	0	0	0	1	0	100.0	0.00490		68.03		389.57	0.00
			LINK SUBTOTALS-		130	66.81	2	5	13	22	88	32.3	0.42993		100.79		161.98	0.00
			GRAND TOTALS-		143	66.81	2	5	16	26	94	34.3	0.42993	104.321	110.87		203.25	0.55

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

	---A M--- HOUR OF DAY ---P M---																								
DAY OF WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	UNKNOWN	TOTAL	
SUNDAY	1	0	1	0	2	0	1	1	0	2	0	1	2	1	1	1	0	1	1	1	1	4	0	0	0	22	S
MONDAY	1	0	0	0	3	0	1	0	0	1	2	0	0	0	2	1	0	0	4	0	2	1	3	0	0	21	M
TUESDAY	0	1	0	0	0	1	1	0	1	3	0	0	0	1	1	0	2	3	0	1	2	3	0	0	0	20	T
WEDNESDAY	0	0	0	2	1	2	1	2	0	1	0	2	2	1	4	1	1	0	0	0	0	3	2	1	0	26	W
THURSDAY	0	1	1	0	1	2	1	0	0	1	0	0	1	0	1	0	1	1	0	2	2	2	0	1	0	18	T
FRIDAY	0	0	1	0	0	2	1	1	5	2	1	0	1	0	1	2	0	1	1	2	1	1	1	0	0	24	F
SATURDAY	0	0	0	0	1	0	0	0	0	2	1	2	1	0	0	1	1	1	0	1	0	0	1	0	0	12	S
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
TOTAL	2	2	3	2	8	7	6	4	6	12	4	5	7	3	10	6	5	7	6	7	8	14	7	2	0	143	T

	YEAR			
	TOTAL	2002	2003	2004
JANUARY	12	3	5	4
FEBRUARY	12	7	3	2
MARCH	10	3	4	3
APRIL	6	3	1	2
MAY	13	5	1	7
JUNE	10	2	5	3
JULY	17	8	7	2
AUGUST	11	6	1	4
SEPTEMBER	11	3	0	8
OCTOBER	17	6	7	4
NOVEMBER	15	5	3	7
DECEMBER	9	2	2	5
UNKNOWN	0	0	0	0
TOTAL	143	53	39	51

TYPE OF UNIT			
01-2 DOOR	17	10-BOBTAIL	0
02-4 DOOR	35	20-2ADT	1
03-CONVERTBLE	0	30-3ASU	1
04-STAT WGN	7	40-4ASU	0
05-VAN/CAMPER	6	21-2ASA	0
06-PICKUP TRK	67	22-2ATA	1
12-SCHOOL BUS	1	31-3ASA	0
13-MOTOR HOME	0	32-3ATA	2
14-MOTORCYCLE	4	33-3ATR	4
15-MOPED	0	42-4ATA	0
16-MOTOR BIKE	0	25-2AT1A2ATR	0
17-BICYCLE	0	35-3AT1A2ATR	1
18-SNOWMOBILE	0	36-3AT2A2ATR	0
19-PEDESTRIAN	1	50-OTHER	0
23-ATV	0	81-2AX CM BUS	0
07-SUV	27	82-3AX CM BUS	0
99-UNK/OTH	0	98-FARM/TRAC	0
TOTAL	175		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

TYPE OF LOCATION

ACCIDENT TYPE	ST ROAD	CURV ROAD	**AT INTERSECTION** 3-LEG	4-LEG	5-LEG	DRIVE WAYS	BRIDGE	INTER CHANGE	UN KNOWN	TOTAL
OBJECT IN ROAD	0	1	0	0	0	0	0	0	0	1
REAR END/SIDESWIPE	8	0	6	0	0	4	0	0	0	18
HEAD-ON/SIDESWIPE	2	0	0	0	0	0	0	0	0	2
INTERSECTION MOVEMENT	0	0	5	0	0	0	0	0	0	5
PEDESTRIANS	0	1	0	0	0	0	0	0	0	1
TRAIN	0	0	0	0	0	0	0	0	0	0
RAN OFF ROAD	26	17	1	0	0	2	0	0	0	46
ANIMAL	0	0	0	0	0	0	0	0	0	0
DEER	20	1	0	0	0	0	0	0	0	21
MOOSE	34	5	1	0	0	0	0	0	0	40
BEAR	0	0	0	0	0	0	0	0	0	0
SLED/BIKE	0	0	0	0	0	0	0	0	0	0
OTHER	2	0	0	0	0	2	0	0	0	4
NON COLLISION	4	1	0	0	0	0	0	0	0	5
UNKNOWN	0	0	0	0	0	0	0	0	0	0
TOTAL	96	26	13	0	0	8	0	0	0	143

INJURY DATA

SEV CODE	INJURY ACCIDENTS	NUMBER OF INJURIES
K	2	2
A	5	8
B	16	20
C	26	36
PD	94	
TOTAL	143	66

FIXED OBJECT STRUCK

CONSTRUCTION BARRICADES	0
TRAFFIC SIGNAL	0
R/R CROSSING	0
LIGHT POLE	0
UTILITY POLE	3
SIGN POST	0
MAIL BOXES	0
OTHER POLES/POSTS	1
FIRE PLUG/PARK METER	0
TREE/SHRUBBERY	11
CRASH CUSHION	0
MEDIAN SAFETY BARRIER	0
BRIDGE PIERS	2
OTHER GUARDRAILS	1
FENCING NOT BARRIER	0
CULVERT HEADWALL	0
EMBANKMENT/DITCH	28
BUILDING WALL	1
ROCK OUTCROPPING/LEDGE	3
OTHER	5
UNKNOWN	0
TOTAL	55

TRAFFIC CONTROL DEVICES

TRAFFIC SIG STOP/GO	0
TRAFFIC SIG FLASHING	0
OVERHEAD FLASHERS	0
ALL WAY STOP	0
STOP SIGN/OTHER	4
YIELD SIGN	0
CURVE SIGN	12
OFFICER /SCHOOL PAT	1
SCHOOL BUS STOP ARM	0
SCHOOL ZONE SIGN	0
R/R CROSSING DEVICE	0
NO PASSING ZONE	1
NONE	118
OTHER	7
UNKNOWN	0
TOTAL	143

ROAD CHARACTER

LEVEL STRAIGHT	72
LEVEL CURVED	17
ON GRADE STRAIGHT	34
ON GRADE CURVED	10
TOP OF HILL STRAIGHT	5
TOP OF HILL CURVED	1
BOTTOM OF HILL STRAIGHT	2
BOTTOM OF HILL CURVED	2
UNKNOWN	0
TOTAL	143

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

APPARENT CONTRIBUTING FACTOR	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
HUMAN FACTORS							
NO INPROPER DRIVING	89	22	1	0	0	0	112
FAIL TO YIELD R-WAY	2	1	0	0	0	0	3
ILLEGAL UNSAFE SPEED	11	0	0	0	0	0	11
FOLLOW TOO CLOSE	5	0	0	0	0	0	5
DISREGARD TRAF CONTROL	1	0	0	0	0	0	1
DRIVING LEFT OF CENTER	4	0	0	0	0	0	4
IMPROPER PASSING	1	1	0	0	0	0	2
IMPROPER LANE CHANGE	1	0	0	0	0	0	1
IMPROPER START/STOP	0	0	0	0	0	0	0
IMPROPER TURN	1	0	0	0	0	0	1
UNSAFE BACKING	3	1	0	0	0	0	4
NO PROPER SIGNAL	0	0	0	0	0	0	0
IMPEDING TRAFFIC	0	0	0	0	0	0	0
DRIVER INATTENTION	12	4	0	0	0	0	16
DRIVER INEXPERIENCE	1	0	0	0	0	0	1
PEDESTRIAN VIOLATION	0	0	0	0	0	0	0
PHYSICAL IMPAIRMENT	4	0	0	0	0	0	4
VISION OBSCURED GLASS	0	0	0	0	0	0	0
VISION OBSCURED LIGHT	1	0	0	0	0	0	1
VISION OBSCURED OTHER	1	1	0	0	0	0	2
OTHER HUMAN FACTOR	2	0	0	0	0	0	2
HIT & RUN	0	0	0	0	0	0	0
VEHICULAR FACTORS							
DEFECTIVE BRAKES	0	0	0	0	0	0	0
DEFECTIVE TIRE	1	0	0	0	0	0	1
DEFECTIVE LIGHTS	0	0	0	0	0	0	0
DEFECTIVE SUSPENSION	1	0	0	0	0	0	1
DEFECTIVE STEERING	0	0	0	0	0	0	0
OTHER VEHICLE DEFECT	0	0	0	0	0	0	0
UNKNOWN	2	1	0	0	0	0	3
TOTAL	143	31	1	0	0	0	175

APPARENT PHYSICAL CONDITION	DR 1	DR 2	DR 3	DR 4	DR 5	OTHER	TOTAL
NORMAL	128	31	1	0	0	0	160
UNDER THE INFLUENCE	2	0	0	0	0	0	2
DRINKING	7	0	0	0	0	0	7
USING DRUGS	0	0	0	0	0	0	0
ASLEEP	2	0	0	0	0	0	2
FATIGUED	0	0	0	0	0	0	0
ILL	2	0	0	0	0	0	2
HANDICAPPED	0	0	0	0	0	0	0
OTHER/UNKNOWN	2	0	0	0	0	0	2
TOTAL	143	31	1	0	0	0	175

AGE	TYPE OF UNIT: DRIVER	BIKE	SNOW SLED	PED	ATV	TOTAL
9-UNDER	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	18	0	0	0	0	18
20-24	15	0	0	0	0	15
25-29	12	0	0	0	0	12
30-39	29	0	0	0	0	29
40-49	30	0	0	0	0	30
50-59	38	0	0	1	0	39
60-69	15	0	0	0	0	15
70-79	11	0	0	0	0	11
80-OVER	6	0	0	0	0	6
UNKNOWN	0	0	0	0	0	0
TOTAL	174	0	0	1	0	175

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CLEAR	DAWN	6	0	0	1	0	0	0	0	0	0	7
	DAYLIGHT	26	1	1	4	0	0	0	0	1	0	33
(96)	DUSK	3	0	0	0	0	0	0	0	0	0	3
	DARK-LIGHTS	7	1	0	0	0	0	0	0	0	0	8
	DARK NO LIGHTS	39	0	2	1	0	0	0	0	1	1	44
	DARK LIGHTS OFF	1	0	0	0	0	0	0	0	0	0	1
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
RAIN	DAWN	0	1	0	0	0	0	0	1	0	0	2
	DAYLIGHT	0	6	0	0	0	0	0	0	1	0	7
(13)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	4	0	0	0	0	0	0	0	0	4
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SNOW	DAWN	0	0	0	0	1	0	0	0	0	0	1
	DAYLIGHT	0	0	0	0	0	0	0	4	3	0	7
(12)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	1	0	1	0	0	0	1	1	0	4
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SLEET/HAIL	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	2	0	2
(4)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	1	0	0	0	0	0	1	0	2
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
FOG/SMOG	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	2	0	0	0	0	0	0	0	0	2
(3)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	1	0	0	0	0	0	0	0	0	1
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0

LIGHT	
DAWN	10
DAYLIGHT	64
DUSK	3
DARK-LIGHTS	8
DARK NO LIGHTS	57
DARK LIGHTS OFF	1
OTHER	0
UNKNOWN	0
TOTAL	143

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY II - CHARACTERISTICS

WEATHER	LIGHT CONDITION	ROAD SURFACE: DRY	WET	SNOW SAND	ICE SAND	MUD	DEBRIS	OIL	SNOW	ICE	OTHER	TOTAL
CROSS WINDS	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	1	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
SAND/DUST	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	0	0	0	0	0	0	0	0	0	0	0
(0)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
CLOUDY	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	7	2	1	0	0	0	0	1	0	0	11
(13)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	1	1	0	0	0	0	0	0	0	0	2
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
OTHER	DAWN	0	0	0	0	0	0	0	0	0	0	0
	DAYLIGHT	1	0	0	0	0	0	0	0	0	0	1
(1)	DUSK	0	0	0	0	0	0	0	0	0	0	0
	DARK-LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK NO LIGHTS	0	0	0	0	0	0	0	0	0	0	0
	DARK LIGHTS OFF	0	0	0	0	0	0	0	0	0	0	0
	OTHER	0	0	0	0	0	0	0	0	0	0	0
	UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
ROAD SURFACE TOTALS		91	20	5	7	1	0	0	7	11	1	143

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

ACCIDENT SUMMARY INPUT

TYPE OF STUDY: NODES AND LINKS TYPE OF REQUEST: ACCIDENT I & II WITH LINK DETAIL
STUDY PERIOD: FROM MONTH 01 YEAR 2002 TO MONTH 12 YEAR 2004

INPUT COMMENTS

REQUEST: RTE 6/15
TOWN: GUILFORD - JACKMAN

INPUT DATA

ROUTE	COUNTY	FIRST NODE	EXCLUDE FIRST	DISTANCE	SECOND NODE	LAST NODE	EXCLUDE LAST	DISTANCE
0006X	21	07042	0	0.00	07043	06083	0	0.00
	25	06230	0	0.00	06229	06190	0	0.00

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS		
21010	RTE 6	07042	07043	0.1	1	0	0	0	0	1	200212976		
				0.2	1	0	1	0	0	0	200316751		
				0.4	1	0	0	0	0	1	200306766		
				1.0	2	0	0	0	0	2	200200370	200303328	
				1.2	1	0	0	0	0	1	200404192		
		07043	08962	0.3	1	0	0	0	0	1	200341064		
				0.5	1	0	0	0	0	1	200437162		
				0.6	1	0	0	0	1	0	200224283		
				0.7	1	0	0	0	1	0	200426749		
				0.8	1	0	0	0	0	1	200211608		
		07044	08962	0.1	1	0	0	0	0	1	200320156		
		07044	08941	0.2	1	0	0	0	1	0	200435559		
		07045	08941	0.1	1	0	0	0	0	1	200435560		
				0.6	1	0	0	0	0	1	200432030		
		07045	07046	0.1	1	0	0	0	0	1	200404193		
		01875	07047	0.1	2	0	0	0	0	2	200316871	200423920	
				0.3	2	0	0	0	0	2	200320630	200401116	
		07047	07048	0.7	2	0	0	0	0	2	200224236	200308522	
				0.9	1	0	0	0	0	1	200238474		
				1.0	1	0	0	0	0	1	200221967		
		07048	07049	0.4	1	0	0	0	0	1	200435567		
		07049	08999	0.1	3	0	1	0	0	2	200202121	200240736	200432738
				0.4	1	0	0	0	0	1	200411000		
				0.5	1	0	0	1	0	0	200233867		
				0.7	1	0	0	0	0	1	200215463		
				1.0	2	0	0	0	0	2	200303346	200303363	
21150	RTE 6+15			1.1	1	0	0	0	0	1	200210335		
		07050	08999	0.1	2	0	0	1	1	0	200413925	200427642	
				0.2	1	0	0	1	0	0	200339524		
				0.7	1	0	0	0	0	1	200423915		
				1.3	2	0	1	0	1	0	200205009	200312834	
				1.4	1	0	0	0	1	0	200426326		
		07051	08961	0.1	1	0	0	0	1	0	200408167		
		01125	07052	0.1	1	1	0	0	0	0	200302600		
		07053	08943	0.1	1	0	0	0	0	1	200433500		
		07053	07054	0.6	1	0	0	0	1	0	200321101		
		07055	07056	0.3	1	0	0	0	0	1	200423376		
		07056	07057	0.0	1	0	0	0	0	1	200317650		
				0.3	1	0	0	1	0	0	200413721		
				0.4	1	0	0	0	1	0	200234102		
				0.6	1	0	0	0	1	0	200217395		
				0.7	1	0	0	0	0	1	200317897		
				0.8	1	0	0	0	0	1	200219161		
				1.0	2	0	0	1	1	0	200201653	200403994	
				1.2	2	0	1	0	0	1	200239701	200308256	
				1.3	1	0	0	0	0	1	200438309		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS		
				1.4	2	0	0	0	0	2	200317233	200430047	
		07057	07058	0.1	1	0	0	0	0	1	200423913		
				0.3	1	0	0	0	0	1	200416082		
				1.0	1	0	0	0	0	1	200200368		
21190	GREENVILLE RD			1.5	1	0	0	0	0	1	200329948		
		07058	07059	0.1	1	0	0	0	0	1	200416790		
				0.2	2	0	0	2	0	0	200216792	200216831	
				1.6	3	0	0	0	1	2	200208824	200329606	200424239
		07059	08958	0.0	1	0	0	0	0	1	200319162		
				0.1	1	0	0	0	0	1	200330361		
				0.5	1	0	0	0	0	1	200220032		
				0.6	3	1	0	1	0	1	200299077	200426327	200426323
		08957	08958	0.2	2	0	0	0	0	2	200219193	200219970	
				0.3	1	0	0	0	0	1	200212449		
		07060	08957	0.8	1	0	0	0	0	1	200202827		
21090	MOOSEHEAD LK RD	07060	08956	0.1	3	0	0	1	1	1	200324093	200433480	200440800
		07061	08956	0.6	2	0	0	1	0	1	200208116	200212027	
		07061	07062	0.1	1	0	0	0	0	1	200216029		
				0.4	1	0	0	0	0	1	200411925		
		07062	07063	0.1	3	0	0	1	0	2	200213299	200235953	200236351
				0.2	1	0	0	0	0	1	200238983		
				0.4	1	0	0	0	0	1	200433479		
				1.3	1	0	0	0	0	1	200302333		
				1.4	1	0	0	0	0	1	200421942		
		07063	08942	0.1	1	0	0	0	0	1	200429241		
		07064	07065	0.1	1	0	0	0	0	1	200215655		
	0006X	06059	07067	0.1	1	0	0	1	0	0	200320641		
	WEST ST.	06059	06060	0.1	2	0	0	0	0	2	200235357	200331924	
		06067	06068	0.1	1	0	0	0	1	0	200426331		
21805	0006X	06072	06073	0.1	2	0	0	0	0	2	200332508	200418821	
		06075	08955	0.4	1	0	0	0	0	1	200309194		
21816				0.5	1	0	0	0	0	1	200339044		
		06076	06077	0.2	1	0	0	0	1	0	200334167		
21801				0.5	1	0	0	0	0	1	200221915		
		06077	06078	0.1	1	0	0	0	0	1	200207259		
		01762	07237	0.3	1	0	0	0	0	1	200233232		
		06079	06080	0.5	1	0	0	0	0	1	200315642		
				2.0	1	0	1	0	0	0	200428662		
		06080	06081	0.2	1	0	0	0	0	1	200430049		
		06081	06082	0.3	1	0	0	0	1	0	200209309		
		06082	06083	0.5	1	0	0	0	1	0	200433595		
25851				0.8	2	0	0	0	0	2	200330365	200415033	
		06228	06229	0.3	1	0	0	0	1	0	200438223		
25837		06227	06228	1.6	1	0	0	0	0	1	200217901		
25803		06225	06226	0.1	1	0	0	1	0	0	200415032		
25844		06223	06224	0.5	1	0	0	0	0	1	200210950		

TINACC30

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING, ACCIDENT RECORDS SECTION

LINK DETAIL

TOWN#	STREET NAME OR ROUTE #	LOW NODE	HIGH NODE	DISTANCE	TOTAL ACCIDENTS	INJURY ACCIDENTS K	A	B	C	PD	ACCIDENT REPORT NUMBERS
		06214	06215	1.5	1	0	0	0	0	1	200221906
25803		06213	06214	0.2	1	0	0	0	0	1	200403190
		06209	06210	0.2	1	0	0	0	1	0	200223555
				0.8	1	0	0	0	0	1	200206381
25849		06204	06205	0.1	1	0	0	0	1	0	200441387
		06199	06200	0.1	1	0	0	0	0	1	200233697
		06197	06999	0.9	1	0	0	0	0	1	200416654
25833		06196	06197	0.1	1	0	0	0	1	0	200321287
		06194	06195	0.2	1	0	0	0	0	1	200336133
		06193	06194	0.4	1	0	0	0	0	1	200428351
		06192	06193	0.7	1	0	0	0	0	1	200328924
		06190	06191	0.1	1	0	0	0	1	0	200404641
				TOTALS-	130	2	5	13	22	88	

INV Mar. 8. 2006 9:05AM

CODE NUMBER UUUDE

TRAFFIC ACCIDENT REPORT
STATE OF MAINE

22203650

No. 5493 D.P.P. 2 ONLY

07056.07057.10

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	2	13	02	Wed	1240	1246	1319

001653

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	15		Monson	150	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK	CIRCLE ONE
		MILES / TENTHS		At. Spectical Pond Corner	N W E S

UNIT NO. 1 - VEHICLE 1 — TOTAL UNITS INV 1 — UNIT NO. 2 - VEH 2 / PED / BIKE

DRIVER

DRIVER'S LICENSE NUMBER - 1: 5862092	STATE: ME	DRIVER'S LICENSE NUMBER 2:	STATE:
LAST NAME: King	FIRST NAME: Warren	MIDDLE: B	LAST NAME / FIRST NAME / MIDDLE:
NUMBER AND STREET: P.O Box 703		NUMBER AND STREET:	
CITY: Greenville	STATE: ME	CODE NUMBER: 20	CITY / STATE / CODE NUMBER:
DATE OF BIRTH: 3-28-23	SEX: M	LICENSE STATUS: (A) S P N	REST/PERM: -/- CLASS: C
DATE OF BIRTH	SEX	LICENSE STATUS: A S P N	REST/PERM / CLASS

OWNER

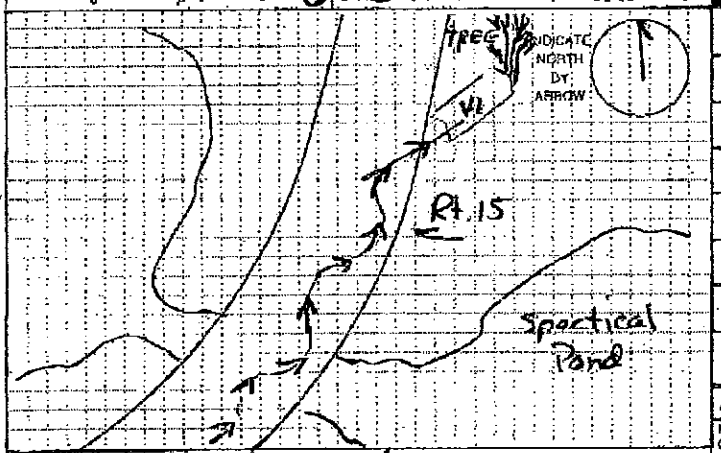
LAST NAME - OWNER 1: Same	FIRST NAME	MIDDLE	LAST NAME OWNER 2 / FIRST NAME / MIDDLE
NUMBER AND STREET: Same			NUMBER AND STREET
CITY: Same	STATE		CITY / STATE

VEHICLE

VEHICLE TYPE: 04=SW	YEAR AND MAKE: 00 37=Isuzu	COLOR: 03=RED	VEHICLE TYPE / YEAR AND MAKE / COLOR
LICENSE PLATE NUMBER: 1497 GA	YEAR: 02	ISSUE STATE: ME	NO OCCUP: 1
LICENSE PLATE NUMBER / YEAR	ISSUE STATE	NO OCCUP	
VEHICLE IDENTIFICATION NO. 4S2DM58W244358172			VEHICLE IDENTIFICATION NO.
INSURANCE CO. Liberty Mutual			INSURANCE CO.
POLICY NO. A02-212-340538-02 1			POLICY NO.

9 - TOP, 10 - BOTTOM — TOTAL — TOWED BY: Moosehead Towing — DAMAGE CODES: 11 — DAMAGE ESTIMATE: $7000.-

9 - TOP, 10 - BOTTOM — TOTAL — TOWED BY: — DAMAGE CODES — DAMAGE ESTIMATE: $



DESCRIPTION: V1 NB Rt.15 at Spectical Pond corner. V1 lost control on snow covered roadway. V1 went over the snow bank on the east side of Rt.15 and struck a tree.

AMBULANCE CODES: GAIDEAN Ambulance

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 1

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Warren King	2	1	2	3	1	1	1	1	M	78

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY	DATE
[signature]	4605	E-MSP	Lt. Herbert Morse	

LOCAL CODES

N 4497 FORM 13/20A

Mar. 8. 2006 9:06AM No.5493 P. 3

TRAFFIC ACCIDENT REPORT
STATE OF MAINE

CODE NUMBER: C-20E | 22217541 | 017395

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	7	21	02	Sunday	0220	0229	0258

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	15		Monson 450	~~[illegible]~~	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
		MILES / TENTHS		.8 Miles to Shirley TL

CIRCLE ONE: N W E S

UNIT NO. 1 - VEHICLE 1 | TOTAL UNITS INV 1 | UNIT NO. 2 - VEH 2 / PED / BIKE

DRIVER

	Driver 1	Driver 2
DRIVER'S LICENSE NUMBER	9133282	
STATE	ME	
LAST NAME	Duncan	
FIRST NAME	Stacey	
MIDDLE	L	
NUMBER AND STREET	72 Flanders Hill Rd	
CITY	Sangerville	
STATE	ME	
CODE NUMBER	20	
DATE OF BIRTH	3/18/71	
SEX	F	
LICENSE STATUS	A S P N	A S P N
REST/PERM	-1-	
CLASS	C	

OWNER

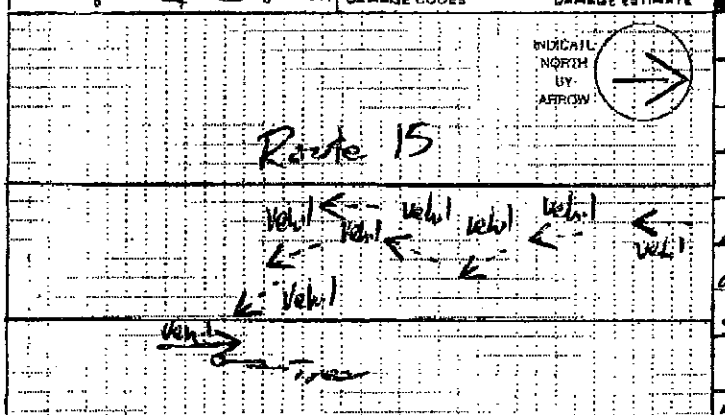
	Owner 1	Owner 2
LAST NAME - OWNER 1	Duncan	
FIRST NAME	Stacey	
MIDDLE	L	
NUMBER AND STREET	762 West St.	
CITY	Walpole	
STATE	MA	

VEHICLE

	Vehicle 1	Vehicle 2
VEHICLE TYPE	UT-07	
YEAR AND MAKE	95 Chevy-01	
COLOR	Wt 02	
LICENSE PLATE NUMBER	600940	
YEAR	02	
ISSUE STATE	MA	
NO. OCCUP	1	
VEHICLE IDENTIFICATION NO.	1GNDT13W352235778	
INSURANCE CO.	Commerce Ins. Co.	
POLICY NO.	GPP505	
TOWED BY	Moorehead Towing	
DAMAGE CODES	11	
DAMAGE ESTIMATE	$ 10,000	

TOTAL #11

INDICATE NORTH BY ARROW



TOTAL NUMBER OF PERSONS INVOLVED 1

DESCRIPTION: Veh.1 South Rt. 15 Monson. Veh. swerved for animal that ran into roadway. Veh.1 over corrected and lost control. Veh.1 went off roadway, rolling over, striking tree and coming to final rest on passenger side. Driver taken to hospital in POV.

AMBULANCE CODES N/A

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.) N/A

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Stacey Duncan	2	2	1	4	2	1	1	1	F	31

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY	DATE
Marc Poulin [signature]	3998	E	Herbert Morse	7.30.02

07056.07057.06

LOCAL CODES

FORM 13:20A

Mar. 8. 2006 9:06AM No.5493 P. 4

TRAFFIC ACCIDENT REPORT
STATE OF MAINE

CODE NUMBER 6000E 22220254

019161

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	8	15	02	Thurs	2043	2046	2101

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	15		Monson	150	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE (MILES / TNTHS)	TO NUMBER	MILES AND TENTHS TO LANDMARK
				.6mi to Monson-Shirley line

CIRCLE ONE: N W E S

UNIT NO. 1 - VEHICLE 1 — TOTAL UNITS INV 1 — UNIT NO. 2 - VEH 2 / PED / BIKE

DRIVER

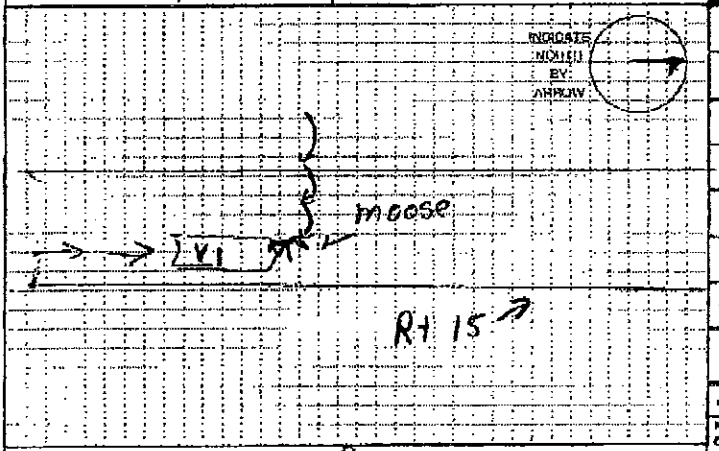
	Unit 1	Unit 2
DRIVER'S LICENSE NUMBER - 1	4493053	
STATE	ME	
LAST NAME / FIRST NAME / MIDDLE	Groh Darrel B	
NUMBER AND STREET	P.O. Box 302	
CITY / STATE / CODE NUMBER	Palmyra ME 20	
DATE OF BIRTH	5-5-52	
SEX	M	
LICENSE STATUS	A S P N	
REST/PERM	-/I	
CLASS	C	

OWNER

	Unit 1	Unit 2
LAST NAME OWNER 1 / FIRST NAME / MIDDLE	Same	
NUMBER AND STREET	Same	
CITY / STATE	Same	

VEHICLE

	Unit 1	Unit 2
VEHICLE TYPE	06 = Pickup	
YEAR AND MAKE	87 06 = Ford	
COLOR	03 = MA	
LICENSE PLATE NUMBER	6588GF	
YEAR	02	
ISSUE STATE	ME	
NO OCCUP	2	
VEHICLE IDENTIFICATION NO.	2FTEF14N1HCA53092	
INSURANCE CO.	Liberty Mutual	
POLICY NO.	A02-218-131963-21 2	
TOWED BY:		
DAMAGE CODES	1.8	
DAMAGE ESTIMATE	$ 1000.-	



DESCRIPTION: V1 NB Rt 15. Moose entered the roadway from the West Ditch. V1 struck moose.

AMBULANCE CODES: None

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 2

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Darrel Groh			2	5	1	1	1	1	M	50
Tanya Groh			2	5	1	1	1	3	F	49

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY	DATE
[signature]	4605	E-MSP	Lt. Herbert Morse	9.3.02

07056-07057-0.8

LOCAL CODES

ORM 13/204

TRAFFIC ACCIDENT REPORT

STATE OF MAINE

INVESTIGATING AGENCY CODE NUMBER: ME0110000

02-6355

FOR D.P.S. USE ONLY: P 34102

DATE OF ACCIDENT: MONTH 09 | DAY 08 | YEAR 2002 | DAY OF WEEK Sun | TIME 11:48 | TIME REPORTED 11:50 | TIME ARRIVED 12:07

ON: ROUTE 6 | OR NAME OF STREET OR HIGHWAY: RTE 6+15 | CITY OR TOWN: Monson | CODE NUMBER: 21150 | COUNTY: Piscataquis | HIT AND RUN:

AT: BETWEEN NODE NUMBERS: 07056 / 07057 | DISTANCE FROM SCENE: 0 MILES 4 TNTHS | TO NUMBER: 07056 | MILES AND TENTHS TO LANDMARK | N W S E (CIRCLE ONE)

N↑ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - | ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1: 544010847 | STATE: MA

LAST NAME: Muhr, Kelly | FIRST NAME | MIDDLE

NUMBER AND STREET: 132 Elliotsville Rd

CITY: Monson | STATE: ME 04464 | CODE NUMBER: 20

DATE OF BIRTH: 08/19/1968 | SEX: F | LICENSE STATUS: (A) S P N | REST/PERM: 0 | CLASS: C

OWNER

LAST NAME - OWNER 1: Muhr, Michael | FIRST NAME | MIDDLE

NUMBER AND STREET: 132 Elliotsville Rd

CITY: Monson | STATE: ME 04464

VEHICLE

VEHICLE TYPE: Station Wagon | YEAR AND MAKE: 1994 Ford | COLOR: Maroon

LICENSE PLATE NUMBER: 431JGJ | YEAR: 2003 | ISSUE STATE: ME | NO OCCUP.: 3

VEHICLE IDENTIFICATION NO.: 1FARP15J2RW252276

INSURANCE CO.: Commerce Ins Co

POLICY NO.: N/A

TOWED BY: Moosehead Towing

DAMAGE CODES: 3, 9 | DAMAGE ESTIMATE: $ 3,000.00

EVENT ENTIRE: 9 (TOP) 10 (BOTTOM)

DRIVER

DRIVER'S LICENSE NUMBER | STATE

LAST NAME | FIRST NAME | MIDDLE

NUMBER AND STREET

CITY | STATE | CODE NUMBER

DATE OF BIRTH | SEX | LICENSE STATUS: A S P N | REST/PERM | CLASS

OWNER

LAST NAME - OWNER 2 | FIRST NAME | MIDDLE

NUMBER AND STREET

CITY | STATE

VEHICLE

VEHICLE TYPE | YEAR AND MAKE | COLOR

LICENSE PLATE NUMBER | YEAR | ISSUE STATE | NO OCCUP.

VEHICLE IDENTIFICATION NO.

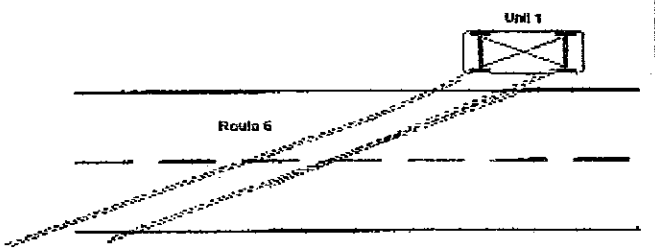
INSURANCE CO.

POLICY NO.

TOWED BY:

DAMAGE CODES | DAMAGE ESTIMATE $

EVENT ENTIRE: 9 (TOP) 10 (BOTTOM)



TOTAL NUMBER OF PERSONS INVOLVED: 3

DESCRIPTION: Unit 1 was Northbound on Rt 6/15. Driver said she was tending to Nicholas in backseat(tightening seatbelt) when she went over the right side of the road. She realized this, and overcorrected and skidded across the road and rolled into the ditch.

AMBULANCE CODES: N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Muhr, Kelly (Driver)	9	4	3	4	1	1	1	1	F	34
Muhr, Nicholas (Passenger)	11	11	2	5	1	1	1	6	M	7
Muhr, Amanda (Passenger)	8	4	2	4	1	1	1	3	F	5

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE) | OFFICER NUMBER: 1109 | TROOP OR DEPARTMENT: PISCATAQUIS COUNTY SHERIFFS DEPT | APPROVED BY: | DATE

Guy E. Dow
FORM 13:20A
Rev. 4/97

02-6355-0-4

07056-07057-1.2

INVESTIGATING AGENCY CODE NUMBER	TRAFFIC ACCIDENT REPORT - STATE OF MAINE	02-8005	FOR D.P.S. USE ONLY P
ME0110000			39701

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	12	02	2002	Mon	00:03	00:05	00:20

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	ROUTE 6	RTE 6+15	Monson	21150	Piscataquis	

AT	BETWEEN NODE NUMBERS		DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
	07056	07057	0 MILES 2 TNTHS	07057	N W S E

N↑ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER	STATE
1526043	ME

LAST NAME	FIRST NAME	MIDDLE
HOFBAUER, JOHN F JR		

NUMBER AND STREET: BX 338

CITY	STATE	CODE NUMBER
GREENVILLE	ME 04441	2 0

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
10/20/1939	M	(A) S P N	0	A

OWNER

LAST NAME - OWNER 1	FIRST NAME	MIDDLE
HOFBAUER, JOHN F JR		

NUMBER AND STREET: BX 338

CITY	STATE
GREENVILLE	ME 04441

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR
Station Wagon	2002 Volvo	Tan

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.
H68ADN	2003	FL	2

VEHICLE IDENTIFICATION NO. YV15Z58D621065784

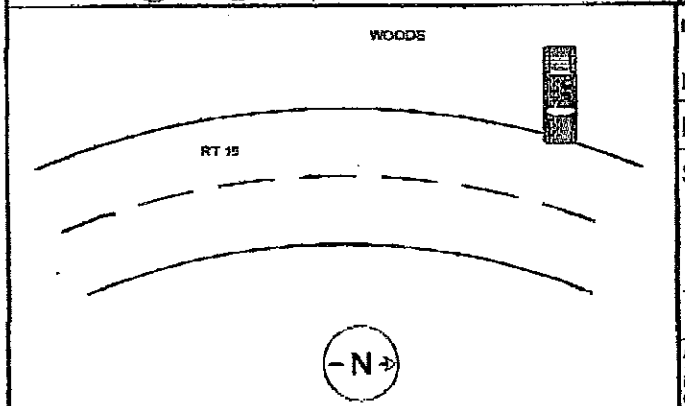
INSURANCE CO. PROGRESSIVE

POLICY NO. 50570043-4

VEH # 1 2 3 4 5 6 7 8 9 (TOP) 10 (BOTTOM)

TOWED BY: DARLINGS

6, 7 DAMAGE CODES | $ 5,000.00 DAMAGE ESTIMATE



TOTAL NUMBER OF PERSONS INVOLVED: 2

DESCRIPTION: UNIT 1 WAS NORTH BOUND ON RT 15 IN MONSON NEAR SPECTACLE POND. HE LOST CONTROL DUE TO ICY, SNOWDRIFTED ROAD CONDITIONS AND SKIDDED INTO THE DITCH.

AMBULANCE CODES N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
HOFBAUER, JOHN F JR (Driver/Owner)	11	11	2	5	1	1	1	1	M	63
HOFBAUER, JANE (Passenger)	11	11	2	5	1	1	1	3	F	65

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
	1109	PISCATAQUIS COUNTY SHERIFFS DEPT		

GUY E DOW
FORM 13:20A
Rev. 4/97

TRAFFIC ACCIDENT REPORT

STATE OF MAINE

INVESTIGATING AGENCY CODE NUMBER: ME0110000

03-1086

FOR D.P.S USE ONLY: P 08256

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	03	03	2003	Mon	10:50	10:50	11:20

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	ROUTE 15	RTE 6+15	Monson	21150	Piscataquis	

AT	BETWEEN NODE NUMBERS		DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
	07056	07057	0 MILES 2 TNTHS	07057	

N W S E (CIRCLE ONE)

S↓ UNIT NO. 1 - Vehicle — TOTAL UNITS INV. 2 — S↓ UNIT NO. 2 - [X] VEH. 2 [ ] PED. [ ] BIKE

DRIVER

	UNIT NO. 1	UNIT NO. 2
DRIVER'S LICENSE NUMBER	8790073	6085175
STATE	ME	ME
LAST NAME	KANE, ELIZABETH B	LAYMAN, LYNN A
FIRST NAME		
MIDDLE		
NUMBER AND STREET	PO BX 455	PO BX 354
CITY	GREENVILLE	GREENVILLE
STATE	ME 04441	ME 04441
CODE NUMBER	20	20
DATE OF BIRTH	12/29/1917	07/22/1951
SEX	F	F
LICENSE STATUS (A S P N)	A	A
REST/PERM	A	0
CLASS	C	C

OWNER

	UNIT NO. 1	UNIT NO. 2
LAST NAME - OWNER	KANE, ELIZABETH B	LAYMAN, LYNN A
FIRST NAME		
MIDDLE		
NUMBER AND STREET	PO BX 455	PO BX 354
CITY	GREENVILLE	GREENVILLE
STATE	ME 04441	ME 04441

VEHICLE

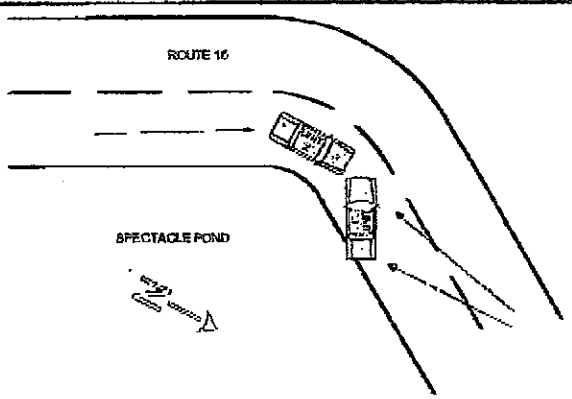
	UNIT NO. 1	UNIT NO. 2
VEHICLE TYPE	4 Door	2 Door
YEAR AND MAKE	1995 Honda	1996 Ford
COLOR	Red	Red
LICENSE PLATE NUMBER	8580	524KT
YEAR	2003	2003
ISSUE STATE	ME	ME
NO OCCUP.	1	1
VEHICLE IDENTIFICATION NO.	1HGEG8654SLO43889	KNJLT05H8T6189085

INSURANCE

	UNIT NO. 1	UNIT NO. 2
INSURANCE CO.	CU YORK INS.CO	ALLSTATE
POLICY NO	YMZP19164	9-19-105553

	UNIT NO. 1	UNIT NO. 2
TOWED BY	MOOSEHEAD TOWING	MOOSEHEAD TOWING
DAMAGE CODES	1	1
DAMAGE ESTIMATE	$ 1,000.00	$ 1,000.00

EVENT IF ENTIRE: 9 (TOP) 10 (BOTTOM)



TOTAL NUMBER OF PERSONS INVOLVED: 2

DESCRIPTION: UNIT 1 WAS SOUTHBOUND ON RT 15. UNIT 1 HAD OBSCURED VISION FROM BLOWING SNOW . UNIT 1 LOST CONTROL DUE TO THE ICY ROAD CONDITIONS AND SKIDDED INTO THE PATH OF UNIT 2.

AMBULANCE CODES: Charles A. Dean Ambulance Svc(210)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	25	27	28	29	30	31	32	33	34
KANE, ELIZABETH B (Driver/Owner)	11	11	2	5	1	1	1	1	F	85
LAYMAN, LYNN A (Driver/Owner)	9	3	3	2	1	2	1	1	F	51

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
GUY E DOW	T109	PISCATAQUIS COUNTY SHERIFFS DEPT	LT YOUNG	3/3/2003

FORM 13:20A
Rev. 4/97

INVESTIGATING AGENCY CODE NUMBER ME0110000	TRAFFIC ACCIDENT REPORT STATE OF MAINE	03-3029	FOR D.P.S. USE ONLY P 17233

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	06	17	2003	Tue	21:13	21:14	21:32

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	RT 15		Monson	21150 (R)	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
		0 MILES 0 TNTHS	7057	N W S E (CIRCLE ONE)

N↑ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1	STATE	DRIVER'S LICENSE NUMBER	STATE
0575054	ME		

LAST NAME	FIRST NAME	MIDDLE	LAST NAME	FIRST NAME	MIDDLE
BARTON, DAVID A					

NUMBER AND STREET	NUMBER AND STREET
RFD 2 BOX 531	

CITY	STATE	CODE NUMBER	CITY	STATE	CODE NUMBER
Lincolnville	ME 04849	2 0			

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS	DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
06/20/1951	M	(A) S P N	0	C			A S P N		

OWNER

LAST NAME - OWNER 1	FIRST NAME	MIDDLE	LAST NAME - OWNER 2	FIRST NAME	MIDDLE
BARTON, ROBIN A					

NUMBER AND STREET	NUMBER AND STREET
2396 BELFAST RD	

CITY	STATE	CITY	STATE
LINCOLNVILLE	ME 04849		

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR	VEHICLE TYPE	YEAR AND MAKE	COLOR
SUV	1999 Toyota	Green (GR)			

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.	LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.
7945 JX	2004	ME	2				

VEHICLE IDENTIFICATION NO. JT3HP10VOX7115168 | VEHICLE IDENTIFICATION NO.

INSURANCE CO FARM FAMILY INS. CASUALITY | INSURANCE CO

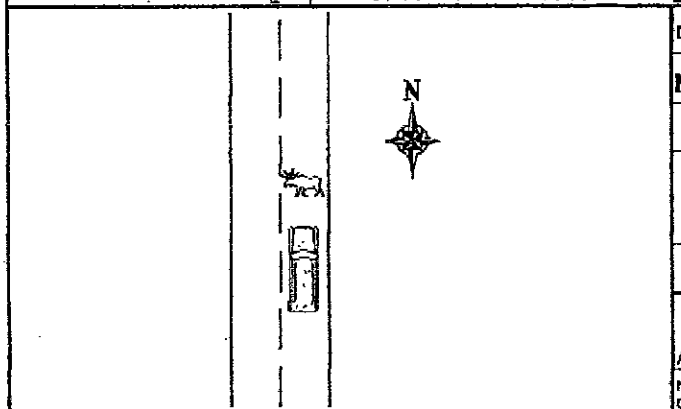
POLICY NO. 1814P104601 | POLICY NO.

9 (TOP) 10 (BOTTOM) — EVENTIRE VEH #

TOWED BY: NONE | 1, 8 DAMAGE CODES | $ 2,000.00 DAMAGE ESTIMATE

9 (TOP) 10 (BOTTOM) — EVENTIRE VEH #

TOWED BY: | DAMAGE CODES | $ DAMAGE ESTIMATE



DESCRIPTION: UNIT 1 WAS NORTH BOUND WHEN A MOOSE RAN OUT IN FRONT OF HIM.

AMBULANCE CODES N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 2

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
BARTON, DAVID A (Driver)	11	11	1	5	1	1	1	1	M	51
MEADE, CHARLES (Passenger)	11	11	1	5	1	1	1	3	M	27

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
	1109	PISCATAQUIS COUNTY SHERIFFS DEPT	BOB YOUNG	6/24/2003

GUY DOW
FORM 13:20A
Rev. 4/97

Commercial

INVESTIGATING AGENCY CODE NUMBER	TRAFFIC ACCIDENT REPORT STATE OF MAINE		FOR D.P.S. USE ONLY
ME0110000		03-3158	17650

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	06	24	2003	Tue	09:15	09:19	09:30

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	ROUTE 15		Monson	21150 (R)	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
		MILES / TENTHS		SPECTACAL POND

S↓ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1	STATE	DRIVER'S LICENSE NUMBER	STATE
0732032	ME		

LAST NAME	FIRST NAME	MIDDLE	LAST NAME	FIRST NAME	MIDDLE
PEARL, DENNIS A					

NUMBER AND STREET	NUMBER AND STREET
P.O. BOX 76	

CITY	STATE	CODE NUMBER	CITY	STATE	CODE NUMBER
SANGERVILLE	ME 04479	2 0			

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS	DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
08/05/1940	M	(A) S P N	M,P,Y	B			A S P N		

OWNER

LAST NAME - OWNER 1	FIRST NAME	MIDDLE	LAST NAME - OWNER 2	FIRST NAME	MIDDLE
PEARL, DENNIS A					

NUMBER AND STREET	NUMBER AND STREET
P.O. BOX 76	

CITY	STATE	CITY	STATE
SANGERVILLE	ME 04479		

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR	VEHICLE TYPE	YEAR AND MAKE	COLOR
3 Axle Single Unit 30	1989 Int. Harvester/Navistar 42	Black			

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.	LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.
634-568	2004	ME	1				

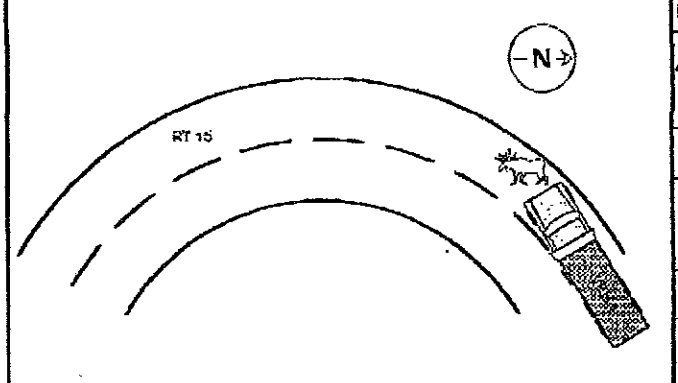
VEHICLE IDENTIFICATION NO 1HSZPG3R6KH676843 | VEHICLE IDENTIFICATION NO.

INSURANCE CO. NORTH EAST INS. CO. | INSURANCE CO.

POLICY NO 10181004281 | POLICY NO.

(1) (2) 3 4 5 6 7 8 9 (TOP) 10 (BOTTOM) — VEH # 1 — TOWED BY: N/A — DAMAGE CODES 1, 2 — DAMAGE ESTIMATE $ 2,000.00

(1) (2) 3 4 5 6 7 8 9 (TOP) 10 (BOTTOM) — VEH # 1 — TOWED BY: — DAMAGE CODES — DAMAGE ESTIMATE $



DESCRIPTION: VEH 1 TRAVELING SOUTH UNABLE TO AVOID MOOSE CROSSING IN ROADWAY HIT MOOSE.

AMBULANCE CODES N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 1

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
PEARL, DENNIS A (Driver/Owner)	11	11	2	5	1	1	1	1	M	62

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
	1107	PISCATAQUIS COUNTY SHERIFFS DEPT	LT. YOUNG	6/24/2003

MICHAEL GOULD
FORM 13:20A
Rev. 4/97

IN City or Town	Month	Day	Year	Unit Number
Monson	06	24	2003	1

Number of Highway	Or - Name of Street or Highway
ROUTE 15 ROUTE 15	

FOR D.P.S. USE ONLY
17650

STATE OF MAINE
ACCIDENT SUPPLEMENT FORM 1393 REV.(4-96)
POLICE TRAFFIC ACCIDENT REPORT
03-3158

CONFIDENTIAL IF SO MARKED

* Driver Name: PEARL, DENNIS

* Driver License Number: 0732032

* Vehicle ID Number: 1HSZPG3R6KH676843

* Vehicle License State: ME Vehicle Plate Number: 634-568

US DOT#: 751171 ICC#:

Interstate Carrier: (Y/N) N

* Carrier Name: D&H TRUCKING

* Address: P.O. BOX 78

* City, State, Zip Code: SANGERVILLE, ME 04479

Source of Carrier Name: 1
1. Side of Vehicle
2. Shipping papers
3. Driver
4. Log book

Traffic Way: 2
1. Not Physically Divided - Two Way Traffic
2. Divided Highway, Median Strip, w/o Traffic Barrier
3. Divided Highway, Median Strip, w/ Traffic Barrier
4 One Way Traffic

Traffic Access: 1
1 No Control - unlimited Access 2 Full Control - only ramp entry and exit 3 Other

Cargo Body Type: 05
1. Bus (seats 15 plus incl driver)
2. Van/closed box
3 Cargo tank
4. Flatbed
5. Dump
6. Concrete mixer
7. Auto transporter
8. Garbage/refuse
9 Mobile/modular home
10. Other

Vehicle Code: 30

COMBINED Gross Vehicle Weight Rating/From Mfg. Specs: 018 (to nearest thousand)

Register GVW: 006 (to nearest thousand)

Boosted registration GVW: 054 (to nearest thousand)

Hazardous Material Involvement Placarded (Y/N): N *(If yes, complete 1, 2 and 3)*

1 Was HAZMAT Cargo Released (Y/N): N (not including the engine fuel tank) How Transported: T = Tank/Bulk, P = Package

2 Four digit number from placard: and name:

3 HAZMAT CLASS: *(From bottom of placard)* IF ONE DIGIT ONLY, ENTER IN FIRST BOX

Sequence of events: First event 13 *Second event 01 *Third event *Fourth event
(Enter in boxes in order of occurrence) * When necessary

01 Ran off road
02 Jackknife
03 Overturned (rollover)
04 Downhill runaway
05 Cargo loss/shift
06 Explosion or fire
07 Separation of units
08 Collision w/ pedestrian
09 Collision w/ MV in transport
10 Collision w/ parked MV
11 Collision w/ train
12 Collision w/ pedalcycle
13 Collision w/ animal
14 Collision w/ fixed object
15 Collision w/ other object
16 Collision w/ other

Cargo Code: 1 = Unloaded 2 - Partially loaded 3 - - Loaded *(Enter one code only)*

Commodity Code: *(Cargo carried)* and name:

Length *(to nearest foot)*: Overall 025 Trailer length

Distance *(to nearest foot)*: Center of front axle to center of rearmost axle: 018

Distance *(to nearest foot)*: Center of rear drive axle to center of rearmost axle: 004

Oversize permit *(Enter "Y" in all appropriate boxes)*: Weight Y Length Height Width

INVESTIGATING AGENCY CODE NUMBER	TRAFFIC ACCIDENT REPORT STATE OF MAINE	007943	FOR D.P.S USE ONLY P
MEMSP0E00			17897

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	06	28	2003	Sat	09:20	09:23	09:55

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
		RTE 6+15	Monson	21150 (R)	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
	07056	0 MILES 8 TNTHS		N W (S) E

S↓ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1	STATE	DRIVER'S LICENSE NUMBER	STATE
5431067	ME		

LAST NAME	FIRST NAME	MIDDLE	LAST NAME	FIRST NAME	MIDDLE
Jefferson, David I					

NUMBER AND STREET	NUMBER AND STREET
Po Box 103	

CITY	STATE	CODE NUMBER	CITY	STATE	CODE NUMBER
shirley	ME 04485	2 0			

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS	DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
03/18/1948	M	(A) S P N	A,I,N	B			A S P N		

OWNER

LAST NAME - OWNER 1	FIRST NAME	MIDDLE	LAST NAME - OWNER 2	FIRST NAME	MIDDLE
Jefferson, David I					

NUMBER AND STREET	NUMBER AND STREET
Po Box 103	

CITY	STATE	CITY	STATE
shirley	ME 04485		

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR	VEHICLE TYPE	YEAR AND MAKE	COLOR
SUV	1996 GMC	White			

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP	LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP
2449	2003	ME	1				

VEHICLE IDENTIFICATION NO. 1GNGK26R0TJ400477 | VEHICLE IDENTIFICATION NO.

INSURANCE CO. Northeast Insurance Company | INSURANCE CO

POLICY NO 02180060944 | POLICY NO.

EVENTIRE: 1 (2 3 4 5 6 7 8) 9 (TOP) 10 (BOTTOM)

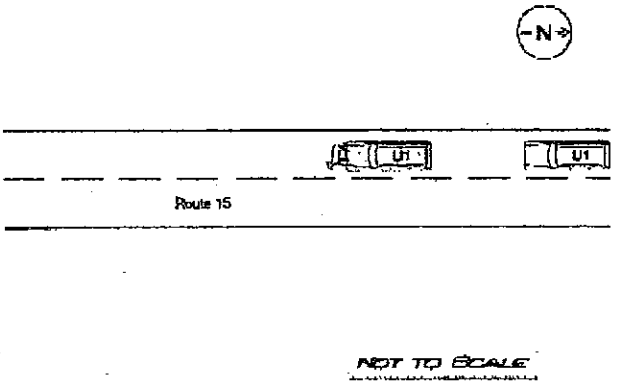
TOWED BY: Moose Head Towing

DAMAGE CODES: 1 | DAMAGE ESTIMATE: $ 2,000.00

EVENTIRE: 1 (2 3 4 5 6 7 8) 9 (TOP) 10 (BOTTOM)

TOWED BY:

DAMAGE CODES | DAMAGE ESTIMATE $



DESCRIPTION: Unit 1 was traveling South on Route 15, deer ran out in front of Unit 1. Unit 1 struck deer pushing grill into radiator making vehicle unable to be driven.

AMBULANCE CODES N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 1

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Jefferson, David I (Driver/Owner)	11	11	2	5	1	1	1	1	M	55

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
	4387	MAINE STATE POLICE TROOP E	Sgt. Peter Stewart	7/2/2003

Trooper Forrest C. Simpson

FORM 13:20A

Rev. 4/97

INVESTIGATING AGENCY CODE NUMBER MEMSP0E00

TRAFFIC ACCIDENT REPORT

STATE OF MAINE

SPE2004-003249

FOR D.P.S. USE ONLY P

0 3994

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	01	16	2004	Fri	09:25	09:27	10:19

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
		RTE 15	Monson	21150 (R)	Piscataquis	

AT	BETWEEN NODE NUMBERS		DISTANCE FROM SCENE		TO NUMBER	MILES AND TENTHS TO LANDMARK
	07057	07056	0 MILES	5 TNTHS	07057	N W S E

S↓ UNIT NO. 1 - Vehicle TOTAL UNITS INV. 1 UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1	3011003
STATE	ME
LAST NAME	Hibbard, Juanita
FIRST NAME	
MIDDLE	
NUMBER AND STREET	Box 284
CITY	Monson
STATE	ME 04464
CODE NUMBER	2 0
DATE OF BIRTH	01/24/1947
SEX	F
LICENSE STATUS	(A) S P N
REST/PERM	A
CLASS	C

DRIVER'S LICENSE NUMBER	
STATE	
LAST NAME	
FIRST NAME	
MIDDLE	
NUMBER AND STREET	
CITY	
STATE	
CODE NUMBER	
DATE OF BIRTH	
SEX	
LICENSE STATUS	A S P N
REST/PERM	
CLASS	

OWNER

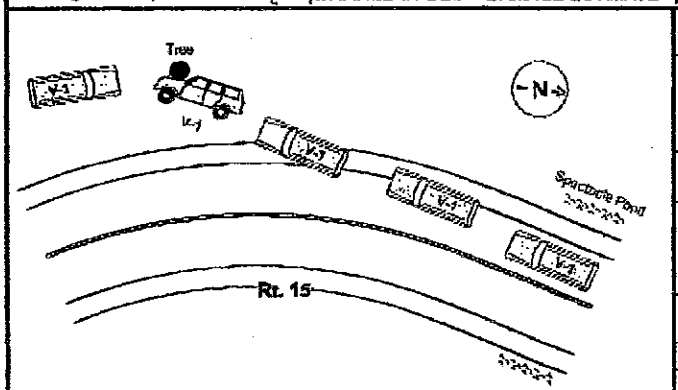
LAST NAME - OWNER 1	Hibbard, Juanita
FIRST NAME	
MIDDLE	
NUMBER AND STREET	Box 284
CITY	Monson
STATE	ME 04464

LAST NAME - OWNER 2	
FIRST NAME	
MIDDLE	
NUMBER AND STREET	
CITY	
STATE	

VEHICLE

VEHICLE TYPE	SUV
YEAR AND MAKE	1999 Ford
COLOR	Blue (BL)
LICENSE PLATE NUMBER	56524
YEAR	2004
ISSUE STATE	ME
NO OCCUP.	2
VEHICLE IDENTIFICATION NO.	1FMPU18L5XLB56420
INSURANCE CO.	Vermont Mutual
POLICY NO.	PA18023155
TOWED BY	Moosehead Towing
DAMAGE CODES	1, 2, 3, 4, 9
DAMAGE ESTIMATE	$ 4,000.00

VEHICLE TYPE	
YEAR AND MAKE	
COLOR	
LICENSE PLATE NUMBER	
YEAR	
ISSUE STATE	
NO OCCUP.	
VEHICLE IDENTIFICATION NO.	
INSURANCE CO.	
POLICY NO.	
TOWED BY	
DAMAGE CODES	
DAMAGE ESTIMATE	$



DESCRIPTION: Please see attached Form 13.91.

AMBULANCE CODES Charles A. Dean Ambulance Svc(210);Monson Fire Dept First Respond(232)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 2

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
Hibbard, Juanita (Driver/Owner)	9	5	2	4	1	1	1	1	F	56
Hibbard, Taylor (Passenger)	11	11	2	5	4	1	1	6	F	2

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
	3998	MAINE STATE POLICE TROOP E	Sgt. Mark D. Brooks	1/16/2004

Tpr. Marc Poulin

FORM 13:20A

Rev. 4/97

SPE2004-003
D1

ACCIDENT NUMBER	City or Town	Month	Date	Year
	IN Monson	01	16	2004
	Number of Highway ON [ ] and [ ]	Or - Name of Street or Highway RTE 15		
	Driver - Name: Hibbard, Juanita - Vehicle 1			
DO NOT WRITE IN THIS SPACE	Driver - Name			

State of Maine
Supplement to 03994

POLICE
TRAFFIC ACCIDENT REPORT
for
ADDITIONAL DIAGRAMS, DATA OR ANY
NECESSARY STATEMENTS TAKEN

Confidential if so Marked

V-1 southbound on Rt 15. Visibility was poor due to blinding snow. V-1 started skidding on the side of the roadway and attempted to correct. The vehicle went off the roadway and rolled over on its side and struck a tree. V-1 landed back on its wheels.

Other Values:

Weather: blowing snow

Commercial

TRAFFIC ACCIDENT REPORT

STATE OF MAINE

INVESTIGATING AGENCY CODE NUMBER: ME0110000

04-2931

FOR D.P.S. USE ONLY: F 13721

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	05	18	2004	Tue	06:15	06:18	06:37

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	ROUTE 15	RTE 6+15	Monson	21150 (R)	Piscataquis	

AT	BETWEEN NODE NUMBERS		DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
	07057	07056	0 MILES 3 TNTHS	07056	RT.15 LEDGE CUT

S↓ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER	STATE
B260117095506	QC

LAST NAME	FIRST NAME	MIDDLE
BOUCHER, ALAIN		

NUMBER AND STREET: 550 175E RUE

CITY	STATE	CODE NUMBER
Saint George	QC G5Z1B2	

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
09/17/1955	M	(A) S P N	0	A

OWNER

LAST NAME - OWNER 1: R.B.L. INC,

NUMBER AND STREET: 1415 8E RUE

CITY	STATE
Saint Prospe	QC G0M1Y0

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR
3 Axle Tractor with Tridem Axle Semi (33)	1998 Mack	White

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP
L164766	2005	QC	1

VEHICLE IDENTIFICATION NO.: 1M1AA18Y8WW083393

INSURANCE CO.: ESSOR INS.

POLICY NO: 690084

TOWED BY: T&W GARAGE

DAMAGE CODES: 11 | DAMAGE ESTIMATE: $ 80,000.00

DRIVER (2)

DRIVER'S LICENSE NUMBER | STATE

LAST NAME | FIRST NAME | MIDDLE

NUMBER AND STREET

CITY | STATE | CODE NUMBER

DATE OF BIRTH | SEX | LICENSE STATUS (A S P N) | REST/PERM | CLASS

OWNER (2)

LAST NAME - OWNER 2 | FIRST NAME | MIDDLE

NUMBER AND STREET

CITY | STATE

VEHICLE (2)

VEHICLE TYPE | YEAR AND MAKE | COLOR

LICENSE PLATE NUMBER | YEAR | ISSUE STATE | NO OCCUP.

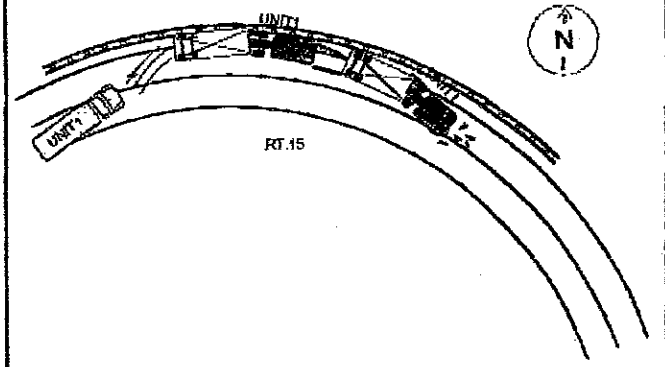
VEHICLE IDENTIFICATION NO.

INSURANCE CO.

POLICY NO.

TOWED BY:

DAMAGE CODES | DAMAGE ESTIMATE



DESCRIPTION: Please see attached Form 13.91.

AMBULANCE CODES: Msyo Regional Hospital(455)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 1

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
BOUCHER, ALAIN (Driver)	2	5	1	3	1	1	4	1	M	48

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY:	DATE
ALLEN L EMERSON	1106	PISCATAQUIS COUNTY SHERIFFS DEPT	LT. R. YOUNG	5/18/2004

FORM 13.20A
Rev. 4/97

04-2931
D1

ACCIDENT NUMBER	City or Town	Month	Date	Year
	IN Monson	05	18	2004
	Number of Highway: On ROUTE 15 and ROUTE 15	Or - Name of Street or Highway: RTE 6+15		
	Driver - Name: BOUCHER, ALAIN - Vehicle 1			
DO NOT WRITE IN THIS SPACE	Driver - Name			

State of Maine
Supplement to 13721

POLICE
TRAFFIC ACCIDENT REPORT
for
ADDITIONAL DIAGRAMS, DATA OR ANY
NECESSARY STATEMENTS TAKEN

Confidential if so Marked

UNIT 1 WAS TRAVELING SOUTH WHEN OPERATOR LOST CONTROL OF UNIT 1. UNIT 1 ROLLED ONTO ITS SIDE AND SLIDE INTO GUARDRAIL COMING TO REST IN ROADWAY.

Other Values:

Commercial Unit 1 - Cargo Body Type: BOX TRAILER

IN City or Town	Month	Day	Year	Unit Number
Monson	05	18	2004	1

Number of Highway: ROUTE 15 | ROUTE 15

Or - Name of Street or Highway: RTE 6+15

* Driver Name: BOUCHER, ALAIN

* Driver License Number: B260117095506

* Vehicle ID Number: 1M1AA18Y8WW083393

* Vehicle License State: QC

* Vehicle Plate Number: L164766

FOR D.P.S. USE ONLY: 13721

STATE OF MAINE
ACCIDENT SUPPLEMENT FORM 1393 REV.(4-96)
POLICE TRAFFIC ACCIDENT REPORT
04-2931

CONFIDENTIAL IF SO MARKED

U.S.DOT# 5 0 0 1 6 9 ICC#

Interstate Carrier: (Y/N) Y

* Carrier Name: R.B.L. INC

* Address: 1415 8E RUE

* City, State, Zip Code: SAINT PROSPER, QC G0M1Y0

Source of Carrier Name:
1. Side of Vehicle
2. Shipping papers
3. Driver
4. Log book

Traffic Way: 1
1. Not Physically Divided - Two Way Traffic
2 Divided Highway, Median Strip, w/o Traffic Barrier
3. Divided Highway, Median Strip, w/ Traffic Barrier
4. One Way Traffic

Traffic Access: 1
1 No Control - unlimited Access
2 Full Control - only ramp entry and exit
3. Other

Cargo Body Type: 1 0
1. Bus (seats 15 plus incl. driver)
2. Van/closed box
3 Cargo tank
4. Flatbed
5. Dump
6 Concrete mixer
7. Auto transporter
8. Garbage/refuse
9. Mobile/modular home
10. Other

Vehicle Code: 3 3 BOX TRAILER

COMBINED Gross Vehicle Weight Rating/From Mfg. Specs: (to nearest thousand)

Register GVW: (to nearest thousand)

Boosted registration GVW: (to nearest thousand)

Hazardous Material Involvement Placarded (Y/N) N *(If yes complete 1 2 and 3)*

1 Was HAZMAT Cargo Released (Y/N) N (not including the engine fuel tank) How Transported: T = Tank/Bulk P = Package

2 Four digit number from placard and name:

3 HAZMAT CLASS: *(From bottom of placard)* IF ONE DIGIT ONLY, ENTER IN FIRST BOX

Sequence of events: First event 0 1 *Second event 0 3 *Third event 1 4 *Fourth event

(Enter in boxes in order of occurrence) * - When necessary - *

01 Ran off road
02 Jackknife
03 Overturned (rollover)
04 Downhill runaway
05 Cargo loss/shift
06 Explosion or fire
07 Separation of units
08 Collision w/ pedestrian
09 Collision w/ MV in transport
10 Collision w/ parked MV
11 Collision w/ train
12 Collision w/ pedalcycle
13 Collision w/ animal
14 Collision w/ fixed object
15 Collision w/ other object
16 Collision w/ other

Cargo Code: 1 - Unloaded 2 - Partially loaded 3 - = Loaded *(Enter one code only)*

Commodity Code: *(Cargo carried)* and name:

Length *(to nearest foot)*. Overall 0 8 4 Trailer length 0 4 5

Distance *(to nearest foot)*: Center of front axle to center of rearmost axle:

Distance *(to nearest foot)*: Center of rear drive axle to center of rearmost axle:

Oversize permit *(Enter "Y" in all appropriate boxes)*: Weight Length Height Width

INVESTIGATING AGENCY CODE NUMBER	TRAFFIC ACCIDENT REPORT STATE OF MAINE		FOR D.P.S. USE ONLY F
ME0110000		04-7835	30047

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	10	13	2004	Wed	22:30	22:33	23:00

	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
ON	ROUTE 15	RTE 6+15	Monson	21150 (R)	Piscataquis	

	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE	TO NUMBER	MILES AND TENTHS TO LANDMARK
AT	07057	MILES / TNTHS		N W S E (CIRCLE ONE)

N↑ UNIT NO. 1 - Vehicle | TOTAL UNITS INV. 1 | UNIT NO. - ☐ VEH. 2 ☐ PED. ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER	STATE
5345134	ME

LAST NAME	FIRST NAME	MIDDLE
BOULEY, CHERYL W		

NUMBER AND STREET: 33 NORTH BIRCH STREET

CITY	STATE	CODE NUMBER
Greenville	ME 04441	2 0

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
05/27/1959	F	(A) S P N	0	C

OWNER

LAST NAME - OWNER 1	FIRST NAME	MIDDLE
BOULEY, CHERYL W		

NUMBER AND STREET: 33 NORTH BIRCH STREET

CITY	STATE
Greenville	ME 04441

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR
SUV	2004 GMC	

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.
89057	2005	ME	2

VEHICLE IDENTIFICATION NO. 1GKET16S246208612

INSURANCE CO. ONE BEACON INSURANCE CO

POLICY NO. ASG4832038

ENTIRE VEH #: 1 2 3 4 5 6 7 8 9 (TOP) 10 (BOTTOM)

TOWED BY: N/A

DAMAGE CODES: 2 | DAMAGE ESTIMATE: $ 1,100.00

DRIVER

DRIVER'S LICENSE NUMBER	STATE

LAST NAME	FIRST NAME	MIDDLE

NUMBER AND STREET:

CITY	STATE	CODE NUMBER

DATE OF BIRTH	SEX	LICENSE STATUS	REST/PERM	CLASS
		A S P N		

OWNER

LAST NAME - OWNER 2	FIRST NAME	MIDDLE

NUMBER AND STREET:

CITY	STATE

VEHICLE

VEHICLE TYPE	YEAR AND MAKE	COLOR

LICENSE PLATE NUMBER	YEAR	ISSUE STATE	NO OCCUP.

VEHICLE IDENTIFICATION NO.

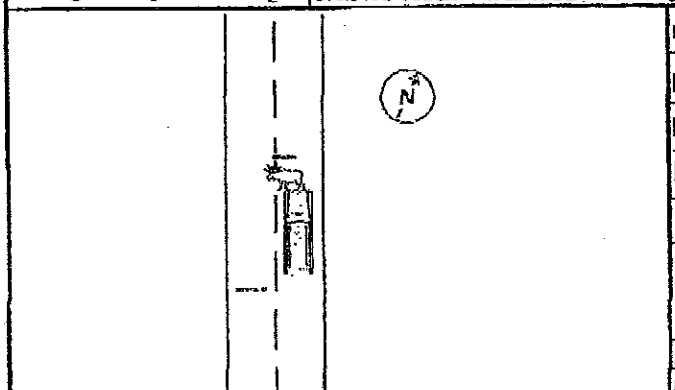
INSURANCE CO.

POLICY NO.

ENTIRE VEH #: 1 2 3 4 5 6 7 8 9 (TOP) 10 (BOTTOM)

TOWED BY:

DAMAGE CODES: | DAMAGE ESTIMATE: $



DESCRIPTION: UNIT 1 WAS TRAVELING NORTH ON ROUTE 15 WHEN A MOOSE TRIED TO CROSS THE ROAD IN FRONT OF HER. SHE WAS UNABLE TO STOP IN TIME AND STRUCK THE MOOSE.

AMBULANCE CODES N/A(1000)

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 2

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
BOULEY, CHERYL W (Driver/Owner)	11	11	2	5	1	1	1	1	F	45
BOULEY, AMANDA (Passenger)	11	11	2	5	1	1	1	3	F	23

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER	TROOP OR DEPARTMENT	APPROVED BY	DATE
	1108	PISCATAQUIS COUNTY SHERIFFS DEPT	LT. ROBERT YOUNG	10/20/2004

JAMES B. KANE

FORM 13:20A

Rev. 4/97

INVESTIGATING AGENCY CODE NUMBER ME0110000

TRAFFIC ACCIDENT REPORT
STATE OF MAINE

04-9682

FOR D.P.S. USE ONLY F 38309

DATE OF ACCIDENT	MONTH	DAY	YEAR	DAY OF WEEK	TIME	TIME REPORTED	TIME ARRIVED
	12	31	2004	Fri	08:30	08:31	08:42

ON	ROUTE	OR NAME OF STREET OR HIGHWAY	CITY OR TOWN	CODE NUMBER	COUNTY	HIT AND RUN
	ROUTE 15	RTE 6+15	Monson	21150	Piscataquis	

AT	BETWEEN NODE NUMBERS	DISTANCE FROM SCENE MILES	TNTHS	TO NUMBER	MILES AND TENTHS TO LANDMARK
	07057				

S↓ UNIT NO. 1 - Vehicle TOTAL UNITS INV. 1 UNIT NO. - ☐ VEH. 2 ☐ PED ☐ BIKE

DRIVER

DRIVER'S LICENSE NUMBER 1: 188106945 STATE: CT
LAST NAME: MCCAGUE, AARON D FIRST NAME: MIDDLE:
NUMBER AND STREET: 36 PEPPERMILLDR.
CITY: West Haven STATE: CT 06516 CODE NUMBER: 0 7
DATE OF BIRTH: 06/29/1986 SEX: M LICENSE STATUS: (A) S P N REST/PERM: 0 CLASS: C

DRIVER'S LICENSE NUMBER: STATE:
LAST NAME: FIRST NAME: MIDDLE:
NUMBER AND STREET:
CITY: STATE: CODE NUMBER:
DATE OF BIRTH: SEX: LICENSE STATUS: A S P N REST/PERM: CLASS:

OWNER

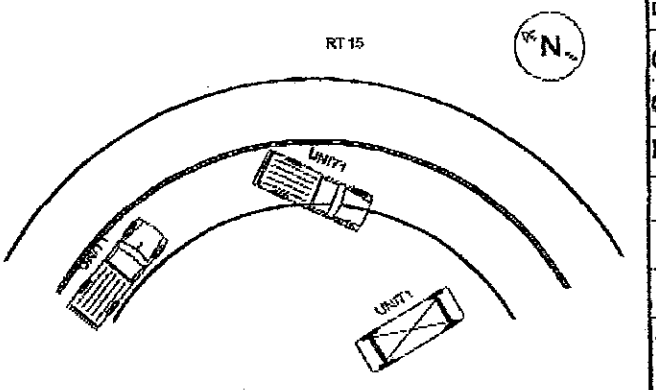
LAST NAME - OWNER 1: MCCAGUE, ETHAN J FIRST NAME: MIDDLE:
NUMBER AND STREET: 36 PEPPERMILL DR.
CITY: West Haven STATE: ME 06516

LAST NAME - OWNER 2: FIRST NAME: MIDDLE:
NUMBER AND STREET:
CITY: STATE:

VEHICLE

VEHICLE TYPE: Pickup Truck YEAR AND MAKE: 2000 Toyota COLOR: Black
LICENSE PLATE NUMBER: 6CT-534 YEAR: 2005 ISSUE STATE: CT NO OCCUP.: 2
VEHICLE IDENTIFICATION NO. 4TAWN72NXYZ598601
INSURANCE CO. STATE FARM INS
POLICY NO. 19-0059-C12-07
TOWED BY: ABBOT TOWING
DAMAGE CODES: 1, 7, 8 DAMAGE ESTIMATE: $ 2,500.00

VEHICLE TYPE: YEAR AND MAKE: COLOR:
LICENSE PLATE NUMBER: YEAR: ISSUE STATE: NO OCCUP.:
VEHICLE IDENTIFICATION NO.
INSURANCE CO
POLICY NO
TOWED BY:
DAMAGE CODES: DAMAGE ESTIMATE: $



DESCRIPTION: UNIT 1 WAS TRAVELING SOUTH WHEN OPERATOR LOST CONTROL DUE TO POOR ROAD CONDITIONS. UNIT 1 STARTED SLIDING SIDEWAYS INTO DITCH ROLLING OVER ONTO ITS SIDE.

AMBULANCE CODES N/A(1000)
NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)

TOTAL NUMBER OF PERSONS INVOLVED: 2

NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)	25	26	27	28	29	30	31	32	33	34
MCCAGUE, AARON D (Driver)	11	11	2	5	1	1	1	1	M	18
MCCAGUE, SEAN E (Passenger)	11	11	2	5	1	1	1	3	M	17

LOCAL CODES

INVESTIGATING OFFICER (SIGNATURE): OFFICER NUMBER: 1108 TROOP OR DEPARTMENT: PISCATAQUIS COUNTY SHERIFFS DEPT APPROVED BY: LT. R. YOUNG DATE: 12/31/2004

ALLEN L EMERSON
FORM 13:20A
Rev. 4/97

JN:	JN 1381.01	Gorrill-Palmer Consulting Engineers, Inc.
Project Description:	Plum Creek Re-zoning Proposal	P.O. Box 1237
Project Location:	Moosehead Lake Region of Maine	15 Shaker Road
Date:	March 9, 2006	Gray, Maine 04039

Hotel
Land Use Code (LUC) 310

Numer of Rooms: 750

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 8.95 (X) - 373.16	6339	50%	50%	3170	3169
AM Peak Adjacent Street	Ln(T) = 1.24 Ln(X) - 2.00	497	60%	40%	298	199
PM Peak Adjacent Street	---	---	55%	45%	---	---
AM Peak hour of Generator	Ln(T) = 0.87 Ln(X) + 0.02	324	55%	45%	178	146
PM Peak Hour of Generator	Ln(T) = 1.00 Ln(X) - 0.58	420	60%	40%	252	168
Saturday	T = 9.62 (X) - 294.56	6920	50%	50%	3460	3460
Saturday Peak Hour of Gen.	T = 0.69 (X) + 4.32	522	55%	45%	287	235

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 8.17 (X)	6128	50%	50%	3064	3064
AM Peak Adjacent Street	T = 0.56 (X)	420	60%	40%	252	168
PM Peak Adjacent Street	T = 0.59 (X)	443	55%	45%	243	200
AM Peak Hour of Generator	T = 0.52 (X)	390	55%	45%	215	175
PM Peak Hour of Generator	**T = 0.61 (X)**	**458**	**60%**	**40%**	**275**	**183**
Saturday	T = 8.19 (X)	6143	50%	50%	3071	3072
Saturday Peak Hour of Gen.	T = 0.72 (X)	540	55%	45%	297	243

* Percentages rounded to nearest 5%

JN:	1381.01	Gorrill-Palmer Consulting Engineers, Inc.
Project Description:	Plum Creek Re-zoning Proposal	P.O. Box 1237
Project Location:	Moosehead Lake Region of Maine	15 Shaker Road
Date:	March 9, 2006	Gray, Maine 04039

Single-Family Detached Housing
Land Use Code (LUC) 210

Dwelling Units: 975

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 9.57 (X)	9331	50%	50%	4666	4665
AM Peak Hour of Generator	T = 0.77 (X)	751	25%	75%	188	563
PM Peak Hour of Generator**	**T = 1.02 (X)**	**995**	**65%**	**35%**	**647**	**348**
AM Peak Hour of Adj. Street Traffic	T = 0.75 (X)	731	25%	75%	183	548
PM Peak Hour of Adj. Street Traffic	T = 1.01(X)	985	65%	35%	640	345
Saturday	T = 10.10 (X)	9848	50%	50%	4924	4924
Saturday Peak Hour of Gen.	T = 0.94 (X)	917	55%	45%	504	413

* Percentages rounded to nearest 5%

Fitted Curve Equation

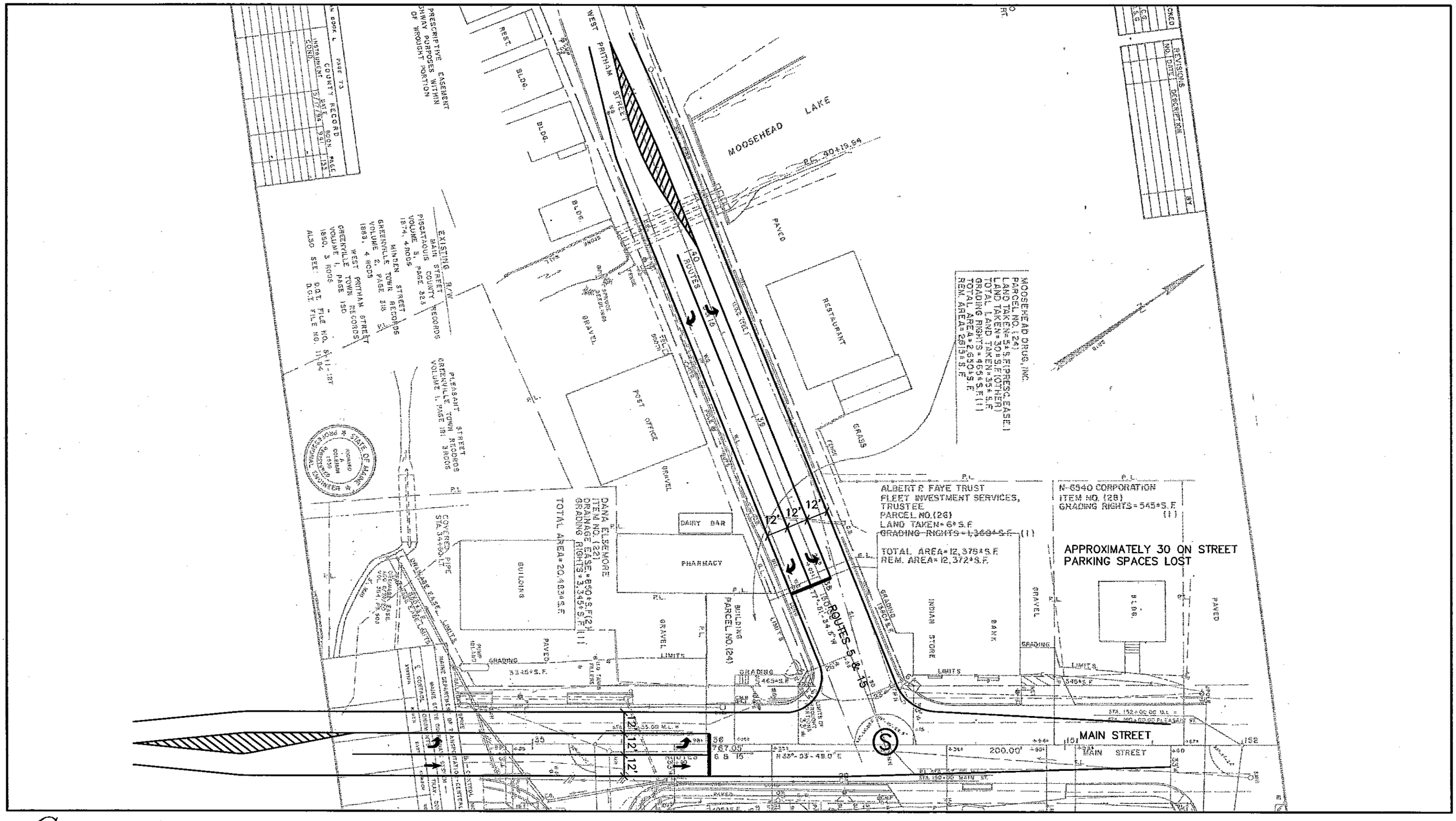
Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	Ln(T) = 0.92 Ln(X) + 2.71	8449	50%	50%	4225	4224
AM Peak Hour of Generator	T = 0.70 (X) + 12.05	695	25%	75%	174	521
PM Peak Hour of Generator	Ln(T) = 0.89 Ln(X) + 0.61	842	65%	35%	547	295
AM Peak Hour of Adj. Street Traffic	T = 0.70 (X) + 9.43	692	25%	75%	173	519
PM Peak Hour of Adj. Street Traffic	Ln(T) = 0.90 LN(X) + 0.53	832	65%	35%	541	291
Saturday	Ln(T) = 0.94 Ln(X) + 2.63	8951	50%	50%	4476	4475
Saturday Peak Hour of Gen.	T = 0.89 (X) + 10.93	879	55%	45%	483	396

* Percentages rounded to nearest 5%

** Actual volume used for analysis and included in the text of the report is higher do to individual rounding of rates for separate sites

Road Improvements - Alternative 1

Figure No. 8A



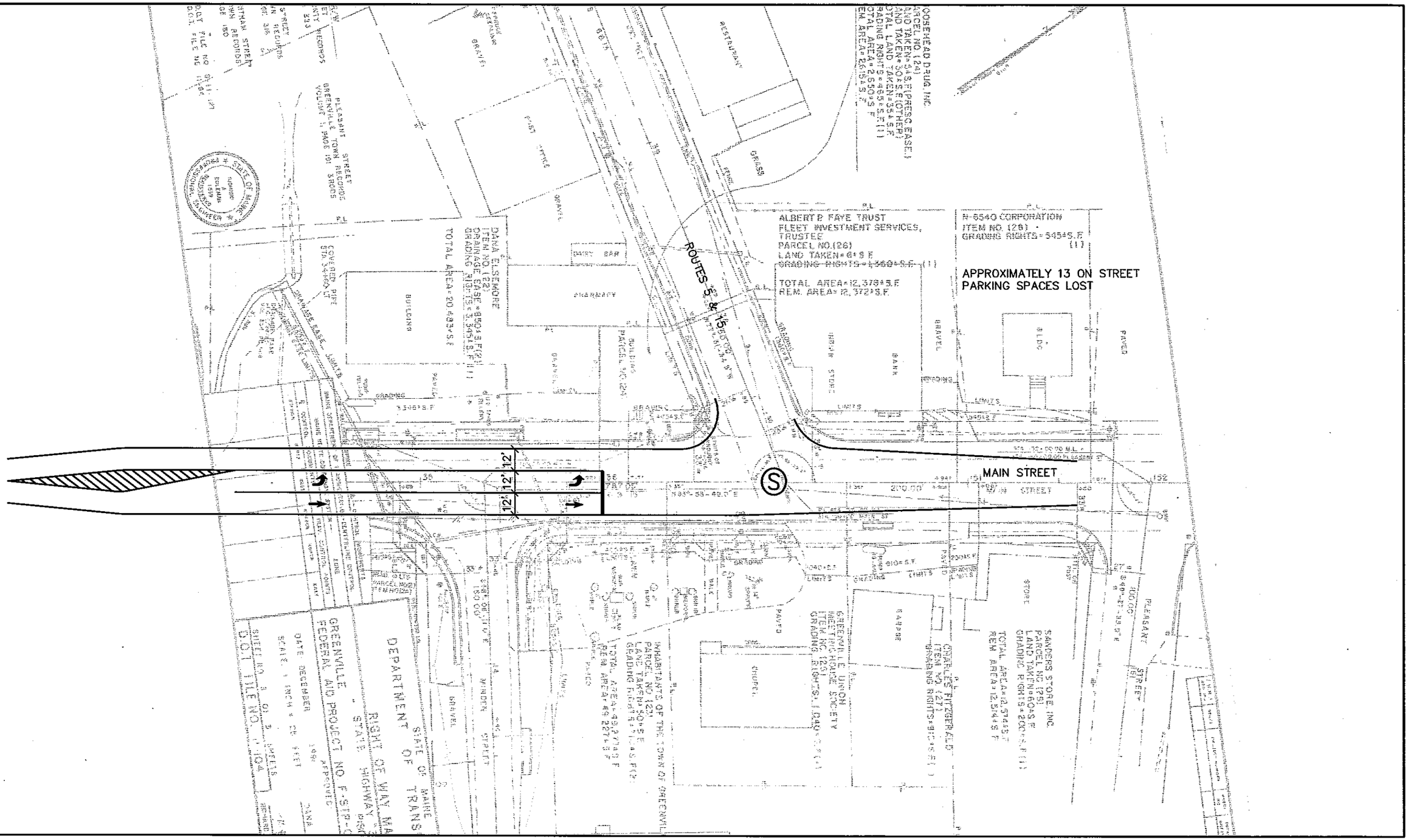
GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: DAB	Scale:	1" = 50'
Draft: ZRJ	Date:	MARCH 2006
Checked: RCN	File Name:	1381-01_pbase.dwg

Road Improvements - Alternative 2 - 50% of Development Traffic Arriving During Peak Hour

FIGURE NO. 8B



GP Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Road
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

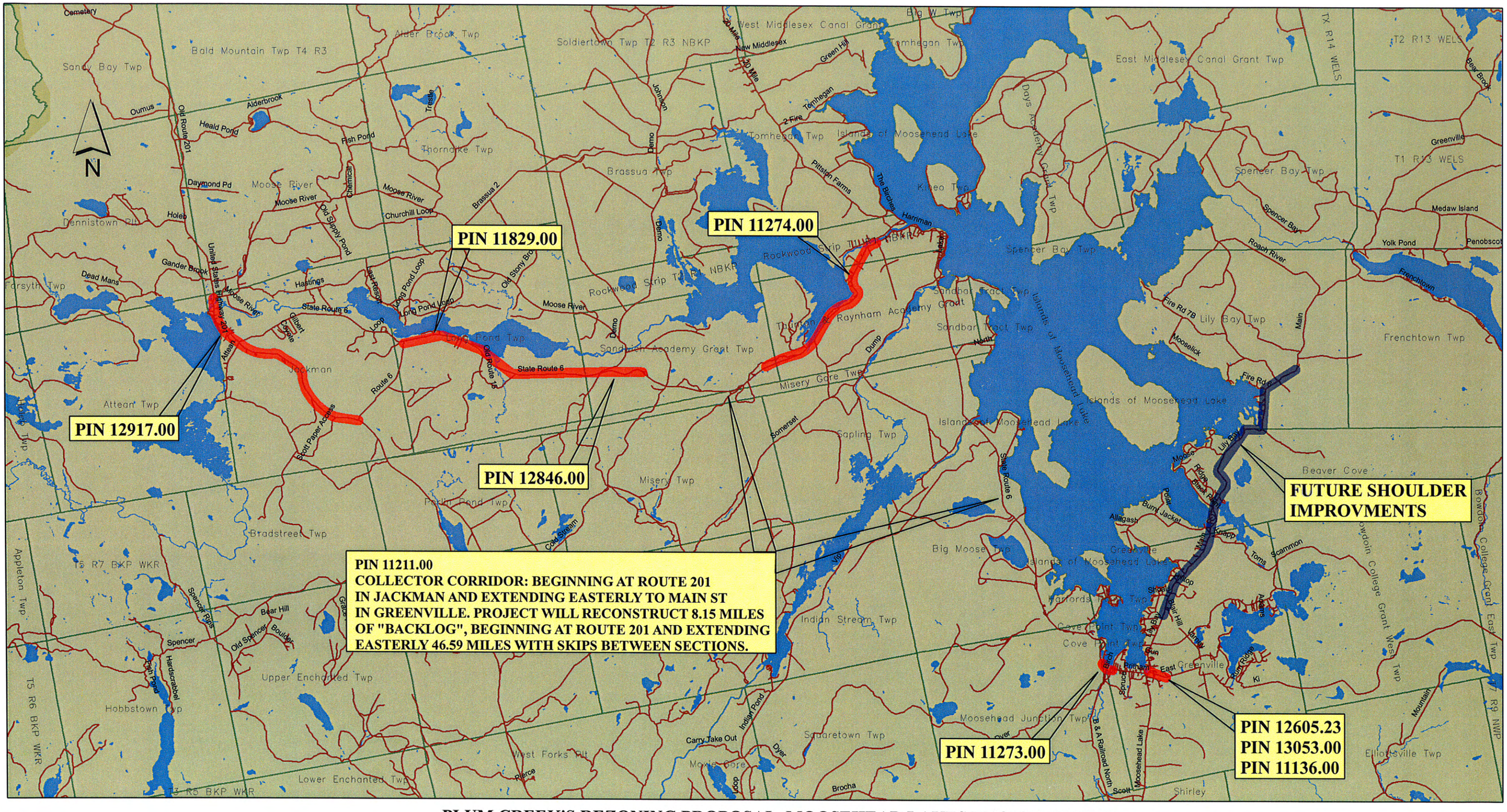
PLUM CREEK'S REZONING PROPOSAL
MOOSEHEAD LAKES REGION, MAINE

Design: DAB
Draft: ZRJ
Checked: RCN

Scale: 1" = 50'
Date: MARCH 2006
File Name: 1381-01_pbase_alt2.dwg

Future Maine DOT Roadway Improvements

Figure No. 1



PLUM CREEK'S REZONING PROPOSAL, MOOSEHEAD LAKES REGION, MAINE

GP Gorrill–Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
Fax: 207-657-6912
mailbox@gorrillpalmer.com
www.gorrillpalmer.com

Miles
3 1.5 0 3 6

JN: 1381.01
DATE: MAR 2006
SOURCE: MAINE GIS WEBSITE

Form of
HIKING TRAIL EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that **PLUM CREEK MAINE TIMBERLANDS, L.L.C.** (formerly known as SDW TIMBER II, L.L.C.), a limited liability company organized and existing under the laws of the State of Delaware and having a mailing address of 999 Third Avenue, Suite 4300, Seattle, WA 98104, (hereinafter referred to as the "Grantor," which word shall include, unless the context clearly indicates otherwise, the above-named Grantor and its successors and assigns and any future owners or successors-in-interest to the Protected Property (defined below), and their agents, executors, administrators, and legal representatives) GRANTS to **THE STATE OF MAINE** acting by and through the Department of Conservation, Bureau of Parks and Lands, with a mailing address of 22 State House Station, Augusta, ME 04333 (hereinafter referred to as the "Holder," which word shall, unless the context clearly indicates otherwise, include Holder's successors and/or assigns), with QUITCLAIM COVENANT, in perpetuity, the following described Hiking Trail Easement on and across certain twenty (20) foot wide corridors of Grantor's land located in Bowdoin College Grant West, Bowdoin College Grant East, Beaver Cove, Frenchtown Township, Lily Bay Township, Shawtown Township, Smithtown Township, Big Moose Township, Sapling Township, Misery Gore, Taunton & Raynham Academy Grant, and Rockwood Strip (T1 R1 NKBP), in Piscataquis and Somerset Counties, Maine, which corridors of land are hereinafter collectively referred to as the "Protected Property", and are described on **Exhibit A**, attached hereto, and depicted on the plans attached hereto as **Exhibit B**, both made a part hereof by reference.

PURPOSE

The purpose of this Hiking Trail Easement is to allow the public, under the auspices and control of the Holder, to construct, maintain, repair and utilize the Protected Property for a pedestrian hiking trail, while also allowing the continued use of the Protected Property and the adjacent lands of the Grantor as a commercial working forest. In connection therewith, this Hiking Trail Easement is not intended to limit the rights of Grantor to conduct Forest Management Activities (as hereinafter defined) on the Protected Property, or to otherwise exercise its reserved rights hereunder. It is the intent of this Hiking Trail Easement that the location of the hiking trails will remain essentially fixed as set forth herein, and Grantor does not intend to relocate, or require relocation, of the hiking trails and/or the Hiking Trail Easement except in those cases set forth below. This Hiking Trail Easement is granted in accordance with the terms and provisions of the Concept Plan for Plum Creek's Lands in the Moosehead Lake Region (the "Concept Plan") approved by the Maine Land Use Regulation Commission ("LURC") on _____, 2007, and applies to the Protected Property only. Nothing herein shall be construed to impose any obligation, restriction, or other encumbrance on any real property not expressly made a part of the Protected Property.

WHEREAS, it is a significant public benefit that a hiking trail system be established in the Greater Moosehead Lake Region, an area of unique public interest; and

WHEREAS, the Protected Property is located proximate to other trail systems, including the Appalachian Trail, and other high value recreational resources, and is otherwise within an area ideally situated for the creation of a trail system; and

WHEREAS, this Hiking Trail Easement makes the Protected Property available for the establishment of a permanent public trail system that will provide long-term recreational and economic benefits to the surrounding area, the Greater Moosehead Lake Region, and the State of Maine; and

WHEREAS, continued Forest Management Activities on and near the Protected Property is not inconsistent or incompatible with the establishment of a hiking trail system; and

WHEREAS, this Hiking Trail Easement is granted not as a gift but pursuant to the terms of the Concept Plan and in consideration for and mitigation of certain development rights that will be or have been authorized by LURC.

NOW THEREFORE Grantor and Holder have established this Hiking Trail Easement affecting the Protected Property consisting of the following terms, covenants, restrictions, and affirmative rights, which shall run with and bind the Protected Property in perpetuity:

1. Public Hiking Trail Easement.

A. Use. The public, subject to the rights and obligations of the parties herein, shall have the perpetual right to enter upon and make use of the Protected Property for hiking (defined below) and trail construction, maintenance, repair, and relocation, and such other uses consistent herewith from time to time permitted by the Rules and Regulation adopted by Grantor pursuant to **Section 1.C.** below.

B. Trail Location, Cutting and Maintenance. The locations of the trail corridors making up the Protected Property are depicted on Exhibit B (subject to the relocation rights of Grantor set forth below), and Grantor may establish the hiking trails anywhere within such corridors. The rights granted to Holder by this Hiking Trail Easement shall include those rights reasonably necessary for or incident to the construction, maintenance, relocation, and/or repair of the hiking trails on the Protected Property, including the right to erect directional and/or informational signs, and to blaze trees or otherwise mark trails. Holder or its designated agents operating under its direction and control shall be responsible for all aspects of Trail design, layout, cutting, grading, drainage, and all related maintenance; provided that the locations of the trail corridors making up the Protected Property (either as initially constructed or as may be relocated from time to time), must be approved in advance by Grantor. Construction of proposed hiking trails, and maintenance of all existing hiking trails shall be subject to reasonable rules and regulations from time to time adopted by Grantor pursuant to **Section 1.C** below. All hiking trails constructed under this Hiking Trail Easement shall be generally left in a primitive state, and in no event shall any hiking trail be paved with any asphalt, concrete, recycled material, or other impervious surface. All such construction, reconstruction, maintenance and repair work shall be undertaken at Holder's sole cost and expense. Holder shall be responsible for obtaining all

permits for such construction activities and permitted uses of the hiking trails from all Federal, state or local authorities with jurisdiction over the hiking trails or the Protected Property. Holder agrees that the location, design, and capacity of any necessary bridges, stream crossings or culverts built or improved by Holder must conform with applicable rules, laws and regulations, the then-existing forestry Best Management Practices of the State of Maine, and the standards imposed by the 2005-2009 Sustainable Forestry Initiative Standards, any successors to same, or such other standards as Grantor may from time to time implement on or apply to the Protected Property; and must be approved in advance by Grantor, such approval not to be unreasonably delayed or withheld.

C. Rules and Regulations Concerning Public Use, Construction and Maintenance. The right of the public to use the hiking trails and the duties of Holder as to trail oversight, construction, reconstruction, maintenance and repair are subject to the reserved right of Grantor (upon reasonable opportunity to comment by Holder, except in the case of an emergency) to establish, and modify from time to time, reasonable rules and regulations (the "Rules and Regulations") for the conservation and protection of the Protected Property, for public safety purposes, to protect critical habitat or environmentally sensitive areas, and/or to facilitate compatibility with the conduct of Forest Management Activities and other reserved uses hereunder. Grantor's reserved right to make the Rules and Regulations shall include the rights, without limitation, to control, limit or prohibit, by posting and other reasonable means, on some or all of the trail corridors making up the Protected Property, night use, loud activities, domesticated animals, pets or bicycles, and/or posting signs or cutting trees or other vegetation outside the trail corridors. The following uses are strictly prohibited within the Protected Property: snowmobiles, all terrain vehicles, any other motorized vehicles, camping and open fires.

D. Publications. Grantor shall be provided at least thirty (30) days advance opportunity to review for accuracy and content any maps, pamphlets or brochures printed and distributed by Holder or its agents in regard to public use of the hiking trails.

2. Reservation of Uses, Forest Management Activities.

A. Reservation of all Uses. Grantor reserves all the rights, uses, title, and interest in and to the Protected Property other than those specific grants and covenants made to Holder in this Hiking Trail Easement. Grantor specifically reserves, without limitation, the perpetual right on the Protected Property to engage in Forest Management Activities. This Hiking Trail Easement shall not be construed in any manner to create any obligation of Grantor to maintain a buffer strip, undisturbed forest land, view corridor, or other limitation on its Forest Management Activities and other land uses permitted hereunder. In the event that any future statute, regulation, or rule has the effect of expanding or enhancing the public use of the hiking trails, contrary to or inconsistent with the terms and provisions of this Hiking Trail Easement, the enactment of such law, regulation, or rule shall be deemed a material default without the requirement of proof of specific impact, and shall entitle Grantor to exercise the remedies for default provided in **Section 6** below.

B. Right to Close and Relocate Portions of Protected Property. Grantor's reserved rights shall include, without limitation, the right on thirty (30) days advance written notice, or shorter periods in the event of an emergency, to close portions of the trail corridors making up the Protected Property and/or to require relocation of one or more trail corridors, or portions thereof, on either a temporary or permanent basis, as Grantor may determine in its sole judgment as necessary or appropriate for the conservation and protection of the Protected Property, for public safety purposes, to protect critical habitat or environmentally sensitive areas, and/or to accommodate Forest Management Activities and other reserved uses of Grantor; provided that Grantor designates an alternate route so that the connectivity of the trails located within the Protected Property is not interrupted. In such event, Grantor shall be solely responsible for the costs and expense of such relocation, but shall not be responsible for the physical relocation of the hiking trails. In the event of a temporary relocation, Grantor shall execute and deliver to Holder a temporary easement, on identical terms and conditions to this Hiking Trail Easement, for the areas to which the hiking trails have been relocated. In the event of a permanent relocation, Grantor and Holder shall execute an amendment to this Hiking Trail Easement revising the description and depiction of the Protected Property set forth in Exhibits A and B to reflect the relocated areas. Such right to close or relocate trails shall not be construed to limit Grantor's rights otherwise to engage in any uses of the Protected Property permitted hereunder, including without limitation Forest Management Activities on, over, across, near, or in the vicinity of the hiking trails as permitted in **Section 2.A** above.

C. Nonexclusivity. Nothing contained in this Hiking Trail Easement shall be construed as imposing an obligation upon Grantor to restrict any other license or permission granted by Grantor on the Protected Property to Holder, the public, or any other party, nor shall anything contained in this Hiking Trail Easement be construed as granting an exclusive right to carry on any activity on the Protected Property. Other than as set forth in this Hiking Trail Easement, no permanent expressed or implied right of access to, or use of, private lands and/or improvements, including, but not limited to, roads owned by Grantor, is granted, transferred, or assigned.

3. Immunities.

Grantor and Holder claim all of the rights and immunities against liability to the fullest extent of the law under the Maine Recreational Use Statute (14 M.R.S.A. § 159-A, et seq. as amended from time to time) and the Maine Tort Claims Act (14 M.R.S.A. § 8101, et seq. as amended from time to time) and under any other applicable provision of law providing immunity from liability to landowners who allow public recreational uses of their lands.

4. Additional Provisions Regarding Trail Use.

Without limitation to Grantor's rights to impose Rules and Regulations limiting the use of the hiking trails, the following special provisions shall at all times apply to the hiking trails:

A. Trail Usage. Holder expressly agrees to adequately police the trails located on the Protected Property, to provide proper supervision of use of the Protected Property by the public, and to adequately maintain and repair the trails located on the Protected Property. Holder shall keep the Protected Property clear of debris and litter and shall take all reasonable steps to ensure

that the exercise of the rights granted by this Hiking Trail Easement is done in a manner consistent with the provisions of this Hiking Trail Easement and all Rules and Regulations from time to time adopted by Grantor.

B. Unauthorized Use of Protected Property and Adjacent Property of Grantor. Holder agrees to use all reasonably available means to discourage unauthorized public travel on the Protected Property and any property owned by Grantor outside of the designated corridors, and to advise the public of any relocation of the hiking trails pursuant to **Section 2.B**., above.

C. Fees. Holder agrees that it shall not charge a user fee or similar specific assessment for the use of the Protected Property without the prior consent in writing of Grantor, which consent may be withheld in its absolute discretion. This prohibition shall not restrict Holder from assessing fees of general application to the public.

D. Public Information. Holder shall be solely responsible for the handling and administration of all public matters, controversies, or conflicts regarding the rights of the public under this Hiking Trail Easement. Holder shall designate a representative as its official contact person to whom all public inquiries may be forwarded by Grantor.

5. Indemnification.

Holder shall indemnify, save, and hold Grantor harmless from and against any and all loss, damage, expense (including attorneys' fees), responsibility, liability for injury or death of persons, and/or loss, damage to, or destruction of property belonging to Grantor or others, or for claims therefor, whether or not Grantor has suffered actual loss, damage, environmental contamination, or expense ("Loss"), where such Loss has resulted from, pertains to, or has arisen out of the exercise, by Holder, the public or any third parties, of the rights granted by this Hiking Trail Easement. Holder's indemnity obligation shall include, without limitation, any negligent acts, omissions to act, or willful misconduct, whether active or passive, on the part of Holder, its agents or the public and shall extend to claims asserted after termination of this Hiking Trail Easement to the extent that the Loss occurred during the term of this Hiking Trail Easement. Holder's indemnity obligations shall extend to the joint or concurrent negligence of Holder and Grantor but shall not extend to Losses caused by Grantor's sole negligence or willful misconduct. Holder hereby waives, in favor of Grantor only, any governmental immunity defenses which might otherwise be available to it in the event that Grantor makes claim for indemnification as provided above.

6. Default, Remedies.

In the event of Holder's material uncured breach of any of the covenants, terms, conditions, restrictions, and agreements herein contained for a period of thirty (30) days after written notice from Grantor, then Grantor may, at its option, prohibit use by posting or other means of those portions of the Protected Property which are the subject to the breach until cured to Grantor’s satisfaction. Additionally, Grantor may recover its costs, including reasonable attorney’s fees, and damages incurred as a result of the breach. If the breach by Holder is of a type that is not capable of being cured within said thirty (30) days, the breach will be deemed cured if Holder commences to cure the breach within said thirty days, gives written assurances of

its intent to complete the cure within a reasonable time under the circumstances and diligently completes the cure as soon as circumstances permit. No failure on the part of Grantor to enforce a breach of this Hiking Trail Easement by Holder of any conditions or agreements herein contained shall be construed as a waiver of the right to enforce any of the remedies provided herein for subsequent breach of the same or any other of said conditions or agreements.

7. Non-Assignability/Transfer of Protected Property

Holder shall not assign or transfer this Hiking Trail Easement or any of the rights associated herewith. This Hiking Trail Easement shall be binding upon and enforceable by and against Grantor and any future owners or successors in interest of the Protected Property, such that multiple Grantors may own portions of the Protected Property, each of whom shall be entitled to enforce and be bound by this Hiking Trail Easement. Grantor's rights and obligations under this Hiking Trail Easement shall terminate in whole or in applicable part when it ceases to have any interest in the Protected Property, or portion thereof, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

8. Amendments

Grantor and Holder have the right to amend this Hiking Trail Easement to the extent that changes are not inconsistent with the purpose of this grant or the Concept Plan, by written and recorded agreement of Grantor and Holder.

9. Force Majeure:

Upon giving notice to the other party, a party affected by an event of Force Majeure as defined in **Section 10** below shall be released without any liability on its part from the performance of its obligations under this Hiking Trail Easement, but only to the extent and only for the period that its performance of such obligations is prevented or materially hindered by the event of Force Majeure. During the period that the performance by one of the parties of its obligations under this Agreement has been suspended by reason of an event of Force Majeure, the other party may likewise suspend the performance of all or part of its obligations hereunder to the extent that such suspension is commercially reasonable.

10. Definitions

As used in this Hiking Trail Easement the terms listed below shall have the meanings ascribed to them:

"Force Majeure" means any event or condition, not existing as of the date of execution of this Agreement, not reasonably foreseeable as of such date and not reasonably within the control of either party, which prevents, in whole or in material part, the performance by one of the parties of its obligations hereunder, such as act of God, fire, flood, windstorm, blight, icestorm, snow, government regulation, order, legislation or taking, war or related actions, civil insurrection, terrorism, riot, sabotage, strike or other labor disturbance, epidemic, and similar events.

"Forest Management Activities" means all forest management practices allowable under law (now or in the future) and the harvesting and removal of any and all forest products by any and all current and future harvesting and removal techniques allowable under law. Forest Management Activities shall include, but not be limited to, the following activities and Grantor's management of such activities: reforestation, planting, growing, cutting, and harvesting trees, forest products, and other vegetation; construction, use, and maintenance of skid trails, skid roads, skidder bridges, log yards, landing and staging areas, land management roads, winter haul roads or other paths, roads, or trails used to provide pedestrian, domestic animal and vehicular access to and from and within the Protected Property in order to carry out the Forest Management Activities on the Protected Property; clearing for reforestation; harvesting, pruning, girdling, or trimming trees and other vegetation; harvesting forest products with domestic animals or mechanical equipment; maintenance of existing fields and meadows; conducting timber cruising, forest management planning, forest stand improvement, forest crop selection, forest research, and other forest resource evaluation activities; cutting and removing forest products, including but not limited to trees, logs, poles, posts, pulpwood, firewood, chips, seeds, pinestraw, stumps, seed cones, bark, shrubs, lesser vegetation, and biomass; collection and processing of all sugar maple products; conducting fire control and other activities to prevent or control losses or damage to forest crops or forest products; identifying and marking boundaries; salvaging forest crops or forest products; marking timber and performing other activities to identify trees or areas for harvest; performing commercial and pre-commercial silvicultural treatments; disposing of harvesting debris and conducting post-harvest or site recovery activities; applying in accordance with applicable statutes and regulations herbicides, pesticides, fungicides, rodenticides, insecticides, and fertilizers; removing, loading, and transporting timber and other forest crops and products; processing forest products with portable or temporary equipment designed for in-woods processing; trimming, cutting, removing, burning, or otherwise disposing of any trees or vegetation which are diseased, rotten, damaged or fallen; trimming, cutting, removing, or otherwise disposing of any trees or vegetation as is necessary to construct or maintain fire lanes, footpaths, and any roads permitted under this Easement; the removal (by quarrying or otherwise) of gravel and other minerals from the earth and the storage of the same (which gravel and other minerals may be used for any lawful purpose, including sale to others); and any other activity the Grantee deems useful or expedient in connection with the foregoing.

11. Notices

Notices to any party must be in writing and will be sufficient if served personally or sent by overnight delivery service or certified mail, return receipt requested, addressed as follows:

To Grantor	General Counsel Plum Creek Maine Timberlands, L.L.C. 999 Third Avenue Suite 4300 Seattle, WA 98104
To Holder:	Director Maine Bureau of Parks and Lands

22 State House Station
Augusta, ME 04333

With a copy to: Director
Maine Land Use Regulation Commission
22 State House Station
Augusta, ME 04333

or to such other authorized person as any party may from time to time designate by written notice to the others.

12. General Provisions.

A. General. The section headings herein are for reference and convenience only and shall not be considered in the interpretation hereof. If any term or provision of this Hiking Trail Easement is determined to be invalid, unenforceable, or against public policy, the remainder of this Hiking Trail Easement shall not be affected thereby and all other terms and provisions of this Hiking Trail Easement shall remain valid and enforceable to the extent permitted by law.

B. Waiver. The failure or delay of either party, for any reason whatsoever, to enforce this Hiking Trail Easement shall not constitute a waiver of its rights, and each party hereby waives any defense of laches, prescription or estoppel. Nothing herein shall be construed as to relieve Grantor from compliance with any federal, state or local law, regulation, rule or ordinance applicable to the Protected Property.

C. Governing Laws. This Hiking Trail Easement is intended to be governed as a trail easement in compliance with 33 M.R.S.A §§ 1581-1585. Interpretation and performance of this Hiking Trail Easement shall be governed by all other applicable laws of the State of Main, without giving effect to its conflict of laws provisions if doing so would result in any provision of this Hiking Trail Easement being governed or interpreted under the laws of any other jurisdiction. Should uncertainty arise in its meaning, this Hiking Trail Easement shall be interpreted in favor of Grantor's use of the Protected Property.

D. Enforcement Rights. This Hiking Trail Easement shall not be construed to entitle any person or entity other than Grantor or Holder to enforce any of the terms or conditions hereof. Specifically, no member of the public shall have any rights under this Hiking Trail Easement to enforce as against Grantor any of its provisions, such rights being exclusive to Holder.

IN WITNESS WHEREOF, Grantor has caused this Hiking Trail Easement to be signed in its corporate name, and its corporate seal to be hereto affixed, by _____, its _____, hereunto duly authorized, this _____ day of _____, 2007.

Signed, Sealed and Delivered
in the presence of:

WITNESS

GRANTOR:
PLUM CREEK MAINE TIMBERLANDS, L.L.C.

_____

By: _____
Name
Its

STATE OF WASHINGTON)
)ss:
COUNTY OF KING)

On this ___ day of _____, 2007, before me personally appeared _____, to me known to be the _____ of Plum Creek Maine Timberlands, L.L.C., the limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited liability company for the uses and purposes therein mentioned, and on oath stated that s/he was authorized to execute said instrument on behalf of the limited liability company and that the seal affixed is the seal of said limited liability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

_____
Notary Public in and for the
State of Washington
Residing at_____
My Commission Expires _____
Printed Name: _____

HOLDER ACCEPTANCE

The above and foregoing Hiking Trail Easement was authorized to be accepted by **THE STATE OF MAINE** acting by and thought the Department of Conservation, Bureau of Parks and Lands, Holder as aforesaid, and the said Holder does hereby accept the foregoing Hiking Trail Easement, by and through _____, its _____, hereunto duly authorized, this _____ day of _____, 2007 and agrees to be bound by all its terms and provisions.

HOLDER:
THE STATE OF MAINE acting by and through the Department of Conservation, Bureau of Parks and Lands

By:_____
Its: _____

State of Maine
County of Kennebec, ss _____, 2007

Personally appeared _____, hereunto duly authorized, and acknowledged the foregoing instrument to be his free act and deed in his said capacity as Commissioner of the Maine Department of Conservation.

Before me,

_____
Notary Public
Printed Name: _____

ATTACHMENTS:

EXHIBIT A - A legal description of the Protected Property.

EXHIBIT B. A Plot Plan depicting the approximate location of existing and proposed trail corridors making up the Protected Property and showing approximate locations of features on and near the Protected Property.

Form of
SNOWMOBILE TRAIL EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that **PLUM CREEK MAINE TIMBERLANDS, L.L.C.** (formerly known as SDW TIMBER II, L.L.C.), a limited liability company organized and existing under the laws of the State of Delaware and having a mailing address of 999 Third Avenue, Suite 4300, Seattle, WA 98104, (hereinafter referred to as "Grantor," which word shall include, unless the context clearly indicates otherwise, the above-named Grantor and its successors and assigns and any future owners or successors-in-interest to the Protected Property (defined below), and their agents, executors, administrators, and legal representatives) GRANTS to **THE STATE OF MAINE** acting by and through the Department of Conservation, Bureau of Parks and Lands, with a mailing address of 22 State House Station, Augusta, ME 04333 (hereinafter referred to as "Holder," which word shall, unless the context clearly indicates otherwise, include Holder's successors and/or assigns), with QUITCLAIM COVENANT, in perpetuity, the following described Snowmobile Trail Easement on and across certain ten (10) foot wide corridors of Grantor's land located in Squaretown Township, Big Moose Township, Sapling Township, Misery Gore, Taunton & Raynham Academy Grant, Sandwich Academy Grant, Rockwood Strip (T2 R1 NKBP), Long Pond Township, Thorndike Township, Bowdoin College Grant West, Beaver Cove, Lily Bay Township, Frenchtown Township, Smiththown Township (T1 R13 WELS), and T1 R14 WELS, in Somerset and Piscataquis Counties, Maine, which corridors of land are hereinafter collectively referred to as the "Protected Property", and are described on **Exhibit A**, attached hereto, and depicted on the plans attached hereto as **Exhibit B**, both made a part hereof by reference;

PURPOSE

The purpose of this Snowmobile Trail Easement is to enhance recreational opportunities within the State of Maine by making land available to the public, under the direction and control of Holder, for purposes of constructing and utilizing a permanent snowmobile trail system on the Protected Property, subject to the terms and conditions, and reserved rights of Grantor, set forth herein. Notwithstanding the foregoing, Holder acknowledges that the Protected Property is part of a working forest, and that Forest Management Activities (defined below) and other activities continue to be conducted on and in the vicinity of the Protected Property. Reference is made to the approved Concept Plan for Plum Creek's Gateway Lands in the Moosehead Lake Region for Grantor's land (the "Concept Plan"), of which the Protected Property is a part, on file at the offices of the Maine Land Use Regulation Commission ("LURC") in Augusta, Maine, or its successor agency. This Snowmobile Trail Easement applies to the Protected Property only. Nothing herein shall be construed to impose any obligation, restriction, or other encumbrance on any real property not expressly made a part of the Protected Property.

WHEREAS, it is a significant public benefit that a snowmobile trail system be established in the Greater Moosehead Lake Region, an area of unique public interest; and

WHEREAS, the Protected Property is located proximate to other trail systems, including the Innerconnected Trail System (the "ITS"), and other high value recreational resources, and is otherwise within an area ideally situated for the creation of a trail system; and

WHEREAS, the majority of the ITS is located on land by permission only, and is not a permanent right of the public; and

WHEREAS, this Snowmobile Trail Easement makes the Protected Property available for the establishment of a permanent public snowmobile trail system that will provide long-term recreational and economic benefits to the surrounding area, the Greater Moosehead Lake Region, and the State of Maine; and

WHEREAS, continued Forest Management Activities on and near the Protected Property are not inconsistent or incompatible with the establishment of a snowmobile trail system; and

WHEREAS, this snowmobile Trail Easement is granted not as a gift but pursuant to the terms of the Concept Plan and in consideration for and mitigation of certain development rights that will be or have been authorized by LURC.

NOW THEREFORE Grantor and Holder have established this Snowmobile Trail Easement affecting the Protected Property consisting of the following terms, covenants, restrictions, and affirmative rights, which shall run with and bind the Protected Property in perpetuity:

1. Public Snowmobile Trail Easement.

A. Use. The public, subject to the rights and obligations of the parties herein, shall have the perpetual right to enter upon and make use of the Protected Property for Snowmobiling (defined below) and trail construction, reconstruction, maintenance, repair, preparation, and relocation, and such other uses consistent herewith from time to time permitted by the Rules and Regulations adopted by Grantor pursuant to **Section 1.C.** below.

B. Trail Location, Cutting and Maintenance. The proposed locations of the trail corridors making up the Protected Property are depicted on Exhibit B. The exact locations of the trail corridors making up the Protected Property shall be determined by the as-constructed, on the ground location of such trail corridors, as the same may be relocated from time to time pursuant to the terms of this Snowmobile Trail Easement. The rights granted to Holder by this Snowmobile Trail Easement shall include those rights reasonably necessary for or incident to the construction, maintenance, relocation, and/or repair of the snowmobile trails on the Protected Property, including the right to erect directional and/or informational signs, and to blaze trees or otherwise mark trails. Holder or its designated agents operating under its direction and control shall be responsible for all aspects of Trail design, layout, cutting, grading, drainage, and all related maintenance; provided that the locations of the trail corridors making up the Protected Property (either as initially constructed or as may be relocated from time to time), must be approved in advance by Grantor. Construction of proposed snowmobile trails, and maintenance of all existing snowmobile trails shall be subject to reasonable standards, rules, and regulations

from time to time adopted by Grantor pursuant to **Section 1.C** below. All snowmobile trails constructed under this Snowmobile Trail Easement shall be generally left in a primitive state, and in no event shall any snowmobile trail be paved with any asphalt, concrete, recycled material, or other impervious surface. All such construction, reconstruction, maintenance and repair work shall be undertaken at Holder's sole cost and expense. Holder shall be responsible for obtaining all permits for such construction activities and permitted uses of the smowmobile trails from all Federal, state or local authorities with jurisdiction over the snowmobile trails or the Protected Property. Holder agrees that the location, design, and capacity of any necessary bridges, stream crossings or culverts built or improved by Holder must conform with applicable rules, laws and regulations, the then-existing forestry Best Management Practices of the State of Maine, and the standards imposed by the 2005-2009 Sustainable Forestry Initiative Standards, any successors to same, or such other standards as Grantor may from time to time implement on or apply to the Protected Property; and must be approved in advance by Grantor, such approval not to be unreasonably delayed or withheld.

C. Right of Grantor to Establish Rules and Regulations Concerning Public Use, Construction and Maintenance. The right of the public to use the snowmobile trails and the duties of Holder as to trail oversight, maintenance, and construction are subject to the reserved right of Grantor (upon reasonable opportunity to comment by Holder, except in the case of an emergency) to establish reasonable rules, regulations, and restrictions (the "Rules and Regulations"), for the conservation and protection of the Protected Property and/or the Forest Management Activities and other reserved uses hereunder. Grantor's reserved right to make the Rules and Regulations shall include the rights, without limitation, to control, limit or prohibit, by posting and other reasonable means, on some or all of the trail corridors making up the Protected Property, winter pedestrian activities (including cross-country skiing and snowshoeing), all terrain vehicles ("ATVs"), motorized vehicles, loud activities, domesticated animals, pets or bicycles, posting of signs, or cutting trees outside the trail corridors. Night use, camping and open fires on the Protected Property are expressly prohibited.

D. Publications. Grantor shall be provided at least thirty (30) days advance opportunity to review for accuracy and content any maps, pamphlets, or brochures printed and distributed by Holder or its agents in regard to public use of the snowmobile trails.

2. Reservation of Uses, Forest Management Activities, and Timber Harvesting.

A. Reservation of all Uses. Grantor reserves all the rights, uses, title, and interest in and to the Protected Property other than those specific grants and covenants made to Holder in this Snowmobile Trail Easement. Grantor specifically reserves, without limitation, the perpetual right on the Protected Property and any adjacent property of the Grantor to engage in Forest Management Activities. This Snowmobile Trail Easement shall not be construed in any manner to create any obligation of Grantor to maintain a buffer strip, undisturbed forest land, view corridor, or other limitation on its Forest Management Activities and other land uses permitted hereunder. In the event that any future statute, regulation, or rule has the effect of expanding or enhancing the public use of the snowmobile trails, contrary to or inconsistent with the terms and provisions of this Snowmobile Trail Easement, the enactment of such law, regulation, or rule

shall be deemed a material default without the requirement of proof of specific impact, and shall entitle Grantor to exercise the remedies for default provided in **Section 6** below.

B. Right to Close and Require Relocation of Snowmobile Trails. Grantor's reserved rights shall include, without limitation, the right on thirty (30) days advance written notice, or shorter periods in the event of an emergency, to close portions of the trail corridors making up the Protected Property and/or to require relocation of one or more trail corridors, or portions thereof, on either a temporary or permanent basis, as Grantor may determine in its sole judgment as necessary or appropriate for public safety and/or in connection with Grantor's Forest Management Activities. Upon receipt of such notice, Holder shall take all reasonable steps to close the affected trail corridors, or portions thereof, at its sole cost and expense. Holder shall have the right, at its sole cost and expense, to relocate any closed trail corridors, or portions thereof, to a new location acceptable to Grantor, which location shall be confirmed by an amendment to Exhibit B executed by the parties. In the event Holder does not relocate any affected trail corridors, or portions thereof, within said 30-day period, Grantor shall have the right to close the same, by posting or other means; provided, however, that the closing of any such trail corridors, or portions thereof, by Grantor shall not affect the right of Holder to relocate such trail corridors as set forth herein. Such right to close or relocate trails shall not be construed to limit Grantor's rights otherwise to engage in any uses of the Protected Property, including without limitation Forest Management Activities on, over, across, near**,** or in the vicinity of the Protected Property as permitted in **Section 2.A** above.

C. Nonexclusivity. Nothing contained in this Snowmobile Trail Easement shall be construed as imposing an obligation upon Grantor to restrict any other license or permission granted by Grantor on the Protected Property to Holder, the public, or any other party, nor shall anything contained in this Snowmobile Trail Easement be construed as granting an exclusive right to carry on any activity on the Protected Property. Other than as set forth in this Snowmobile Trail Easement no permanent expressed or implied right of access to, or use of, private lands and/or improvements, including, but not limited to, roads owned by Grantor, is granted, transferred, or assigned.

3. Immunities.

Grantor and Holder claim all of the rights and immunities against liability to the fullest extent of the law under Title 14 M.R.S.A., Section 159-A, et seq. as amended and any successor provisions thereof, (Maine Recreational Use Statute), and Title 14 M.R.S.A. Section 8101, et seq. as amended and any successor provisions thereof, (the Maine Tort Claims Act), and under any other applicable provision of law.

4. Additional Provisions Applicable to Snowmobiles and Related Usage of the Protected Property.

Without limitation to Grantor's rights to impose Rules and Regulations limiting the use of the Snowmobile Trails, the following special provisions shall at all times apply to the Snowmobile Trails:

A. Grooming. Grantor shall have no responsibility for grooming or patrolling Snowmobile Trails. No portion of any Snowmobile Trail shall be located on a plowed road except to cross said road at a right angle.

B. Trail Usage. Holder expressly agrees to adequately police the trails located on the Protected Property, to provide proper supervision of use of the Protected Property by the public, and to adequately maintain and repair the trails located on the Protected Property. Holder shall keep the Protected Property clear of debris and litter and shall take all reasonable steps to ensure that the exercise of the rights granted by this Snowmobile Trail Easement is done in a manner consistent with the provisions of this Snowmobile Trail Easement and all Rules and Regulations from time to time adopted by Grantor **.**

C. Unauthorized Use of Property. Holder agrees to use every available means to discourage unauthorized public travel on the Protected Property outside of the designated corridors.

D. Trail Network. In the event that Forest Management Activities of Grantor is of an unusual or emergency nature which would be in conflict with Holder's use under the terms of this Snowmobile Trail Easement, Grantor agrees to employ reasonable measures to expedite the granting of permission of an alternate route. Preparation and maintenance of that alternate route will be the responsibility and expense of Holder.

E. Fees. Holder agrees that it shall not charge a user fee or similar specific assessment for the use of the Protected Property without the prior consent in writing of Grantor, which consent may be withheld in its absolute discretion. This prohibition shall not restrict Holder from assessing fees of general application to the public. Grantor reserves the right to assess a user's fee as part of the Rules and Regulations if in its judgment the fees are necessary to cover its costs associated with this Snowmobile Trail Easement.

F. Public Controversies. Holder shall be solely responsible for the handling and administration of all public matters, controversies**,** or conflicts regarding the rights of the public under this Snowmobile Trail Easement. Holder shall designate a representative as its official contact person to whom all public inquiries may be forwarded by Grantor.

5. Indemnification and Insurance.

A. Indemnification. Holder shall indemnify, save, and hold Grantor harmless from and against any and all loss, damage, expense (including attorneys' fees), responsibility, liability for injury or death of persons**,** and/or loss, damage to, or destruction of property belonging to Grantor or others, or for claims therefor, whether or not Grantor has suffered actual loss, damage, environmental contamination, or expense ("Loss"), where such Loss has resulted from, pertains to, or has arisen out of the Snowmobile Trail Easement. Holder's indemnity obligation shall include, without limitation, any negligent acts, omissions to act, or willful misconduct, whether active or passive, on the part of Holder, its agents or the public and shall extend to claims asserted after termination of this Snowmobile Trail Easement to the extent that the Loss occurred during the term of this Snowmobile Trail Easement. Holder's indemnity obligations

shall extend to the joint or concurrent negligence of Holder and Grantor but shall not extend to Losses caused by Grantor's sole negligence or willful misconduct. Holder hereby waives, in favor of Grantor only, any governmental immunity defenses which might otherwise be available to it in the event that Grantor makes claim for indemnification as provided above.

B. Insurance. The State of Maine acting through the Bureau of Parks and Lands, or its successors, will purchase and keep in full force and effect, an insurance policy providing property damage (casualty) insurance for the benefit of Grantor in the amount of $1,000,000.00 per occurrence and an insurance policy providing $1,000,000.00 per occurrence, public liability protection to Grantor and Holder as named insureds. All such liability insurance policies shall (i) name Grantor, and its affiliates, as additional insureds but only with respect to their interests arising from this Agreement; (ii) provide Grantor with at least thirty (30) days notice of cancellation; (iii) be occurrence-based; (iv) provide cross-liability coverage in favor of the named insureds and the additional insureds. Holder shall provide Grantor with certificates of insurance in a form reasonably satisfactory to Grantor evidencing Holder's compliance with the insurance requirements of this Section. All liability insurance policies required to be maintained pursuant to this Agreement shall be written by an insurance company licensed in Maine, which company shall have at least an "A" Rating Classification, and shall be assigned a financial size category of at least Class IX, as indicated in the most recent edition of A.M. Best's Key Rating Guide for insurance companies. In the event that inflation, industry standards or any other cause, in Grantor's reasonable opinion, requires the aforesaid limits and coverages to be increased or modified, Grantor reserves the right upon consultation with Holder to require Holder to modify said limits and coverages to the levels then customarily carried on operations and property of like size and type.

6. Default and Termination

A. Default. In the event of Holder's material uncured breach of any of the covenants, terms, conditions, restrictions**,** and agreements herein contained for a period of thirty (30) days after written notice from Grantor, then Grantor may, at its option, (i) prohibit use by posting or other means of those portions of the Protected Property which are the subject to the breach until cured to Grantor's satisfaction; or, (ii) terminate this Snowmobile Trail Easement, or any portion thereof, by recording a written notice in the County registries with a copy to Holder of such termination, and upon the date specified in said notice, this Snowmobile Trail Easement, or such applicable portion thereof, shall terminate and be of no further force and effect. Additionally, Grantor may recover its costs, including reasonable attorney's fees, and damages incurred as a result of the breach. If the breach by Holder is of a type that is not capable of being cured within said thirty (30) days, the breach will be deemed cured if Holder commences to cure the breach within said thirty days, gives written assurances of its intent to complete the cure within a reasonable time under the circumstances and diligently completes the cure as soon as circumstances permit. No failure on the part of Grantor to enforce a breach of this Snowmobile Trail Easement by Holder of any conditions or agreements herein contained shall be construed as a waiver of the right to enforce any of the remedies provided herein for subsequent breach of the same or any other of said conditions or agreements.

B. Hold Over. It is further understood that, at the termination of this Snowmobile Trail

Easement, or portion thereof, any signs, bridges, structures, and all personal property of Holder shall be removed from the Protected Property within ninety (90) days from the date of this termination; Holder hereby agrees that any personal property of Holder remaining on the Protected Property after the expiration of said ninety (90) days shall be and become the property of Grantor. Grantor, however, reserves the right to require that Holder shall remove the same within the ninety (90) day period if it so demands.

7. Non-Assignability/Transfer of Property

Holder shall not assign or transfer this Snowmobile Trail Easement or any of the rights associated therewith. This Snowmobile Trail Easement shall be binding upon and enforceable by and against Grantor and any future owners or successors in interest of the Protected Property, such that multiple Grantors may own portions of the Protected Property, each of whom shall be entitled to enforce and be bound by this Snowmobile Trail Easement. Grantor's rights and obligations under this Snowmobile Trail Easement shall terminate in whole or in applicable part when it ceases to have any interest in the Protected Property, or such portion of it as so sold, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

8. Amendments

Grantor and Holder have the right to amend this Snowmobile Trail Easement to the extent that changes are not inconsistent with the purpose of this grant or the Concept Plan, by written and recorded agreement of Grantor and Holder.

9. Force Majeure:

Upon giving notice to the other party, a party affected by an event of Force Majeure as defined in **Section 10** below shall be released without any liability on its part from the performance of its obligations under this Snowmobile Trail Easement, but only to the extent and only for the period that its performance of such obligations is prevented or materially hindered by the event of Force Majeure. During the period that the performance by one of the parties of its obligations under this Agreement has been suspended by reason of an event of Force Majeure, the other party may likewise suspend the performance of all or part of its obligations hereunder to the extent that such suspension is commercially reasonable.

10. Definitions

As used in this Agreement the terms listed below shall have the meanings ascribed to them:

"Force Majeure" means any event or condition, not existing as of the date of execution of this Agreement, not reasonably foreseeable as of such date and not reasonably within the control of either party, which prevents, in whole or in material part, the performance by one of the parties of its obligations hereunder, such as act of God, fire, flood, windstorm, blight, icestorm, snow, government regulation, order, legislation or taking, war or related actions, civil

insurrection, terrorism, riot, sabotage, strike or other labor disturbance, epidemic, and similar events.

"Forest Management Activities" means all forest management practices allowable under law (now or in the future) and the harvesting and removal of any and all forest products by any and all current and future harvesting and removal techniques allowable under law. Forest Management Activities shall include, but not be limited to, the following activities and Grantor's management of such activities: reforestation, planting, growing, cutting, and harvesting trees, forest products, and other vegetation; construction, use, and maintenance of skid trails, skid roads, skidder bridges, log yards, landing and staging areas, land management roads, winter haul roads or other paths, roads, or trails used to provide pedestrian, domestic animal and vehicular access to and from and within the Protected Property in order to carry out the Forest Management Activities on the Protected Property; clearing for reforestation; harvesting, pruning, girdling, or trimming trees and other vegetation; harvesting forest products with domestic animals or mechanical equipment; maintenance of existing fields and meadows; conducting timber cruising, forest management planning, forest stand improvement, forest crop selection, forest research, and other forest resource evaluation activities; cutting and removing forest products, including but not limited to trees, logs, poles, posts, pulpwood, firewood, chips, seeds, pinestraw, stumps, seed cones, bark, shrubs, lesser vegetation, and biomass; collection and processing of all sugar maple products; conducting fire control and other activities to prevent or control losses or damage to forest crops or forest products; identifying and marking boundaries; salvaging forest crops or forest products; marking timber and performing other activities to identify trees or areas for harvest; performing commercial and pre-commercial silvicultural treatments; disposing of harvesting debris and conducting post-harvest or site recovery activities; applying in accordance with applicable statutes and regulations herbicides, pesticides, fungicides, rodenticides, insecticides, and fertilizers; removing, loading, and transporting timber and other forest crops and products; processing forest products with portable or temporary equipment designed for in-woods processing; trimming, cutting, removing, burning, or otherwise disposing of any trees or vegetation which are diseased, rotten, damaged or fallen; trimming, cutting, removing, or otherwise disposing of any trees or vegetation as is necessary to construct or maintain fire lanes, footpaths, and any roads permitted under this Easement; the removal (by quarrying or otherwise) of gravel and other minerals from the earth and the storage of the same (which gravel and other minerals may be used for any lawful purpose, including sale to others); and any other activity the Grantee deems useful or expedient in connection with the foregoing.

"Snowmobile" means a self-propelled vehicle manufactured for off-road travel on snow that (i) has a curb weight of not more than 1,000 pounds, (ii) does not exceed 50 inches in width, (iii) is driven by a track or tracks in contact with the snow, and (iv) is steered by a ski or skis in contact with the snow. "Snowmobile" does not include tracked (or otherwise configured) All-Terrain Vehicles (ATVs) or other motorized four-wheeled vehicles.

11. Notices

Notices to any party must be in writing and will be sufficient if served personally or sent by overnight delivery service or certified mail, return receipt requested, addressed as follows:

To Grantor	General Counsel Plum Creek Maine Timberlands, L.L.C. 999 Third Avenue Suite 4300 Seattle, WA 98104
To Holder:	Director Maine Bureau of Parks and Lands 22 State House Station Augusta, ME 04333
With a copy to:	Director Maine Land Use Regulation Commission 22 State House Station Augusta, ME 04333

or to such other authorized person as any party may from time to time designate by written notice to the others.

12. General Provisions.

A. General. The section headings herein are for reference and convenience only and shall not be considered in the interpretation hereof. If any term or provision of this Snowmobile Trail Easement is determined to be invalid, unenforceable, or against public policy, the remainder of this Snowmobile Trail Easement shall not be affected thereby and all other terms and provisions of this Snowmobile Trail Easement shall remain valid and enforceable to the extent permitted by law.

B. Waiver etc. The failure or delay of either party, for any reason whatsoever, to enforce this Snowmobile Trail Easement shall not constitute a waiver of its rights, and each party hereby waives any defense of laches, prescription or estoppel. Nothing herein shall be construed as to relieve Grantor from compliance with any federal, state or local law, regulation, rule or ordinance applicable to the Protected Property.

C. Governing Laws. This Snowmobile Trail Easement is intended to be governed as a trail easement in compliance with 33 M.R.S.A Sections 1581-1585. Interpretation and performance of this Snowmobile Trail Easement shall be governed by all other applicable laws of the State of Maine. Should uncertainty arise in its meaning, this Snowmobile Trail Easement shall be interpreted in favor of Grantor's use of the Protected Property.

D. Enforcement Rights. This Snowmobile Trail Easement shall not be construed to entitle any person or entity other than Grantor or Holder to enforce any of the terms or conditions hereof. Specifically, no member of the public shall have any rights under this Snowmobile Trail Easement to enforce as against Grantor any of its provisions, such rights being exclusive to Holder.

IN WITNESS WHEREOF, Grantor has caused this Hiking Trail Easement to be signed in its corporate name, and its corporate seal to be hereto affixed, by _____, its _____, hereunto duly authorized, this _____ day of _____, 2007.

Signed, Sealed and Delivered
in the presence of:

WITNESS

GRANTOR:
PLUM CREEK MAINE TIMBERLANDS, L.L.C.

_____

By: _____
Name
Its

STATE OF WASHINGTON)
)ss:
COUNTY OF KING)

On this ___ day of _____, 2007, before me personally appeared _____, to me known to be the _____ of Plum Creek Maine Timberlands, L.L.C., the limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited liability company for the uses and purposes therein mentioned, and on oath stated that s/he was authorized to execute said instrument on behalf of the limited liability company and that the seal affixed is the seal of said limited liability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

_____
Notary Public in and for the
State of Washington
Residing at_____
My Commission Expires _____
Printed Name: _____

HOLDER ACCEPTANCE

The above and foregoing Snowmobile Trail Easement was authorized to be accepted by **THE STATE OF MAINE** acting by and thought the Department of Conservation, Bureau of Parks and Lands, Holder as aforesaid, and the said Holder does hereby accept the foregoing Snowmobile Trail Easement, by and through _____, its _____, hereunto duly authorized, this _____ day of _____, 2007 and agrees to be bound by all its terms and provisions.

HOLDER:
THE STATE OF MAINE acting by and through the Department of Conservation, Bureau of Parks and Lands

By:_____
Its: _____

State of Maine
County of Kennebec, ss _____, 2007

Personally appeared _____, hereunto duly authorized, and acknowledged the foregoing instrument to be his free act and deed in his said capacity as Commissioner of the Maine Department of Conservation.

Before me,

_____
Notary Public
Printed Name: _____

ATTACHMENTS:

EXHIBIT A - A legal description of the Protected Property.

EXHIBIT B. A Plot Plan depicting the approximate location of existing and proposed trail corridors making up the Protected Property and showing approximate locations of features on and near the Protected Property.

Appendix F

Form of Ski Trail Easement (Moosehead to Mahoosucs)

This permanent easement covering, approximately 12 miles of trail, 20 feet wide, along the northwest shore of Indian Pond is to be held by the non-profit Western Mountain Alliance group.

The trail easement language will be very similar to that in Appendices D and E. Negotiations on the terms of the easement are ongoing and draft easement language is expected to be completed in the near future. Key provisions will address:

1. Non-vehicular Use

   No motorized vehicles or equipment are to be allowed on the trail except for trail construction and maintenance, for grooming for cross-country skiing and/or for emergency situations.

2. Trailside Hut Access

   Provision will be made to permit trail users to access any primitive trailside huts adjacent to the trail on Plum Creek land.

FORM OF EASEMENT FOR SHORELAND CONSERVATION

CONSERVATION EASEMENT

Granted by

Plum Creek Maine Timberlands, L.L.C.

to

Forest Society of Maine

in connection with the
Concept Plan
for
Plum Creek's Gateway Lands in the Moosehead Lake Region
approved by the
Maine Land Use Regulation Commission
on _____ ___, _____

CONSERVATION EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, **PLUM CREEK MAINE TIMBERLANDS, L.L.C.**, a Delaware limited liability company, formerly known as SDW Timber II, L.L.C., with a place of business in Fairfield, Maine (hereinafter referred to as "Grantor," which word is intended to include unless the context clearly indicates otherwise, the above-named Grantor and its successors and assigns, and any future owners or successors-in-interest to the Protected Property (defined below), and their executors, administrators and legal representatives), **GRANTS** to **FOREST SOCIETY OF MAINE**, a Maine not-for profit corporation with a place of business in Bangor, Maine (hereinafter referred to as "Holder," which word shall, unless the context clearly indicates otherwise, include Holder's successors and/or assigns), and **GRANTS** to the **STATE OF MAINE** (hereinafter referred to as "Third Party", which shall, unless the context clearly indicates otherwise, include the Third Party's successors and assigns), acting by and through its Department of Conservation, Bureau of Parks and Lands, with a mailing address of 22 State House Station, Augusta, Maine 04333, with QUITCLAIM COVENANT, in perpetuity, the following described **Conservation Easement** on land located in *[insert Township and County]*, Maine, hereinafter referred to as the "Protected Property," and described on **Exhibit A**, attached hereto, and shown on a plot plan attached hereto as **Exhibit B**, both made a part hereof by reference.

PURPOSE

This Conservation Easement is intended to provide a significant public benefit by protecting and preserving in perpetuity the Protected Property in its present and historic primarily undeveloped condition that allows its continued operation as a working forest with the perpetual ability to commercially produce forest products, and to conserve and/or enhance forest and wildlife habitats, undeveloped shoreline, and historic public recreation and nature observation and study opportunities of the Protected Property for present and future generations, subject only to such uses as are specifically provided for herein. Reference is made to the approved Concept Plan for Plum Creek's Gateway Lands in the Moosehead Lake Region for Grantor's land (hereinafter referred to as the "Concept Plan"), of which the Protected Property is a part, on file at the offices of the Maine Land Use Regulation Commission in Augusta, Maine, or its successor agency. This Conservation Easement applies to the Protected Property only. Nothing herein shall be construed to impose any obligation, restriction, or other encumbrance on any real property not expressly made a part of the Protected Property.

The following recitals more particularly describe the conservation values of the Protected Property and the significance of this grant.

WHEREAS, the Protected Property consists of *[insert acres]* of land which has been and continues to be used primarily as a working forest; and

WHEREAS, the Protected Property consists of approximately *[insert shoreline feet]* feet of scenic, undeveloped shoreline along *[insert name of waterbody]*; and

WHEREAS, *[insert name of waterbody]* contains little or no structural development (other than significant development, if any, set forth herein); and

WHEREAS, it is a significant public benefit that *[insert name of waterbody]* remain free from structural development and in a substantially wooded state; and

WHEREAS, this Conservation Easement makes the Protected Property available for commercial forest management and related activities and for public outdoor recreation that is consistent with the conservation of the Protected Property's undeveloped natural features; and

WHEREAS, this Conservation Easement is granted not as a gift but pursuant to the terms of the Concept Plan and in consideration for and mitigation of certain development that will be or has been authorized by the Commission in connection with the Concept Plan.

NOW THEREFORE Grantor and Holder have established this Conservation Easement affecting the Protected Property consisting of the following terms, covenants, restrictions, and affirmative rights, which shall run with and bind the Protected Property in perpetuity:

TERMS, COVENANTS AND RESTRICTIONS

1. GENERAL LAND USES

Except in connection with Forest Management Activities (defined below) or as otherwise expressly stated to the contrary herein, structural development, commercial, residential, industrial, energy generation, landfill, and waste disposal activities are prohibited on the Protected Property. Without limiting the generality of the foregoing, houses, apartment buildings, multi-family housing units, campgrounds, condominia, trailer parks, mobile homes, permanent outdoor high-intensity lights, motels or hotels, billboards, junk yards, and commercial and industrial uses of all kind, are specifically prohibited on the Protected Property unless otherwise provided herein.

Notwithstanding anything to the contrary in this Conservation Easement, Grantor, its successors and assigns, shall have the perpetual right to undertake any and all Forest Management Activities on the Protected Property, subject only to the limitations set forth in Paragraph 7 of this Conservation Easement, and to undertake gravel extraction activities permitted under Chapter 10 of the Maine Land Use Regulation Commissions Rules and Standards (or successor regulations thereto), but only in compliance with all requirements thereof. As used in this Conservation Easement, the term "Forest Management Activities" means all commercial forest management practices allowable under law (now or in the future) and the harvesting and removal of any and all forest products by any and all current and future harvesting and removal techniques allowable under law. Forest Management Activities shall include, but not be limited to, the following activities and Grantor's management of such activities: reforestation, planting, growing, cutting, and harvesting trees, forest products, and other vegetation; construction, use, and maintenance of skid trails, skid roads, skidder bridges, log yards, landing and staging areas, land management roads, winter haul roads or other paths,

roads, or trails used to provide pedestrian, domestic animal and vehicular access to and from and within the Protected Property in order to carry out the Forest Management Activities on the Protected Property; clearing for reforestation; harvesting, pruning, girdling, thinning, or trimming trees and other vegetation; harvesting forest products with domestic animals or mechanical equipment; maintenance of existing fields and meadows; conducting timber cruising, forest management planning, forest stand improvement, forest crop selection, forest research, and other forest resource evaluation activities; cutting and removing forest products, including but not limited to trees, logs, poles, posts, pulpwood, firewood, chips, seeds, pinestraw, stumps, seed cones, bark, shrubs, lesser vegetation, and biomass; collection and processing of all sugar maple products; conducting fire control and other activities to prevent or control losses or damage to forest crops or forest products; identifying and marking boundaries; salvaging forest crops or forest products; marking timber and performing other activities to identify trees or areas for harvest; performing commercial and pre-commercial silvicultural treatments; disposing of harvesting debris and conducting post-harvest or site recovery activities; applying in accordance with applicable statutes and regulations herbicides, pesticides, fungicides, rodenticides, insecticides, and fertilizers; removing, loading, and transporting timber and other forest crops and products; processing forest products with portable or temporary equipment designed for in-woods processing; trimming, cutting, removing, burning, or otherwise disposing of any trees or vegetation which are diseased, rotten, damaged or fallen; trimming, cutting, removing, or otherwise disposing of any trees or vegetation as is necessary to construct or maintain fire lanes, footpaths, and any roads permitted under this Conservation Easement; the removal (by quarrying or otherwise) of gravel and other minerals from the earth and the storage of the same (which gravel and other minerals may be used for any lawful purpose, including sale to others); and any other activity Grantor deems useful or expedient in connection with the foregoing.

2. STRUCTURES AND IMPROVEMENTS

From the date of this Grant, no new structures, temporary or permanent, are allowed to be constructed, placed or maintained on the Protected Property, other than Forestry Improvements (described below), structures and improvements for purposes of nature observation (including, without limitation, observation blinds and platforms), trails for use by the general public, and public roads and public utilities and telecommunications facilities.

Notwithstanding the foregoing, Grantor may develop, construct, maintain, install, replace and repair at any time and from time to time Forestry Improvements on the Protected Property. For purposes of this Conservation Easement, the term "Forestry Improvements" means any and all structures, facilities, improvements and utilities that are used in connection with and/or for the purpose of accomplishing Forest Management Activities on the Protected Property, including, without limitation, roads, fences, bridges, gates, maple sugar houses and appurtenant facilities, forest management camps, logging camps, and housing facilities for persons involved with Forest Management Activities on the Protected Property, barns, garages, storage facilities, associated signs and structures, utility services to serve and support such Forestry Improvements, including telecommunication systems, electric power lines and generation facilities, wells, and septic disposal facilities; provided, however, that, to the extent reasonably practical, such utility services crossing the Protected Property shall be located in a manner to minimize their impact on the Protected Property's conservation values. Non-portable and non-mobile sawmills and forest

products processing or manufacturing structures and facilities shall not be permitted on the Protected Property; however, portable sawmills, mobile chippers and other mobile processing equipment not requiring the permanent installation of structures or utilities shall be permitted. All Forestry Improvements permitted hereunder shall be installed and constructed in accordance with applicable laws and regulations.

Existing (as of the date of the grant of this Conservation Easement) structures, improvements and utilities that are not associated with Forest Management Activities may be maintained, replaced and repaired from time to time, but may not be expanded without the consent of Holder, which consent shall be granted only upon a determination by Holder, in its reasonable judgment, that the action will not be inconsistent with the purpose of this Conservation Easement. New, minor structures and improvements for traditional, recreational uses such as trails, bridges, benches, tables, public boat launches, erosion control systems, wells and springs, may be installed, constructed, maintained, repaired, and replaced from time to time, without the consent of Holder, provided that such structures and improvements are installed and constructed in accordance with applicable laws and regulations. New public roads and public utilities and telecommunications facilities may be installed, constructed, maintained, repaired, and replaced from time to time, without the consent of Holder provided that such roads, utilities and/or telecommunications facilities are installed and constructed in accordance with applicable laws and regulations, and further provided that, to the extent reasonably practical, such roads and utilities crossing the Protected Property shall be located in a manner to minimize their impact on the Protected Property's conservation values.

3. SURFACE ALTERATIONS

Except in connection with Forest Management Activities and/or other uses of the Protected Property permitted by this Conservation Easement (including gravel extraction in compliance with the regulations of the Maine Land Use Regulation Commission or its successor agency), no new filling, drilling, excavation, or alteration of the surface of the earth, no removal of soil or minerals, and no changes in the topography, surface or sub-surface water are allowed on the Protected Property; provided, however, that Grantor shall not be deemed to be in breach of the terms hereof in the event a third party owner of mineral rights conducts mining activities.

4. VEGETATION MANAGEMENT

Except in connection with Forest Management Activities, no vegetation may be cut or removed from the Protected Property except as specifically provided in this Conservation Easement or as necessary to the uses of the Protected Property permitted herein, or as allowed by prior written consent of Holder.

5. WILDLIFE AND WATER QUALITY PROTECTION

In order to sustain Forest Management Activities on the Protected Property, and to assure the preservation of the high quality scenic, natural, and ecological character of the Protected Property, the following specific restrictions, subject to any more restrictive local, state, and

federal laws and regulations, are imposed on the Protected Property:

A. Overboard discharge or direct discharge of treated or untreated black or gray water waste into surface waters on or about the Protected Property is strictly prohibited.

B. It is forbidden to dispose of or store rubbish, garbage, debris, abandoned vehicles or equipment, parts thereof, or other unsightly, offensive, hazardous, toxic, or other waste material on the Protected Property, except that organic compost, blowdowns, and by-products of on-site Forest Management Activities permitted by this Conservation Easement may be used or disposed of on the Protected Property in a manner consistent with standard Best Management Practices for forestry operations, and other waste generated by allowed uses on the Protected Property may be stored temporarily in appropriate containers for removal at reasonable intervals, subject to all applicable local, state, and federal laws and regulations.

C. The use of herbicides, insecticides, fungicides, fertilizers, or other potentially harmful substances must be controlled and limited to use only in connection with Forest Management Activities or for public safety purposes and must be used in accordance with all applicable laws and regulations. All other use of these substances is prohibited on the Protected Property.

6. RECREATIONAL EASEMENT

It is Grantor's intent and objective to allow non-motorized public access on and across, and use of, the Protected Property for traditional recreational uses and to maintain opportunities for traditional low-intensity recreational uses of the Protected Property. In furtherance thereof, daytime, pedestrian public use of the Protected Property shall be permitted; provided, however, that Grantor reserves the right to make reasonable rules and regulations for different types of public use, and to control, limit or temporarily prohibit, by posting and other means, any use by the public (including without limitation, loud activities, and areas of access) for purposes of protecting public safety, protecting the conservation values of the Protected Property, to ensure compliance with all applicable laws, and to accommodate Grantor's Forest Management Activities and other uses of the Protected Property permitted hereunder. Night use, camping, open fires, motorized vehicles or other mechanized equipment is strictly prohibited; provided, however, Grantor reserves the right to allow motorized recreational use of the Protected Property (including snowmobiling).

To the extent allowed by Grantor, in its sole discretion, traditional recreational uses of the Protected Property by commercial guides, by customers of commercial sporting camps, and by non-profit camping and educational and scientific institutions, shall be permitted on the Protected Property, provided that they occur in a manner that is consistent with the terms and the Purpose of this Conservation Easement.

Notwithstanding the foregoing, this Conservation Easement does not grant any easement, right of way, right of access, or other interest or license on, across, over, or affecting any other land of Grantor not included in the Protected Property, and this Conservation Easement does not, and shall not be construed to, impose upon Grantor, or its successors or assigns, any obligation to

provide or allow public access on, across, over, or affecting any land of Grantor not included in the Protected Property. Any such rights or licenses affecting any land of Grantor not included in the Protected Property, if granted by Grantor in its sole discretion, shall be by a separate instrument or instruments recorded in the Registry of Deeds where such other land is located, and no such rights or licenses shall arise by implication, necessity, or otherwise, and this Conservation Easement does not expand or extend any privilege or license currently provided by Grantor

Grantor and Holder claim all of the rights and immunities against liability for injury to the public to the fullest extent of the law under Title 14 M.R.S.A. Section 159-A, et seq. as amended and successor provision thereof (Maine Recreational Use Statute), under the Maine Tort Claims Act, and under any other applicable provision of law and equity. Any use of the Protected Property by the public is at the public's sole risk and liability, and any use of the Protected Property shall be deemed a waiver of any and all liability of Grantor, its successors and assigns, for any injury, loss or damage occurring from such use.

7. RESTRICTIONS ON FOREST MANAGEMENT ACTIVITIES

Forest Management Activities shall be conducted in compliance with all applicable laws, rules, and regulations of the Maine Land Use Regulation Commission and the Maine Forest Service, and in compliance with the Concept Plan.

8. PROTECTION OF CONSERVATION VALUES

Upon mutual agreement of Grantor and Holder, the boundaries of the Protected Property may be modified for the purposes of protecting important conservation values and/or natural features or to establish an easily identifiable boundary to the Protected Property (such as a roadway or stream thread), such as wetlands or other sensitive areas, provided that there is no net change in the total acreage of the Protected Property.

9. NOTICES

Any notices to or requests for the consent or approval of Holder must be also copied to Third Party, and Third Party shall be provided with an opportunity to comment. Any such notices required or contemplated hereunder must include, at a minimum, sufficient information to enable Holder and Third Party to determine whether proposed plans are consistent with the terms of this Conservation Easement and the conservation purposes hereof. Notices to any party must be in writing and will be sufficient if served personally or sent by certified mail, return receipt requested, addressed as follows:

To Grantor:	Plum Creek Maine Timberlands, L.L.C. 999 Third Avenue, Suite 4300 Seattle, Washington 98104 Attn: General Counsel
With a copy to:	Plum Creek Maine Timberlands, L.L.C.

49 Mountain Avenue
Post Office Box 400
Fairfield, Maine 04937-0400
Attn: General Manager, Northeast Region

To Holder: Forest Society of Maine
115 Franklin Street, 3rd Floor
Bangor, Maine 04401
Attn: Executive Director

With a copy to Third Party: Maine Bureau of Parks and Lands
22 State House Station
Augusta, Maine 04333
Attn: Director, Planning and Land Acquisitions

or to such other authorized person as any party may from time to time designate by written notice to the others in the manner set forth above.

10. COSTS AND TAXES, RESPONSIBILITY

Grantor is responsible to pay and discharge when due all property taxes, assessments, and other costs, charges, liens and encumbrances lawfully imposed upon or in connection with the Protected Property and to avoid the imposition of any liens or encumbrances that may affect Holder's rights hereunder.

Grantor acknowledges that Holder has no possessory rights in the Protected Property, nor any responsibility or right to control, maintain or keep up the Protected Property. Grantor is responsible for all costs and responsibility of ownership, control, operation, maintenance, and upkeep of the Protected Property, and will indemnify, defend, and hold harmless Holder and Third Party from any claims for damages which arise therefrom, except for harm proximately caused by their negligent act or misconduct, or as may arise out of their workers' compensation obligations.

11. HOLDER'S AFFIRMATIVE RIGHTS

A. Holder has the right to enforce this Conservation Easement by proceedings at law and in equity, including the right to prevent any activity on or use of the Protected Property that is inconsistent with the purpose of this Conservation Easement (other than those activities expressly authorized hereunder), and to require where reasonably practicable the restoration of any area or feature damaged by such inconsistent activity to a condition in compliance herewith. Holder shall not be entitled to monetary damages. Holder shall provide Grantor with thirty (30) days prior notice of and opportunity to cure any breach, except where emergency circumstances require enforcement action without such delay. Holder may not bring an enforcement action against Grantor for injury to or change in the Protected Property resulting from changes beyond the control or responsibility of Grantor, such as fire, flood, storm, and earth movement, from the actions of parties not under the control of Grantor, or from any prudent action taken by Grantor under emergency conditions to prevent, abate or mitigate significant injury to the Protected Property. If a Court (or other decision-maker chosen by mutual consent of the parties) determines that this Conservation Easement has been breached, Grantor will reimburse Holder for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, out-of-pocket costs and any other payments ordered by the Court or decision-maker. If a Court (or other decision-maker chosen by mutual consent of the parties) determines that this Conservation Easement has not been breached, Holder will reimburse Grantor for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, out-of-pocket costs and any other payments ordered by the Court or decision-maker.

B. Holder has the right to enter the Protected Property for inspection and enforcement purposes, at any time and in a reasonable manner that is consistent with the conservation purposes hereof and does not unreasonably interfere with Forest Management Activities undertaken by Grantor.

C. Holder has the right, but not the duty, to manage public recreational use of the Protected Property, to the extent such use is permitted hereby, in the absence of Grantor's managing such use.

12. THIRD PARTY RIGHTS AND ENFORCEMENT; APPLICABLE LAWS

Grantor grants to the Third Party the same entry, inspection, management and enforcement rights as are granted to Holder under this Conservation Easement. However, the parties hereto intend that Holder shall be primarily responsible for the monitoring and enforcement of this Conservation Easement, and that the Third Party intends to assume such responsibility only if Holder fails to properly monitor and enforce. However, the Third Party may at any time exercise, in its own name and for its own account, all the rights of monitoring and enforcement granted Holder under this Conservation Easement. The Third Party shall also have access to the Protected Property, and to any and all records of Holder relevant to the Protected Property. Annual monitoring reports will be filed by Holder with the Third Party.

Notwithstanding that Third Party has executed this Conservation Easement, nothing herein may be construed as approval of or as a substitute for approval or regulation of any activities under the regulatory jurisdiction of the Maine Land Use Regulation Commission or other State regulatory body. Nothing in this Conservation Easement may be construed to permit an activity otherwise prohibited or restricted by state, local, or federal laws or regulations, with which Grantor shall have a responsibility to comply. Any penalty for or mitigation of a violation of a regulation of the Maine Land Use Regulation Commission imposed upon the Grantor by the Maine Land Use Regulation Commission shall be deemed sufficient penalty for or mitigation of a violation of the terms of this Conservation Easement, if the activity causing such violation of the Land Use Regulation Commission regulations is also a violation of this Conservation Easement, such that Grantor shall not be penalized or subject to mitigation twice for a single act.

13. ADDITIONAL CONSERVATION EASEMENT REQUIREMENTS UNDER MAINE LAW

A. This Conservation Easement is created pursuant to The Uniform Conservation Easement Act at Title 33, Maine Revised Statutes, 1989, Sections 476 through 479-B, inclusive, as amended (and successor provisions thereof), and shall be construed in accordance with the laws of the State of Maine.

B. Holder is qualified to hold conservation easements pursuant to Title 33 Maine Revised Statutes Annotated, Section 476(2)(B), as amended (or successor provisions thereof), and is a Qualified Organization under Section 170(h)(3) of the Internal Revenue Code of 1986, as amended (or successor provisions thereof), to wit: a publicly funded, non-profit, section 501(C)(3) organization having a commitment and the resources to protect the conservation purposes of the donation and enforce the restrictions hereof.

C. The Third Party is qualified to hold third party rights of enforcement on conservation easements pursuant to Title 33, Maine Revised Statutes Annotated, Section 476(2)(A), as amended (or successor provisions thereof).

D. This Conservation Easement is assignable by Holder, but only after notice to and approval by Third Party and Grantor, and only to an entity that satisfies the requirements of Section 170(h)(3) of the Internal Revenue Code of 1986, as amended (or successor provisions thereof) and Section 476(2) of Title 33 of the Maine Revised Statutes Annotated (1989), as amended (or successor provisions thereof), and that agrees, as a condition of transfer, to monitor, enforce, and otherwise uphold the conservation purposes and terms of this grant.

E. The Protected Property may be used to secure the repayment of debt, provided that the rights of Holder and Third Party to enforce the terms, restrictions, and covenants created under this Conservation Easement shall continue and not be extinguished by foreclosure of any mortgage or any publicly or privately placed lien. The restrictions of this Conservation Easement, and Holder's and Third Party's right to enforce them shall be superior to any mortgage or lien.

F. This Conservation Easement constitutes a property right owned by Holder.

Notwithstanding that this Conservation Easement is an obligation, and not a financial asset, should it be extinguished (which may be accomplished only by court order), Holder is entitled to a share of the proceeds of any sale, exchange, voluntary or involuntary conversion of the Protected Property, including by an act of eminent domain or in lieu thereof, according to Holder's proportional interest in the Protected Property as determined by Treasury Regulations 1.170-A-14 (g)(6)(ii) or successor regulations. Holder's proportional interest is determined as of the date of this grant and will not include value attributable to improvements to the Protected Property that are made after the date of this grant. Holder shall use any such proceeds for its conservation purposes, as approved by the Third Party.

14. GENERAL PROVISIONS

A. Grantor reserves to itself, its successors and assigns all rights accruing from ownership of the Protected Property, including the right to engage in or permit others to engage in, all uses of the Protected Property that are not expressly prohibited or restricted by this Conservation Easement and that are consistent with the Purposes hereof.

B. Enforcement of the terms of this Conservation Easement shall be at the sole discretion of Holder and/or the Third Party. The failure or delay of Holder or Third Party, for any reason whatsoever, to enforce this Conservation Easement shall not constitute a waiver of its rights and Grantor hereby waives any defense of laches, prescription, or estoppel.

C. Grantor agrees to notify Holder and Third Party prior to any transfer of its interest in the Protected Property. A party's rights and obligations under this Conservation Easement shall terminate when such person or entity ceases to have any interest in the Protected Property or this Conservation Easement, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

D. The parties may amend this Conservation Easement only to the extent that changes are not inconsistent with the conservation purposes of this grant, and only by written and recorded agreement executed by Grantor, Holder, and Third Party.

E. If any provision of this Conservation Easement or the application of any provision to a particular person or circumstance is found to be invalid, the remainder of this Conservation Easement and the application of such provision to any other person or in any other circumstance, shall remain valid.

F. Interpretation and performance of this Conservation Easement shall be governed by the laws of the State of Maine. Should uncertainty arise in its meaning, this Conservation Easement should be interpreted in favor of conserving the Protected Property for the conservation purposes stated herein.

[the remainder of this page intentionally left blank]

IN WITNESS WHEREOF, Plum Creek Maine Timberlands, L.L.C., Grantor, has caused this Conservation Easement to be signed in its corporate name, and its corporate seal to be hereto affixed, by Rick R. Holley, its President, hereunto duly authorized, this ___ day of _____, 20___.

Signed, sealed and delivered
in the presence of:

PLUM CREEK
MAINE TIMBERLANDS, L.L.C.

_____

By: _____
Rick R. Holley
Its President

STATE OF WASHINGTON)
COUNTY OF KING) ss:

On this ___ day of _____, 20__, before me personally appeared Rick R. Holley, to me known to be the President and Chief Executive Officer of Plum Creek Maine Timberlands, L.L.C., the limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited liability company for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument on behalf of the limited liability company and that the seal affixed is the seal of said limited liability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

_____
Notary Public in and for the
State of Washington
Residing at_____
My Commission Expires _____
Printed Name: _____

HOLDER ACCEPTANCE

The above and foregoing Conservation Easement was authorized to be accepted by Forest Society of Maine, Holder as aforesaid, and the said Holder does hereby accept the foregoing Conservation Easement, by and through _____, its _____, hereunto duly authorized, this __ day of _____, 20___.

Signed, sealed and delivered
in the presence of:

FOREST SOCIETY OF MAINE

_____

By: _____
[name of officer]
Its *[insert title]*

State of Maine
County of _____, ss. _____, ____20___

Personally appeared _____, _____ and authorized representative of the above-named Holder and acknowledged the foregoing instrument to be his free act and deed in his/her said capacity, and the free act and deed of said Forest Society of Maine.

Before me,

_____
Notary Public
Name: _____

THIRD PARTY APPROVAL

The foregoing Conservation Easement has been approved by the State of Maine Department of Conservation , which accepts Third Party rights as aforesaid acting by and through _____, in the capacity of Commissioner, hereunto duly authorized this _____day of _____ , 200__.

Signed, sealed and delivered
in the presence of:

MAINE DEPARTMENT
OF CONSERVATION

_____

By: _____
[insert name of Commissioner]
Its Commissioner

State of Maine
County of Kennebec, ss. _____, 20___

Personally appeared _____, hereunto duly authorized, and acknowledged the foregoing instrument to be the free act and deed of that person in said capacity as Commissioner of the Maine Department of Conservation.

Before me,

_____
Notary Public
Name: _____

ATTACHMENTS:

EXHIBIT A - Legal description of the Protected Property

EXHIBIT B - Plot Plan depicting the Protected Property.

Appendix H (same as Appendix I)

Form of Conservation Easement for the Moosehead-Roach River

Conservation easements, in addition to those described in Appendices D through G, will apply to:

- the Moosehead-Roach River Conservation Easement Area (61,000 acres); and
- the Moosehead Legacy Conservation Easement Area (269,000 acres).

The form of the conservation easements that will apply in these two large tracts of land within the Plan Area will be submitted once negotiations between Plum Creek and the easement purchasers and holders are concluded, which is expected in the near future.

The conservation easement language for these areas will share identical terms, thus all of the details for each easement area will only be available when agreement on all terms for both of these particular areas is accomplished.

The conservation easement language, however, will include three fundamental permanent provisions:

1. Permanent No Development Provision

   No development, other than that ancillary to forestry operations and management, is to be permitted within the easement area in perpetuity.

2. Sustainable Working Forest Provision

   Permanent, sustainable, working forest management standards at least equal to current SFI third party audit standards or equivalent standards with certification to be accepted as evidence of compliance.

3. Permanent Traditional Public Access

   Permanent, traditional, public access for hunting, fishing, and hiking is to be provided throughout the easement areas, subject to reasonable rules and regulations that ensure safe forest management operations.

Appendix I (same as Appendix H)

Form of Conservation Easement for the Moosehead Legacy Areas

Conservation easements, in addition to those described in Appendices D through G, will apply to:

- the Moosehead-Roach River Conservation Easement Area (61,000 acres); and
- the Moosehead Legacy Conservation Easement Area (269,000 acres).

The form of the conservation easements that will apply in these two large tracts of land within the Plan Area will be submitted once negotiations between Plum Creek and the easement purchasers and holders are concluded, which is expected in the near future.

The conservation easement language for these areas will share identical terms, thus all of the details for each easement area will only be available when agreement on all terms for both of these particular areas is accomplished.

The conservation easement language, however, will include three fundamental permanent provisions:

1. Permanent No Development Provision

   No development, other than that ancillary to forestry operations and management, is to be permitted within the easement area in perpetuity.

2. Sustainable Working Forest Provision

   Permanent, sustainable, working forest management standards at least equal to current SFI third party audit standards or equivalent standards with certification to be accepted as evidence of compliance.

3. Permanent Traditional Public Access

   Permanent, traditional, public access for hunting, fishing, and hiking is to be provided throughout the easement areas, subject to reasonable rules and regulations that ensure safe forest management operations.

BYLAWS
of the
[Name of Subdivision] HOMEOWNERS ASSOCIATION

ARTICLE I. ASSOCIATION OF OWNERS

Section 1. **Membership.** The members shall consist of all Lot Owners of the [Name of Subdivision] Subdivision (the "Subdivision"), a property governed by a General Declaration of Covenants and Restrictions dated _____ and recorded in the _____ County Registry of Deeds in Book _____, Page _____ (the "Declaration") and located in _____ Township, _____ County, Maine. Membership shall be in accordance with the Declaration and with these Bylaws. The membership of each Owner (defined below) terminates upon a sale, transfer, or other disposition of his/her ownership interest in his/her Lot (as defined in the Declaration) whereupon the membership and any interest in the funds of the Association shall automatically transfer to and be vested in the successor in ownership. A conveyance in mortgage of the Lot, however, shall not operate to transfer membership until the mortgage is foreclosed or the Lot is transferred in lieu of foreclosure.

Section 2. **Meetings.** The first meeting of the members shall be held at the call of Plum Creek Land Company or its succcessor-in-interest (hereinafter the "Declarant") after not less than 50% of all Lots in the Subdivision have been sold.

Section 3. **Subsequent meetings.** Subsequent meetings of the members may be held at any time upon the call of the President or upon the call of the Owners of a minimum of three (3) Lots. Upon receipt of the call, the Secretary shall send out notices of the meeting to all members of the Association.

Section 4. **Notice of meetings.** A written or printed notice of every meeting of the Association shall be given by the Secretary or the person or persons calling the meeting at least thirty (30) days before the date set for the meeting. Such notice shall be given to each member as indicated in the records of the Association by mailing it, postage prepaid, addressed to the member at his/her address as it appears in the records of the Association. If notice is given pursuant to provisions of this section, the failure of any member to receive actual notice of the meeting shall in no way invalidate the meeting or any proceedings at such a meeting.

Section 5. **Waiver of notice.** The presence of all the members at any meeting shall render the same a valid meeting, regardless of the manner of notice or lack thereof.

Section 6. **Quorum.** The presence at any meeting of the Association of Owners whose aggregate voting rights equal more than 25% of the total voting rights shall constitute a quorum. At any meeting at which a quorum is present, the affirmative vote of a majority of those present shall decide any question presented to the meeting (except the election of Directors), unless a greater percentage vote is required by law, by the Declaration, or by these

SAMPLE

Bylaws. In the election of Directors, those receiving the greatest number of votes, even if less than a majority, shall be elected.

Section 7. Voting. Any person, firm, corporation, trust, or other legal entity, or a combination thereof, owning any Lot (an "Owner") other than as a mortgagee, as evidenced by a deed duly recorded in his, her, their, or its name(s) in the _____ County Registry of Deeds, shall be a member of the Association by vitue of such ownership, and shall be entitled to one vote for each Lot so owned at all meetings of the Association. Co-owners or joint owners shall be deemed one Owner, such that only one vote shall be given for each Lot. The authority given by a member to another person to represent such member at meetings of the Association shall be in writing, signed by such member or if a Lot is jointly owned then by all joint owners, or if such member is a corporation or other legal entity, by the proper officers thereof, and shall be filed with the Secretary, and unless otherwise stated therein, such authority shall terminate after eleven months. An executor, administrator, guardian, or trustee may vote at any meeting of the Association with respect to any Lot owned or held by him in such a capacity, whether or not the same has been transferred to his name by a duly recorded conveyance. In case such Lot has not been transferred to his name, he shall satisfy the Secretary that he is the executor, administrator, guardian, or trustee holding such Lot in such capacity. Whenever any Lot is owned jointly by two or more owners, as evidenced by the records of said Registry of Deeds, the owners thereof may designate in writing one or more of the owners to cast the vote for all such owners, and such designation, unless otherwise limited by its terms, shall be valid once filed with the Secretary until revoked by any such owner by notice in writing filed with the Secretary. The Declarant may exercise Declarant's voting rights pertaining to any Lot owned by the Declarant.

Any specified percentage of Owners refers to the aggregate voting rights and not to the number of owners.

Section 8. Adjournment. Any meeting of the Association may be adjourned from time to time to such place and time as may be determined by majority vote of the members present, whether or not a quorum is present.

ARTICLE II. BOARD OF DIRECTORS

Section 1. Number and qualification. Until the first meeting, the affairs of the Association shall be governed by the Declarant or three persons appointed by the Declarant, who need not be Lot Owners. Thereafter, the affairs of the Association shall be governed by a Board of Directors elected by the members, initially composed of three persons (or such greater number as may be determined by the Declarant), and as increased or decreased at any annual meeting by a majority vote of members present at the meeting. Each such Director shall be the Owner or the spouse of an Owner of a Lot; or if an Owner is a corporation or other legal entity, then an officer, partner, trustee, or beneficiary thereof.

SAMPLE

Section 2. Powers and duties. The Board of Directors shall have the powers and duties necessary for the administration of the affairs of the Association and may do all such acts and things as are not by law or by these Bylaws directed to be exercised and done by the Owners.

Section 3. Other duties. In addition to other duties imposed by these Bylaws or by resolutions of the Association, the Board of Directors shall be responsible for the following:

(a) Care, upkeep, and surveillance of all roads, common areas, and facilities within the Subdivision.

(b) Determination and collection of the annual assessments from the Owners.

(c) Employment of the personnel necessary for the maintenance of all roads, common areas, and facilities.

(d) Procurement and payment of appropriate insurance coverage.

(e) Enforcement of the Declaration and any Rules and Regulations promulgated from time to time by the Association.

Section 4. Election and term of office. From and after the first meeting, the Directors shall be elected by the Owners. The term of office shall be fixed for three years. There is no limit on the number of terms a Director may serve, and terms may be served consecutively. At the first meeting, or at the next annual meeting thereafter, the Association may vote to shorten the term(s) of any of the initial Directors so that terms of Directors are thereafter staggered.

Section 5. Vacancies. Vacancies on the Board of Directors caused by any reason other than the removal of a Director by a vote of the members shall be filled by vote of the majority of the remaining Directors, even though they may constitute less than a quorum; and each person so elected shall be a Director until a successor is elected at the next annual meeting of the Association.

Section 6. Removal of Directors. At any regular or special meeting duly called, any one or more of the Directors may be removed with or without cause by a vote of the majority of the members and a successor may then and there be elected to fill the vacancy thus created. Any Director whose removal has been proposed by the members shall be given an opportunity to be heard at the meeting.

Section 7. Compensation. No compensation shall be paid to Directors for their services as Directors. No remuneration shall be paid to a Director for services performed by him for the Association in any other capacity, unless a resolution authorizing such remuneration has been adopted by the Board of Directors before or after the services are undertaken.

SAMPLE

Section 8. Annual Meeting. The annual meeting of the Board of Directors shall be held immediately following the annual meeting of the Association and at the same place, and no notice shall be necessary in order to constitute such meeting, provided a majority of the whole Board is present.

Section 9. Regular and Special Meetings. Regular and special meetings of the Board of Directors may be held at such time and place as may be determined, from time to time, by a majority of the Directors. Notice of regular and special meetings of the Board of Directors shall be given to each Director, personally or by mail, addressed to his or her residence or such other place for notice as may be shown in the records of the Association, or by telephone, at least three days prior to the day named for such meeting.

Section 10. Waiver of notice. Before or after any meeting of the Board of Directors, any Director may, in writing, waive notice of such meeting and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a Director at any meeting of the Board shall be a waiver of notice by him or her of the time and place thereof. If all the Directors are present at any meeting of the Board, no notice shall be required and any business may be transacted at such meeting.

Section 11. Quorum. At all meetings of the Board of Directors, a majority of the Directors shall constitute a quorum for the transaction of business.

Section 12. Unanimous action. Unless otherwise provided by law, the Declaration, or these Bylaws, any action which may be taken at a meeting of the Directors may be taken without a meeting if all of the Directors sign written consents, setting forth the action taken or to be taken, at any time before or after the intended effective date of such action. Such consents shall be filed with the minutes of Directors meetings and shall have the same effect as a unanimous vote.

Section 13. Bonds. The Board of Directors may require that any member of the Association handling or responsible for corporate funds shall furnish adequate bonds. The premiums on such bonds shall be paid by the Association.

Section 14. Committees. The Board of Directors may establish such standing or other committees, with such powers and duties, as it deems advisable.

ARTICLE III. OFFICERS

Section 1. Designation. The Board of Directors of the Association shall elect a President, Treasurer, and a Secretary at the annual meeting of the Board. The term of office shall be one year. There is no limit on the number of terms an officer may serve; provided, however, that officers must be members of the Board of Directors.

SAMPLE

Section 2. President. The President shall be the chief executive officer of the Association, and shall preside at all meetings of the Association and of the Board of Directors. In his or her absence, the Treasurer (and the the Treasurer's absence, the Secretary) shall preside at a meeting. In the absence of the President, Treasurer, and Secretary, a chairman pro tempore may be chosen by the members or Directors, as the case may be, to preside at a meeting. The President shall have all of the general powers and duties which are usually vested in the office of president of a homeonwers association, including but not limited to the power to appoint ad hoc committees from among the Owners or their spouses/family members from time to time as the President may in his or her discretion decide is appropriate to assist in the conduct of the affairs of the Association.

Section 3. Treasurer. The Treasurer shall have the responsibility for Association funds and securities and shall be responsible for keeping full and accurate accounts of all receipts and disbursements in books belonging to the Association.

Section 4. Secretary. The Secretary shall have the responsibility to provide notices of meetings to members, manage and respond to any correspondence to or from the Association, and keep minutes and records of Association meetings.

Section 5. Compensation. The Board members shall receive no compensation for their services except as expressly provided for by a resolution duly adopted by the members.

Section 6. Auditor. The Board of Directors may appoint some person, firm or corporation or professional association engaged in the business of auditing to act as auditor of the Association and to audit the financial statements of the Association.

Section 7. Removal of an Officer. At any regular or special meeting duly called, any one or more of the Officers may be removed with or without cause by a vote of the majority of the Directors and a successor may then and there be elected to fill the vacancy thus created.

ARTICLE IV. FISCAL MANAGEMENT

Section 1. Accounting. Books and accounts of the Association shall be kept under the direction of the Treasurer and in accordance with genarally accepted accounting principles and practices. Within 90 days after the close of each fiscal year, the Association shall furnish its members with a statement of the income and disbursements for such fiscal year and a balance sheet as of the close of that year.

Section 2. Assessments. With respect to each fiscal year, the Board shall estimate the amount required by the Association to meet its expenses for such year, including but not limited to the following items:

SAMPLE

(a) Management and administration expenses;

(b) Costs of maintenance and upkeep of roads, common areas, and other facilities of the Association;

(c) The amount of such reserves as may be reasonably established by the Board, including general operating reserves, reserves for contingencies, and reserves for maintenance and replacements; and

(d) Such other expenses of the Association as may be approved by the Board of Directors including operating deficiencies, if any, for prior periods.

Not less than 30 days before the Annual Meeting of Members, the Board shall cause an estimated annual budget to be prepared based on its estimations of annual expenses, and copies of such budget shall be furnished to each member. Unless at that meeting 75% or more of the Owners present at such meeting vote to reject the budget, the budget shall be deemed ratified, whether or not a quorum is present at the meeting. In the event the budget is rejected, the budget last ratified by the members shall be continued until such time as the Owners ratify a subsequent budget proposed by the Board.

If any member fails or refuses to make payment of his assessed fee, or any other amount payable to the Association when due, the amount thereof shall bear interest at a rate per annum, not exceeding 10%, established from time to time by the Board of Directors and, together with such interest, shall constitute a lien on the Lot of such member. The Association and the Board shall have the authority to exercise and enforce any and all rights and remedies provided in the Declaration or these Bylaws, or otherwise available at law or in equity, for the collection of all unpaid amounts including the right to accelerate payment on the full assessment for the year and, if necessary, to foreclose upon a lien in accordance with Section 6 of this Article.

Section 3. Revised and emergency assessments. If at any time prior to or during the course of any fiscal year the Board deems the amount of the membership assessments to be inadequate by reason of a revision in its estimate of either expenses or income, the Board shall prepare and cause to be delivered to the members a revised estimated annual budget for the balance of such fiscal year and shall call a meeting of the members to ratify such budget in the same manner as for an annual budget. After ratification, monthly or other periodic assessments shall be determined and paid on the basis of such revision.

The Board may, upon finding that an emergency exists which requires immediate assessment of the members, make an emergency assessment not to exceed an amount equal to the then current annual assessment for each Lot, which shall be due and payable when communicated to the members.

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Section 4. Maintenance and repair. All road maintenance and repair shall be performed at the direction of the Board of Directors, and shall be a common expense pursuant to the provisions of the Declaration. Vouchers for the payment of maintenance and repair costs shall be approved by the President before payment.

Section 5. Rules and regulations. In order to assure the peaceful and orderly use and enjoyment of the Lots and common areas and facilities, the Board of Directors may from time to time adopt, modify, and revoke in whole or in part, such reasonable rules and regulations, to be called "Rules and Regulations", governing the conduct of persons within the subdivision as it may deem necessary, including, but not limited to, methods and procedures for enforcing compliance with the Declaration and Bylaws. Such Rules and Regulations, and every amendment, modification, and revocation thereof, shall, upon adoption be delivered promptly to each Owner and shall be binding upon all members of the Association and occupants of the Lots.

Section 6. Foreclosure of lien. In any action to foreclose the lien against any Owner of a Lot, the Association may represent itself through its manager or Board of Directors in like manner as any mortgagee of real property, or as set forth in 33 M.R.S.A. § 1603-116. The manager or Board of Directors acting on behalf of the Lot Owners shall have the power to bid and acquire such Lot. Suit to recover money judgment for unpaid common expenses shall be maintainable with all costs and reasonable attorney's fees without foreclosing or waiving the lien securing the same.

ARTICLE V. EXECUTION OF INSTRUMENTS

Section 1. Instruments generally. All checks, drafts, notes, bonds, acceptances, contracts, deeds, and all other instruments shall be signed by the President or the Secretary, Treasurer or Clerk, or by such other officer or employee as the Board of Directors may designate.

ARTICLE VI. LIABILITY OF OFFICERS

Section 1. Exculpation. No Director of the Association shall be liable for acts or defaults of any other officer or members or for any loss sustained by the Association or any member thereof, unless the same has resulted from his own willful misconduct or gross negligence.

Section 2. Indemnification. Every Director, officer, and member of the Association shall be indemnified by the Association against all reasonable costs, expenses, and liabilities (including counsel fees) actually and necessarily incurred by or imposed upon him in connection with any claim, action, suit, proceeding, investigation, or inquiry of whatever nature in which he may be involved as a party or otherwise by reason of his having been an officer or member of the Association whether or not he continues to be such Director, officer or member of the Association at the time of the incurring or imposition of such costs, expenses, or liabilities, except in relation to matters as to which he is finally adjudged, by court of competant jurisdiction

SAMPLE

or by an arbitrator or mediator selected by the parties, in such action, suit, proceeding, investigation, or inquiry to be liable for willful misconduct or gross negligence toward the Association in the performance of his duties. The foregoing right of indemnification shall be in addition to and not in limitation of all rights to which such persons may be entitled as a matter of law and shall inure to the benefit of the legal representatives of such person.

ARTICLE VII. FISCAL YEAR

Section 1. **Fiscal year.** The fiscal year of the Association shall be established by the Board of Directors.

ARTICLE VIII. BYLAWS

Section 1. **Amendment.** These Bylaws may be amended, modified, or revoked in any respect from time to time by vote of the members of the Association whose aggregate vote constitutes 75 percent of all votes, at a meeting duly called for that purpose.

Section 2. **Conflict.** In the event of any conflict between these Bylaws and the provisions of the Declaration, the Declaration shall govern and apply.

Section 3. **Words of Gender.** The use of any gender in these Bylaws shall be deemed to include any other gender, and words in the singular shall be deemed to include the plural, unless the context otherwise requires.

ARTICLE IX. REAL PROPERTY

Section 1. **Association Property.** All real property interests owned or held by the Association shall be owned or held for the use, benefit, and enjoyment of all members of the Association, jointly and severally, and no member may be denied access to, or the use, benefit, or enjoyment of, any real property, or interest therein, owned or held by the Association. Notwithstanding the provisions of Article VIII, Section 1, above, this Article IX may be amended only by unanimous consent of all members of the Association.

Effective as of _____.

SAMPLE

GENERAL DECLARATION OF COVENANTS AND RESTRICTIONS

of the

[NAME OF SUBDIVISION] SUBDIVISION

THIS GENERAL DECLARATION OF COVEANTS AND RESTRICTIONS (this "Declaration"), made this ___ day of _____, 20___, by Plum Creek Land Company ("Declarant").

1. DECLARATION PURPOSES:

1.1 General Purposes: Declarant is the owner of certain real property located in _____ Township, _____ County, Maine known as the *[Name of Subdivision] Subdivision* (hereinafter, the "Subdivision"), and desires to create therein a rural residential/recreational community. Declarant desires to provide for the perpetual maintenance of the Roads (defined below) within the Subdivision, to provide for the perpetual maintenance of common areas within the Subdivision, to ensure compliance with certain design standards applicable to the Subdivisioin, and to protect the Subdivision from any commercial or other inappropriate development or activity.

1.2 Declaration: To further the general purposes of this Declaration, Declarant, for itself, its successors and assigns, hereby declares that all real property described in Article 3 as the "Properties," whether or not referred to in any deed of conveyance of such real property, or any portion thereof, at all times is and shall be held, transferred, sold, conveyed, and occupied subject to the covenants, restrictions, easements, charges and liens set forth herein.

2. DEFINITIONS: The following words and terms, when used in this Declaration, shall have the following meanings, unless the context clearly indicates otherwise:

2.1 "Association" shall mean the [Name of Subdivision] Homeowners Association, a Maine non-profit corporation with a place of business in _____ Township, Maine.

2.2 "Board" or "Board of Directors" shall mean the duly elected Board of Directors of the Association.

2.3 "Common Area" or "Common Areas" shall mean all interests in real property (including any improvements thereon) held by the Association for the common use of its members.

SAMPLE

2.4 "Common Expenses" shall mean the actual and estimated expenses of operating the Association, including any reasonable reserves, all as may be found to be necessary and appropriate by the Board of Directors pursuant to this Declaration and the Bylaws of the Association.

2.5 "Concept Plan" shall meanand refer to the *Concept Plan for Plum Creek's Gateway Lands in the Moosehead Lake Region* approved by the Maine Land Use Regulation Commission on _____ _____, 2006

2.7 "Lot" shall mean and refer to the individual lots indicated on the Plans (defined below) and shall include any buildings and other improvements located thereon.

2.8 "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title, or that estate or interest which is most nearly equivalent to a fee simple title, to any Lot, but shall not mean or refer to any mortgage holder thereof unless and until such mortgage holder has acquired title to a Lot pursuant to foreclosure or any proceeding in lieu of foreclosure.

2.9 "Plans" shall mean those plans approved by the Maine Land Use Regulation Commission on _____ _____, 20__, and recorded in the _____ County Registry of Deeds in Plan Book _____, Page _____, as the same may be amended from time to time.

2.10 "Properties" shall mean and refer to all such existing properties, and additions thereto, as are subject to this Declaration and are described in Section 3.1, below.

2.11 "Roads" shall mean and refer to all private roads and proposed private roads providing access to and within the Subdivision and shown on the Plans; provided, however, that the term "Roads" shall not include private driveways providing access to individual Lots. The term "Roads" shall include the road beds and all associated easements and rights of way, as depicted on the Plans.

3. PROPERTIES:

3.1 Properties: The real property (the "Properties") located in _____ Township, _____ County, Maine, and more particularly described as follows, to wit: *[insert property description]*.

4. RESTRICTIVE COVENANTS:

The following restrictive covenants shall apply to all Lots:

SAMPLE

4.1 Single Family Residential Use: Lots within this Subdivision may only be used for single family residential housing, or for single family seasonal camping. Only one single family dwelling may be built on each Lot.

4.2 Commercial Use: No commercial or business use, whether for profit or non-profit, may be made of or conducted upon any Lot or improvements thereon, except that rental of a Lot is allowed for single family housing or for single family seasonal camping. Minor home occupations shall be allowed provided that no additional traffic is generated by such use, and further provided that no sign, display of goods, or other visual indication of such is visible from the boundaries of such Lot.

4.3 Signs: No signs or advertisements, other than temporary "for sale" signs and signs identifying a Lot, residence, or the Owner(s) thereof may be erected or placed on any Lot. No sign permitted hereunder, regardless of where located, may exceed 12" X 24" if such sign is visible from any water body abutting any of the Properties or from any Road. All signs on the Properties must comply at all times with the provisions of the Concept Plan and all applicable land use standards of the Maine Land Use Regulation Commission or its successor agency.

4.4 Limited Right of Way: Use of the Roads over which Owners have been granted a right-of-way or easement is for the sole and express purpose of ingress and egress by Owners and their invitees, and for the installation of utilities in accordance with the Concept Plan and all applicable land use standards of the Maine Land Use Regulation Commission or its successor agency. Such Limited Rights of Way shall be appurtenant to and run with the Lots.

4.5 Weather Tight Buildings: All buildings must be maintained in a weather tight condition.

4.6 Building Permits: No construction may be undertaken on any Lot without first obtaining an approved Building Permit from the Maine Land Use Regulation Commission or its successor agency, in accordance with all applcable laws and regulations.

4.7 Set Backs: All structures (including any accessory structures) on Lots must be set back a minimum of 50 feet from the Roads, a minimum of 20 feet from all other property lines, and a mininum of 100 feet from the high water mark of any water bodies abutting the Properties, subject to any further restrictions under the Concept Plan or applicable land use standards of the Maine Land Use Regulation Commission or its successor agency. No utiliy lines are allowed within the 100-foot setback from the high water mark of any water bodies.

4.8 No Subdividing: No Lot may be further subdivided.

4.9 Rules and Regulations: In order to assure the peaceful and orderly use and enjoyment of the Properties, Declarant, or, after transfer of control pursuant to paragraph 5.3 hereof, the Board of Directors, may from time to time adopt, modify, and/or revoke in whole

SAMPLE

or in part, such reasonable rules and regulations, to be called "Rules and Regulations", governing the conduct of persons on the Properties as it may deem necessary or desireable, including, but not limited to methods and procedures for enforcing compliance with the Declaration. Such Rules and Regulations, and every amendment, modification, and revocation thereof, shall be delivered promptly to each Owner and the Association and shall be binding upon all Owners.

4.10 Temporary Structures: No structure of a temporary character (other than tents, travel trailers, and recreational vehicles used for seasonal family camping), trailers, shacks, single or double wide mobile homes, garages, or other outbuildings shall be used at any time as a residence or other habitation.

4.11 Siding and Roofing Materials: All new or replacement exterior roofing materials shall be of non-combustible material and shall be a dark, natural-looking color such that the structure blends in with the surrounding environment; black, brown, forest green, and charcoal gray are preferred. All exterior materials, including window frames, trim, chimneys, and screen doors, shall be unobtrusive in color and texture and shall not be reflective. Natural, earth tones are preferred.

4.12 Exterior Lighting: Exterior lights facing the shore are not allowed. Other exterior lights shall be equipped with motion sensors or other full cut-off features and shall be shaded to prevent glare beyond the Lot. Spotlights are prohibited.

4.13 Nuisances: No noxious or offensive activities or nuisances may be carried on upon any Lot. "Noxious or offensive activities" shall include, without limitation, any activity or behavior which is inconsistent with both the reasonable pleasurable use of the Properties by neighboring Lot Owners and their guests, and their reasonable expectations of quiet enjoyment of their Lot, free from excessively noisy behavior, significantly loud electronic music or other audio distractions, or other similar behavior or activity.

4.14 Property Maintenance: All Lots and buildings and improvements thereon shall be kept and maintained by the Owner of the Lot in a neat, clean, safe, attractive, and sightly condition and in good repair. No Lot or portion thereof may be used or maintained as a dumping site for rubbish or other refuse. Trash, garbage, and other waste shall be kept in proper, sanitary containers. All trash, garbage, and other waste shall be removed regularly in a timely manner and transported off-site to a solid waste transfer station or other approved facility, or otherwise disposed of in accordance with applicable laws and regulations.

4.15 Sewage Disposal and Water Supply Systems: Sewage disposal system (including, without limitation, septic tanks and leach fields) or water supply system (including, without limitation, wells) may serve, or be share by, more than one Lot. Any sewage disposal system and/or water supply system installed and/or maintained on any Lot must at all times comply with applicable laws and regulations, and be regularly maintained.

SAMPLE

4.16 Maximum Height: No structure shall exceed in height the greater of (i) 35 feet above ground level, when measured from the highest, uphill grade point of the structure; or (ii) the height of any screening vegetation.

4.17 Chimneys: All chimneys must be of stone, brick, or tile construction, of or stove pipe, and shall be installed and maintained under the applicable building, fire, and life safety codes.

4.18 Clearing: Clearing of vegetation for paved or gravel driveways, parking areas, and structures, and the creation of impervious surfaces shall be limited so as to minimize phosphorus export. For areas located between 100 feet and 250 feet from the mean high water mark of any water bodies adjacent to the Properties, the extent of impervious surface shall be no more than 10,000 square feet. No more than 30% of any Lot may be cleared in any ten (10) year period. No clearing may be undertaken on any Lot except in compliance with the clearing standards established under the Concept Plan, or other applicable land use standards of the Maine Land Use Regulation Commision or its successor agency.

4.19 Property Lines: All property lines shall be kept free and open and no fences, hedges, or walls are permitted thereon, or within 20-feet thereof.

4.20 Accessory Outbuildings: The total, aggregate footprint of all accessory buildings on any one Lot may not exceed 1,000 square feet and no accessory building may exceed 25 feet in height. The footprint of an accessory building shall be determined by calculating the square footage of the area contained within the external dimensions of such building. For purposes of this Declaration, an accessory building is any building or structure located on a Lot other than one single-family residence and garage (whether attached or detached).

4.21 Walking Trails: Lot Owners may create walking trails upon their Lots, provided that any such trails located within the 100-foot setback from the high water mark do not exceed three feet in width, and further provided that the topsoil is not disturbed in creating such trails and no part of the trail has a sustained grade of more than 10%. All walking trails must comply with applicable standards set forth in the Concept Plan, or other applicable land use standards of the Maine Land Use Regulation Commision or its successor agency.

4.22 Docks: No permanent docks may be built on any Lot; provided, however, that temporary seasonal docks shall be permitted in accordance with applicable state and local laws, rules, and regulations, and the provisions of the Concept Plan, or other applicable land use standards of the Maine Land Use Regulation Commision or its successor agency.

4.23 Common Areas: Common Areas shall be left in their natural state in perpetuity, and shall not be further developed, divided, or partitioned. In connection therewith, clearing on Common Areas shall be limited so as to preserve the scenic resources thereof, subject to, and in accordance with, the Concept Plan; provided, however, that the Association may take

such actions as are necessary to maintain the Common Areas in a manner to promote public health and safety, and the health of the vegetation growing on such Common Areas. Each Lot, as an appurtenance thereto, shall be benefited by an easement and right-of-way over and across all Common Areas for the use and enjoyment thereof, subject to the provisions of this Declaration, the Bylaws, and the Concept Plan.

5. MEMBERSHIP AND VOTING RIGHTS IN THE ASSOCIATION:

5.1 Membership: Prior to the conveyance of any Lots by Declarant to Lot Owners, Declarant shall cause the Association to be formed. Every Owner shall be a member of the Association, provided that any person or entity who holds an interest in any Lot merely as a security for the performance of an obligation shall not be a member**.**

5.2 Voting Rights: Ownership of a Lot shall entitle its Owner to one (1) vote for each Lot owned. When more than one person or entity holds an interest or interests in any Lot, all such persons or entities shall be members, and the single vote for such Lot shall be exercised as they among themselves determine by majority vote, but in no event shall more than one vote be cast with respect to any Lot. Declarant shall also have one vote for every Lot Declarant owns.

5.3 Declarant Control: Notwithstanding the foregoing, Declarant shall have the right to appoint, remove, and replace the directors of the Board until the first meeting of members following the conveyance of 50% of the Lots. Declarant shall call a meeting within 120 days of such conveyance, or at such other time as Declarant deems appropriate.

6. MAINTENANCE OF ROADS AND SIGNS:

6.1 Roads: The Association shall, for the common benefit of the Owners, maintain the Roads. Unless otherwise voted by members of the Association in an Amendment pursuant to Article 8, the Roads are to be maintained in accordance with the standards contained in paragraph 6.1.1 below. The Association will not be responsible for any plowing of the Roads unless and until the Association expressly assumes that obligation pursuant to an Amendment to this Declaration as provided in Article 8. Declarant shall not be responsible for maintenance of Roads, including any plowing of the Roads.

6.1.1 Road Maintenance Standards:

(a) The Association will maintain Roads such that the Roads will be kept open and free of debris during all snow free times for the safe passage of vehicles.

(b) The Association will ensure that all culverts and cross drainages will be kept open and free of debris such that the passage of water is unrestricted. The Association will ensure that all damage to culverts or cross drainages will be repaired promptly.

SAMPLE

The foregoing notwithstanding, in the event the Roads are used by Declarant in its commercial timber harvesting operations, Declarant shall be responsible at its expense to repair any damage caused to the Roads as the result of such timber harvesting operations.

6.2 Extent of Members' Easements: The rights and easements of enjoyment created hereby and in the deeds to Owners shall be subject to the rights of Declarant, its successors and assigns as herein reserved and/or as reserved in the deeds to Owners, and as set forth in the Concept Plan.

6.3 Rights Reserved by Declarant: Declarant, for itself, its successors and assigns, reserves for the benefit of Declarant or any properties of Declarant or any successor or assign of Declarant, which need not include the Properties, the following rights in any properties transferred to the Association or the Owners:

(a) Unless expressly waived by Declarant, Declarant reserves exclusively unto itself, its successors and assigns, a perpetual (notwithstanding paragraph 9.1), alienable, and releasable utility easement and right in, on, over, and under the Roads and Common Areas.

(b) Declarant reserves, for the benefit of Declarant, its successors, assigns, employees and licensees, an easement for the unobstructed use at all times of all Roads for all lawful purposes, including without limitation for all usual commercial forest and land management activities.

6.4 No Affirmative Obligation Unless Stated: Any reservation or right of Declarant which is stated in or implied from these covenants shall not give rise to any affirmative obligation or duty on the part of Declarant unless expressly stated in these covenants.

7. COVENANT FOR MAINTENANCE ASSESSMENTS:

7.1 Assessments By Declarant and the Association:

7.1.1 Creation of the Lien and Personal Obligation of Assessments: Each Owner of a Lot, by acceptance of a deed therefor (whether or not it is so expressed in any such deed) shall be deemed to covenant for himself, his heirs, representatives, successors, and assigns, to pay the Association, following such conveyance, assessments and charges as provided herein. All such assessments and charges shall be fixed, established, and collected from time to time as hereinafter provided. All such assessments and charges, together with any interest thereon and costs of collection thereof, shall be a charge on the land and/or dwelling with respect to which such assessments and charges are made and shall be a lien against such land or dwelling, and shall have the effect of a lien established under 33 M.R.S.A. § 1603-116. Each such assessment and charge, together with the interest thereon and costs of collection thereof, also

SAMPLE

shall be the personal obligation of the member who is the Owner of such assessed Lot at the time when the assessment fell due.

7.1.2 Purpose of the Assessment: The assessments may be levied against the Lots for the purpose of establishing the necessary reserves and for raising funds in order to provide for maintenance of all Roads and Common Areas within the Subdivision (including payment of real estate taxes and other similar assessments and levies), subject to the provisions of Paragraph 7.1.3 below.

7.1.3 Computation of Operating Budget and Assessments: It shall be the duty of the Board at least thirty (30) days prior to the Association's annual meeting to prepare a budget covering the estimated costs of maintaining the Roads and Common Areas during the coming year; provided, however, that Declarant and/or the Association (by vote at a duly held meeting of the members) may establish three or more "blocks" comprised of specific Lots within the subdivision based upon Roads appurtenant to or within such block and the assessments to be levied shall be determined, in part, on the amount of road maintenance, if any, required by any such block. Any Lot that does not have the benefit of Roads appurtenant to or through such block shall not bear any cost of road maintenance, including plowing. The Board shall cause the budget and the proposed assessments to be levied against each Lot for the following year, to be delivered to each member at least twenty-one (21) days prior to the meeting. The budget and assessments shall be deemed ratified and approved unless disapproved at the annual meeting by a vote of seventy-five percent (75%) of the total votes cast at the meeting. In the event the budget is disapproved, the budget last approved by the members shall be continued until such time as the members approve a subsequent budget proposed by the Board.

The Board shall determine the total amount required, including the operational items such as insurance, repairs, reserves, maintenance and other operating expenses, as well as charges to cover any deficits from prior years and capital improvements approved by the Board. The total annual requirements and any supplemental requirements shall be allocated between, assessed to, and paid by the Members as follows:

Except as provided above, each Lot shall be assessed, and the Owner shall pay, a fraction of said requirements, the numerator of which shall be one (1) and the denominator of which shall be equal to the number of Lots on the Properties subject to this Declaration. The maximum annual assessment for an Owner of a single Lot shall not exceed $100 unless so approved by 75 percent of all votes of the Association at an annual or special meeting. Declarant's obligation for such assessments on unsold Lots subject to this Declaration will be limited to the difference between the actual operating costs of the Association, including reserves, and the assessments levied on Owners other than Declarant. In no event, however, will Declarant be required to make a deficiency contribution in an amount greater than it would otherwise be liable for if it were paying assessments on unsold Lots. The sum due the Association from each individual Owner shall constitute an assessment of the Board of Directors and unpaid

SAMPLE

assessments shall constitute liens on the individual Lots, subject to foreclosure as hereinafter provided.

7.1.4. Due Dates; Duties of the Board of Directors: All assessments shall be payable annually in advance on the day ordered by the Board. The Board shall fix the date of commencement and the amount of the assessment against each Lot and shall prepare a roster of the Lots and assessments applicable thereto which shall be kept in the records of the Association and shall be open to inspection by any member upon reasonable advance request. Upon the written request of a member or his/her mortgagee, the Board shall promptly furnish such member or his/her mortgagee with a written statement of the unpaid charges due from such member.

7.1.5 Notice of Meeting: Written notice of any meeting called for the purpose of taking any action authorized under Section 7.1.3 of this Article 7 shall be sent to all members not less than twenty-one (21) days in advance of the meeting. Upon written request of any institutional holder of a first mortgage, that holder shall be entitled to written notice of any such meeting and shall be permitted to designate a representative to attend and observe the meeting.

7.2 Effect of Non-Payment of Assessment or Other Charges; the Personal obligation of the Owner; the Lien; Remedies: If any assessment or any other charges payable pursuant to this Declaration are not paid on the date when due as provided herein, then such assessments and charges shall become delinquent and shall, together with interest of 10% annually thereon and cost of collection thereof as provided hereinafter, thereupon become a continuing lien upon the Lot against which such assessments are made and shall bind such Lot in the hands of the then Owner, his/her heirs, devisees, personal representatives, successors and assigns. Such lien shall be prior to all other liens except: (a) tax or assessment liens on the Lot by the taxing subdivision of any governmental authority, including but not limited to State, County, Town and School District taxing agencies; and (b) all sums unpaid on any first mortgage of record encumbering the Lot. The personal obligation of the then Owner to pay such assessment or charges shall remain his/her personal obligation for the statutory period and shall not pass to his/her successors in title unless expressly assumed by them.

If any assessment or charges are not paid within thirty days after the due date, Declarant or the Association, whichever is applicable, may bring an action at law against the person personally obligated to pay the same and/or to foreclose the lien against the Lot, and there shall be added to the amount of such assessment or charges the costs of preparing and filing the complaint in, and prosecuting to completion, such action, and in the event a judgment is obtained, such judgment shall include interest on the assessment or charges as above provided and attorney's fees, together with the costs of the action.

8. Amendment: Subject to the other provisions of this Declaration and the Bylaws, this Declaration may be amended as follows:

8.1 Notice: Notice of the subject matter of a proposed amendment shall be included in the notice of any meeting of the Association or Board of Directors in which a proposed amendment is considered, and shall be served upon all Owners in the U.S. Mail at the address last furnished to the Board of Directors.

8.2 Resolution: An amendment may be proposed by either the Board of Directors or by Owners holding in the aggregate no less than twenty percent (20%) of the votes in the Association. No such resolution of the Board of Directors adopting a proposed amendment or proposal by Owners holding the required percentage of votes in the Association shall be effective unless it has been adopted at a meeting of the Association duly called and held in accordance with the Bylaws by the affirmative vote of at least sixty-seven percent (67%) of the votes in the Association, whether or not the Owners casting such votes are present at such meeting, and then executed and recorded as provided in paragraph 8.1(d) of this Article.

8.3 Agreement: In the alternative, an amendment may be made by an agreement signed by the Owners of the Lots to which at least sixty-seven percent (67%) of the votes in the Association are allocated in the manner required for the execution of a deed and acknowledged by at least one of them, and such amendment shall be effective when recorded.

8.4 Certain Amendments: No amendment of this Declaration may make any change in the requirements of Section 4 or Section 6, or in any of the rights, privileges, powers and options of Declarant, its successors or assigns, unless Declarant or its successors or assigns join in the execution of such amendment. No amendment of this Declaration may make any change in Section 4.23 unless the Maine Land Use Regulation Commission and Declarant (or its successors or assigns) join in the execution of such amendment

8.5 Execution and Recording: A copy of each amendment shall be attached to or included with a certificate, certifying that the amendment was duly adopted, which certificate shall be executed and acknowledged by such officer or officers of the Association and/or member or members of the Board of Directors designated for that purpose in the Bylaws. The amendment shall be effective when such certificate and copy of the amendment are recorded in the _____ County Registry of Deeds.

8.6 Notice and Challenge: No action to challenge the validity of an amendment to this Declaration adopted by the Association pursuant to this Article may be brought more than one year after such amendment is recorded (other than a challenge to the validity of an amendment on the grounds that such amendment violates the provisions of Section 8.1(c), above). After each amendment to this Declaration adopted pursuant to this Article has been recorded, notice thereof shall be sent to all Owners at the address last furnished to the Board of Directors, but failure to send such notices shall not affect the validity of such amendment. The Association shall make copies of the Declaration and all amendments thereto available for inspection at reasonable times upon reasonable request for such inspection.

9. GENERAL PROVISIONS:

9.1 Duration: The covenants, restrictions, easements, charges, and liens, and other encumbrances and appurtenances set forth in this Declaration shall run with and bind the Properties, for the benefit of all property owned by Declarant and shall inure to the benefit of and be enforceable by Declarant, the Association, and/or the Owner of any land subject to this Declaration, their respective legal representatives, heirs, successors, and assigns, in perpetuity.

9.2 Notices: Any notice sent or required to be sent to any Owner under the provisions of this Declaration, unless otherwise provided herein, shall be deemed to have been properly given when mailed, postage prepaid, to the last known address of the person who appears as an Owner on the records of Declarant or the Association at the time of mailing. Each Owner shall have the affirmative duty and obligation to inform Declarant or the Association, whichever is applicable, in writing of any change of ownership of the Owner's Lot, the Owner's current address, and any failure of the Owner to receive any information from Declarant or the Association at the correct address of the Owner.

9.3 Enforcement: Enforcement of this Declaration shall be by any proceeding at law or in equity against any person or persons violating or attempting to violate any covenant or restriction. Such action may be either to restrain violation or to recover damages, or against the land to enforce any lien or right created by these covenants. Failure by Declarant, the Association, or any Owner to enforce any covenant or restriction herein contained in no event shall be deemed a waiver of the right to do so thereafter.

9.4 Modification: Prior to the formation of the Association, by recorded supplemental declaration, Declarant may modify any of the provisions of this Declaration or any Supplemental Declaration for the purpose of clarifying any such provisions, provided no such modification may materially change the substantive provisions of any such document or materially alter the rights of any Owner established by any such document.

9.5 Severability: Invalidation of any of the provisions of this Declaration by judgment or court order in no way shall affect any other provisions, which shall remain in full force and effect.

9.6 Arbitration: All claims, disputes, and other matters in question between Declarant on the one hand, and the Association or any Owners, on the other, arising out of, or relating to, this Declaration or the breach thereof, except for claims which specific provision is made herein for enforcement by court proceedings, and except for assessments and collection and enforcement of same, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and the

judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Notice of the demand for arbitration shall be filed in writing with the other parties and with the American Arbitration Association. The demand for arbitration shall be made within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

9.7 Construction: Whenever the singular number is used, the same shall include the plural, use of the plural shall include the singular and the masculine, feminine, and neuter genders shall include each other, as the context may require.

9.8 Beneficiaries of Easements, Rights, and Privileges: The easements, licenses, rights, and privileges established, created, and granted by this Declaration shall be for the benefit of, and restricted solely to, the Association, the Owners, and Declarant; and any Owner may also grant the benefit of such easement, license, right, or privilege to his/her tenants and guests and their immediate families for the duration of their tenancies or visits, subject in the case of the Common Areas to the Rules and Regulations of the Board, but the same is not intended to create nor shall it be construed as creating any rights in or for the benefit of the general public.

9.9 Declarants Rights: Declarant may at any time or from time to time delegate some or all of its rights under this Declaration to the Association by a written instrument recorded in the Piscataquis County Registry of Deeds. If Declarant ceases to exist or for any reason becomes legally unable to exercise its rights and duties hereunder, such rights and duties may be exercised by the Association.

IN WITNESS WHEROF, Declarant has caused this instrument to be executed by its duly authorized representative as of the day and year first above written.

Attest: PLUM CREEK LAND COMPANY

_____ By: _____
Name:_____ Name: _____
Assistant Secretary Title: _____

STATE OF WASHINGTON)
) ss:
COUNTY OF KING)

SAMPLE

Personally appeared before me the above-named _____ and _____, to me known to be the _____ and Assistant Secretary, respectively, of PLUM CREEK LAND COMPANY, and acknowledged the foregoing instrument to be the free act and deed of said corporation.

_____
Notary Public in and for the State of
Washington residing at _____
My commission expires: _____

SAMPLE

QUITCLAIM DEED WITH COVENANT

(Maine Statutory Short Form)

KNOW ALL BY THESE PRESENTS, that **PLUM CREEK LAND COMPANY**, a corporation organized and existing under the laws of the State of Delaware and having an address of 999 Third Avenue, Suite 4300, Seattle, Washington 98104, for consideration paid, GRANTS to _____, whose mailing address is _____, _____, with QUITCLAIM COVENANT, all that certain real property located in _____ Township, _____ County, Maine, which is more particularly described as follows:

All that certain lot or parcel of land, together with the buildings and improvements thereon, located in _____ Township, _____ County, Maine,, designated as Lot ___ on that certain plan made by _____, entitled _____, dated _____, and recorded in the _____ County Registry of Deeds in Plan Book _____, Page _____.

BEING part of that certain property conveyed to Plum Creek Land Company from Plum Creek Maine Timberlands, L.L.C. by deed dated _____ ___, 20__, recorded in the Piscataquis County Registry of Deeds in Book _____, Page _____.

TOGETHER WITH the following easements and rights of way for access and utilities: ***[insert access and utility easements, if any]***

SUBJECT TO the covenants, restrictions and conditions contained in that certain General Declaration of Covenants and Restrictions of the _____ Subdivision, dated _____ and recorded in Book _____, Page _____ of the _____ County Registry of Deeds, as the same may be amended from time to time.

FURTHER SUBJECT TO ***[insert required language from Concept Plan and/or subdivision permit approval]***

IN WITNESS WHEREOF, PLUM CREEK LAND COMPANY has caused this instrument to be executed on its behalf by its duly authorized undersigned representative, this ___ day of _____, 20__.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF:

_____
Witness

PLUM CREEK LAND COMPANY

By:_____
Printed Name:
Its:

SAMPLE

STATE OF _____
County of _____, SS. _____ ____, 20__

Then personally appeared the above-named _____, _____ of Plum Creek Land Company and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity, and the free act and deed of said Plum Creek Land Company.

Before me,

_____
Notary Public/Maine Attorney-at-Law
Printed Name:_____

SAMPLE

PRELIMINARY PHOSPHORUS EVALUATION for Select Watersheds of the Concept Plan for Plum Creek's Gateway Lands in the Moosehead Region

Prepared for:

Plum Creek Land Company
c/o Kent Associates
37 Brunswick Avenue
Gardiner, Maine 04343

Prepared by:

DeLuca-Hoffman Associates, Inc.
778 Main Street, Suite 8
South Portland, Maine 04106
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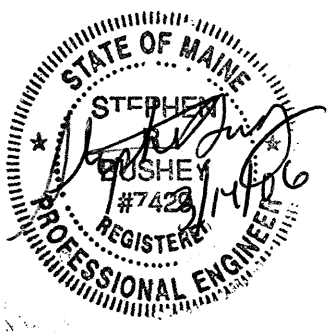

March 14, 2006

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Attachments

Attachment A: Phosphorus Computations

I. INTRODUCTION

DeLuca-Hoffman Associates, Inc. has completed a preliminary phosphorus evaluation of multiple watersheds related to Plum Creek's proposed Concept Plan for their Gateway Lands in the Moosehead Lake region. These evaluations have been prepared in support of the Concept Plan Submission currently under review by the Land Use Regulation Commission and other interested parties. The purposes of these evaluations were as follows:

- To determine a per-acre phosphorus allocation for select watersheds to be used in computing a maximum permitted increase in phosphorus export (PPE) for proposed development activities within the watershed.
- To evaluate estimated phosphorus export increases from a conceptual level subdivision plan for select developments and to determine whether the estimated phosphorous exports remain within the watershed's allocation tolerances or if additional phosphorous control methods will be warranted.

The estimated phosphorus export increases were computed based on conceptual level plans and limited data for six watersheds of the ten Development Areas presented in the revised Concept Plan submission. Ultimately, similar, more detailed studies will be performed for all impacted lake watersheds. Analysis of the Moosehead Lake watershed, for example, has not been performed simply due to its complexity; such an analysis is considered beyond the current scope of the Concept submission and review. LURC subdivision permit guidelines state that an unacceptable increase in phosphorus concentration shall not occur due to the proposed development for projects located in a Lake Watershed. Estimated phosphorus export increases in this report will need to be re-computed for final designs and, in cases where it has been determined that additional treatment measures are warranted, the appropriate design measures will be prepared and incorporated into the plans.

Lot and roadway data used for computing estimated phosphorus export levels were based on the data presented in the "Concept Plan for Plum Creek's Gateway Lands in the Moosehead Lake Region".

II. METHODOLOGY

In accordance with LURC and MEDEP Guidelines, this evaluation has been based on a publication titled, "Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development, MeDEP, September, 1992". This guide is divided into two parts. The first part involves the determination of a per-acre phosphorus allocation, which is the maximum allowable increase in the amount of phosphorus exported per acre of land that new developments within the watershed should be limited to. Data necessary to compute phosphorus allocation values have been obtained from Mr. Jeff Dennis of the MEDEP Lakes Watershed Planning Division. We note that the analysis for Brassua Lake has been performed on an entire watershed basis rather than on a single Township basis. The Plum Creek proposal contains multiple development activities in the Brassua watershed, stretching across multiple Township boundaries. Plum Creek owns greater than 90% of the watershed, hence this method of analysis is considered appropriate and reasonable. Otherwise, development activities within the remaining five analyzed areas are contained within a single Township boundary.

The second part of the evaluation consists of an individual project review for determining the estimated phosphorus export increase from the proposed projects within each watershed area. These increases are compared to allowable phosphorus loading levels to determine if specific mitigation measures are warranted on a project-by-project basis.

III. WATERSHED DATA

The Plum Creek Concept Plan outlines development activities within up to ten watershed subareas in the greater Moosehead region. For the purposes of the initial concept planning DeLuca-Hoffman Associates, Inc. has reviewed six watersheds. Additional study will be required for all impacted watersheds as individual Subdivision proposals are prepared and presented to LURC for approval. Specific watershed data for each current study area is outlined as follows:

Table 1 – Watershed Data

Watershed	Water Quality category	Level of Protection	Phosphorus coefficient (F)*
Brassua Lake	M/S	High	860.00
Long Pond	M/S	High	201.42
Prong Pond	M/S	High	153.68
Burnham Pond	M/S	High	26.61
Indian Pond	Good	High	209.2
Upper Wilson Pond	M/S	High	86.23

*Phosphorous Coefficients provided by Jeff Dennis, MEDEP Lakes Division

IV. PER-ACRE PHOSPHORUS ALLOCATION

In order to determine a per-acre phosphorus allocation for a watershed, the lake's water quality category and desired level of protection are required. The MEDEP Lakes staff has provided this information for each of the study areas. Generally, each waterbody in the study areas has been assigned a water quality category of either "Moderate/Sensitive" or "Good" and a "High" level of protection by the MEDEP. A water quality category of "Moderate/Sensitive" means that waterbodies have an average water quality. The MeDEP suggests that the level of protection for each of these waterbodies should be high due to their cold-water fisheries (i.e., trout and salmon). Based on these criteria, an acceptable increase in lake phosphorus concentration (c) is 0.75 parts per billion (ppb). Indian Pond's level of protection is 1.0 ppb.

The future area that is likely to be developed within each watershed over the next 50 years is also needed to compute the per-acre phosphorus allocation. This is typically accomplished by applying a growth factor to the developable area within any given watershed. Since the majority of each watershed is under Plum Creek ownership and Plum Creek land that is not part of the proposed subdivisions will be set aside as conservation areas, the future areas that are likely to be developed were taken as follows:

Table 2 – Development Data					
Watershed	Proposed Lots and Acreage	Proposed Access Roads	Future Land Management Roads	Other Land	Total Area
Brassua Lake	214/742 acres	24.2 acres	72.7 acres	0 acres	838.9 acres
Long Pond	79/237 acres	11.2 acres	29.0 acres	10 acres	287.2 acres
Prong Pond	58/220 acres	8.43 acres	2.4 acres	See note below	230.9 acres
Burnham Pond	26/88 acres	2.2 acres	2.4 acres	72 acres	164.6 acres
Indian Pond	44/152acres	2.75 acres	9.7 acres	102acres	266.5 acres
Upper Wilson Pond	50/180 acres	4.94 acres	2.4 acres	81 acres	268.4 acres

Note: A portion of the Prong Pond Watershed lies within the Greenville Township with some ownership not by Plum Creek. Jeff Dennis adjusted the F Coefficient value to account for the percentage of land out of Plum Creek control within the watershed.

The remaining Plum Creek lands within each direct drainage watershed area that are not part of the proposed development areas will either be placed in permanent conservation, if adjacent to the waterbodies, or be limited to forest management uses under a long-term working forest conservation plan. These areas were thus not considered to be a source of increased phosphorus over the long-term. These considerations are consistent with the Technical Guide. We note that the MEDEP Lakes Division staff has expressed an interest in the terms and conditions of the set-aside conservation areas and proposed limitations to development within the watersheds, particularly with respect to the 30-year windows and renewals. These aspects of the Plan may need to be further explained and defined to staff as the phosphorus analysis is reviewed.

Computations for the per-acre phosphorus allocation for each of the study areas are contained in Attachment A.

V. PERMITTED PHOSPHORUS EXPORT INCREASE FROM THE PROPOSED DEVELOPMENT

The permitted phosphorus export increase from the proposed development is determined by multiplying the per-acre phosphorus allocation by the acreage of the development sites. The development components including lots and roadways are summarized for each of the ten conceptual "Development Areas" as follows:

Table 3 Components of the Proposed Development Areas			
	Approximate Area (Acres)		
Development Area	Lots	Roadways	Total
Brassua Lake	742.0 ac	24.2 ac	766.2 ac
Long Pond	237.0 ac	11.2 ac	248.2 ac
Prong Pond	220.0 ac	8.4 ac	228.4 ac
Burnham Pond	88.0 ac	2.2 ac	90.2 ac
Indian Pond	152.0 ac	2.8 ac	154.8 ac
Upper Wilson Pond	180 ac	4.9 ac	184.9 ac

Based on the per-acre phosphorus allocation and conceptual acreage of the development area, the permitted phosphorus export increase for each watershed (PPE) has been computed. These values are summarized as follows:

Table 4 – Estimated Permitted Phosphorus Export Increase	
Watershed	PPE (lbs./year)
Brassua Lake	495.6
Long Pond	110.5
Prong Pond	6.59
Burnham Pond	7.35
Indian Pond	101.39
Upper Wilson Pond	37.28

In accordance with the phosphorus guide, if the PPE is more than 25% of the phosphorus allocation for the overall watershed, then an alternate procedure for computing the PPE may be required. This is so that a single large development cannot use up all the watershed's phosphorus allocation. However, in the case of most of the analyzed watersheds, Plum Creek owns the majority of the land. This land will be placed under long-term conservation or working forest management, hence the potential for future additional development within the watershed is nearly zero. Computations for permitted phosphorus export increase are contained in Attachment A.

VI. ESTIMATED PHOSPHORUS EXPORT INCREASE FROM DEVELOPMENT

Estimated phosphorus export increases were computed for the developments for building lots, roads and driveways. Lot data used for determination of phosphorus export rates are as follows:

Table 5 – Lot Data		
Predominant Hydrologic Soil Group[2]	**Assumed Clearing Area Per Lot (sf)[3]**	**Phosphorus Exports Per Lot [1] (lbs)**
Assumed C	10,000 to 15,000 SF	0.44

Notes: [1] Phosphorus export values are based on the assumption that 40% of the site's timber volume has not been harvested within the past five years.

[2] A hydrologic soil group (HSG) of 'C' was assumed due to the lack of soils information. An HSG C is considered conservative and therefore appropriate for this initial analysis.

3. Lot clearing areas are based on Section 4.18 of the Sample Homeowners Association Covenants contained in Appendix 8 of the Concept Plan submission.

Road and driveway lengths used in the phosphorus computations are summarized for each of the Development Areas as follows:

Table 6 Road and Driveway Lengths		
Development Area	**Approximate Road Length (ft)**	**Approximate Driveway Length Contributing Phosphorus (ft)**
Brassua Lake	43,824'	42,800'
Long Pond	20,380'	11,850'
Prong Pond	15,312'	9,550'
Burnham Pond	3,960'	4,400'
Indian Pond	5,016'	7,600'
Upper Wilson Pond	8,976'	8,250'

Driveway lengths were conservatively assumed to be 300' for shorefront lots and 350' to 400' for backlots. Driveways in excess of 150' long per lot are considered to contribute phosphorus export increases in addition to the lot contribution. Therefore the driveway lengths represented in Table 6 reflect only that amount beyond 150'. Existing roads that may need to be improved as part of the proposed subdivision were included in the determination of approximate road length.

Estimated phosphorus export increases computed for the proposed conceptual development are summarized as follows:

Table 7
Estimated Development Phosphorus Export Increases (lbs/year)

Location	Lots	Driveways	Roads	Total Export (TE)
Brassua Lake	94.16	68.48	94.16	281.84
Long Pond	34.76	11.38	55.43	101.57
Prong Pond	24.20	9.46	41.64	75.3
Burnham Pond	11.44	4.22	10.77	26.43
Indian Pond	19.36	7.3	10.43	37.09
Upper Wilson Pond	22.0	7.92	18.67	48.59

In accordance with the methodology, the TE is adjusted by a multiplication factor of 0.5 to yield the total phosphorus available for algal production (TPA). Computations for phosphorus export are contained in Attachment A.

VII. CONCLUSIONS

The permitted phosphorus export increase (PPE) and total phosphorus available for algal production (TPA) computed in this evaluation are as follows:

Table 8 – Summary Comparison

Development Area	PPE	TPA	Comment
Brassua Lake	495.6	140.92	PPE>TPA therefore OK
Long Pond	110.5	50.78	PPE>TPA therefore OK
Prong Pond	6.59	37.65	PPE<TPA therefore phosphorus controls necessary
Burnham Pond	7.35	13.21	PPE<TPA therefore phosphorus controls necessary
Indian Pond	101.39	18.54	PPE>TPA therefore OK
Upper Wilson Pond	37.28	24.3	PPE>TPA therefore OK

Based on the methodology, it is reasonable to conclude that development activities within the watersheds of Brassua Lake, Long Pond, Indian Pond, and Upper Wilson Pond will result in phosphorus loadings that are within the permittable levels without need of additional mitigation measures. The TPA for these watersheds was computed based on no specific phosphorus control measures being implemented for the proposed subdivisions. Development activities within the Prong Pond and Burnham Pond watersheds may result in higher levels of phosphorus export than indicated by the PPE; therefore, it is reasonable to conclude that additional control measures will be necessary. Standard control measures routinely include permanent vegetated buffer strips, infiltration areas, filtration beds or wet basins that are designed to capture stormwater runoff from disturbed ground areas and treat the runoff for phosphorus removal. Critical to the overall assessment of project phosphorus loadings is the development of roads and driveways for the projects. The ability to minimize new road development in the watershed for either the development activities or long-term forest management will aid is keeping phosphorus loadings down. Similarly, the ability to reduce driveway lengths and numbers by incorporating shared drives for multiple lots, for example, also reduces overall phosphorus loadings and will aid the design process

for the locations of additional mitigation measures that may be necessary. Temporary and permanent erosion control measures such as mulch filter berms, silt fence, ditch linings, ditch turnouts, level spreaders, stabilized culvert inlets/outlets and other surface stabilization measures will also be incorporated into the proposed subdivision designs to help mitigate phosphorus impacts and minimize erosion and sediment transport. Each subdivision proposal will include detailed design drawings that will outline all necessary methods and procedures to comply with LURC and State erosion control Best Management Practices. Within these drawings as well as within the lot development requirements, Plum Creek will include specific erosion control practices that will be followed during the construction of all roads, lots and other activities. Ultimately, the studies and design drawings to be prepared during individual subdivision proposal submissions will rely on more detailed watershed data, land condition information, and design information in order to better determine estimated phosphorus loading, erosion control needs and any necessary mitigation measures.

ATTACHMENT A

PRELIMINARY PHOSPHOROUS COMPUTATIONS

Task: Prepare determination of water quality goal and phosphorous allocation worksheets associated with six watersheds within Plum Creek Concept Planning area.

Reference: 1) Phosphorous Control in Lake Waterhseds – MEDEP- Sept. 1992
2) Proposed Concept Plan (Revised April 2006) for Plum Creek's Gateway Lands in the Moosehead Region
3) Telephone correspondence with Jeff Dennis of the DEP Lakes Division
4) Concept Plan Maps by DHAI

Assumptions: 1) Shorefront Lots = 3 acres in size with at least 250' of frontage
2) backlots = 5 acres
3) Future logging road development based on guidance from PC staff or assumed

Base information computations summary:

Watershed	**Shorefront Lots/acres**	**Back Lots/acres**	**Roads (@ 24' wide)**	**Future Logging Roads (@ 20' wide)**	**Non PC Ownership-development area**	**Total Develop-ment Area**
Brassua (Map 6)	164/492	50/250	8.3 miles/24.2 acres	30 miles/72.7 acres	No further development	**838.9acres**
Burnham Pond (Map 7)	21/63	5/25	.75 miles/2.2 acres	1 mile/2.4 acres	72 acres	**164.6 acres**
Indian Pond (Map 7)	34/102	10/50	.95 miles/2.75 acres	4 miles/9.7 acres	102 acres	**266.5 acres**
Prong Pond (Map 10)	35/105	23*/115	2.9 miles/8.43 acres	1 mile/2.42 acres	Accounted for in F value by Jeff Dennis	**230.9 acres**
Upper Wilson Pond (Map 11)	35/105	15/75	1.7 miles/4.94 acres	1 mile/2.42 acres	81 acres	**268.4 acres**
Long Pond (Map 3)	79/237	0	3.86 miles/11.2 acres	12 miles/29 acres	10 acres	**287.2 acres**

* 31 additional lots are in Mud Pond watershed

APPENDIX A

Watershed BRASSAU LAKE Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = 860 lbs/ppb/yr *

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: MODERATE / SENSITIVE

Level of protection: High

(C) = 0.75 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

$$\underset{(F)}{860}\ \text{lbs/ppb/yr} \times \underset{(C)}{0.75}\ \text{ppb} = \underset{(FC)}{645}\ \text{lbs/yr}$$

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = 838.9 acres

5) Using the values of (FC) and (D) given above, complete the following equation:

$$\underset{(FC)}{645}\ \text{lbs/yr} \div \underset{(D)}{838.9}\ \text{acres} = \underset{(P)}{0.77}\ \text{lbs/acre/yr}$$

PER-ACRE PHOSPHORUS ALLOCATION = $\underset{(P)}{0.77}$ lbs/ac/yr

* per Jeff Dennis - MDEP

Project Brassau

Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.77 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 766.2
Wetland acreage: 122.6 (16% of total)
Steep acreage: —

(A) = 643.6 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

0.77 (P) lbs/ac/yr x 643.6 (A) acres = 495.6 (PPE) lbs/yr

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = 495.6 (PPE) lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project Brassau

Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access	8.3 miles or 43,824 ft	x 0.272* /100 ft	x( )	x( )	x( )	x(1)	= 119.20 lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	

TOTAL EXPORT FROM ROADS = 119.20 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 24' WIDE ROAD x (0.008) + 2 (0.04) = .272 per 3.3.1.1 Ref.1

Project Brassau Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot 214 :	0.44* lbs x( )	x( )	x( )	x( )	x(1) =	94.16 lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1) =	____ lbs P,	

TOTAL EXPORT FROM LOTS = 94.16 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

* from TABLE 3-4, HSG C, and 10,000 - 15,000 SF CLEARING AREA

Project Brassau Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
214	200LF/LOT ft	x 0.16* /100 ft	x( )	x( )	x( )	x(1)	= 68.48 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM DRIVEWAYS = 68.48 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 20' wide x 0.008 = 0.16 per section 3.3.1.1 ref 1.

Project Brassay

Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

****

TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	119.20	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	94.16	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	68.48	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	281.84	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

$$\underset{\text{(TE)}}{\frac{281.84}{}} \times 0.5 = \underset{\text{(TPA)}}{\frac{140.92}{}}$$

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 495.6 (from Step 1)
(TPA) = 140.92 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

495.6 > 140.92 ∴ export within allowable limits

APPENDIX A

Watershed Burnham Pond Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = 26.61 lbs/ppb/yr

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: moderate / sensitive

Level of protection: High

(C) = 0.75 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

(26.61 lbs/ppb/yr) x (0.75 ppb) = 19.96 lbs/yr
(F) (C) (FC)

Plum Creek allocation @ 80% of FC per Jeff Dennis = 15.97 lbs/yr

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = 164.6 acres

5) Using the values of (FC) and (D) given above, complete the following equation:

(15.97 lbs/yr)/(164.6 acres) = 0.097 lbs/acre/yr
(FC) (D) (P)

PER-ACRE PHOSPHORUS ALLOCATION = 0.097 lbs/ac/yr
(P)

Project Buenham Pond Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.097 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 90.2
Wetland acreage: 14.4 (16% of total)
Steep acreage: -

(A) = 75.80 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

0.097 (P) lbs/ac/yr x 75.80 (A) acres = 7.35 (PPE) lbs/yr

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = 7.35 (PPE) lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project Burnham Pond Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access	0.75 mile or 3,960 ft	x 0.272* /100 ft	x( )	x( )	x( )	x(1)	= 10.77 lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	

TOTAL EXPORT FROM ROADS = 10.77 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 24' wide road x (0.008) + 2(0.04) = 0.272

Project Burnham Pond

Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot 26 :	0.44* lbs x( )	x( )	x( )	x( )	x(1)	= 11.44 lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM LOTS = 11.44 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

* TABLE 3-4

Project Burnham Pond Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
2 lots	150 ft/lot	0.096 /100 ft				1	3.02 lbs P	
5 lots	250 ft/lot	0.096 /100 ft				1	1.2 lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	
		/100 ft				1	lbs P	

TOTAL EXPORT FROM DRIVEWAYS = 4.22 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project Burnham Pond Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

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TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	10.77	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	11.44	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	4.22	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	26.43	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

26.43 (TE) x 0.5 = 13.21 (TPA)

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 7.35 (from Step 1)
(TPA) = 13.21 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

7.35 < 13.21 ∴ phosphorous controls warranted

APPENDIX A

Watershed INDIAN POND Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = 209.2 lbs/ppb/yr

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: GOOD

Level of protection: HIGH

(C) = 1.0 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

(209.2 (F) lbs/ppb/yr) x (1.0 (C) ppb) = 209.2 (FC) lbs/yr

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = 266.5 acres (House lots only - Doesn't include resort)

5) Using the values of (FC) and (D) given above, complete the following equation:

(209.2 (FC) lbs/yr)/(266.5 (D) acres) = 0.78 (P) lbs/acre/yr

PER-ACRE PHOSPHORUS ALLOCATION = 0.78 (P) lbs/ac/yr

Project INDIAN POND Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.78 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 154.75
Wetland acreage: 24.76 (16% of total)
Steep acreage: —

(A) = 129.99 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

0.78 (P) lbs/ac/yr x 129.99 (A) acres = 101.39 (PPE) lbs/yr

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = 101.39 (PPE) lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project INDIAN POND Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access Roads	0.95 mile or 5,016 ft	x 0.208* /100 ft	x( )	x( )	x( )	x(1)	= 10.43 lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	
____	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P	

TOTAL EXPORT FROM ROADS = 10.43 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 16' wide × 0.008 + 2(0.04) = 0.208 per 3.3.1.1

Project INDIAN POND Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot 44 :	0.44 lbs	x( )	x( )	x( )	x(1)	= 19.36 lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	
Lot ____ :	____ lbs	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM LOTS = 19.36 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

Project INDIAN POND

Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
34 lots	150 LF/lot ft	x 0.096* /100 ft	x( )	x( )	x( )	x(1)	= 4.90 lbs P,	
10	250 LF/lot ft	x 0.096* /100 ft	x( )	x( )	x( )	x(1)	= 2.40 lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	
____	____ ft	x____/100 ft	x( )	x( )	x( )	x(1)	= ____lbs P,	

TOTAL EXPORT FROM DRIVEWAYS = 7.30 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 12' wide D/W x 0.008 = 0.096 per 3.3.1.1

Project INDIAN POND Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

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TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	10.43	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	19.36	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	7.30	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	37.09	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

$$\underset{\text{(TE)}}{37.09} \times 0.5 = \underset{\text{(TPA)}}{18.54}$$

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 101.39 (from Step 1)
(TPA) = 18.54 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

101.39 > 18.54 ∴ phosphorous export within ALLOWABLE for lots

APPENDIX A

Watershed Piong Pond Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = _____ lbs/ppb/yr

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: Moderate/Sensitive

Level of protection: High

(C) = 0.75 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

(_____ lbs/ppb/yr) x (_____ ppb) = _____ lbs/yr
(F) (C) (FC)

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = _____ acres

5) Using the values of (FC) and (D) given above, complete the following equation:

(_____ lbs/yr)/(_____ acres) = 0.034 lbs/acre/yr
(FC) (D) (P)

PER-ACRE PHOSPHORUS ALLOCATION = 0.034 lbs/ac/yr* (P)

* per Jeff Dennis - MDEP

Project Piony Pond

Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.034 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 230.9
Wetland acreage: 36.9
Steep acreage: -

(A) = 194.0 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

$$\underset{(P)}{0.034} \text{ lbs/ac/yr} \times \underset{(A)}{194.0} \text{ acres} = \underset{(PPE)}{6.59} \text{ lbs/yr}$$

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = $\underset{(PPE)}{6.59}$ lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project Prony Pond Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access,	2.9 mile 15,312 ft	x 0.272* /100 ft	x( )	x( )	x( )	x(1)	= 41.64 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM ROADS = 41.64 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

* 24' wide x (0.008) + 2(0.004) = 0.272 per 3.3.1.1

Project Prong Pond

Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

	QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot	58	: 0.44 lbs x(	)x(	)x(	)x(	1)=	24.2 lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	
Lot		: lbs x(	)x(	)x(	)x(	1)=	lbs P,	

TOTAL EXPORT FROM LOTS = 24.2 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

Project Pony Pond Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
351db,	150LF/10 ft	x 0.096 /100 ft	x( )	x( )	x( )	x(1)	= 5.04 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
231db,	200LF/10 ft	x 0.096 /100 ft	x( )	x( )	x( )	x(1)	= 4.42 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM DRIVEWAYS = 9.46 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project Prong Pond Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

****

TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	41.64	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	24.2	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	9.46	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	75.3	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

75.3 (TE) x 0.5 = 37.65 (TPA)

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 6.59 (from Step 1)
(TPA) = 37.65 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

6.59 < 37.65 ∴ Additional phosphorous controls are warrented.

APPENDIX A

Watershed Upper Wilson Pond Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = 86.23 lbs/ppb/yr

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: moderate Sensitive

Level of protection: high

(C) = 0.75 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

(86.23 (F) lbs/ppb/yr) x (0.75 (C) ppb) = 64.67 (FC) lbs/yr

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = 268.4 acres

5) Using the values of (FC) and (D) given above, complete the following equation:

(64.67 (FC) lbs/yr)/268.4 (D) acres) = 0.24 (P) lbs/acre/yr

PER-ACRE PHOSPHORUS ALLOCATION = 0.24 (P) lbs/ac/yr

Project Upper Wilson Pond Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.24 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 184.94
Wetland acreage: 29.59 (16% of total)
Steep acreage: —

(A) = 155.35 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

$$\underset{(P)}{0.24}\ \text{lbs/ac/yr} \times \underset{(A)}{155.35}\ \text{acres} = \underset{(PPE)}{37.28}\ \text{lbs/yr}$$

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = $\underset{(PPE)}{37.28}$ lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project Upper Wilson Pond

Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access Roads	1.7 miles 8976LF	ft x 0.208 /100 ft	x( )	x( )	x( )	x(1)	= 18.67 lbs P,	
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		
____, ____	ft x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,		

TOTAL EXPORT FROM ROADS = 18.67 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project Upper Wilson Pond

Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot 50 :	0.44 lbs x( )	x( )	x( )	x(1)	=	22 lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	
Lot ____ :	____ lbs x( )	x( )	x( )	x(1)	=	____ lbs P,	

TOTAL EXPORT FROM LOTS = 22 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

Project Upper Wilson Pond Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
35 lots	150 LF/lot	ft x 0.096 /100 ft	x( )	x( )	x( )	x(1)	= 5.04 lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
15 lots	200 LF/lot	ft x 0.096 /100 ft	x( )	x( )	x( )	x(1)	= 2.88 lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	
		ft x /100 ft	x( )	x( )	x( )	x(1)	= lbs P	

TOTAL EXPORT FROM DRIVEWAYS = 7.92 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project _____ Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

****

TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	18.67	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	22.0	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	7.92	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	48.59	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

48.59 (TE) x 0.5 = 24.30 (TPA)

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 37.28 (from Step 1)
(TPA) = 24.30 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

37.28 > 24.30 ∴ phosphorous export within ALLOWABLE

APPENDIX A

Watershed Long Pond Standard Review Method

WORKSHEET A

PART ONE - DETERMINATION OF WATER QUALITY GOAL AND PHOSPHORUS ALLOCATION

PART ONE. Determine allowable phosphorus export (per acre) in the lake watershed.

1) Contact DEP's Lakes Section to obtain the value of (F) (phosphorus coefficient) for the lake in whose watershed the development is proposed.

(F) = 201.42 * lbs/ppb/yr

2) Contact DEP's Lakes Section to obtain the water quality category of the lake. Choose a level of protection for the lake. Using the water quality category and level of protection, use Table 3-2 to determine (C) (acceptable increase in P concentration).

Water quality category: moderate/sensitive

Level of protection: High

(C) = 0.75 ppb

3) Using the values of (F) and (C) given above, complete the following equation:

(201.42 (F) lbs/ppb/yr) x (0.75 (C) ppb) = 151.065 (FC) lbs/yr

4) Estimate (D) (future area to be developed over the next 50 years).

(D) = 287.2 acres

5) Using the values of (FC) and (D) given above, complete the following equation:

(151.065 (FC) lbs/yr)/(287.2 (D) acres) = 0.53 (P) lbs/acre/yr

PER-ACRE PHOSPHORUS ALLOCATION = 0.53 (P) lbs/ac/yr

* per Jeff Dennis - MDEP

Project Long Pond Standard Review Method

WORKSHEET A-1

PART TWO - INDIVIDUAL PROJECT REVIEW,

STEP 1. Determine maximum permitted phosphorus export from the development.

1) Obtain (P) (per-acre phosphorus allocation) from PART ONE.

(P) = 0.53 lbs/ac/yr

2) Determine (A), project acreage, from site plan. Include all land to be developed and any commonly held land or protected land included in the development.

a) Subtract acreage that is undevelopable due to physical limitations, including:

(1) wetland areas > 1 acre
(2) areas of sustained slope >25% covering more than 1 acre

Total acreage of development: 248.2
Wetland acreage: 39.7 (16% of total)
Steep acreage: —

(A) = 208.5 acres

3) Using the values of (P) and (A) shown above, complete the following equation:

$$\underset{(P)}{0.53} \text{ lbs/ac/yr} \times \underset{(A)}{208.5} \text{ acres} = \underset{(PPE)}{110.50} \text{ lbs/yr}$$

MAXIMUM PERMITTED PHOSPHORUS EXPORT FROM PROJECT = $\underset{(PPE)}{110.50}$ lbs/yr

STEP 2. Use Worksheets A-2 through A-6 to calculate PREDICTED phosphorus export from the development.

For Single-Family Residential Development use:
Worksheet A-2 (roads)
Worksheet A-3 (houselots)
Worksheet A-4 (residential driveway, sections>150 feet)

For Multi-unit Dwellings, Commercial & Industrial Projects use:
Worksheet A-5 (all developed areas)

Project Long Pond

Standard Review Method

WORKSHEET A-2

PHOSPHORUS EXPORT FROM ROADS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the road into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of road applying appropriate treatment factor(s) for phosphorus control measures on that section of road. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of road drain to different treatment systems.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC/WI/SL
Access,	3.86mi/20380 ft	x 0.272 /100 ft	x( )	x( )	x( )	x(1)	= 55.43 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM ROADS = 55.43 lbs P

N =No Treatment HC = Soil Hydrologic Class SL = Buffer Slope
B = bufferstrips WP = wet pond I = infiltration areas WI = Buffer Width

NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project Long Pond

Standard Review Method

WORKSHEET A-3
PHOSPHORUS EXPORT FROM LOTS
SINGLE-FAMILY RESIDENTIAL PROJECTS

Complete one of the lines below for each houselot. Phosphorus export figures for the various hydrologic groups are listed in Table 3-4. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic group and width are determined from the site plan.

****

QTY	EXPORT TREATMENT	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT(HE)	BUFFER HC/SL/WI
Lot 79 :	0.44 lbs x(	)x(	)x(	)x(1)=	34.76 lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		
Lot____:	_____lbs x(	)x(	)x(	)x(1)=	_____ lbs P,		

TOTAL EXPORT FROM LOTS = 34.76 lbs P

N = No Treatment HE = P Export from houselots
B = bufferstrips WP = wet pond I = infiltration areas
HC = Soil Hydrologic Group WI = Buffer Width SL = Buffer Slope

NOTE: Please add a site map showing buffer location and a narrative of the buffers.

Project Long Pond Standard Review Method

WORKSHEET A-4

PHOSPHORUS EXPORT FROM DRIVEWAYS LONGER THAN 150 FEET
SINGLE-FAMILY RESIDENTIAL PROJECTS

Mark the driveway section greater than 150 feet into sections based on the type of treatment each section will receive. Complete one of the lines below for each section of driveway applying appropriate treatment factor(s) for phosphorus control measures on that section of driveway. Treatment factors are listed on the last page of each design chapter. Buffer hydrologic class and width are determined from the site plan. Multiply by 0.5 when the two sides of a single stretch of driveway drain to different treatment systems.

NOTE: Only use this worksheet for the section of driveway(s) greater than 150 feet. Please note that the first 150 feet of driveway is automatically included export factors used in Worksheet A-3 so do not include the first 150 ft of drive here.

****

LABEL NAME	LENGTH OF SECTION	PHOS. EXPORT (LBS)	TREATMENT FACTORS B	WP	I	N	PHOSPHORUS EXPORT	BUFFER HC&SL&WI
79lots	150 LF/lot ft	x 0.096 /100 ft	x( )	x( )	x( )	x(1)	= 11.38 lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	
____,	____ ft	x ____ /100 ft	x( )	x( )	x( )	x(1)	= ____ lbs P,	

TOTAL EXPORT FROM DRIVEWAYS = 11.38 lbs P

HC = Soil Hydrologic Class WI = Buffer Width SL = Buffer Slope
B = Bufferstrips WP = Wet Pond I = Infiltration areas
N = No Treatment
NOTE: Please provide a site map showing buffer location and a narrative of the buffers.

Project Long Pond Standard Review Method

WORKSHEET A-7

TOTAL PHOSPHORUS EXPORT FROM PROJECT

****

TOTAL PHOSPHORUS EXPORT FROM PROJECT

(from Worksheet A-2)	TOTAL EXPORT FROM ROADS: SINGLE-FAMILY RES.	55.43	
(from Worksheet A-3)	TOTAL EXPORT FROM LOTS: SINGLE-FAMILY RES.	34.76	+
(from Worksheet A-4)	TOTAL EXPORT FROM DRIVEWAYS>150 FT:	11.38	+
(from Worksheet A-5)	TOTAL EXPORT FROM MULTI-UNIT, COMM., INDUSTRIAL:	N/A	+
(from Worksheet A-6)	CREDITS:	N/A	-
	TOTAL EXPORT FROM PROJECT:	101.57	LBS/YR

STEP 3. Correct total export to reflect phosphorus availability.

Multiply total export (TE) by the correction factor to determine total phosphorus available for algal production.

$$\frac{101.57}{\text{(TE)}} \times 0.5 = \frac{50.78}{\text{(TPA)}}$$

STEP 4. Compare PERMITTED phosphorus export with PREDICTED phosphorus export.

(PPE) = 110.50 (from Step 1)
(TPA) = 50.78 (from Step 3)

If (PPE) > (TPA), then phosphorus control is adequate.
If (PPE) < (TPA), then additional phosphorus control is needed.

110.50 > 50.78 ∴ phosphorous export within Allowable

Detail Map 3

CONCEPT PLAN for PLUM CREEK'S GATEWAY LANDS in the MOOSEHEAD LAKE REGION

Note:
Shoreland development areas shown on this map indicate the approximate location and amount of linear shorefront proposed for residential lots. Plum Creek reserves the right to relocate these lots to other areas on the same waterbody (provided the caps established in the Plan are met) or to a backlot area shown on the maps.

N

Moose River

Thorndike Twp

Brassua Twp

Fletcher Pond West

Fletcher Pond East

Demo Pond

Roderique Pond

Rockwood Strip T2 R1 NBKP

Long Pond Twp

NEW OR IMPROVED ROAD

Northwest Shore

South Shore

North Central Shore

Long Pond

Northeast Shore

Long Pond

Little Otter Pond

Jackman

6 15

Fogg Pond

Sandwich Academy Grant

Misery Gore Twp

201

Upper Paradise Pond

Lower Paradise Pond

Horseshoe Pond

Smith Pond

Misery Twp

Parlin Pond Twp

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
- Railroad
- Appalachian Trail
- ITS Snowmobile Trail within Plan Area
- ITS Snowmobile Trail not within Plan Area
- Proposed Peak-to-Peak Hiking Trail
- Proposed Hiking Trail outside Plan Area
- Moosehead to Mahoosucs Trail
- Existing development or LURC Development District
- Existing 40 Acre subdivision
- Proposed residential zone / envelope
- Open Space
- Existing commercial / industrial location
- Proposed resort zone / envelope
- The Roaches Conservation Area
- Moosehead / Roaches Conservation Easement
- Quarter Million Acre Option
- 30 Year No Development

500 Ac
100 Ac
10 Ac

0 1 2 Miles

Note:
Shoreland development areas shown on this map indicate the approximate location and amount of linear shorefront proposed for residential lots. Plum Creek reserves the right to relocate these lots to other areas on the same waterbody (provided the caps established in the Plan are met) or to a backlot area shown on the maps.

N

Leith Pond

Brassua Twp

Tomhegan Twp

Moosehead Wildlands Concept Plan

Moosehead Lake

Kineo

Kineo Twp

Days Academy Grant Twp

Rockwood

West Shore A

NEW OR IMPROVED ROAD

West Shore B

West Shore C

Rockwood Strip T2 R2 NBKP

Brassua Lake

Rockwood Strip T2 R1 NBKP

South Peninsula B

South Peninsula C

NEW OR IMPROVED ROAD

Rockwood Village West A

Rockwood Village West B

Rockwood Kineo View

West Outlet

West Outlet Shore

West Outlet Highlands C

West Shore E

West Shore D

South Peninsula D

South Peninsula Highland

South Peninsula A

Southeast Highlands

Taunton & Raynham Twp

Southeast Shore

South Peninsula E

West Outlet Highlands A

West Outlet Highlands B

6

15

Sandbar Tract Twp

Sandwich Academy Grant

Detail Map 6

CONCEPT PLAN for PLUM CREEK'S GATEWAY LANDS in the MOOSEHEAD LAKE REGION

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
- Railroad
- Appalachian Trail
- ITS Snowmobile Trail within Plan Area
- ITS Snowmobile Trail not within Plan Area
- Proposed Peak-to-Peak Hiking Trail
- Proposed Hiking Trail outside Plan Area
- Moosehead to Mahoosucs Trail
- Existing development or LURC Development District
- Existing 40 Acre subdivision
- Proposed residential zone / envelope
- Open Space
- Existing commercial / industrial location
- Proposed resort zone / envelope
- The Roaches Conservation Area
- Moosehead / Roaches Conservation Easement
- Quarter Million Acre Option
- 30 Year No Development

500 Ac
100 Ac
10 Ac

0 1 2 Miles

Detail Map 7

CONCEPT PLAN for PLUM CREEK'S GATEWAY LANDS in the MOOSEHEAD LAKE REGION

Note:
Shoreland development areas shown on this map indicate the approximate location and amount of linear shorefront proposed for residential lots. Plum Creek reserves the right to relocate these lots to other areas on the same waterbody (provided the caps established in the Plan are met) or to a backlot area shown on the maps.

N

Sandwich Academy Grant
Taunton & Raynham Twp
Misery Gore Twp
Otter Pond
Sapling Twp
Misery Twp
Chase Stream Twp
Indian Stream Twp
Big Moose Twp
Commercial / Industrial (Saw Mill)
Moosehead Lake
Sapling
Kennebec River East Outlet
East Outlet Highlands B
East Outlet Highlands A
Deep Cove Northeast Shore
North Highlands
Deep Cove Highlands
Deep Cove East Shore
North Shore
Burnham Pond
South Shore
Rail Station
Indian Pond
Resort Club House
Indian Pond Northeast Shore
Indian Pond Highlands
Indian Pond Southeast Shore
NEW ROAD
NEW ROAD
Big Moose Mt. Village
Mountain View Pond

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
- Railroad
- Appalachian Trail
- ITS Snowmobile Trail within Plan Area
- ITS Snowmobile Trail not within Plan Area
- Proposed Peak-to-Peak Hiking Trail
- Proposed Hiking Trail outside Plan Area
- Moosehead to Mahoosucs Trail
- Existing development or LURC Development District
- Existing 40 Acre subdivision
- Proposed residential zone / envelope
- Open Space
- Existing commercial / industrial location
- Proposed resort zone / envelope
- The Roaches Conservation Area
- Moosehead / Roaches Conservation Easement
- Quarter Million Acre Option
- 30 Year No Development

500 Ac
100 Ac
10 Ac

0 1 2 Miles

Detail Map 10

CONCEPT PLAN for PLUM CREEK'S GATEWAY LANDS in the MOOSEHEAD LAKE REGION

N

Lily Bay Twp

Lily Bay Heights A

Lily Bay Heights B

Resort at Lily Bay

Carleton Point

Moosehead Lake

Beaver Cove Back A

Mud Pond

NEW OR IMPROVED ROAD

Beaver Cove Back B

Northeast Highlands

Northeast Shore

Beaver Cove

West Shore

South Shore

Prong Pond

Greenville

Beaver Cove

Mountain Pond

Fogg Pond

Bowdoin College Grant West Twp

Note:
Shoreland development areas shown on this map indicate the approximate location and amount of linear shorefront proposed for residential lots. Plum Creek reserves the right to relocate these lots to other areas on the same waterbody (provided the caps established in the Plan are met) or to a backlot area shown on the maps.

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
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- Appalachian Trail
- ITS Snowmobile Trail within Plan Area
- ITS Snowmobile Trail not within Plan Area
- Proposed Peak-to-Peak Hiking Trail
- Proposed Hiking Trail outside Plan Area
- Moosehead to Mahoosucs Trail
- Existing development or LURC Development District
- Existing 40 Acre subdivision
- Proposed residential zone / envelope
- Open Space
- Existing commercial / industrial location
- Proposed resort zone / envelope
- The Roaches Conservation Area
- Moosehead / Roaches Conservation Easement
- Quarter Million Acre Option
- 30 Year No Development

500 Ac
100 Ac
10 Ac

0 1 2 Miles

Detail Map 11

CONCEPT PLAN for PLUM CREEK'S GATEWAY LANDS in the MOOSEHEAD LAKE REGION

Moosehead Lake
Moose Bay Shore
Moose Bay Village
Lily Bay Road
West Shore Highlands
South Peninsula
Upper Wilson Pond
West Shore
East Shore A
East Shore B
East Shore Narrows
South Cove
NEW OR IMPROVED ROAD
Lower Wilson Pond
Notch Pond
Cranberry Pond
Rum Pond
Bowdoin College Grant West Twp
Indian Pond
Secret Pond
Greenville
Moosehead Junction Twp
Elliottsville Twp
6
15

N

Note:
Shoreland development areas shown on this map indicate the approximate location and amount of linear shorefront proposed for residential lots. Plum Creek reserves the right to relocate these lots to other areas on the same waterbody (provided the caps established in the Plan are met) or to a backlot area shown on the maps.

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement
- Major Road (Public)
- Minor Road (Public or Private)
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- Proposed Hiking Trail outside Plan Area
- Moosehead to Mahoosucs Trail
- Existing development or LURC Development District
- Existing 40 Acre subdivision
- Proposed residential zone / envelope
- Open Space
- Existing commercial / industrial location
- Proposed resort zone / envelope
- The Roaches Conservation Area
- Moosehead / Roaches Conservation Easement
- Quarter Million Acre Option
- 30 Year No Development

500 Ac
100 Ac
10 Ac
0 1 2 Miles

PLUM CREEK LAND COMPANY
SOIL INVESTIGATION SERVICES
SOILS MAPPING AND EVALUATION
MOOSEHEAD LAKE REGION, MAINE

03-0466.2 MARCH 29, 2006

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Exhibit 2 - USDA, NRCS Soil Survey Legend
Exhibit 3 - Summary Table of Soil Potential Ratings
Exhibit 4 - Typical Low Density Development Area Footprint on a Soil Association
Exhibit 5 - Soil Potential Ratings for Low Density Development in the Unorganized Area of Maine (pgs. 1-19)

Table 1 - Summary of Soil Limitations and Corrective Measures
Table 2 - Summary of Findings (By Area)

03-0466.2

March 29, 2006

Kent Associates
Attention: Mr. Brian Kent
37 Brunswick Avenue
Gardiner, ME 04345

Subject: Plum Creek Land Company
Soil Investigation Services
Soils Mapping and Evaluation
Moosehead Lake Region, Maine

Dear Mr. Kent:

As requested as a part of our ongoing soil investigation services, we conducted preliminary soil and wetland investigations on potential development areas identified on Maps 1-14 of a Concept Plan for Plum Creek's Gateway Lands in the Moosehead Lake Region shown in Exhibit 1. The purpose of our investigations was to evaluate the suitability of soils for subsurface wastewater disposal and low density residential or commercial development through on-site soil investigations and evaluation of published soil mapping.

Maps 1-14 in Exhibit 1 contain U.S. Department of Agriculture, Natural Resource Conservation Service (USDA NRCS) Class D – Medium Intensity Soil Maps for approximately 462,000 acres owned by Plum Creek in the Moosehead Lake Region. The USDA NRCS Soil Potential Ratings for each soil map unit shown on Maps 1-14 are attached in Exhibit 2. The USDA NRCS Soil Survey Legend for the Southern Part of Piscataquis County, Maine are attached in Exhibit 3. A Summary Table of Soil Type Potential Ratings, Soil Limitations, and Corrective Measures are attached (Table 1). A summary of our findings is shown in Table 2 arranged by map number.

This report is subject to our limitations attached in Appendix A.

PURPOSE OF INVESTIGATIONS

The purpose of our investigation was to assess the feasibility of the proposed development of the various "Gateway Lands" development areas following LURC standards.

As directed under Chapter 10, Section 10.25G.2 of the Maine Department of Conservation Land Use Regulation Commission (LURC) standards, evaluation of potential development areas are based on the USDA, NRCS guidance document "Soil Potential Ratings for Low Density Development in the Unorganized Area of Maine, April 2004." A determination of project feasibility is based on soil potential ratings established for the soil map units and soil types described in this document. As directed by LURC, a soil with a low or very low development potential rating shall not be developed unless the Commission determines that adequate corrective measures will be used to overcome these limitations. Table 1 summarizes the major soil limitations and typical corrective measures for soils with low or very low potential for development in the areas of investigation.

METHODOLOGY

Our field investigations consisted of traversing proposed development areas, excavating and describing test pits, and identifying wetland boundaries. On several areas including the Sapling area and Deep Cove area on Moosehead Lake, Northeast Shore of Indian Pond, Prong Pond and Upper Wilson Pond, we conducted High Intensity Soil Surveys and Wetland Investigations. Where detailed field investigations were not conducted, we verified the published USDA, NRCS Soil Survey Maps. Our verification of NRCS Soil Survey Maps was completed by traversing the area and comparing on-site soils to the published soil survey mapping. For our investigations, all test pit locations, wetland boundaries encountered, and other site features were located onto a base plan using a Trimble GPS Pro XR or GEOXT receiver with sub-meter accuracy. This information was not shown on Maps 1-14 due to the scale of mapping.

Published Soil Maps

Our services included a review of USDA, NRCS published soil maps for the development areas, which included Somerset and Piscataquis Counties. We also

conducted field work, which included hand dug test pits in all of the proposed development areas to verify the published soils data.

USDA, NRCS published soil maps are Class D soil surveys. In Somerset and Piscataquis Counties, soil mapping is at a 1" = 5280' scale where the minimum map unit size is 40 acres or more. That is, at the scale of mapping, the smallest map unit that can be shown on a map is about 40 acres. Maps 1 through 14 in Exhibit 1 present the digitized NRCS soil mapping units overlain on the "Gateway Lands", shown at a scale of 1" = 5000'.

NRCS describes the purpose of the published soil mapping "to assist land owners, state planners, developers, engineers, and others in their planning activities." In addition, NRCS states "soil maps should only be used for general planning purposes. This is because the smallest map unit delineated is commonly 16 to 40 acres and is composed of two or three soil types due to the scale of mapping."

In the published soil maps, NRCS mapped soils in association with two or three soil types identified in each soil mapping unit. Typically, in a soil association each soil type occurs in a specific landscape position that is repeatable across large geographic areas. Exhibit 4 is an illustration of one common soil association (76C – Telos-Chesuncook-Elliottsville association, 3 to 15 percent slopes). As is shown in Exhibit 4, the three different soil types typically occur on specific landscape positions. In this case, Telos is the dominant soil consisting of about 40 percent of the map unit on the lower landscape positions. Both the Chesuncook and Elliottsville soils consist of about 20 percent of the map unit but typically occur on the higher landscape positions and best building sites.

SOIL POTENTIAL

As is outlined in the NRCS guidance document "Soil Potential Ratings for Low Density Development in the Unorganized Area of Maine, April 2004," ratings are based on the cost of overcoming limiting soil properties (construction costs) and costs to overcome continuing limitations (maintenance costs).

A soil type or map unit with a very low rating is not necessarily impossible to use; it would be most costly to develop. Conversely, a soil with a high rating is typically less expensive and more feasible for development. Refer to pages 16 to 19 of the NRCS document for a detailed explanation of this rating system.

Based on NRCS Soil Potential Ratings as is shown in Exhibit 2, most of the soil associations and complexes mapped in the "Gateway Lands" have very low to low potential for development. However, as Table 1 summarizes, each map unit contains more than one soil, some with greater potential for development than others. As is illustrated in Exhibit 4, even on soil associations that are dominated by soils with very low to low potential, a small percentage of soils with medium or high potential soils can provide a development area footprint, or building envelope, large enough to support 1 acre lots with a well planned lot layout. For example, a soil association with only 15 percent medium to high potential soil could support development of 1 acre lots using a typical development footprint (building envelope) of 6550 square feet shown in Exhibit 4. Exhibit 4 illustrates how soil association 76C, with 40 percent medium to high potential soils can easily accommodate a typical 1 acre lot and development footprint (building envelope).

FEASIBILITY OF DEVELOPMENT

Under Chapter 10.25G.2 of LURC standards, NCRS potential ratings are to be used in our evaluations to determine feasibility of development.

NRCS defines the area of low density development as "residences and comparable buildings with septic tank absorption fields, with an on-site source of water."

According to LURC standards, an area can be considered feasible for development by meeting one of the following two options:

1. Soil potential ratings are medium or high for the proposed use as defined by NRCS, or
2. Soils with a low or very low development rating shall incorporate adequate corrective measures to overcome those limitations to the satisfaction of the Commission.

Where option #1 cannot be met, we have presented or identified typical soil limitations and typical corrective measures in Table 1.

As Exhibit 4 illustrates, a typical low density development footprint, or building envelope, is about 6550 square feet. For comparison purposes, 6550 is about 15 percent of a typical 1 acre lot and about 0.3 percent of the 40-acre minimum delineation size for the NRCS published soil survey.

Table 2 summarizes the dominant soils we observed in the proposed development areas or in possible building envelopes where detailed investigations were conducted. Based on our investigations and the information provided in Exhibit 4, we assume most soil associations except those that are listed in Table 1 as generally not suitable for the proposed uses have some feasibility for development. As discussed earlier and as illustrated in Exhibit 4, soil associations with 15 percent medium to high potential soil have the potential to feasibly support suitable building envelopes in 1 acre lots in low density developments.

EXPLORATIONS AND INVESTIGATIONS

The following is a brief description of our findings for each proposed development area. Soil potential ratings discussed for each development area are based on "Soil Potential Ratings for Low Density Development in the Unorganized Areas of Maine" dated April 2004 by the USDA, NRCS. A copy of this document is available on request. Exhibit 3 is a Soil Legend for the areas of investigation. Exhibit 3 is a correlation legend that allows correlation of the alphabetic legend (Example, TmB) to the numerical legend (Example, 78B). Our findings are organized by map number and geographic area and are summarized below: No development is proposed on Maps 1, 2, 4, 8 and 14.

FINDINGS

MAP 3

Long Pond

Proposed shoreland development area, Northwest Shore, consists of shallow to moderately deep nearly level to strongly sloping well to excessively well drained silty

glacial till soils. NRCS mapping indicates dominant soils of Monson, Ricker and Elliottsville. Our on-site investigations revealed Elliottsville soils as the dominant soil with shallow soils on large boulders or rock outcrop. In general, the area is dominated by soils with medium potential for low density residential development and subsurface wastewater disposal systems. Some small areas of poorly drained Monarda soils occur in some drainages. Monarda soils have very low potential for development and are associated with wetlands.

Proposed shoreland development area, North Central Shore, consists of nearly level to strongly sloping somewhat poorly to moderately well drained silty glacial till Telos and Chesuncook soils. Some small areas of poorly drained Monarda soils occur mostly in drainages. There are several areas mostly on the extreme western and eastern sides of the site where large rock outcrops occur. In general, the area has a medium potential for low density residential development and subsurface wastewater disposal systems. Monarda soils have very low potential for development and are associated with wetlands.

Proposed shoreland development area, Northeast Shore, is characterized by gently sloping somewhat poorly and moderately well drained deep silty glacial till Telos and Chesuncook soils which become increasingly more bouldery or bedrock controlled on the western and northern portions of the site. Most areas have a medium potential for low density residential development and subsurface wastewater disposal systems. No wetland areas were observed.

Detailed investigations were not conducted on proposed shoreland development area, South Shore. However we verified USDA, NRCS soil maps by traversing the area. According to NRCS and as we verified, soils are moderately deep to deep well drained silty glacial till soils. The dominant soil mapped by the NRCS, Danforth, has high potential for low density residential development and subsurface wastewater disposal systems. Elliottsville soil has medium potential for the proposed use. There may be small wet areas and shallow soils on the east side of this proposed lot area.

MAP 5

Big W Township

Proposed shoreland development area, Big W North and Big W South, occur on gently to strongly sloping shallow to very deep silty glacial till consisting of mainly Monson, Elliottsville, Telos and Chesuncook soils. In general, the proposed lot areas have medium potential for low density residential development and subsurface wastewater disposal. The Big W South area has a perennial stream and associated wetlands in the southern portion of the site. In addition, occasional small narrow wetland areas occur in the lowest topographic positions. A narrow strip of wetter soils occur near the lake shore in portions of the Big W North area.

MAP 6

Brassua Lake

Proposed shoreland development area, Southeast Shore, is characterized by gently sloping somewhat poorly to moderately well drained deep silty glacial till Telos and Chesuncook soils. The area has medium potential for low density residential development and subsurface wastewater disposal systems. No significant wetlands were observed.

Proposed backlot development area, Southeast Highlands, is characterized by gently to strongly sloping somewhat poorly to moderately well drained deep silty glacial till Telos and Chesuncook soils. This area has medium potential for low density residential development and subsurface wastewater disposal systems. No significant wetlands were observed.

Proposed shoreland development areas, South Peninsula B and C, are nearly level to gently sloping. Toward the western end of area, there is some strongly sloping ground on the higher elevations back from the lake. Soils are somewhat poorly drained to moderately well drained deep silty glacial till Telos and Chesuncook with some isolated pockets of poorly drained Monarda soils along drainageways or in depressions. Telos and Chesuncook soils have low to medium potential for low density residential

development and subsurface wastewater disposal systems. Monarda soils have very low potential for the proposed use and are typically associated with wetlands.

Detailed investigations were not conducted on proposed shoreland development area South Peninsula A. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils are deep somewhat excessively drained sandy glaciofluvial soils. The dominant mapped soil, Masardis, has low to medium potential for low density residential development and subsurface wastewater disposal systems. There may be small wetland areas on the east side of this proposed lot area.

Proposed shoreland development area, West Shore A, is nearly level to gently sloping being more nearly level toward the shore. Soils are somewhat poorly to moderately well drained deep silty glacial till Telos and Chesuncook. This site has low to medium potential for low density residential development and subsurface wastewater disposal systems. No significant wetlands were observed.

Proposed shoreland development areas, West Shore B and C, occur on gently sloping somewhat poorly to moderately well drained silty glacial till Telos and Chesuncook soils. This area has low to medium potential for low density residential development and subsurface wastewater disposal systems. Some small wetland areas consisting of poorly drained Monarda soil occur in small drainages and depressions. Monarda soils have very low potential for development and are typically associated with wetlands.

Proposed backlot development area, South Peninsula Highlands, is gently sloping to strongly sloping with some areas in the southeast portion being level to nearly level. Some rock outcrop areas were encountered throughout the site. The soils are mainly somewhat poorly to moderately well drained deep silty glacial till Telos and Chesuncook with several poorly drained areas of Monarda soils along drainageways and depressions. The site has low to medium potential for low density residential development and subsurface wastewater disposal systems, except on the poorly drained Monarda soils that have very low potential. Monarda soils are typically associated with wetlands.

Corridor Backlots

Detailed investigations were not conducted on proposed backlot development areas, Rockwood/Kineo View/Rockwood Village West A and B. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep silty glacial tills. NRCS mapped soils are dominated by deep somewhat poorly and moderately drained Telos and Chesuncook with shallow to moderately deep Monson and Elliottsville soils on some ridge tops. Poorly drained Monarda soils may occur in some low-lying areas. In general, the soil map indicates that the area has medium potential for the proposed use on the Telos, Chesuncook and Elliottsville soils. Low to medium potential would be expected on the Monson soils. Monarda soils have very low potential for development and are typically associated with wetlands.

Moosehead Lake

Proposed backlot development areas, West Outlet Highlands A, B and C, occur on gently to strongly sloping shallow to very deep silty glacial tills. Soils are dominated by somewhat poorly drained Telos soils with numerous pockets of poorly drained Monarda soils in the low-lying areas. Soils on the ridge tops and slopes are dominated by Telos and Chesuncook soils with small areas of Monson or Elliottsville soils on ridge tops. Ridge tops and side slopes have medium potential for low density residential development and subsurface wastewater disposal. Monarda soils in the low-lying areas have very low potential for development and are associated with wetlands. Overall, the area has suitable soils for the proposed use.

Proposed shoreland development area, West Outlet Shore, is dominated by gently to strongly sloping deep poorly drained Monarda and somewhat poorly drained Telos soils. The higher topographic positions have low to medium potential for low density residential development and very low to low potential for subsurface wastewater disposal systems. The lower topographic positions have very low to low potential for the proposed use. Some lower areas may be dominated by the poorly drained Monarda soils that are typically associated with wetlands. Our on-site investigations revealed building envelope areas with soils having medium potential for low density residential development and subsurface wastewater disposal.

Detailed investigations were not conducted on proposed shoreland development area, Sandbar Tract. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep and poorly drained to moderately well drained silty glacial till. The dominant NRCS mapped soils are deep somewhat poorly drained Telos and moderately well drained Chesuncook which have low to medium potential for the proposed use. Of lesser extent are well drained shallow to moderately deep Monson and Elliottsville soils typically occurring on ridge tops and poorly drained Monarda soils occurring in the low areas. Monson soils have low potential and Monarda soils have very low potential for the proposed use. Monarda soils are typically associated with wetlands.

MAP 7

Moosehead Lake

Proposed backlot development areas, East Outlet Highlands A and B, occur on gently to strongly sloping shallow to very deep silty glacial tills. Soils are dominated by somewhat poorly drained Telos soils with numerous pockets of poorly drained Monarda soils in the low-lying areas. Soils on the ridge tops and slopes are dominated by Telos and Chesuncook soils with small areas of Monson or Elliottsville soils on ridge tops. Ridge tops and side slopes have medium potential for low density residential development and subsurface wastewater disposal. Monarda soils in the low-lying areas have very low potential for development and are associated with wetlands. Overall, the areas have suitable soils for the proposed use.

Proposed shoreland development area, Sapling Shorefront, is dominated by gently to strongly sloping deep somewhat poorly to moderately well drained silty glacial tills on the higher elevations and poorly to somewhat poorly drained soils on the lower areas. The somewhat poorly drained Telos and moderately well drained Chesuncook soils have medium potential for the proposed use. The poorly drained Monarda soils have very low potential for the proposed use and are typically associated with wetlands. Overall, the area is dominated by soils suitable for the proposed use.

Proposed shoreland development area, Deep Cove Shore, occurs on gently to strongly sloping shallow to very deep silty glacial till consisting of mainly Monson, Elliottsville, Telos and Chesuncook soils. The proposed lot areas generally have low to high potential for low density residential development and subsurface wastewater disposal. Occasional small narrow wetland areas occur in the lowest topographic positions.

Detailed investigations were not conducted on proposed backlot development areas, Deep Cove Highlands. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep silty glacial tills. NRCS mapped soils are dominated by shallow to moderately deep Monson and Elliottsville soils that typically occur on ridge tops. Small areas of poorly drained Monarda soils, generally associated with wetlands, may occur in some low-lying areas. In general, the area has low to medium potential for the proposed use on the Telos, Chesuncook and Elliottsville soils.

Burnham Pond

Proposed shoreland development areas, North and South Shore, are characterized by gently sloping to strongly sloping somewhat poorly drained Telos and moderately well drained Chesuncook deep silty glacial till soils. These areas have medium potential for low density residential development and subsurface wastewater disposal systems. Some shallow Monson and moderately deep Elliottsville loamy glacial till soils occur on the west side of the North Shore area. Monson and Elliottsville soils have low to medium potential for the proposed use. No significant wetland areas were observed on this site but small drainage areas were observed.

Detailed investigations were not conducted on the proposed backlot development area on the North Shore Highlands. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils are dominated by gently to strongly sloping Telos, Chesuncook and Elliottsville, or similar soils. Typically, these soils have low to medium potential for low density residential development and subsurface wastewater disposal. No significant wetland areas are expected.

Indian Pond

Proposed shoreland development area, Northeast Shore, is typically nearly level to gently sloping with some strongly sloping areas on the higher elevations back from the lake. Soils are somewhat poorly drained Telos to moderately well drained Chesuncook deep silty glacial till on ridge tops and slopes and with poorly drained Monarda along drainageways or in depressions. Telos and Chesuncook are the dominant soils and have medium potential for low density residential development and subsurface wastewater disposal systems. Monarda soils have very low potential for the proposed use and are typically associated with wetlands.

Detailed investigations were not conducted on proposed shoreland development area, Southeast Shore and Highlands area. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils are dominated by gently to strongly sloping Telos, Chesuncook and Elliottsville, or similar soils. Telos and Chesuncook soils are deep and somewhat poorly drained and moderately drained silty glacial till. Elliottsville is well drained moderately deep silty glacial till. Typically, these soils have low to medium potential for low density residential development and subsurface wastewater disposal. No significant wetland areas are expected.

Big Moose Mtn. Village

Detailed investigations were not conducted on proposed backlot development, Highlands area. However, we verified soil mapping provided by USDA, NCRS by traversing the area. According to NRCS and as we verified, soils are somewhat poorly drained to moderately well drained deep silty glacial till Telos and Chesuncook with some isolated pockets of poorly drained Monarda along drainageways or in depressions. Telos and Chesuncook soils have low to medium potential for low density residential development and subsurface wastewater disposal systems. Monarda soils have very low potential for the proposed use and are typically associated with wetlands.

Low potential would be expected on the Monson soils. Monarda soils have very low potential for development and are typically associated with wetlands.

MAP 9

Lily Bay Township

Detailed investigations were not conducted on proposed shoreland development area, Stevens Point. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping deep loamy glacial tills. NRCS mapped soils are dominated by deep somewhat poorly and moderately drained Colonel and Dixfield with well drained Marlow soils on some ridge tops. Poorly drained Brayton soils may occur in some low-lying areas. In general, the soil map indicates that the area has medium potential for the proposed use on the Dixfield and Marlow soils. Low potential would be expected on the Colonel soils. Brayton and organic Wonsqueak and Bucksport soils have very low potential for development and are typically associated with wetlands.

MAP 10

Prong Pond

Soils in the proposed shoreland development areas, West and South Shore, range from gently to strongly sloping shallow to deep silty glacial tills. Soils are dominated by deep somewhat poorly and moderately drained Telos and Chesuncook with shallow to moderately deep Monson and Elliottsville soils typically occurring on ridge tops. Poorly drained Monarda soils, generally associated with wetlands, may occur in some low-lying areas. In general, the area has medium potential for the proposed use on the Telos, Chesuncook and Elliottsville soils. Low to medium potential would be expected on the Monson soils. Monarda soils have very low potential for development and are typically associated with wetlands. Our on-site investigations revealed steep areas along the shore of South Shore and on the west and east sides of the West Shore areas with large building envelope areas consisting of soils with medium potential for development.

Proposed shoreland development area, Northeast Shore, is level to strongly level near the pond and becomes steeply sloping approximately 200 feet from the shoreline. Soils range from somewhat poorly drained Telos to moderately well drained Chesuncook soils that are deep bouldery silty glacial tills and well drained shallow Monson and

moderately deep Elliottsville soils on ridge tops. There are numerous gently to strongly sloping Chesuncook and Elliottsville soil areas that have medium potential for low density residential development and subsurface wastewater disposal systems. A small wetland area was observed on the northwest corner of the site. Our on-site investigations revealed numerous building envelope areas with medium potential for low density residential development and subsurface wastewater disposal.

Proposed backlot development area, Northeast Highlands, occurs on gently to strongly sloping shallow to very deep silty glacial till consisting of mainly Tunbridge, Marlow Dixfield, and Colonel soils, with a small component of Danforth or similar soils. Ridge tops typically consist of shallow to moderately deep Lyman and Tunbridge soils. The proposed development area generally has large building envelope areas with medium potential for low density residential development and subsurface wastewater disposal. Small wetland areas occur in the lowest topographic positions.

Detailed investigations were not conducted on proposed backlot development areas, Beaver Cove Back A and B. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep and poorly drained to moderately well drained loamy glacial till. The dominant NRCS mapped soils appear to be deep somewhat poorly drained Colonel and moderately well drained Dixfield which have low to medium potential for the proposed use. Of lesser extent are somewhat excessively well drained shallow Lyman soils typically occurring on ridge tops and poorly drained Brayton soils occurring in the low areas. The southern portion of Beaver Cove Back A is dominated by steep slopes that will need to be avoided for the proposed use. Lyman soils have low potential and Brayton soils have very low potential for the proposed use. Brayton soils are typically associated with wetlands.

Lily Bay Township

Detailed investigations were not conducted on proposed shoreland development area, Carlton Point. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep silty glacial tills. NRCS mapped soils are dominated by

deep somewhat poorly and moderately drained Telos and Chesuncook with shallow to moderately deep Monson and Elliottsville soils on some ridge tops. Poorly drained Monarda soils may occur in some low-lying areas. In general, the soil map indicates that the area has low to medium potential for the proposed use on the Telos, Chesuncook and Elliottsville soils. Low potential would be expected on the Monson soils. Monarda soils have very low potential for development and are typically associated with wetlands.

Detailed investigations were not conducted on proposed backlot development areas, Resort at Lily Bay and Lily Bay Heights B. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep and poorly drained to moderately well drained silty glacial till. The dominant NRCS mapped soils appear to be deep somewhat poorly drained Telos and moderately well drained Chesuncook which have low to medium potential for the proposed use. Of lesser extent are well drained shallow to moderately deep Monson and Elliottsville soils typically occurring on ridge tops and poorly drained Monarda soils occurring in the low areas. Monson soils have low potential and Monarda soils have very low potential for the proposed use. Monarda soils are typically associated with wetlands.

Detailed investigations were not conducted on proposed backlot development areas, Lily Bay Heights A. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping deep poorly drained to moderately well drained silty glacial till. The dominant NRCS mapped soils appear to be deep somewhat poorly drained Telos and moderately well drained Chesuncook which have low to medium potential for the proposed use. Of lesser extent is the poorly drained Monarda soils occurring in the low areas and the moderately deep Elliottsville soil. Monarda soils have very low potential for the proposed use and are typically associated with wetlands.

MAP 11

Upper Wilson Pond

Proposed shoreland development areas West Shore and Southwest Peninsula, consist of nearly level to steeply sloping moderately well drained to well drained silty or loamy to sandy glacial till, Becket, Skerry, or similar soils. Slopes are level to strongly sloping adjacent to the pond and on the west side of the site and are steep to very steep about 100 to 200 feet back from the pond. Small areas of poorly drained Monarda soils occur mostly in drainages. The gently to strongly sloping areas have large building envelope areas that have medium potential for low density residential development and subsurface wastewater disposal systems. Monarda soils have very low potential for development and are associated with wetlands.

Proposed shoreland development areas, East Shore A, B, East Shore Narrows and South Cove are dominated by gently to strongly sloping deep somewhat poorly to moderately well drained silty glacial tills on the higher elevations and poorly to somewhat poorly drained soils on the lower areas. The somewhat poorly drained Telos and moderately well drained Chesuncook soils have low to medium potential for the proposed use. The poorly drained Monarda soils have very low potential for the proposed use and are typically associated with wetlands. Overall, the area is dominated by soils suitable for the proposed use, or has large building envelope areas with soils having medium potential for development.

Detailed investigations were not conducted on proposed backlot development area, West Shore Highlands. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS, soils are moderately steep, moderately well to deep well drained loamy glacial till soils. Our on-site investigations revealed large suitable building envelopes consisting of gently to strongly sloping soils, with medium potential for low density residential development and subsurface wastewater disposal systems. Tunbridge, a well drained moderately deep soil, has medium potential for the proposed use. There appears to be some wetland areas and shallow soils on the west and north sides of this proposed development lot area.

Moosehead Lake

Proposed shoreland development area, Moose Bay Shore, occurs on gently sloping somewhat poorly to moderately well drained silty glacial till Telos and Chesuncook soils. This area has medium potential for low density residential development and subsurface wastewater disposal systems. Some small wetland areas consisting of poorly drained Monarda soil occur in small drainages and depressions. Monarda soils have very low potential for development and are typically associated with wetlands. The area is dominated by soils suitable for the proposed use.

Detailed investigations were not conducted on proposed backlot development area, Moose Bay Village. However, we verified soil mapping provided by the USDA, NRCS by traversing the area. According to NRCS and as we verified, soils range from gently to strongly sloping shallow to deep silty glacial tills. NRCS mapped soils are dominated by deep somewhat poorly and moderately drained Telos and Chesuncook with shallow to moderately deep Monson and Elliottsville soils typically occurring on ridge tops. Poorly drained Monarda soils, generally associated with wetlands, may occur in some low-lying areas. In general, the area has low to medium potential for the proposed use on the Telos, Chesuncook and Elliottsville soils. Low potential would be expected on the Monson soils. Monarda soils have very low potential for development and are typically associated with wetlands.

SUMMARY

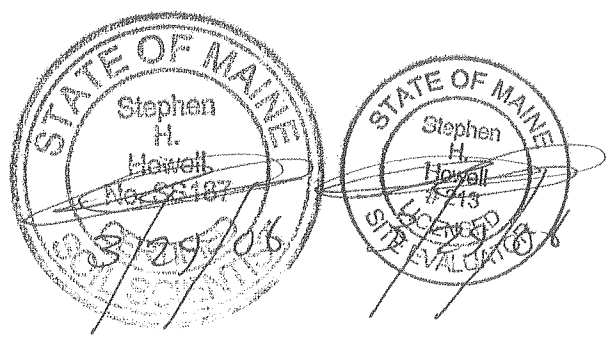
In summary, our preliminary soil and wetland investigations and review of existing NRCS soil mapping generally confirm that the areas of proposed development are suitable for the proposed use as shoreland lots, backlots, and resort or village areas. Most areas observed are suitable for development and are dominated by soils that have medium potential for the proposed uses. In areas where detailed investigations were conducted, numerous suitable building envelope areas were identified. Significant areas of wetlands were not observed on most areas and their occurrence is generally

limited to occasional narrow drainages or depressions which should not significantly restrict development or access.

Please contact me at (207) 848-5714 if you have any questions.

Very truly yours,

S. W. COLE ENGINEERING, INC.



Stephen H. Howell
Project Manager

SHH:slh

cc: Luke Muzzy, Plum Creek, Greenville
Mike Yeager, Plum Creek Land Co., Seattle, WA

F:\Projects\2003\03-0466.2\03-0466.2 mapping & investigations.doc

Appendix A
Limitations

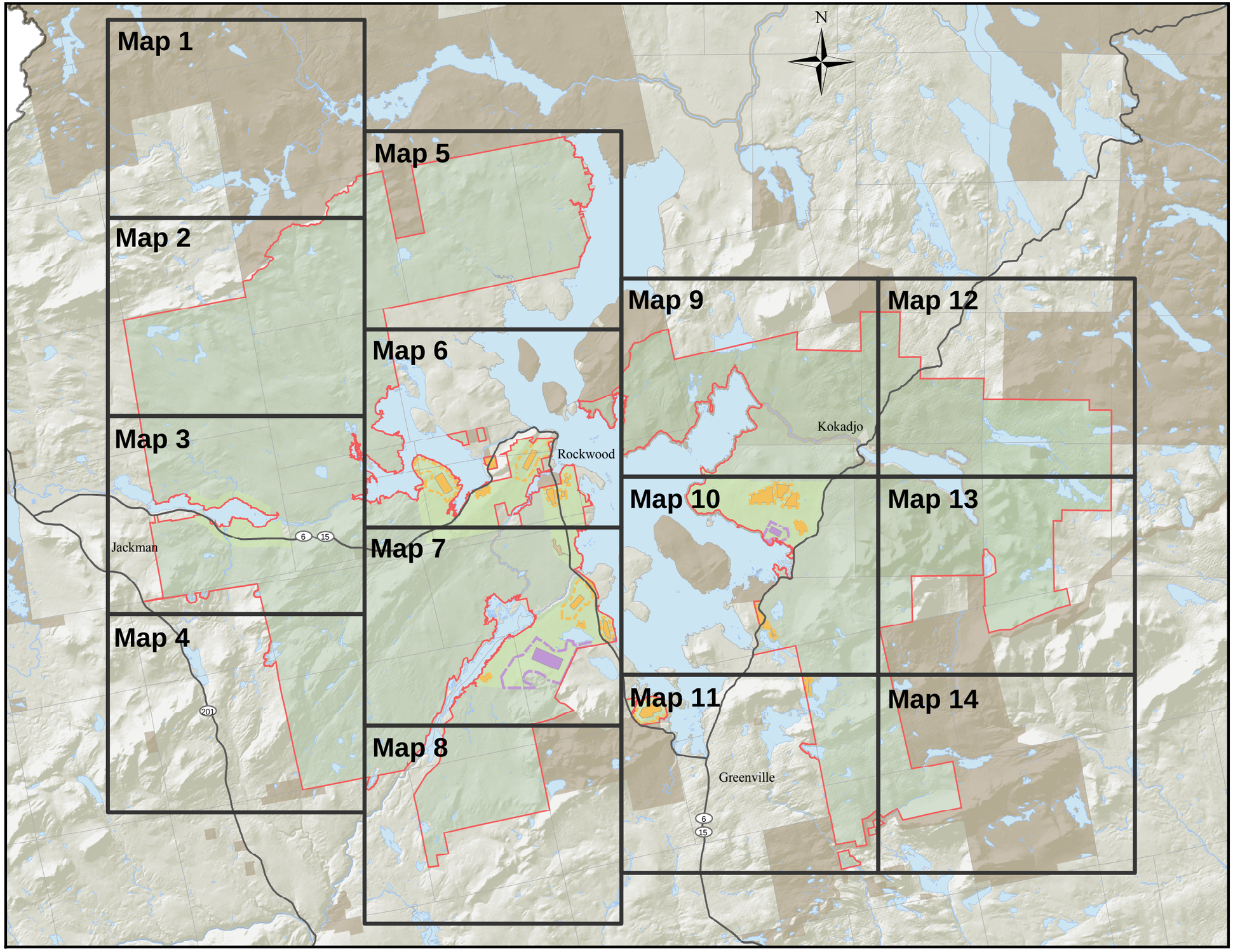
This report has been prepared for the exclusive use of Plum Creek Land Co. for specific application to the Maine Land Use Regulation Commission (LURC). S. W. COLE ENGINEERING, INC. has conducted the work in accordance with generally accepted soil science practices. No other warranty, expressed or implied, is made.

This investigation was conducted, compiled and reported in general accordance with guidelines described in the Guidelines for Maine Certified Soil Scientists for Soil Identification and Mapping (2004) for a Class D - Medium Intensity Soil Survey and Version 3 of the Field Indicators for Identifying Hydric Soils in New England (2004). The conclusions and recommendations presented in this report are based upon the data obtained from the areas explored.

It should be noted that soil map unit design is at least in part influenced by the intended use of the soil survey and information provided may not always be adequate for uses other than that for which the soil survey was originally developed. Soils which are considered non-limiting for one use may be considered limiting for another use.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site, and published information from the USDA Natural Resources Conservation Service. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

EXHIBIT 1



Detail Map Index

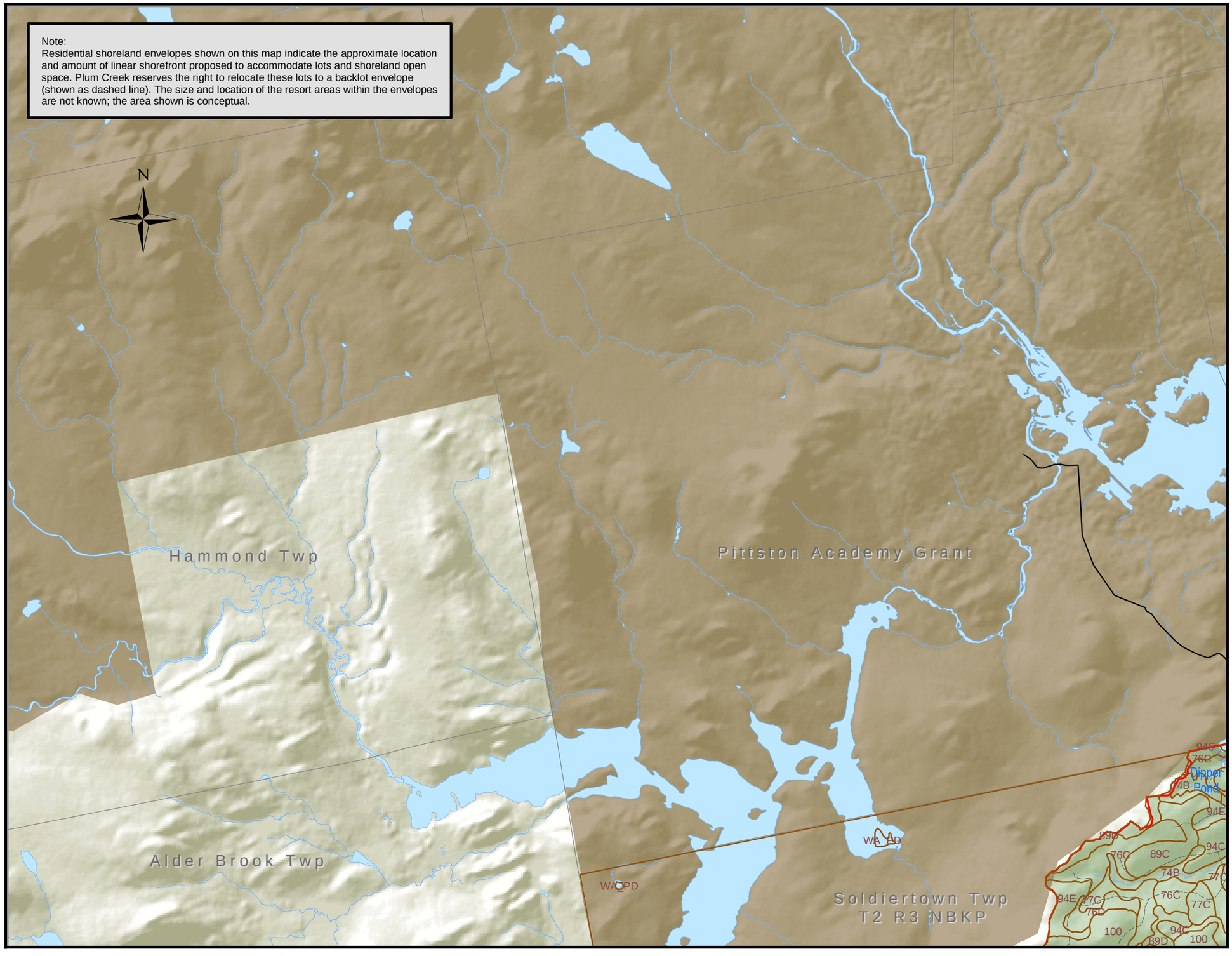
CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Proposed residential area / envelope
- Existing Commercial / Industrial Zone
- Proposed resort area / envelope
- Moosehead - Roach River Conservation Easement (to balance development)
- Roach Ponds Acquisition
- Moosehead Legacy Conservation Easement
- 30-Year No Development Buffer

0 4 8 Miles

April 2006


Note:
Residential shoreland envelopes shown on this map indicate the approximate location and amount of linear shorefront proposed to accommodate lots and shoreland open space. Plum Creek reserves the right to relocate these lots to a backlot envelope (shown as dashed line). The size and location of the resort areas within the envelopes are not known; the area shown is conceptual.

Soil Detail Map 1

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

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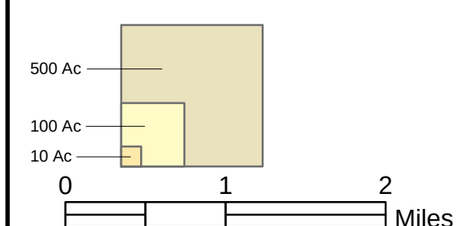
Note:
Refer to accompanying report for explanation of soil association numbers



April 2006

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N

Canada Falls Lake

Alder Brook Twp

Soldiertown Twp T2 R3 NBKP

Center Pond

WA_PD

Fish Pond

Muskrat Pond

Mud Pond

Lost Pond

Luther Pond

Thorndike Twp

Brassua Twp

Moose River

Soil Detail Map 2

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Note:
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500 Ac
100 Ac
10 Ac

0 1 2 Miles

April 2006

Soil Detail Map 3

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

Note:
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N

Moose River
Thorndike Twp
Brassua Twp
Long Pond Twp
Rockwood Strip T2 R1 NBKP
Jackman
Sandwich Academy Grant
Misery Gore Twp
Misery Twp
Parlin Pond Twp

Fletcher Pond West
Fletcher Pond East
Demo Pond
Roderique Pond
Little Otter Pond
Fogg Pond
Upper Paradise Pond
Lower Paradise Pond
Horseshoe Pond
Smith Pond
Long Pond

Northwest Shore
South Shore
North Central Shore
Northeast Shore

WA_PD

6
15
201
139

Legend

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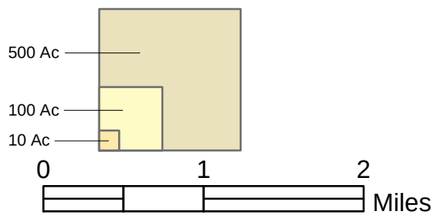
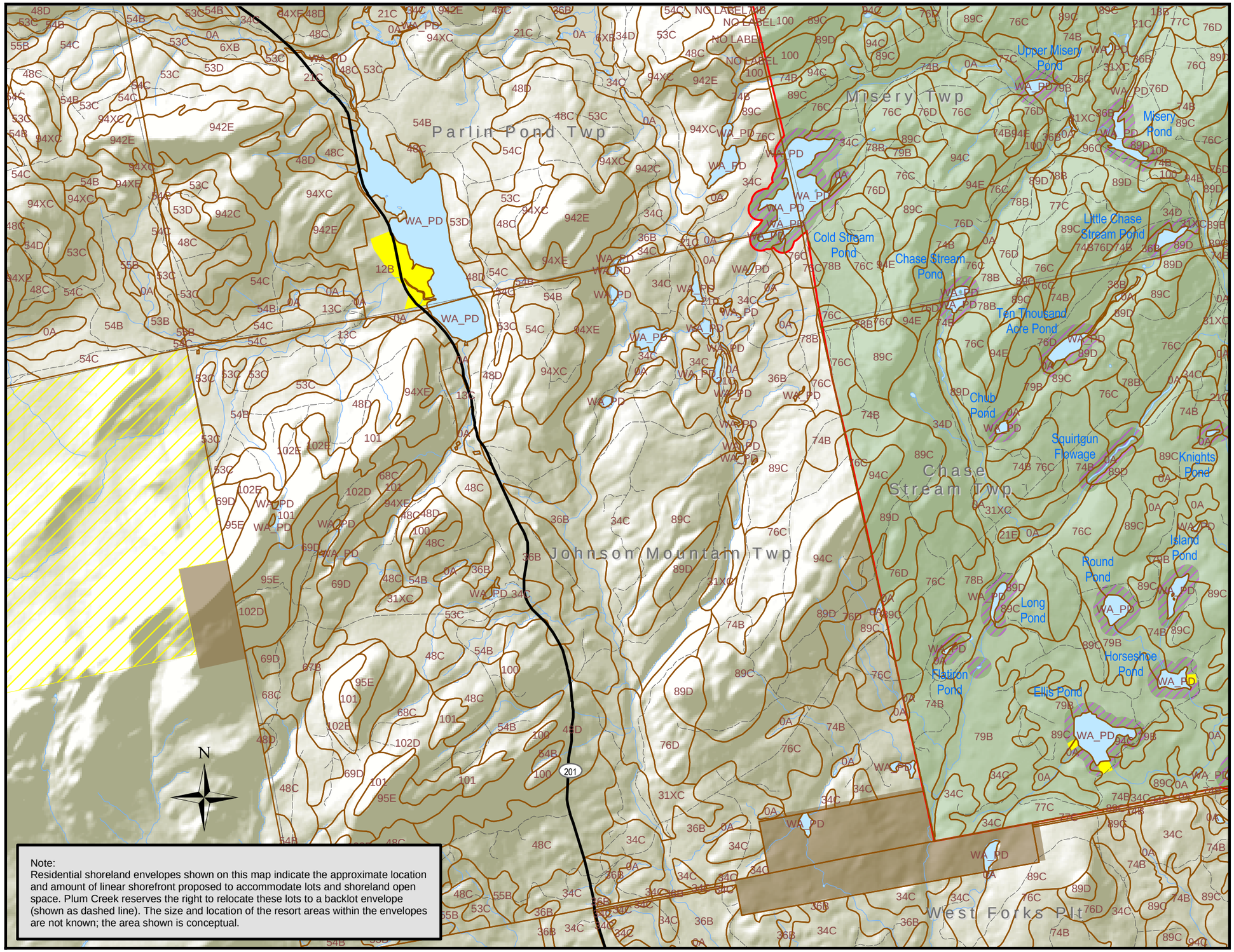


April 2006



Soil Detail Map 4

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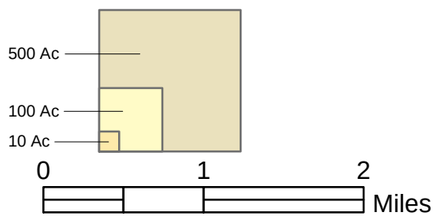
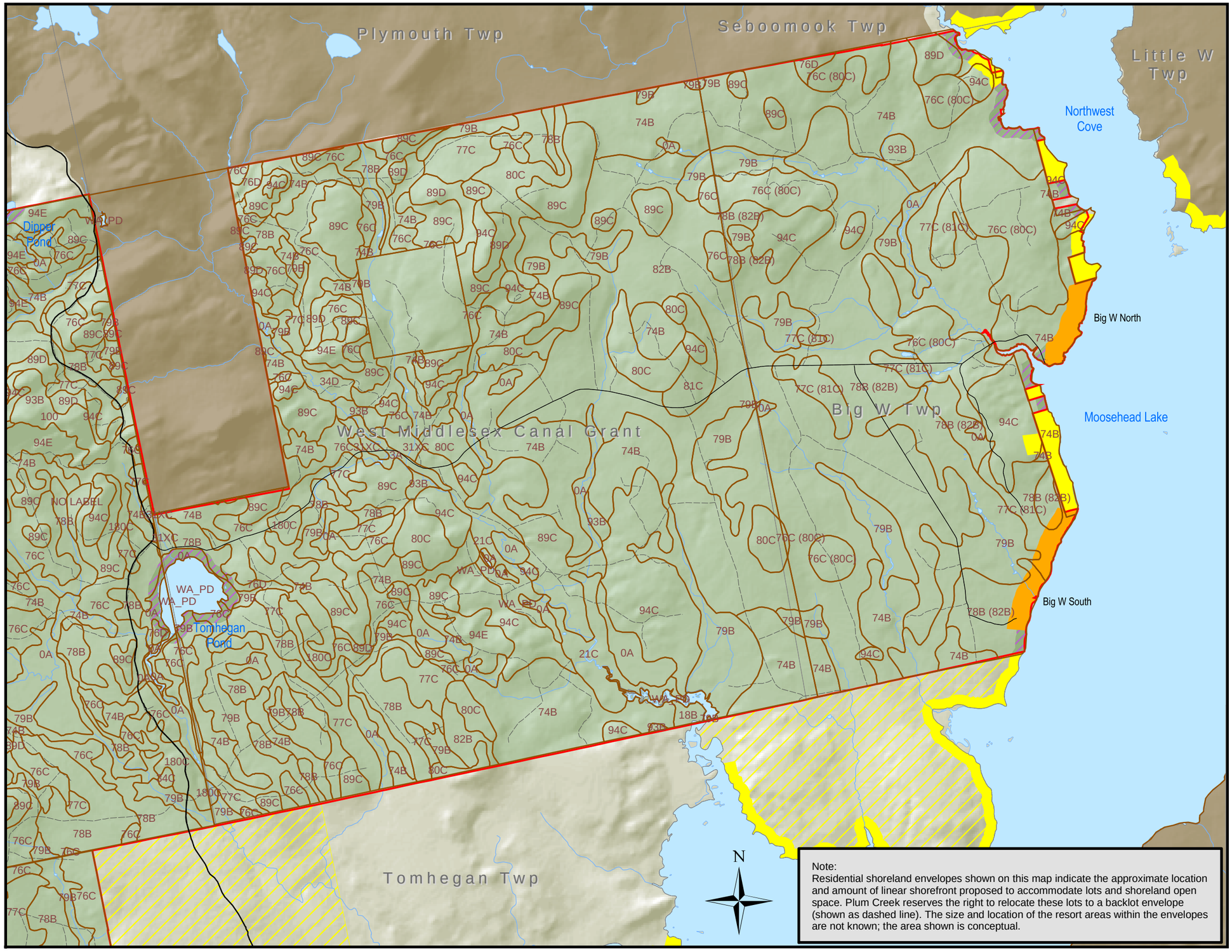


April 2006



Soil Detail Map 5

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

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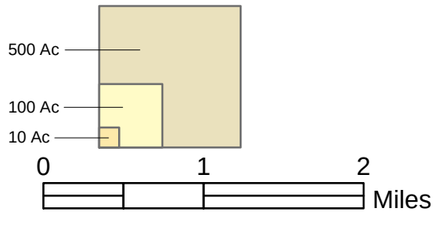

April 2006

Soil Detail Map 6

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

Note:
Residential shoreland envelopes shown on this map indicate the approximate location and amount of linear shorefront proposed to accommodate lots and shoreland open space. Plum Creek reserves the right to relocate these lots to a backlot envelope (shown as dashed line). The size and location of the resort areas within the envelopes are not known; the area shown is conceptual.

N

Moosehead Wildlands Concept Plan

Tomhegan Twp

Brassua Twp

Days Academy Grant Twp

Kineo Twp

Moosehead Lake

Brassua Lake

Leith Pond

Rockwood Strip T2 R2 NBKP

Rockwood Strip T2 R1 NBKP

Taunton & Raynham Twp

Sandwich Academy Grant

Sandbar Tract Twp

Sandbar Tract

Rockwood

Rockwood Kineo View

West Outlet

West Outlet Shore

West Outlet Highlands C

West Outlet Highlands B

West Outlet Highlands A

West Shore A

West Shore B

West Shore C

West Shore D

West Shore E

South Peninsula A

South Peninsula B

South Peninsula C

South Peninsula D

South Peninsula E

South Peninsula Highland

Rockwood Village West A

Rockwood Village West B

Southeast Highlands

Southeast Shore

Legend

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Note:
Refer to accompanying report for explanation of soil association numbers

500 Ac
100 Ac
10 Ac

0 1 2 Miles

April 2006

Soil Detail Map 7

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

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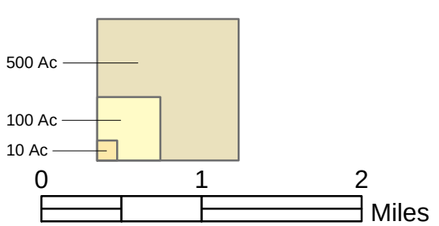
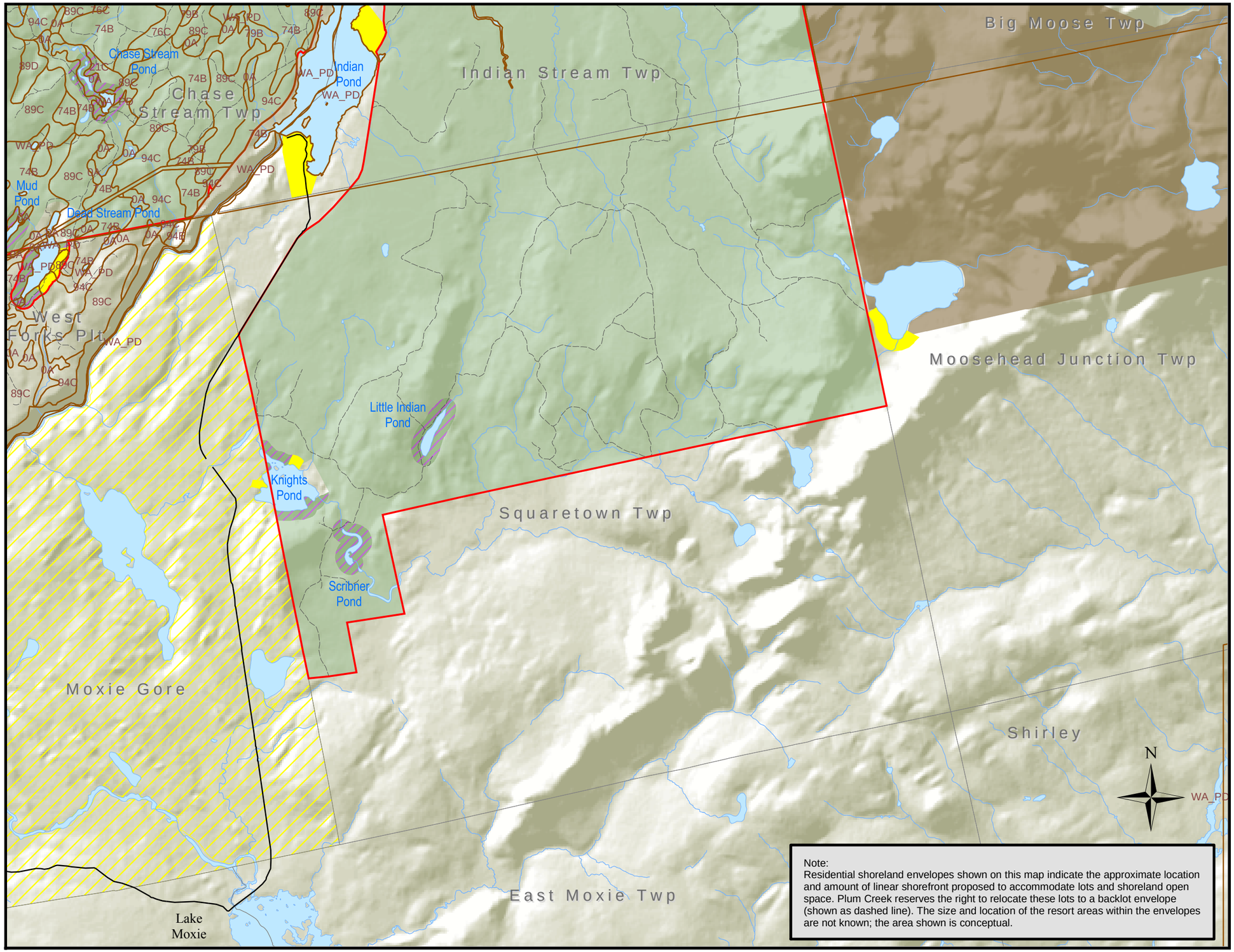


April 2006

Soil Detail Map 8

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION



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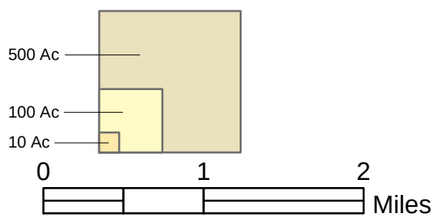
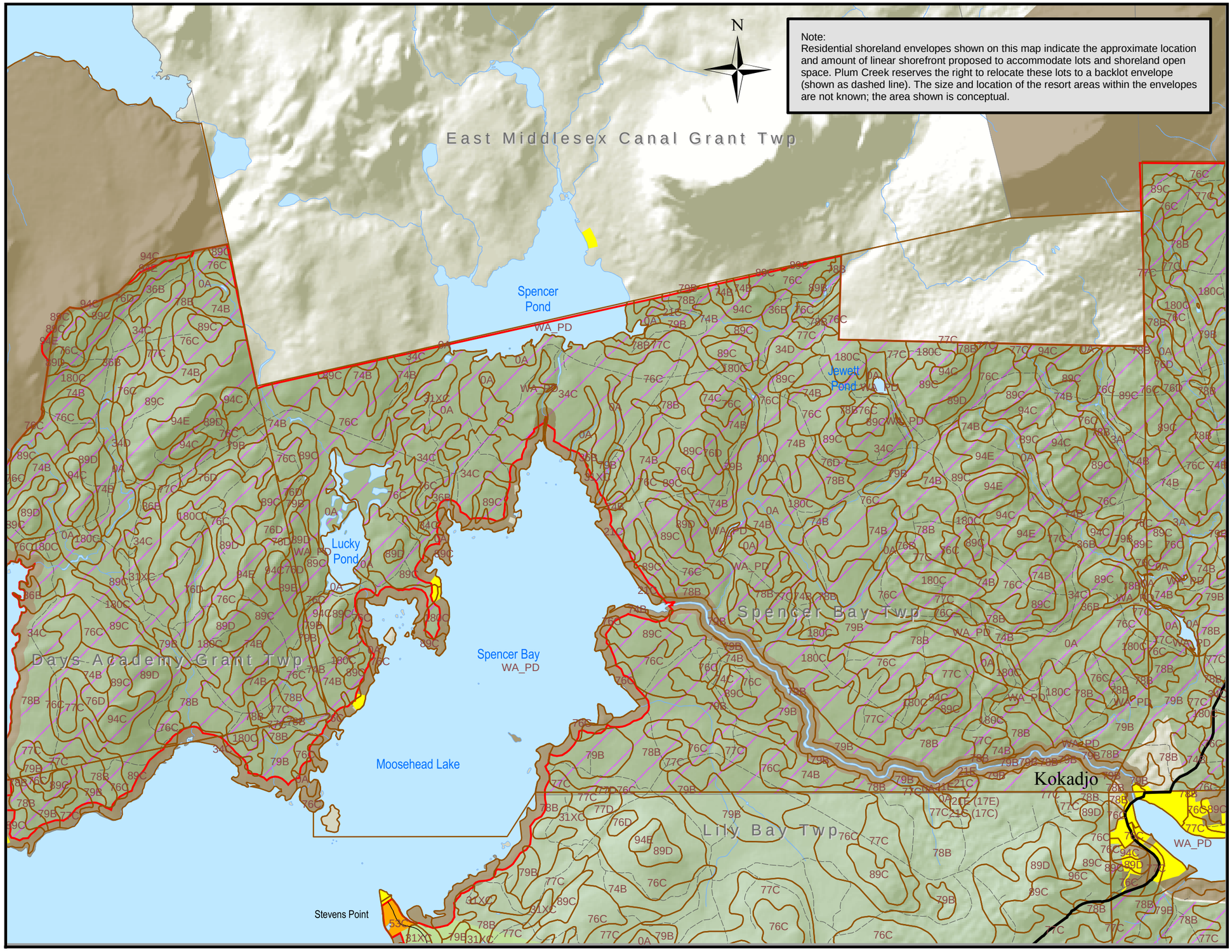


April 2006



Soil Detail Map 9

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

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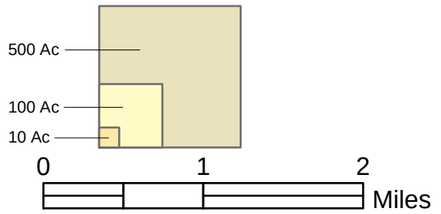
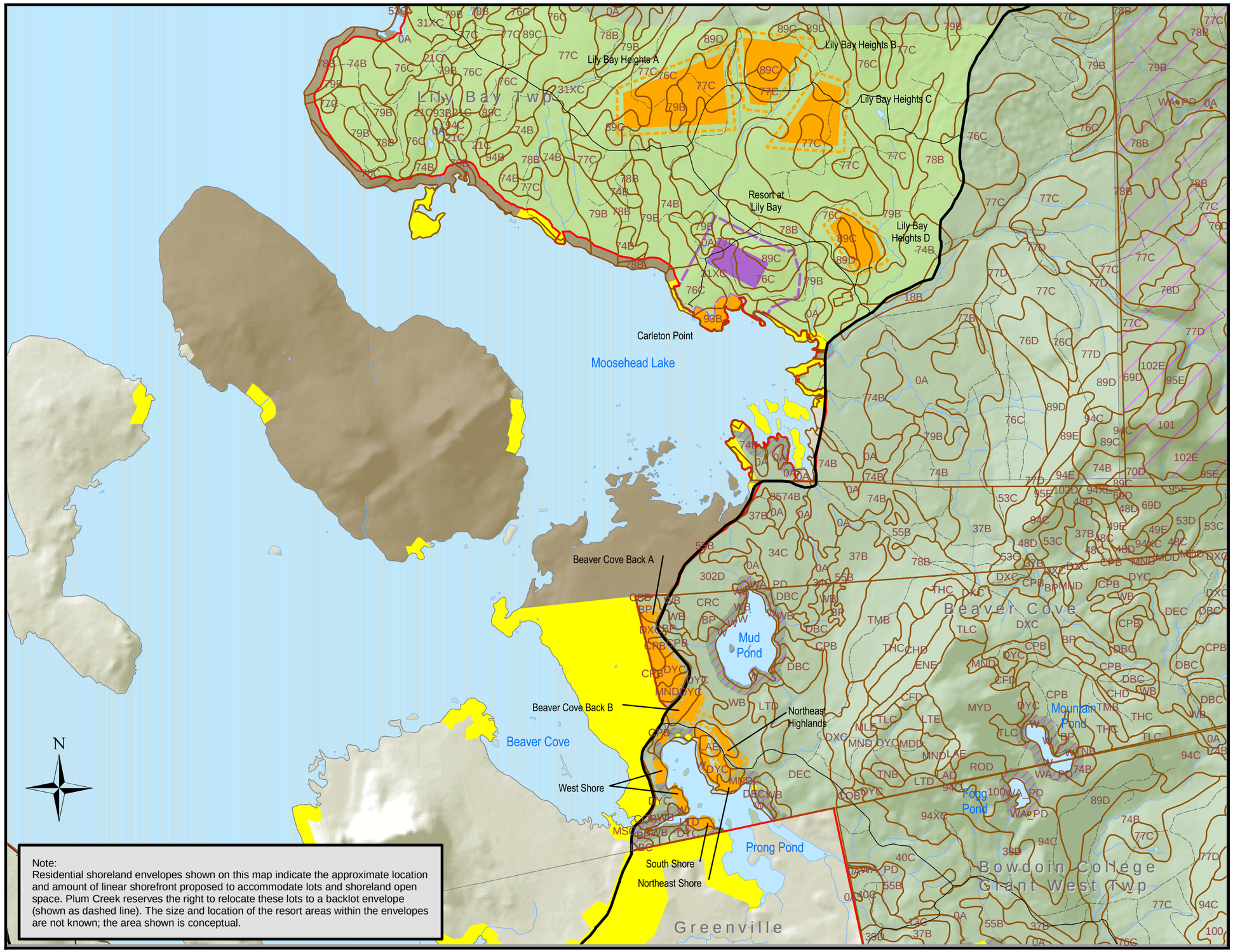


April 2006

Soil Detail Map 10

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION



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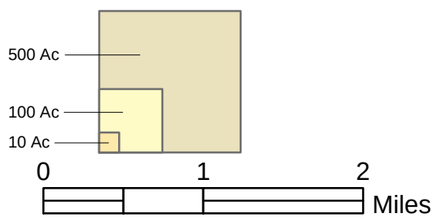
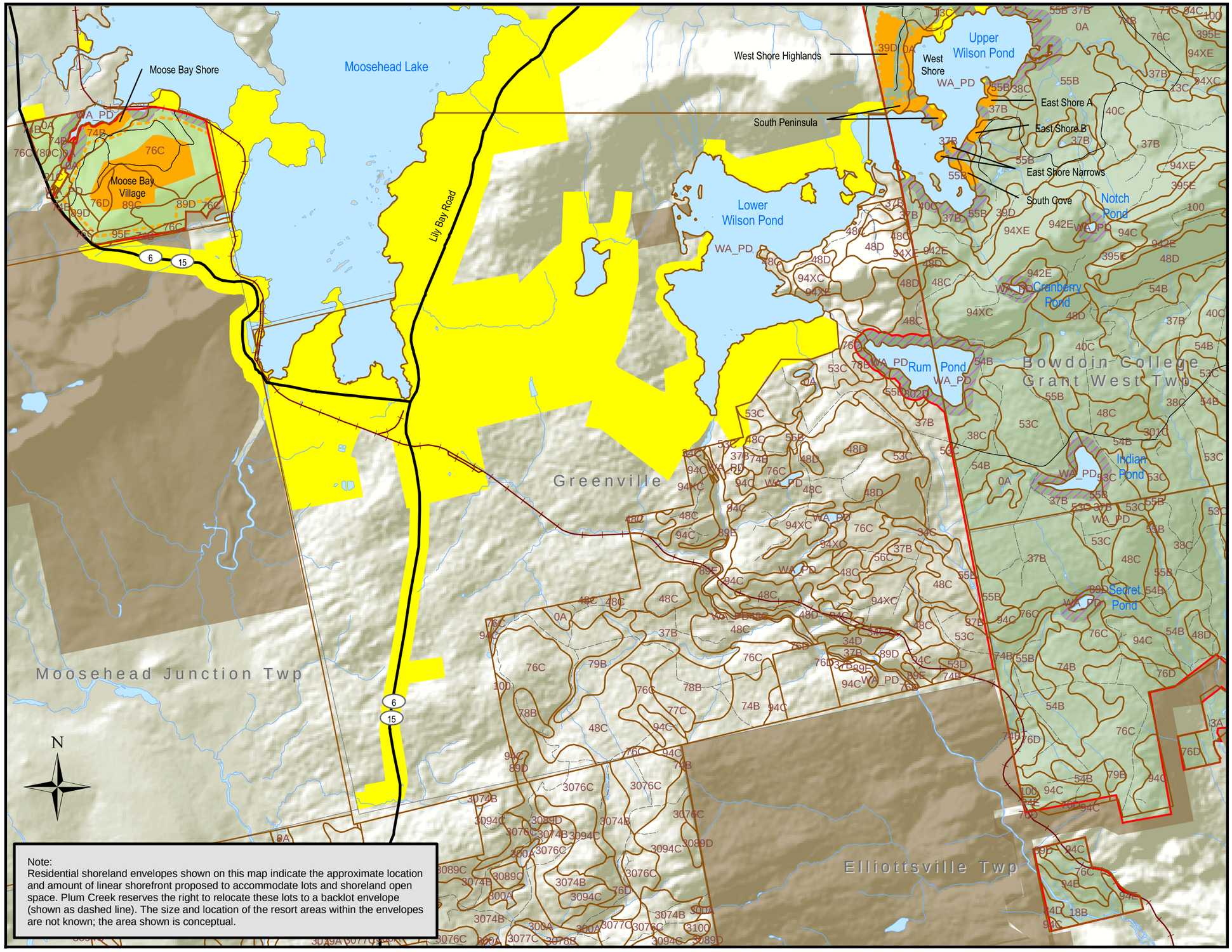


April 2006

Soil Detail Map 11

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

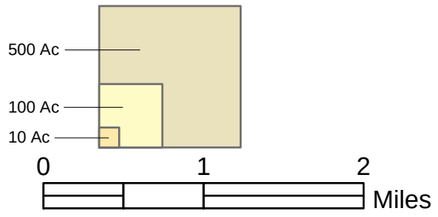


Note:
Residential shoreland envelopes shown on this map indicate the approximate location and amount of linear shorefront proposed to accommodate lots and shoreland open space. Plum Creek reserves the right to relocate these lots to a backlot envelope (shown as dashed line). The size and location of the resort areas within the envelopes are not known; the area shown is conceptual.

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement (to balance development)
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
- Railroad
- Existing Development or LURC Development Subdistrict
- Existing 40 Acre subdivision
- Proposed residential area / envelope
- Existing Commercial / Industrial Zone
- Proposed resort area / envelope
- Moosehead - Roach River Conservation Easement
- Roach Ponds Acquisition
- Moosehead Legacy Conservation Easement
- 30-Year No Development Buffer

Note:
Refer to accompanying report for explanation of soil association numbers



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Note:
Residential shoreland envelopes shown on this map indicate the approximate location and amount of linear shorefront proposed to accommodate lots and shoreland open space. Plum Creek reserves the right to relocate these lots to a backlot envelope (shown as dashed line). The size and location of the resort areas within the envelopes are not known; the area shown is conceptual.

T2 R13 WELS

T2

T1 R13 WELS

T1 R12 WELS

T1 R

Shawtown Twp

Lazy Tom Bog

WA_PD
First Roach Pond

WA_PD
Second Roach Pond

Long Bog

Trout Pond

Penobscot Pond

N

Soil Detail Map 12

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement (to balance development)
- Major Road (Public)
- Minor Road (Public or Private)
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- Railroad
- Existing Development or LURC Development Subdistrict
- Existing 40 Acre subdivision
- Proposed residential area / envelope
- Existing Commercial / Industrial Zone
- Proposed resort area / envelope
- Moosehead - Roach River Conservation Easement
- Roach Ponds Acquisition
- Moosehead Legacy Conservation Easement
- 30-Year No Development Buffer

Note:
Refer to accompanying report for explanation of soil association numbers

500 Ac
100 Ac
10 Ac

0 1 2 Miles

April 2006

Soil Detail Map 13

CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION

Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement (to balance development)
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- Minor Road (Public or Private)
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- Moosehead - Roach River Conservation Easement
- Roach Ponds Acquisition
- Moosehead Legacy Conservation Easement
- 30-Year No Development Buffer

Note:
Refer to accompanying report for explanation of soil association numbers

500 Ac
100 Ac
10 Ac

0 1 2 Miles

April 2006

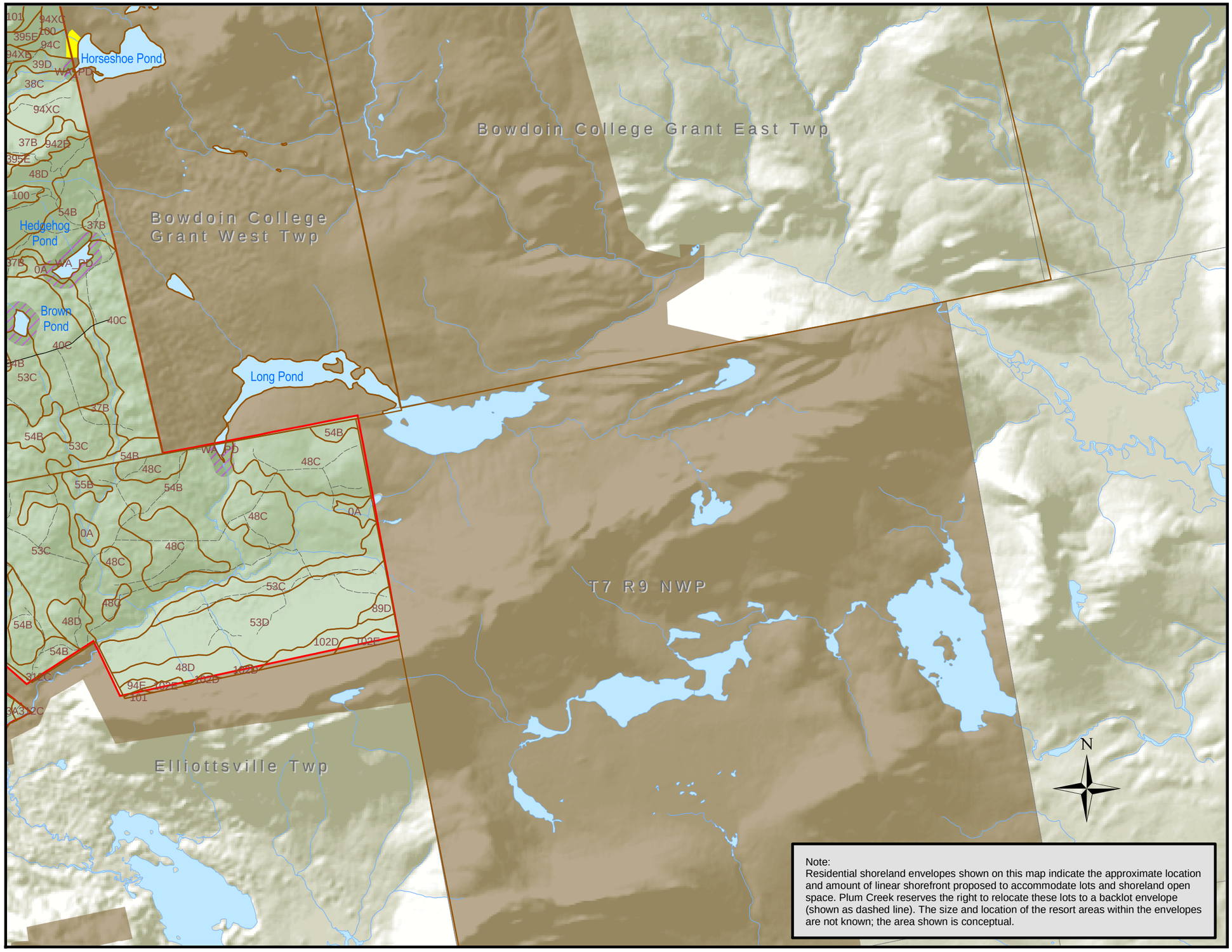
Note:
Residential shoreland envelopes shown on this map indicate the approximate location and amount of linear shorefront proposed to accommodate lots and shoreland open space. Plum Creek reserves the right to relocate these lots to a backlot envelope (shown as dashed line). The size and location of the resort areas within the envelopes are not known; the area shown is conceptual.

N

Frenchtown Twp
Shawtown Twp
TA R11 WELS
Beaver Cove
Bowdoin College Grant West Twp
Bowdoin College Grant East Twp
TB R11 WELS
First Roach Pond
Trout Pond
Fourth Roach Pond
Third Roach Pond
Beaver Pond
Bluff Pond
Fourth West Branch Pond
Big Lyford Pond
Second West Branch Pond
First West Branch Pond

Soil Detail Map 14

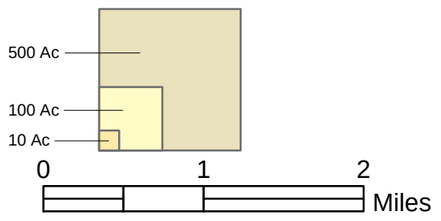
CONCEPT PLAN for PLUM CREEK'S LANDS in the MOOSEHEAD LAKE REGION



Legend

- Plum Creek Ownership Subject to Concept Plan
- Private, State, Federal Land in Conservation
- Shoreland on Pristine Pond, River or Lake with permanent, 500' deep, conservation easement (to balance development)
- Major Road (Public)
- Minor Road (Public or Private)
- Forest Management and Subdivision Access Road
- Railroad
- Existing Development or LURC Development Subdistrict
- Existing 40 Acre subdivision
- Proposed residential area / envelope
- Existing Commercial / Industrial Zone
- Proposed resort area / envelope
- Moosehead - Roach River Conservation Easement
- Roach Ponds Acquisition
- Moosehead Legacy Conservation Easement
- 30-Year No Development Buffer

Note:
Refer to accompanying report for explanation of soil association numbers



April 2006

EXHIBIT 2

SOIL SURVEY LEGEND FOR PISCATAQUIS COUNTY, SOUTHERN PART

This legend is a listing of all of the soil map units mapped in the county. In the left hand are the soil symbols as they appear on the soil survey field maps. In the right hand column are the alphabetical symbols as they appear in the published soil survey report for Piscataquis County, southern Part. In some cases, one or more numerical symbols (those in parenthesis) have been eliminated and combined into an alphabetical symbol that represents a single map unit. They have been combined because of small acreage and because the soils are very similar or because of changes in the classification system since the soil was mapped. In the published report the symbols on the maps and the legend will both be alphabetical.

The alphabetical soil symbols with upper and lowercase letter are order 2 map units. The alphabetical soil symbols with all upper case letters are order 3 map units. The last letter in symbols with 3 letters indicates the slope of the map units.

Field Symbol	Map Unit Name	Publication Symbol
OA(300A)	WONSQUEAK AND BUCKSPORT SOILS	WB
2UL1	URBANLAND-PENQUIS-PLAISTED COMPLEX, 0 TO 8 PERCENT, SLOPES	UpB
3A(204A, 303A)	CHARLES-CORNISH-WONSQUEAK COMPLEX	CC
6XB(36XB, 307B)	BOOTHBAY-SWANVILLE ASSOCIATION, GENTLY SLOPING	BOB
18B(21C, 318B, 321C)	MASARDIS GRAVELLY FINE SANDY LOAM, STRONGLY SLOPING	MSC
21E(321E)	MASARDIS-ADAMS COMPLEX, STEEP	MTE
3IXC(36B, 331XC, 336B)	DANFORTH-MASARDIS-PEACHAM ASSOCIATION, ROLLING, VERY STONY	DEC
34C(38C,334C,338C)	DANFORTH CHANNERY SILT LOAM, STRONGLY SLOPING, VERY STONY	DBC
34D(334D,338D)	DANFORTH CHANNERY SILT LOAM, MODERATELY STEEP, VERY STONY	DBD
37B(54B,337B, 354B)	COLONEL-BRAYTON-DIXFIELD ASSOCIATION, GENTLY SLOPING, VERY STONY	CPB
47C(347C)	BERKSHIRE-LYMAN ASSOCIATION, STRONGLY SLOPING , VERY STONY	BFC
47D(347D)	BERKSHIRE-LYMAN ASSOCIATION, MODERATELY STEEP, VERY STONY	BFD
48C(348C)	DIXFIELD-COLONEL-LYMAN ASSOCIATION, STONGLY SLOPING, VERY STONY	DYC
48D(348D)	MARLOW-LYMAN-DIXFIELD ASSOCIATION, MODERATELY STEEP, VERY STONY	MND
49E(349E)	MARLOW-LYMAN-BERKSHIRE ASSOCIATION, STEEP, VERY STONY	MLE
53C(353C)	DIXFIELD-COLONEL ASSOCIATION, STRONGLY SLOPING, VERY STONY	DXC
53D(353D)	MARLOW-DIXFIELD ASSOCIATION, MODERATELY STEEP, VERY STONY	MDD
55B(355A,355B)	BRAYTON-PEACHAM ASSOCIATION, EXTREMELY STONY	BP
56C(356 C)	PLAISTED- HOWLAND- PENQUIS ASSOCIATION, STRONGLY SLOPING, VERY STONY	PWC
56D (356D)	PLAISTED-PENQUIS-HOWLAND ASSOCIATION, MODERATELY STEEP, VERY STONY	PWD
58B(209B,329B, 358B,3458B)	HOWLAND-MONARDA ASSOCIATION, GENTLY SLOPING, VERY STONY	HRB

74B(74C,93B,94B,393B,3074B)	TELOS-MONARDA-MONSON COMPLEX, UNDULATING,VERY STONY	TNB
76C(80C, 3076C)	TELOS-CHESUNCOOK-ELLIOTTSVILLE ASSOCIATION, STONGLY SLOPING, VERY STONY	TLC
76D(80D,3076D)	CHESUNCOOK-ELLIOTTSVILLE-TELOS ASSOCIATION, MODERATELY STEEP, VERY STONY	CFD
77C(81C, 3077C)	TELOS-CHESUNCOOK ASSOCIATION, STONGLY SLOPING, VERY STONY	THC
77D(81D,3077D)	CHESUNCOOK-TELOS ASSOCIATION, MODERATELY STEEP, VERY STONY	CHD
78B(82B, 3078B)	TELOS-MONARDA ASSOCIATION, GENTLY SLOPING, VERY STONY	TMB
79B(83B,3079A)	MONARDA-BURNHAM ASSOCIATION, VERY STONY	MW
89C(3089C)	ELLIOTTSVILLE-MONSON COMPLEX, STRONGLY SLOPING, VERY STONY	EMC
89D(3089D)	ELLIOTTSVILLE-MONSON COMPLEX, MODERATELY STEEP, VERY STONY	EMD
89E(94E,3089E,3094E)	MONSON-ELLIOTTSVILLE-RICKER COMPLEX, STEEP, VERY STONY	MYE
94C (3094C)	MONSON-ELLIOTTSVILLE-RICKER COMPLEX, MODERATELY STEEP, VERY STONY	MYD
94XC(394XC)	LYMAN-TUNBRIDGE COMPLEX, MODERATELY STEEP, VERY STONY	LTD
94XE(394XE)	LYMAN-TUNBRIDGE COMPLEX, STEEP, VERY STONY	LTE
95D(3095D))	ENCHANTED VERY GRAVELLY SILT LOAM, MODERATELY STEEP, EXTREMELY STONY	END
95E(395E,395F,3095E)	ENCHANTED VERY GRAVELLY SILT LOAM, VERY STEEP, EXTREMELY STONY	ENE
100(101,310D,3101)	RICKER-ROCK OUTCROP COMPLEX, MODERATELY STEEP	ROD
102D(3102D)	SADDLEBACK-RICKER COMPLEX, MODERATELY STEEP, VERY STONY	SRD
102E(3102E)	SADDLEBACK-RICKER COMPLEX, STEEP, VERY STONY	SRE
200B	PENQUIS-THORNDIKE COMPLEX, 3 TO 8 PERCENT SLOPES	PhB
200C	PENQUIS-THORNDIKE COMPLEX, 8 TO 15 PERCENT SLOPES	PhC
201A(201B)	FRYEBURG SILT LOAM	Fr
202A(203A)	CORNISH-LOVEWELL COMPLEX	Cv
206A(252A)	SWANVILLE SILT LOAM	Sv
207B(251B,251C)	BOOTHBAY SILT LOAM, 3 TO 8 PERCENT SLOPES	BhB
208B	HOWLAND SILT LOAM, 3 TO 8 PERCENT SLOPES	HoB
208C(223C,288C)	PLAISTED SILT LOAM, 8 TO 15 PERCENT SLOPES	PtC
216B	TELOS SILT LOAM, 3 TO 8 PERCENT SLOPES	TeB
219B	ELLIOTSVILE-CHESUNCOOK COMPLEX, 3 TO 8 PERCENT SLOPES	EcB
220B	PENQUIS-PLAISTED COMPLEX, 3 TO 8 PERCENT SLOPES	PeB
220C (220D)	PENQUIS-PLAISTED COMPLEX, 8 TO 15 PERCNET SLOPES	PeC
221C(2000C, 3000C)	THORNDIKE-PENQUIS COMPLEX, ROLLING, VERY STONY	TSC
221E(392C)	THORNDIKE-ABRAM COMPLEX, ROLLING, VERY STONY	TRC
223b(288b)	PLAISTED SILT LOAM, 3 TO 8 PERCENT SLOPES	PtB
223XB	CHESUNCOOK SILT LOAM, 3 TO 8 PERCENT SLOPES	CeB
223XC	CHESUNCOOK SILT LOAM, 8 TO 15 PERCNET SLOPES	CeC
227B	MONARDA SILT LOAM, 0 TO 8 PERCENT SLOPES	MvB

230B	MASARDIS GRAVELLY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES	MrB
234B	DANFORTH CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES	DaB
242B	ADAMS LOAMY FINE SAND, 0 TO 8 PERCENT SLOPES	AdB
242C(315C,3012B)	ADAMS LOAMY FINE SAND, STRONGLY SLOPING	AEC
243B(244B,250A, 250B)	ALLAGASH VERY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES	AgB
243C(250C,250D)	ALLAGASH VERY FINE SANDY LOAM 8 TO 15 PERCENT SLOPES	AgC
253B	DIXFIELD FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	DfB
253(2053C)	MARLOW FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES	MaC
254B	COLONEL GRAVELLY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	CoB
259B(260B)	THORNDIKE-PENQUIS-ABRAM COMPLEX, 3 TO 8 PERCENT SLOPES	TtB
275B(275C)	BERKSHIRE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES, VERY STONY	BeB
292C	THORNDIKE-ABRAM COMPLEX, 8 TO 15 PERCENT SLOPES	ToC
301C(302D,3301C,3301D,3302D)	COLONEL-HERMON COMPLEX, ROLLING, EXTREMELY BOULDERY	CRC
308A	SWANVILLE-WONSQUEAK ASSOCIATION	SW
320C	PENQUIS-PLAISTED-BERKSHIRE COMPLEX, ROLLING, VERY STONY	PFC
343C	ALLAGASH-ADAMS COMPLEX, STRONGLY SLOPING	AHC
369C(369D)	SURPLUS FINE SANDY LOAM, MODERATELY STEEP, EXTREMELY STONY	SUD
942C(3942C)	LYMAN-ABRAM COMPLEX, MODERATELY STEEP, VERY STONY	LAD
942E(3942E)	LYMAN-ABRAM COMPLEX, VERY STEEP, VERY STONY	LAE
2303A	CORNISH-CHARLES-FRYEBURG COMPLEX, 0 TO 8 PERCENT SLOPES	CsB
3012D	ADAMS-ALLAGASH COMPLEX, HILLY	AFD
3358B	MONARDA-HOWLAND-THORNDIKE COMPLEX, UNDULATING, VERY STONY	MXB
3574B	COLONEL-BRAYTON-LYMAN COMPLEX, UNDULATING, VERY STONY	CQB
PITS	PITS, SAND AND GRAVEL	Ps
W	WATER, BODIES LESS THAT 40 ACRES IN SIZE	w
wq	WATER, BODIES GREATER THAN 40 ACRES IN SIZE	wa

EXHIBIT 3

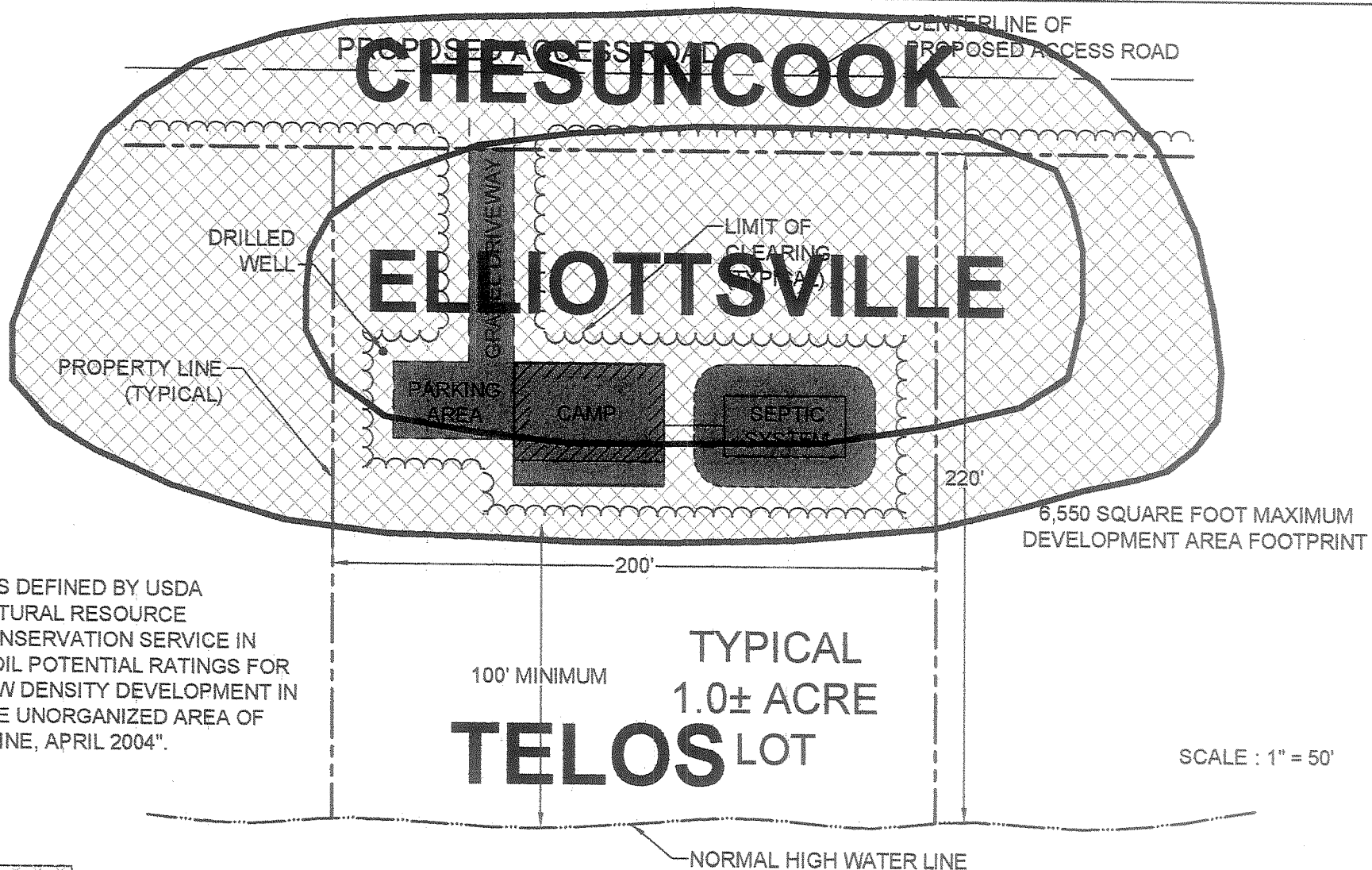
EXHIBIT 3		
Soil Potential Index Values & Rating Classes for Soil Survey Project 619		
Map Unit #	**Septics**	**Development**
0A	Very Low (VL)	Very Low (VL)
3A	Very Low (VL)	Very Low (VL)
6XB	Very Low (VL)	Very Low (VL)
12B	Low (L)	Medium (M)
13C	Very Low (VL)	Medium (M)
21C (17C, 18B)	Very Low (VL)	Medium (M)
21E (17E)	Very Low (VL)	Very Low (VL)
31XC	Very Low (VL)	Medium (M)
34C	High (H)	High (H)
34D	Very Low (VL)	Very Low (VL)
37B	Very Low (VL)	Low (L)
37C	Very Low (VL)	Very Low (VL)
38C	Medium (M)	Medium (M)
38D	Very Low (VL)	Very Low (VL)
38E	Very Low (VL)	Very Low (VL)
40C	Medium (M)	Medium (M)
47C	High (H)	High (H)
47D	Very Low (VL)	Very Low (VL)
48C	Medium (M)	Medium (M)
48D	Very Low (VL)	Very Low (VL)
49E	Very Low (VL)	Very Low (VL)
53C	Medium (M)	Medium (M)
53D	Very Low (VL)	Very Low (VL)
54B	Very Low (VL)	Low (L)
54C	Very Low (VL)	Very Low (VL)
55B (67B)	Very Low (VL)	Very Low (VL)
68C (67C)	Medium (M)	Medium (M)
69D	Very Low (VL)	Very Low (VL)
70D	Very Low (VL)	Very Low (VL)
70E	Very Low (VL)	Low (L)
74B	Very Low (VL)	Very Low (VL)
76C (56C, 57C, 80C)	Very Low (VL)	Very Low (VL)
76D (56D, 57D, 80D)	Very Low (VL)	Very Low (VL)
77C (81C)	Very Low (VL)	Very Low (VL)
77D (81D)	Very Low (VL)	Very Low (VL)
78B (58B, 82B)	Very Low (VL)	Very Low (VL)
79B (83B)	Very Low (VL)	Very Low (VL)
89C	Low (L)	Medium (M)
89D	Very Low (VL)	Very Low (VL)
89E	Very Low (VL)	Very Low (VL)
93B (94B)	Very Low (VL)	Very Low (VL)

EXHIBIT 3		
Soil Potential Index Values & Rating Classes for Soil Survey Project 619		
Map Unit #	**Septics**	**Development**
94C	Very Low (VL)	Low (L)
94E	Very Low (VL)	Very Low (VL)
94XC	Very Low (VL)	Low (L)
94XE	Very Low (VL)	Very Low (VL)
95D	Very Low (VL)	Very Low (VL)
95E	Very Low (VL)	Very Low (VL)
96C	Very Low (VL)	Very Low (VL)
100	Very Low (VL)	Very Low (VL)
101	Very Low (VL)	Very Low (VL)
102D	Very Low (VL)	Very Low (VL)
102E	Very Low (VL)	Very Low (VL)
103E	Very Low (VL)	Very Low (VL)
104	Very Low (VL)	Very Low (VL)
180C	Medium (M)	Medium (M)
301C	High (H)	High (H)
301D	Very Low (VL)	Very Low (VL)
302C	High (H)	High (H)
302D	Very Low (VL)	Very Low (VL)
312C	Very Low (VL)	Medium (M)
312D	Very Low (VL)	Very Low (VL)
942C	Very Low (VL)	Low (L)
942E	Very Low (VL)	Very Low (VL)

EXHIBIT 3		
Soil Potential Index Values & Rating Classes for Soil Survey Project 620 & 621		
Map Unit #	**Septics**	**Development**
10F	Very Low (VL)	Very Low (VL)
16XA	Very Low (VL)	Very Low (VL)
19B	Very Low (VL)	Low (L)
32XC	Very Low (VL)	Medium (M)
34XC	Medium (M)	Medium (M)
34XD	Very Low (VL)	Very Low (VL)
36B	Very Low (VL)	Very Low (VL)
39D	Very Low (VL)	Very Low (VL)
374B	Very Low (VL)	Low (L)
376C	Very Low (VL)	Very Low (VL)
377C	Very Low (VL)	Very Low (VL)
378B	Very Low (VL)	Low (L)
379A	Very Low (VL)	Very Low (VL)
389C	Low (L)	Medium (M)
389D	Very Low (VL)	Very Low (VL)
394C	Very Low (VL)	Very Low (VL)
394E	Very Low (VL)	Very Low (VL)
3389E	Very Low (VL)	Very Low (VL)

EXHIBIT 4

EXHIBIT 4: TYPICAL LOW DENSITY DEVELOPMENT* AREA FOOTPRINT ON A SOIL ASSOCIATION



* AS DEFINED BY USDA NATURAL RESOURCE CONSERVATION SERVICE IN "SOIL POTENTIAL RATINGS FOR LOW DENSITY DEVELOPMENT IN THE UNORGANIZED AREA OF MAINE, APRIL 2004".

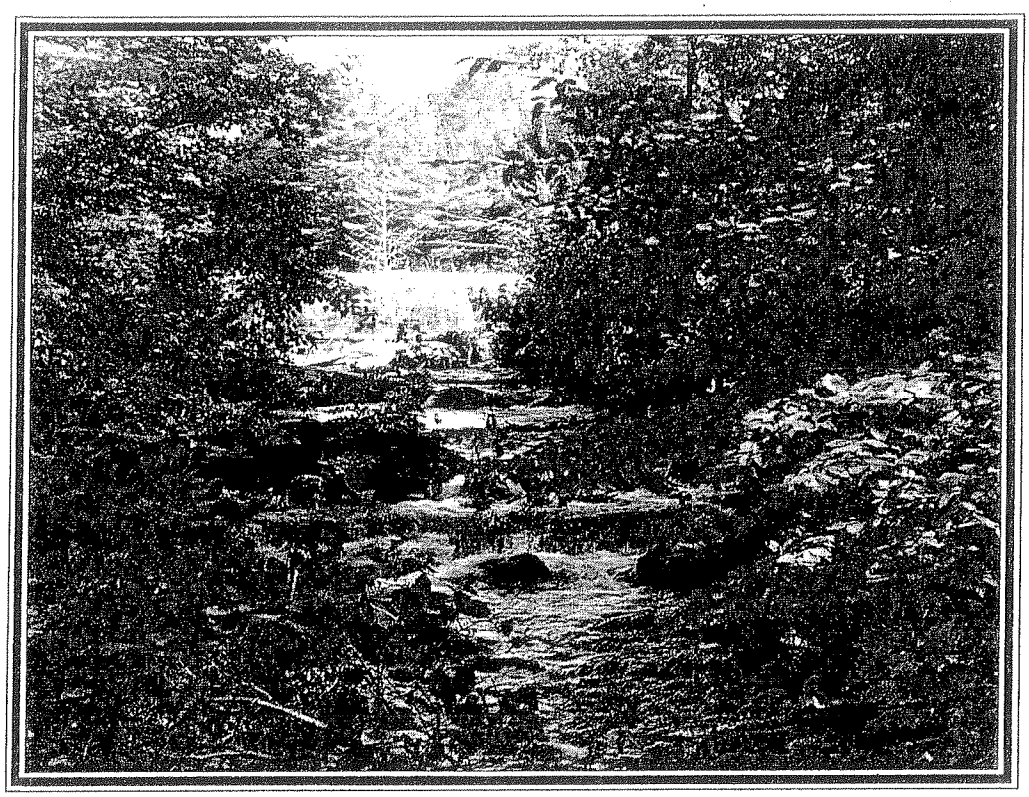
03-0466.2

EXHIBIT 5

Soil Potential Ratings

for Low Density Development in The Unorganized Area Of Maine

April 2004



NRCS Natural Resources Conservation Service

967 Illinois Ave, Suite #3
Bangor, ME 04401
Tel: (207) 990-9100 • Fax: (207) 990-9599

FOREWORD

The Unorganized Area of Maine is facing changes in land use which have placed enormous pressure on land and water resources. As parts of the Unorganized Area are converted from forestry to urban, large lot subdivision and summer camp uses, soil and water resources can be threatened. The construction of homes, septic tank absorption fields, wells, and roads, if not properly planned, can negatively affect the quality of life. In many cases, soil conditions such as wetness, depth to bedrock and steep slopes can be the catalyst for environmental degradation. Many potential soil related problems can be avoided by sound land use planning before development begins.

Costs for overcoming soil limitations increase as the degree of soil limitations becomes more severe. These increased costs to make an area suitable for development are passed on to the landowner. Soil Potential Ratings for Low Density Development in The Unorganized Area of Maine is a planning tool for state planners, and others, to address soil limitations by rating soils as to the costs of corrective measures and the long term maintenance costs needed to satisfactorily overcome soil problems.

The purpose of this publication is to assist landowners, state planners, developers, engineers, and others in their planning activities. Information obtained from Natural Resources Conservation Service soil maps in the Unorganized Area of Maine should only be used for general planning purposes. This is because the smallest map unit delineated in these areas is commonly 16 to 40 acres and is composed of 2 or 3 soil types due to the scale of mapping. For site specific decisions, more detailed soil information such as a High Intensity Soil Survey done by a Maine certified Soil Scientist is needed. This index has been designed to be used with a variety of scales of soil mapping. It has general ratings for broad map units and more specific ratings with individual soil series within these map units if more detailed mapping is available. State officials, land use planners, land users, and other are encouraged to contact the local Soil and Water Conservation District Office for assistance when using this information. Other information concerning land use in agricultural and forestry planning also is readily available in this office.

This publication is designed for use with soil survey maps and information available from the local Soil and Water Conservation Districts as well as more detailed certified mapping. The district office addresses are:

Androscoggin/Sagadahoc
Androscoggin Valley SWCD
P.O. Box 1938 (254 Goddard Rd.)
Lewiston, ME 04241-1938
Phone: (207) 783-9196

Aroostook-Central
Central Aroostook SWCD
744 Maine Street
Presque Isle, ME 04769
Phone: (207) 764-4770

Aroostook-Southern
Southern Aroostook SWCD
RR3, Box 45
Houlton, ME 04730
Phone: (207) 532-2087

Knox/Lincoln
Knox/Lincoln SWCD
191 Camden Road
Warren, ME 04866
Phone: (207) 273-2005

Oxford
Oxford County SWCD
1570 Main Street Suite 10
Oxford, ME 04270
Phone: (207) 743-5789

Penobscot
Penobscot County SWCD
28 Gilman Plaza, Suite 2
Bangor, ME 04401
Phone: (207) 947-6622

Aroostook
St. John Valley
St. John Valley SWCD
96 Market Street
Fort Kent, ME 04743
Phone: (207) 834-3311

Cumberland
Cumberland County SWCD
201 Main Street, Suite 6
Westbrook, ME 04092
Phone: (207) 856-2777

Franklin
Franklin County SWCD
107 Park Street
Farmington, ME 04938
Phone: (207) 778-4279

Hancock
Hancock County SWCD
190 Bangor Road
Ellsworth, ME 04605
Phone (207) 667-8663

Kennebec
Kennebec County SWCD
9 Green Street (3rd Floor)
Augusta, ME 04330
Phone: (207) 622-8250

Piscataquis
Piscataquis County SWCD
42 Pine Crest Drive
Dover-Foxcroft, ME 04426
Phone: (207) 564-2321

Somerset
Somerset County SWCD
7 High Street
Skowhegan, ME 04976
Phone: (207) 474-8324

Waldo
Waldo County SWCD
266 Waterville Road
Belfast, ME 04915
Phone: (207) 338-3069

Washington
Washington County SWCD
Federal Bldg., & Post Office
51 Court Street
Machias, ME 04654-0121
Phone: (207) 255-3995

York
York County SWCD
P.O. Box 819 (8 Waterboro Road)
Alfred, ME 04002
Phone: (207) 324-7015

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INTRODUCTION

Soil interpretations are made by identifying the type of soil within an area by using a soils map either from a published soil survey report, an interim soil survey report, an individual soil survey field sheet or from a soil map developed by a Maine Certified Soil Scientist.

The soils in an area are identified in the field and delineated on aerial photographs by soil scientists. The aerial photograph with the delineations of soil types becomes the soil map. After the soil type has been determined, interpretations can be made by using soil interpretation sheets containing information on the characteristics of the soil, ratings based on the limitations of the soil for various uses, and expected yields of certain crops and woodland species.

SOIL LIMITATION RATINGS

Soil survey interpretations have been prepared for and provided to users of soil surveys for many years. They have been provided in the form of land capability classes for agriculture and soil limitation ratings for various other land uses. An example of these is rating a soil as having slight, moderate, severe, or very severe limitations for the installation of septic systems. They do, however, have a few shortcomings.

- They are based on the limiting soil property rather than a combination of restrictive features.
- They are based on a national system of rating soils using criteria developed nationally and do not reflect state laws, local ordinances, and criteria.
- They do not indicate corrective measures or alternatives needed to overcome restrictive soil features or the relative costs of overcoming these features.
- They do not array the soils within a specified area from highest to lowest potential for a given use.
- They tend to rate soils in a negative context.

SOIL POTENTIAL RATINGS

Soil potential ratings have been developed and adopted as a more useful form of soil interpretations. These ratings are based on local conditions, local experience and expertise, and laws, codes, and rules governing the use of soils for various purposes. They include the feasibility of a soil for a particular use relative to other soils within a given area. These ratings reflect the potential of use rather than the limitations of use and are designed to meet local needs and conditions. Factors considered in preparing soil potential ratings are the feasibility of using certain technology and practices to overcome limiting factors and the relative cost of implementing these practices and the adverse effects and costs of any continuing limitation during the projected lifetime of use.

Soil potential ratings:

- provide a common set of terms applicable to all kinds of land use for rating the quality of a soil for a particular use in an area.
- use local criteria to meet local needs.
- provide information about soils that emphasizes feasibility of use rather than avoidance of problems.
- strengthen planning and management through more feasible and effective use of the information provided in soil surveys and on-site soils evaluations by properly relating the information to modern technologies.
- approach the process of rating soils in a more positive context.

Soil potential ratings are used with other resource information to facilitate resource planning and for making land use decisions.

Soil potential ratings are only one factor to be considered in a complete evaluation of an area and are used with other resource information in determining land feasibility and use. Table 1 displays the major steps in determining soil potential ratings.

1	Determine Development Uses To Be Rated.	Septic Systems, Dwellings, Roads, etc.			
2	Determine Soil Properties Important For Rating Each Selected Use.	Texture, Permeability, Slope, Drainage, Water Table, Flooding, Depth To Bedrock			
3	Review Soils From Unorganized Area Soil Survey Data.	**Site Specific** Danforth Shirley Elliottsville		**General Planning** 34C	
4	Select Reference Soil For Selected Use.	**Site Specific** Danforth		**General Planning** Danforth Part	
5	Determine Soil Limitations and Corrective Measurers For Each Use	Depth to Water Table Slopes, etc. Site Preparation, Fill, stoniness,etc.			
6	Determine Soil Potential Index (SPI) For Each Soil, For the Selected Use.	**Site Specific** **Soil** Danforth Shirley Elliottsville	**SPI** 100 53 71	**Map Unit** 34C	**SPI** 83
7	Determine Rating Classes For Soil Potential Index Ranges. Determine Rating Class For Each Soil Map unit or Soil Series.	**Site Specific** **SPI** 100 60-82 40-59 Danforth Shirley Elliottsville	**Rating Class** Very High (VH) Medium (M) Low(L) Very High (VH) Low (L) Medium (M)	**General Planning** **Map Unit** 34 C	**Rating Class** High (H)

Table 1 - The Major Steps in Determining Soil Potential Ratings

PURPOSE

Soil potential ratings were developed to provide soil survey users and land use planners a tool in determining the relative qualities of soils and their feasibility for use and development.

Soil potential ratings are intended to be used as a guide to planning and to help planners and users to better understand problems which may be encountered and corrective measures needed to overcome these problems.

DEVELOPMENT OF SOIL POTENTIAL RATING

Local people knowledgeable of the use and development of the land resource of the Unorganized Area were contacted to help develop soil potential ratings. They consisted of consultants, land appraisers, site evaluators, site plan evaluators, Natural Resources Conservation Service personnel, state personnel, and land developers.

They determined that the primary need for soil potentials is to rate soils for development occurring in the Unorganized Area, especially in the area of low density development. The development uses considered are septic tank absorption fields, dwellings with basements, and local roads and streets.

They also determined the uses for which the soils should be rated, the soil factors affecting development, and the methods and relative costs of corrective measures and of continuing limitations compared to the costs for the reference soil.

FACTORS FOR DETERMINING SOIL POTENTIAL RATINGS FOR DEVELOPMENT

The ratings of soils in terms of their potential for development are based on their natural properties. The important soil properties considered in development are texture, permeability, depth to seasonal high water table, depth to restricting layer, depth to bedrock, slope, flooding, stone cover, and natural drainage class.

Soil potential ratings and corrective measures designed for NRCS soil map units are not site specific. When the ratings are used in conjunction with an NRCS soil survey map, a specific site within the map unit may perform better or not as well as indicated by the map unit rating. If during an on-site investigation it is possible to identify the soil series, the potential rating of that series within the map unit should be used. If this is not possible, the rating for the map unit should be used. If a higher intensity (more detailed) soil map is available, the rating for the individual series within the map unit should be used.

SOIL PROPERTIES

The following soil properties have been considered when rating soils for development potential.

TEXTURE

Texture is an important property of the soil to consider when rating the soil. Soils are made up of particles or separates of various sizes. Soil separates which make up texture are sand, silt, and clay. Gravel, cobblestones, stones and boulders are not textures.

Sand particles are visible to the naked eye. They do not have significant interparticle attraction. The pore spaces between particles are usually large and continuous.

Clay particles are so small they cannot be seen without a microscope. The pore spaces are very small and are frequently discontinuous which slows the movement of air and water.

Silt particles are between sand and clay in size.

Most soils contain more than one separate and most often a combination of all three. The amount of each separate contained within a soil will determine its texture. For instance, the fine sandy loam textural class is a combination of sand, silt, and clay with a larger percentage of fine sand and silt. Also, particles larger than sand and smaller than 3 inches (gravel) are recognized by modifiers of the textural class name such as gravelly fine sandy loam.

IN GENERAL SOIL POTENTIAL FOR DEVELOPMENT IS HIGH FOR SOIL THAT:

- Does Not Flood
- Has Adequate Permeability
- Has Suitable Texture
- Has a Relatively Deep Water Table
- Has Adequate Depth to Bedrock
- Has a gentle Slope

IN GENERAL SOIL POTENTIAL FOR DEVELOPMENT IS LOW FOR SOIL THAT:

- Floods
- Is Not Very Permeable
- Has Unsuitable Texture
- Has High Water Table
- Has a Shallow Depth To Bedrock
- Has a Steep Slope

PERMEABILITY

Permeability is the rate at which water moves vertically through the soil. Texture and structure of the soil affect its rate of permeability. Sandy (coarse textured) soils transmit water faster than clay (fine textured) soils. Platy structure, which is the horizontal alignment of soil particles or groups of particles within the soil, impedes the vertical movement of water and therefore reduces soil permeability. Water tends to move horizontally within soils having platy structure. Soils with granular structure tend to

readily transmit water vertically. Very porous soils or gravelly soils transmit water vertically very rapidly, causing a concern of having nutrients and microbes carried into ground water. Problems can result when soil permeability is too slow or too fast.

FOR SEPTIC SYSTEMS, PERMEABILITY OF SOIL MUST BE ADEQUATE TO PREVENT:

- Seepage from septic tank systems onto road or system slopes
- Backup of sewage
- Shortened life of septic systems
- Groundwater contamination

SLOPE

Slope is defined as the inclination of the surface in relation to the horizontal and is one of the most noticeable of soil properties. The slope is usually stated as the ratio of vertical rise to horizontal distance and expressed as a percentage. For example, a 10 foot vertical rise in a 100 foot horizontal distance is a 10 percent slope.

Slope is a major component of the landscape and is one of the most significant soil properties governing land use. Most land use and development takes place on the less sloping areas. Figure 1 relates slope conditions to changes in the landscape.

Areas with slopes less than 15 percent generally do not present as many problems as areas that are steeper. Areas with slopes over 3 percent require additional costs to fit development on the slopes, more detailed designs, and more considerations of other soil properties.

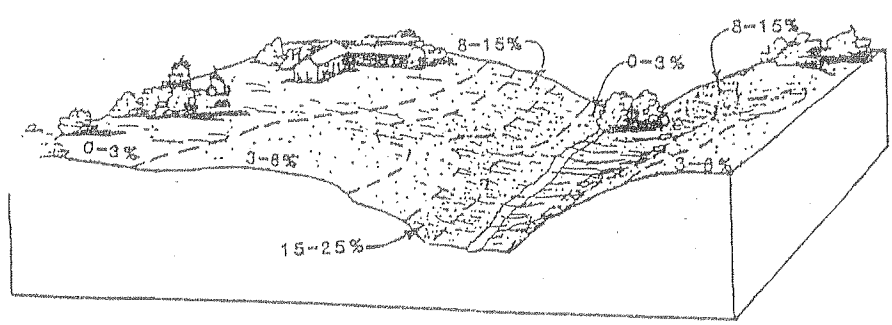

Figure 1 - Soil Slope Related to the Landscape

SURFACE STONES

Surface stones are rock fragments ten inches or larger in diameter which lie on the soil surface or which are partially imbedded in the soil. The amount of surface stoniness is referred to as the percent of area covered by stones. For example, a three percent stone

cover means that three percent of the total area is covered by stones ten inches or larger. Boulders are those rock fragments larger than 24 inches.

Surface stones affect the use of a soil by being a nuisance during operations which disturb the soil surface. In some cases, depending on the size and amount of surface stones, special equipment may be necessary for stone removal.

WATER TABLE

The water table is defined as the water surface within a soil where all voids or spaces are completely filled with water (saturated). The water table in the soil rises and falls with respect to time and the extent of saturation of the soil and varies according to its drainage characteristics and the supply of water to the soil (figure 2). The water table fluctuates by season and also can vary over a period of years. Water tables in soils fluctuate more or less in a regular pattern during the course of the year.

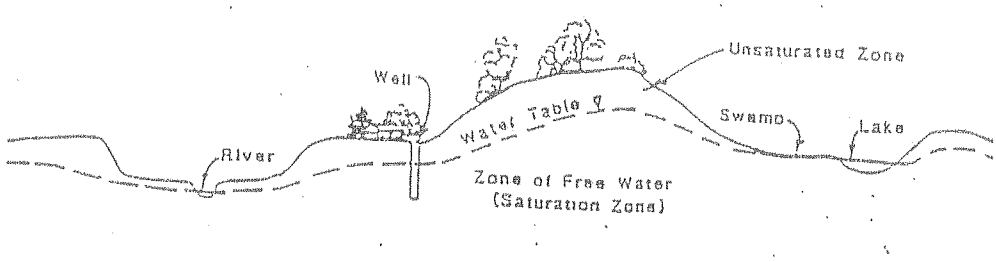

Figure 2 - Diagram Showing the Relation of the Water Table to the Earth's Surface

Maximum heights in soils with a seasonal water table can be expected in April or May, just after the snow melts and the frost comes out of the ground and again in the late fall. Water tables also fluctuate within a season depending on precipitation. Seasonal high water table can be determined by soil color or the presence of spots of varying color (mottles) within the soil. Generally yellowish and reddish colors indicate a dry, well oxygenated soil. Grayish colors indicate an absence of oxygen caused by wet conditions.

FLOODING

Some soils are flood prone. Flooding refers to the inundation by water from river or stream overflow (figure 3). This soil property indicates a very serious condition for development. Where soils are subject to flooding, it is not desirable to locate normal types of structures. Many uses, such as septic sewage waste disposal systems can be adversely affected by flooding and may be prohibited by local or state laws.

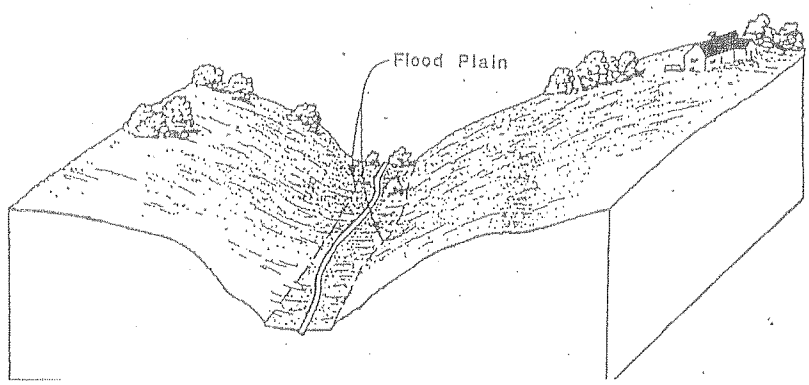

Figure 3 - Soils in the Flood Plain are Subject to Flooding

DEPTH TO BEDROCK

The depth of soil above the bedrock has a great influence on development. Generally, it is expensive to excavate and remove bedrock for house foundations or roads. Shallow depth to bedrock may prohibit or greatly increase the costs of construction of septic tank systems. Depth to bedrock varies greatly over a relatively short distance as shown in figure 4.

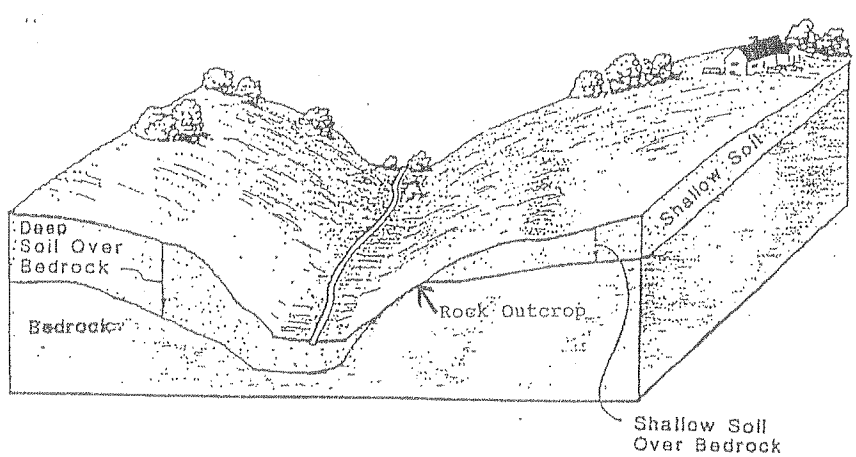

Figure 4 - Depth to Bedrock

RESTRICTIVE LAYER

Some soils have a restrictive layer that begins at a depth of 10 to 40 inches. The restrictive layer is commonly a firm substratum in glacial till soils or lake and marine sediment soils. This restrictive layer impedes the natural drainage of the soil by restricting the downward movement of water. A perched or intermittent water table is often created above the restrictive layer.

NATURAL DRAINAGE CLASS

Natural drainage refers to the rapidity and extent of the removal of water from the soil in relation to the flow of incoming water, and is closely associated to the seasonal high water table. The natural drainage class of a soil refers to the drainage class of a soil in its natural state without artificial drainage. With artificial drainage, such as underground tile lines or open surface drains, the depth of the water table can be altered. Natural drainage classes range from very poorly drained in the wettest soils to excessively drained on the droughtiest soils. Figure 5 idealizes the changes in soil drainage as topography changes.

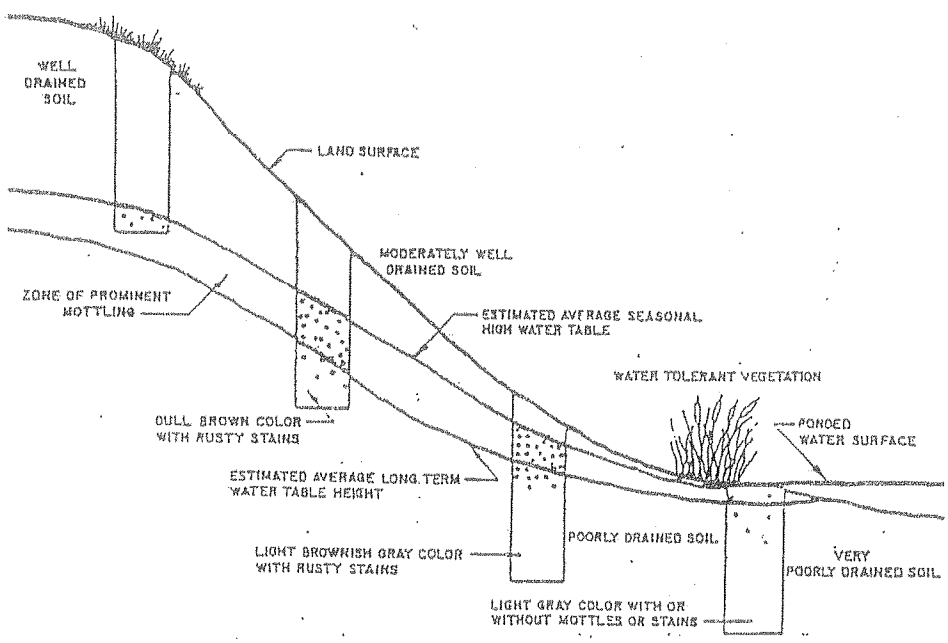

Figure 5 - Soil Drainage Class

DEFINITION OF LOW DENSITY DEVELOPMENT

For the purpose of this document, low density development includes single family unit residences with basements and comparable buildings and septic tank absorption fields, with an on-site source of water. Residences may be a single unit or a cluster of units in a development. Gravel roads in developments are also included. In developing this rating

system, a specific model of a house, septic system and road were used (as described below) with the cost of construction at the time. This was necessary to assign index points. Although costs change over time, the relative relationship of the rating system will not change, thus eliminating the need for a cost factor when using these ratings. Once established, the rating system gives a relative measure of the suitability of a site for development that is not tied to a specific model of a house, septic system or road.

SEPTIC TANK ABSORPTION FIELD SYSTEM

The model single family home sewage disposal system consists of a 1000 gallon septic tank and an absorption field that distributes effluent from the septic tank into the soil. The system is designed for 270 gallons per day of effluent from a three bedroom house. The system is expected to function year-round at the designed capacity without surfacing of effluent, backing up of the system, or pollution of the groundwater. It is assumed that septic tanks and absorption fields will be installed according to the Subsurface Wastewater Disposal Rules, Chapter 241, Department of Human Services, Division of Health Engineering, State of Maine. It is also assumed the septic tanks will be maintained properly.

DWELLINGS WITH BASEMENTS

The model dwelling with basement is a single family year-round residence less than three stories high with a full basement and garage covering 1500 square feet of land. The foundation consists of spread footings with an eight foot, poured concrete wall built on undisturbed soil. All dwellings have minimal foundation drains. There is on site sewage disposal and water supply.

LOCAL ROADS AND STREETS

The model local road or street is one that is designated for purposes of vehicular traffic designed to handle 25 to 100 vehicles per day. These roads generally have a gravel surface about 20 feet wide including shoulders. Base material is about 15 inches of gravel. Surface water drainage is minimal. Cost figures are based on 100 foot segments of road.

RATING FACTORS

DEPTH TO WATER TABLE - The depth to water table affects the natural drainage of the soil which in turn affects the soils potential for development. A soil with a shallow depth to the seasonal high water table requires construction methods such as added fill and artificial drainage to overcome this limitation. A soil with a seasonal high water table deeper than 6 feet below the soil surface would have higher potential than a soil with a seasonal high water table at 18 inches.

FLOODING - Soils are rated on the basis of whether they are subject to flooding or not. Flooding is separated into three categories: none, occasional (floods at least once in ten years), and frequent (floods at least once every two years). Soils subject to flooding have less potential for development than those that do not flood.

SLOPE - Soils are rated on the basis of slope. The less sloping areas require less corrective measures than the steeper areas and thus have a greater potential for development.

DEPTH TO BEDROCK - The presence of bedrock affects the use of soil for development. Soils with shallow depth over bedrock have less potential for development than deep soils.

SURFACE STONES - The presence of stones and boulders on the soil surface affect the use of the soil for development. In preparing a site for a dwelling or septic sewage disposal area surface stones have to be removed.

DEPTH TO RESTRICTIVE LAYER - Some soils have a restrictive layer that begins at a shallow depth. This layer can impede natural drainage and permeability. This soil factor is important when designing a septic sewage disposal system.

SOIL PROFILE AND CONDITION - The Maine State Plumbing Code provides a table by which each soil can be categorized by profile group and soil condition. The profile group is based on parent material or origin of the soil, texture of the soil, and the presence of any restricting layer within the soil profile. The soil condition refers to the depth to bedrock or drainage class.

REFERENCE SOIL

In order to establish soil potential ratings for low density development, a reference soil for the area was established. The reference soil has the most favorable characteristics for all the uses rated in this document. All of the soils are evaluated relative to the reference soil and arrayed in descending order of relative quality. The reference soil condition for development is a soil with the following properties:

- A water table level greater than 6 feet.
- The soil does not flood.
- The slope is 10 percent.
- The soil lacks a restrictive layer.
- The depth to bedrock is more than 5 feet.
- Surface stone cover is 0.1 to 15 percent.
- The soil requires a medium sized rating for a septic sewage disposal field.
- There is low potential for groundwater contamination from septic field effluent.

The Danforth soil has been established as the reference soil for the unorganized areas. It has all of the desirable properties for low density development uses. A Danforth soil on a slope of 2 to 8 percent would have a Soil Potential Index of 100. However, on soils legends for NRCS soil survey maps in the unorganized areas, there is no Danforth map unit with a 2 to 8 percent slope. The closest map units are 3IXC Danforth - Masardis - Peacham association, 1 to 16 percent slopes and 34C Danforth - Shirley - Elliottsville association, 3 to 15 percent slopes. In these map units, Danforth averages about 10 percent slopes which would rate slightly less than 100 but an area of Danforth soils identified by a more detailed soil survey on a slope of 2 to 8 percent would rate 100.

Most other soils in the Unorganized Area will have an index lower than the Danforth soils. Hermon and Monadnock soils have the same rating as Danforth, but Danforth was chosen as the reference soil because it is the most extensively mapped soil in the Unorganized Area. This was determined by communication with NRCS soil scientists that have extensive mapping experience in the Unorganized Area. Figure 6 shows an idealized profile of the Danforth soil.

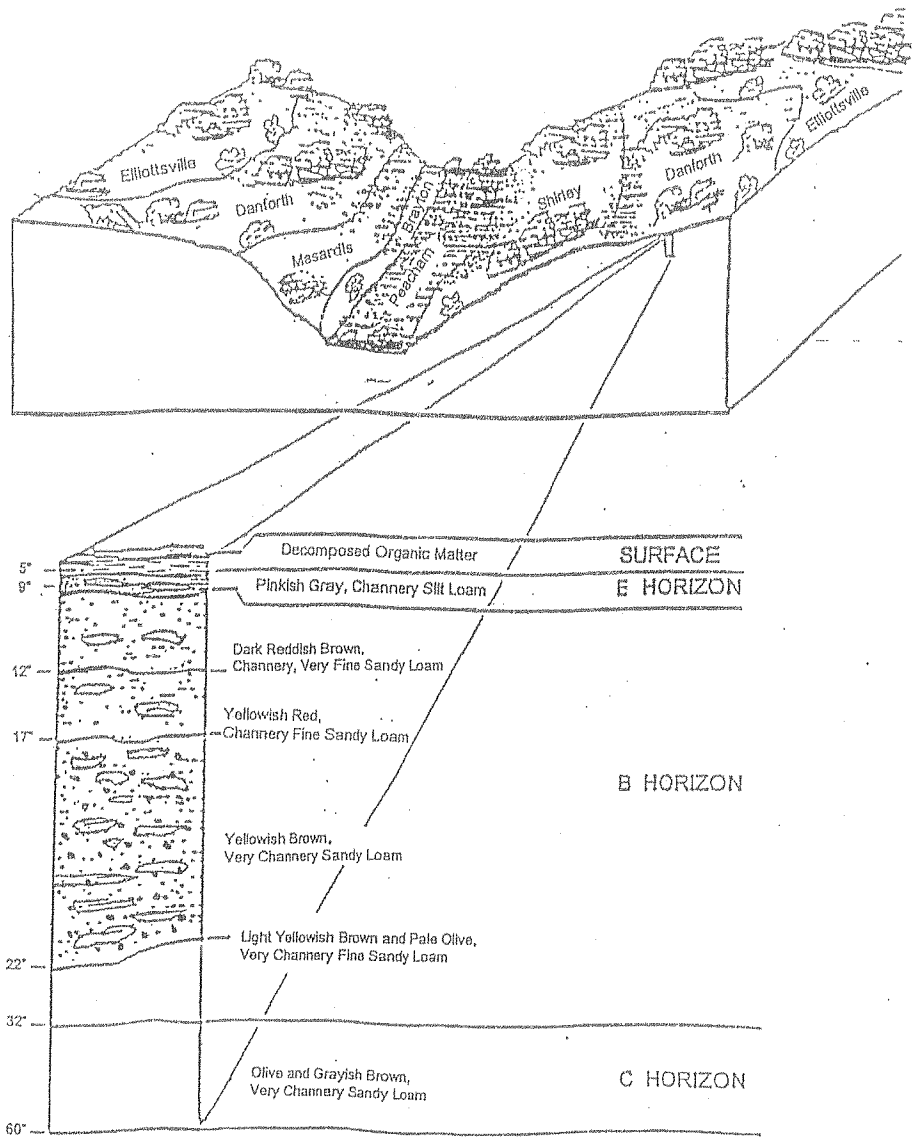

Figure 6 - Profile of Danforth Soil, Each Soil Has a Unique Profile

SOIL POTENTIAL INDEX

The Soil Potential Index is derived by calculating values for soil performance. All soils start out with values of 100 and then deductions are made for costs of corrective measures to overcome limiting soil properties, and costs established to overcome continuing limitations.

No highly detailed economic analysis of costs has been determined. Corrective measures represent indices of added costs over the basic cost of the reference soil needed to obtain the desired level of performance. No corrective measures are required for the reference soil; therefore, no deductions would be made in deriving the soil potential index. Soils with less favorable properties would have ratings less than 100 to account for deductions taken to obtain the desired performance level.

Example:

For a soil with a seasonal high water table at 2 feet below the ground surface the corrective measure for a septic sewage absorption field would be added fill to raise the level of the field. The cost of added fill is indexed and becomes part of the Soil Potential Index Equation.

Limitations existing after all corrective measures have been made are referred to as continuing limitations. These may include negative effects on social, economic, or environmental values. Continuing limitations are indices of costs resulting from unfavorable soil properties remaining after corrective measures are made. An example would be erosion control on steep slopes in order to prevent siltation of road ditches or plugging of storm drains. The cost of periodic erosion control measures would be indexed and used in the Soil Potential Index equation.

The Soil Potential Rating is based on the index value obtained after the corrective measure index and continuing limitation index have been subtracted from 100.

The Soil Potential Index is a mathematical expression of a soil's position in the overall range of potentials which goes from a high of 100 to a low of 0. Since the entire range is large, these numerical ratings are separated into Soil Potential Rating Classes. These classes are based on the expected performance of a soil if feasible measures are taken to overcome its limitations, the cost of such measures, and the magnitude of the limitations that remain after measures have been applied. The development rating (fourth column in the rating tables) is a weighted sum of the septic, dwelling and road indices. The septic system has the most restrictive site requirements and the dwelling has the least restrictive site requirements. Therefore, to get the composite development index, 45 percent of the septic index, 20 percent of the dwelling index and 35 percent of the local road index are added together.

Example: 38C2 Skerry part;

Septics Index 69 x .45(45%) =	31.05
Dwellings Index 81 x .20=	16.20+
Roads Index 66 x.35 =	23.10+
Development Index	70 rounded

Table 2 – Figuring the Development Index

Table 3 - Soil Potential Rating Class

SOIL POTENTIAL INDEX	RATING CLASS
100	VERY HIGH(VH)
83-99	HIGH (H)
60-82	MEDIUM (M)
40-59	LOW (L)
0-39	VERY LOW (VL)

VERY HIGH POTENTIAL - Site conditions and soil properties are favorable. Installation costs are lowest for that use and there are no soil limitations. Soils in the group have soil properties similar to the reference soil. The Soil Potential Index for this rating class is 100 for each soil use.

HIGH POTENTIAL - Site conditions and soil properties are not as favorable as the reference soil condition. The cost of measures for overcoming soil limitations are slight. The index for this rating class ranges from 83 to 99 for each soil use.

MEDIUM POTENTIAL - Site conditions and soil properties are below soils with high potential. Costs of the measures for overcoming soil limitations are significant. The Soil Potential Index for this class ranges from 60 to 82.

LOW POTENTIAL - Site conditions and soil properties are significantly below soils with medium potential. Costs of measures required to overcome soil limitations are very high. The Soil Potential Index for this rating class ranges from 40 to 59 for each soil use.

VERY LOW POTENTIAL - There are severe soil limitations for which economical corrective measures are prohibitive or unavailable and costs of these measures are extremely high. Also, soil limitations which detract from environmental quality may continue even after installation of corrective measures. The Soil Potential Index for this rating class is less than 40. They may also be prohibited for use by local or state laws.

CRYIC SOILS

Both the Maine Land Use Regulation Commission and the Maine Department of Environmental Protection list fragile mountain areas as "resources of state significance". Activities in these areas may require a permit. Fragile mountain areas are defined as "areas above 2700 feet in elevation from mean sea level".

Soils are considered cryic (cold) if their mean annual temperature is between 32 and 47 degrees Fahrenheit. The mean annual summer (June, July, August) temperature must be below 59 degrees Fahrenheit. In the unorganized areas, cryic soils are mapped above 2500 feet in elevation from mean sea level. Therefore, cryic soils can indicate fragile mountain areas

Special precautions must be taken when working in cryic soils. Because of the short growing season, projects must be timed carefully so that time is allowed for revegetation of disturbed areas. High proportions of organic materials in the upper layers make soils

slippery, unstable and difficult to compact, presenting problems for equipment and vehicle operations.

ADDITIONAL NOTES

1. The Maine Subsurface Wastewater Disposal Rules, 144A CMR 241, dated October 1, 2002 was the reference for developing the soil potential indices and ratings for the septic sewage disposal fields. These rules govern siting, design, construction, and inspection of subsurface wastewater disposal systems. Table 600.1 of the Rules recommends disposal area ratings for the soils in Maine based on parent material, texture and soil classification, depth to bedrock, and drainage. Every soil being rated has to be identified in the table based on these soil properties to determine disposal area size and depth of the separation distance between the bottom of the bed and the most limiting factor (seasonal high groundwater table, restrictive layer, or bedrock).

   Assumptions made for determining the disposal area size are for a three bedroom single family home with a design flow of 270 gallons of wastewater per day with a medium rated crushed rock disposal area of 700 square feet on a soil meeting the minimum standards for a first time system. Costs include the tank, pipe, rock fill, and any other fill and materials needed to meet the standards of the plumbing code.

2. Costs of corrective measures and continuing limitations are approximated and based on 1995 prices. For soil and site conditions that have no typical corrective measures or where no actual costs could be determined, penalty points were assigned as a factor.

3. These soil potential ratings for development may need to be updated in the future to reflect new technology and new ordinances and rules. These changes may affect the soil potential of a soil for a particular use over a period of time.

4. Some soil characteristics have numerical ranges. The third paragraph on page 78 describes how values were determined that are used with the work sheets to calculate a soil potential index value.

5. Outwash soils have rapid or very rapid permeability. The Maine Subsurface Wastewater Disposal Rules lists these soils as profile numbers 5 and 6. The rapid rate of permeability creates the potential for increased groundwater contamination. Due to this condition, these soils are penalized 60 index points and have a rating class of low or very low. The footnote on the Septic Tank Absorption Field; Soil Profile and Condition Work Sheet page 84 lists some but not all the possible methods to reduce the potential for groundwater contamination. If one of these measures is used and the depth to seasonal high water table and slope are suitable, the rating class may improve to better than very low or low. The soils that may meet these criteria are Adams, Allagash, Agwam, Au Gres, Colton, Croghan, Deerfield, Duane, Duxbury, Finch, Hinckley, Machias, Madawaska, Marlow, Masardis, Masardis Variant, Merrimac, Moosilauke, Naumberg, Ninigret, Saugatuck, Scarboro, Sheepscot, Skowhegan, Stetson, Walpole and Windsor.

6. Somewhat poorly drained soils that have a seasonal high water table deeper than 12 inches from the mineral soil surface may have a higher soil potential rating if they are outside of the shore land zone.

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U.S. Department of Agriculture, Soil Conservation Service, Soil Survey Manual

SOIL SURVEY PROJECT AREAS

In the interest of providing a higher quality soil survey product for the public, the Natural Resources Conservation Service and the National Cooperative Soil Survey have divided the United States, including the Unorganized Area of Maine, into soil survey projects. This promotes the timely completion of mapping in smaller geographical areas. The finished maps and supporting written information are available to the public more quickly. The product will be more cohesive and consistent as it is more likely that the survey was or will be completed by a more stable, personnel wise, mapping crew. The Unorganized Area of Maine is divided into four soil survey projects (Figure 7). Area 619 includes northern parts of Somerset, Franklin and Oxford Counties. In this area, the mapping is completed so it has its own soil potential ratings. Area 622 includes parts of northern Hancock and Western Washington Counties. Mapping is completed in well over half this area. It also has its own soil potential ratings. Area 620 includes northern parts of Somerset and Piscataquis Counties. A limited amount of mapping has been completed in this area. Area 621 is western Aroostook County. Mapping has started as a soil survey project but only a limited amount of work is completed. Due to the limited amount of mapping completed in areas 620 and 621, they have been combined into one soil potential rating.

TABLE 1

Table 1 Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Abram	Very Low	103E	shallow depth to bedrock, steep slopes	additions of granular fill/ removal of ledge/building roads aboveground/proper design & layout of site improve-ments such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	942C	shallow depth to bedrock, steep slopes	additions of granular fill/ removal of ledge/building roads aboveground/proper design & layout of site improve-ments such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	942E	shallow depth to bedrock, steep slopes	additions of granular fill/ removal of ledge/building roads aboveground/proper design & layout of site improve-ments such as driveways, buildings, trails, & accessory structures/ avoid steep areas
Adams	Medium	12B	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.
	Medium	13C	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.
	Medium	21C	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Adams	Very Low	21E	steep slopes/ susceptibility to accelerated erosion/droughti-ness/poor septic system performance	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas/ installation of septic system pretreatment units, loam liners, etc.
Becket	Medium	38C	wetness/frost action/restrictive layer/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing and/or larger footings/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	38D	steep slopes/ susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	38E	steep slopes/ susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Bemis	Very Low	68C	wetness/possible permitting considerations due to hydric soils	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
Berkshire	Medium	47C	steep slopes, susceptibility to accelerated erosion	additions of granular fill/ proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	47D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	49E	steep slopes, susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
Brayton	Very Low	37B	Generally Not Suitable for Proposed Use	
	Very Low	37C	Generally Not Suitable for Proposed Use	
	Very Low	54B	Generally Not Suitable for Proposed Use	
	Very Low	54C	Generally Not Suitable for Proposed Use	
	Very Low	55B	Generally Not Suitable for Proposed Use	
Bucksport	Very Low	0A	Generally Not Suitable for Proposed Use	

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Burnham	Very Low	79B	Generally Not Suitable for Proposed Use	
Charles	Very Low	3A	Generally Not Suitable for Proposed Use	
Chesuncook	Medium	76C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Very Low	76D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/ proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	77D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/ proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
Colonel	Low	37B	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Colonel	Very Low	37C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Low	48C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Low	53C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Colonel	Low	54B	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Low	54C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Low	96C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Colton	Medium	13C	poor septic system performance/droughtiness	installation of septic system pretreatment units, loam liners, etc./proper soil preparing & watering during growing season
	Medium	312C	poor septic system performance/droughtiness	installation of septic system pretreatment units, loam liners, etc./proper soil preparing & watering during growing season
	Very Low	312D	steep slopes/sus-ceptibility to accelerated erosion/droughtiness/poor septic system performance	proper soil preparing & watering during growing season/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas/ installation of septic system pretreatment units, loam liners, etc.
Cornish	Very Low	3A	Generally Not Suitable for Proposed Use	
Croghan	Medium	6XB	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.
	Medium	12B	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.
Danforth	Very Low	34D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Dixfield	Medium	48C	wetness/frost action/restrictive layer	additions of granular fill/ditching, culverts, riprap, filter fabric or building roads aboveground/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper design & layout of site improvements such as driveways, buildings, trains, & accessory structures
	Very Low	48D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	53D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ avoid steep areas
Elliottsville	Medium	34C	shallow depth to bedrock	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	34D	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Elliottsville	Medium	76C	shallow depth to bedrock	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	76D	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Medium	89C	shallow depth to bedrock	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	89D	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	89E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Medium	94C	shallow depth to bedrock	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures

Table 1 Cont'd.
Summary of Soil Limitations & Corrective Measures

Soil Type	Soil Potential*	Map Unit	Soil Limitations [a]	Corrective Measures [b]
Elliottsville	Very Low	94E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Medium	180C	shallow depth to bedrock	additions of granular fill/removal of ledge/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
Enchanted	Very Low	95D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	95E	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
Hermon	Very Low	38E	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	103E	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	301D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Hermon	High	302C	droughtiness	proper soil preparing & watering during growing season
	Very Low	302D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	312D	steep slopes, susceptibility to accelerated erosion	additions of granular fill/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
Hogback	Very Low	49E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/appropriate erosion control plan & measures/removal of ledge/minimize soil disturbance
	Very Low	94XC	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	proper soil preparing & watering during growing season/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	94XE	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	proper soil preparing & watering during growing season/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Hogback	Very Low	942C	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	942E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas
Lyman	Very Low	94XC	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	94XE	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/appropriate erosion control plan & measures/removal of ledge/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Lyman	Very Low	363C	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	630C	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	630E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/appropriate erosion control plan & measures/removal of ledge/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	631C	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Lyman	Very Low	634B	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	900E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/appropriate erosion control plan & measures/removal of ledge/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	942C	shallow depth to bedrock/droughtiness	additions of granular fill/ removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	942E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/appropriate erosion control plan & measures/removal of ledge/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Mahoosuc	Very Low	95E	steep slopes/excess organics/low strength/droughtiness	additions of granular fill/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas
	Low	96C	excess organics/low strength/droughtiness	additions of granular fill/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
Masardis	Medium	21C	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.
	Very Low	21E	steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas/installation of septic system pretreatment units, loam liners, etc.
	Medium	31XC	droughtiness/poor septic system performance	proper soil preparing & watering during growing season/installation of septic system pretreatment units, loam liners, etc.

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Marlow	Very Low	48D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	49E	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	High	53C	NA	NA
	Very Low	53D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
Monadnock	High	47C	NA	NA
	Very Low	47D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
Monarda	Very Low	74B	Generally Not Suitable for Proposed Use	
	Very Low	78B	Generally Not Suitable for Proposed Use	
	Very Low	79B	Generally Not Suitable for Proposed Use	
	Very Low	93B	Generally Not Suitable for Proposed Use	

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Monson	Low	74B	shallow depth to bedrock/droughtiness	additions of granular fill/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Low	89C	shallow depth to bedrock/droughtiness	additions of granular fill/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	89D	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & meas-ures/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails, & accessory structures/ avoid steep areas
	Very Low	89E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & meas-ures/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Monson	Low	94C	shallow depth to bedrock/droughtiness	additions of granular fill/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures
	Very Low	94E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & meas-ures/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improve-ments such as driveways, buildings, trails, & accessory structures/ avoid steep areas
Peacham	Very Low	31XC	Generally Not Suitable for Proposed Use	
	Very Low	55B	Generally Not Suitable for Proposed Use	
Pillsbury	Very Low	37B	Generally Not Suitable for Proposed Use	
	Very Low	37C	Generally Not Suitable for Proposed Use	
	Very Low	54B	Generally Not Suitable for Proposed Use	
	Very Low	54C	Generally Not Suitable for Proposed Use	
	Very Low	96C	Generally Not Suitable for Proposed Use	
Rawsonville	Very Low	38E	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improve-ments such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Rawsonville	Very Low	47D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	48D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	94XE	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	302D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Ricker	Very Low	93B	shallow depth to bedrock/excess organics/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	94C	shallow depth to bedrock/excess organics/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/proper design & layout of site improvements such as driveways, buildings, trails, & accessory structures/ minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Ricker	Very Low	94E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	100	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	101	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Ricker	Very Low	102D	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	102E	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas
	Very Low	104	shallow depth to bedrock/steep slopes/susceptibility to accelerated erosion/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Rock Outcrop	Very Low	70D	Generally Not Suitable for Proposed Use	
	Very Low	70E	Generally Not Suitable for Proposed Use	
	Very Low	1002	Generally Not Suitable for Proposed Use	
	Very Low	101	Generally Not Suitable for Proposed Use	
	Very Low	103E	Generally Not Suitable for Proposed Use	
	Very Low	104	Generally Not Suitable for Proposed Use	
Roundabout	Very Low	6XB	Generally Not Suitable for Proposed Use	
Saddleback	Very Low	70D	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	70E	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Saddleback	Very Low	95D	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	101D	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	102D	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Saddleback	Very Low	102E	shallow depth to bedrock/steep slopes/wetness/susceptibility to accelerated erosion/low strength/droughtiness	additions of granular fill/ appropriate erosion control plan & measures/removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
Sisk	Very Low	69D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	70D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Sisk	Very Low	70E	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ removal of ledge/ proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
Skerry	Medium	38C	wetness/frost action/restrictive layer/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ footing & under slab drains, sump pump, waterproofing, and/or larger footings/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	38D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ appropriate erosion control plan & measures/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Skerry	Very Low	301D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ appropriate erosion control plan & measures/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
	Very Low	302D	steep slopes/susceptibility to accelerated erosion	additions of granular fill/ appropriate erosion control plan & measures/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/ avoid steep areas
Surplus	Medium	68C	wetness/frost action/restrictive layer/susceptibility to accelerated erosion/low strength	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Surplus	Very Low	68D	steep slopes/wetness/frost action/restrictive layer/susceptibility to accelerated erosion/low strength	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
Telos	Low	74B	wetness/frost action/restrictive layer	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Telos	Low	76C	wetness/frost action/restrictive layer	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	76D	steep slopes/wetness/frost action/restrictive layer/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Telos	Low	77C	wetness/frost action/restrictive layer	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Very Low	77D	steep slopes/wetness/frost action/restrictive layer/susceptibility to accelerated erosion	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures/avoid steep areas

Table 1 Cont'd. Summary of Soil Limitations & Corrective Measures				
Soil Type	**Soil Potential***	**Map Unit**	**Soil Limitations [a]**	**Corrective Measures [b]**
Telos	Low	78B	wetness/frost action/restrictive layer	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
	Low	180C	wetness/frost action/restrictive layer	additions of granular fill/ ditching, culverts, riprap, filter fabric or building roads aboveground/ appropriate erosion control plan & measures/footing & under slab drains, sump pump, waterproofing, and/or larger footings/proper soil preparing & watering during growing season/minimize soil disturbance/proper design & layout of site improvements such as driveways, buildings, trails & accessory structures
Wonsqueak	Very Low	OA	Generally Not Suitable for Proposed Use	

*Development potential based on NRCS potential ratings for low density development

NA = Not Applicable

TABLE 2

TABLE 2

SUMMARY OF FINDINGS

Plum Creek Land Company Soils Investigation
Soils Mapping and Evaluation
Moosehead Lake Region, Maine

MAP	AREA	LOCATION	SOIL POTENTIAL RATING [a]	DOMINANT SOIL TYPE [b]	SOIL LIMITATIONS [c]	CORRECTIVE MEASURES [d]	HYDRIC SOILS [e]
MAP 3	Long Pond	Northwest Shore	Very Low	Ricker	1,2,9,11	1,3,4,6,8,9	*None Observed*
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
		North Central + Northeast Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
		South Shore	High	Danforth	2,9	1,7,8,9	PSS/PFO
			Medium	Elliottsville	1,2,9	1,4,8,9	
MAP 5	Big W Township	Big W North & Big W South	Medium	Monson	1,2,9,11	1,3,4,6,8,9	PFO (lake shore)
			Medium	Elliottsville	1,2,9	1,4,8,9	Perennial Stream
			Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
MAP 6	Brassua Lake	Southeast Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
		Southeast Highlands	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
		South Peninsula B+C	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
		South Peninsula A	Medium	Masardis	2,9,11,12	1,6,8,9,10	PSS/PFO
		West Shore A	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
		West Shore B+C	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
		South Peninsula Highlands	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
	Corridor Backlots	Rockwood/Kineo View & Rockwood Village West A+B	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
	Moosehead Lake	West Outlet Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		Sandbar Tract	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		West Outlet Highlands A+B+C	Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
MAP 7	Burnham Pond	North Shore	Medium	Elliottsville	1,2,9	1,4,8,9	Drainages
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
		South Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
		North Shore Highlands	Low - Medium	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
	Indian Pond	Northeast Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		Southeast Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	

TABLE 2

SUMMARY OF FINDINGS

Plum Creek Land Company Soils Investigation
Soils Mapping and Evaluation
Moosehead Lake Region, Maine

MAP	AREA	LOCATION	SOIL POTENTIAL RATING [a]	DOMINANT SOIL TYPE [b]	SOIL LIMITATIONS [c]	CORRECTIVE MEASURES [d]	HYDRIC SOILS [e]
		Highlands Area & Big Moose	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
		Mtn. Village	Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
	Moosehead Lake	Sapling & East Outlet	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	*None Observed*
		Highlands A+B	Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	Drainages
		Deep Cove Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
		Deep Cove Highlands	Medium	Elliottsville	1,2,9	1,4,8,9	
			Low	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
			Medium	Elliottsville	1,2,9	1,4,8,9	
MAP 9	Lily Bay Township	Stevens Point	Medium	Dixfield	2,9	1,7,8,9	
			High	Marlow	NA	NA	
			Low	Colonel	3,4,7	1,2,5,8	
			Very Low	Brayton	Not Suitable	Not Suitable	PSS/PFO
MAP 10	Prong Pond	West & South Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		Northeast Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	PSS/PFO
		Northeast Highlands	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
		Beaver Cove Back A+B	Low	Colonel	3,4,7	1,2,5,8	
			Medium	Dixfield	2,9	1,7,8,9	
			Low	Lyman			
			Very Low	Brayton			
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	PSS/PFO
	Lily Bay Township	Carlton Point	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		Resort at Lily Bay &	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
		Lily Bay Heights A+B	Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low - Medium	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
MAP 11	Upper Wilson Pond	West Shore &	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
		South Peninsula	Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		East Shore A+B/East	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
		Shore Narrows/South Cove	Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
		West Shore Highlands	Medium	Skerry	2,9	1,3,7,8,9	
			Medium	Becket	2,9	1,7,8,9	
			Medium	Tunbridge	2,9	1,7,8,9	
	Moosehead Lake	Moose Bay Shore	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO
			Low	Monson	1,2,9,11	1,3,4,6,8,9	

TABLE 2

SUMMARY OF FINDINGS

Plum Creek Land Company Soils Investigation
Soils Mapping and Evaluation
Moosehead Lake Region, Maine

MAP	AREA	LOCATION	SOIL POTENTIAL RATING [a]	DOMINANT SOIL TYPE [b]	SOIL LIMITATIONS [c]	CORRECTIVE MEASURES [d]	HYDRIC SOILS [e]
		Moose Bay Village	Low	Telos	2,3,4,7,9,10	1,2,3,5,6,7,8,9	
			Medium	Chesuncook	2,9	1,8,9	
			Medium	Elliottsville	1,2,9	1,4,8,9	
			Low	Monson	1,2,9,11	1,3,4,6,8,9	
			Very Low	Monarda	Not Suitable	Not Suitable	PSS/PFO

Notes:
[a] Soil Potential Ratings from "Soil Potential Ratings for Low Density Development in the Unorganized Area of Maine," Natural Resource Conservation Service, (USDA-NRCS, 2004).
[b] Dominant soil types as determined by on-site investigations and/or USDA-NRCS published soil maps.
[c] Soil Limitations from Table 1 and site investigations.
[d] Corrective measures from Table 1.
[e] Observed during on site investigations by SWC staff Wetland and Soil Scientists.

Notes:
*Development potential based on NRCS potential ratings for low density development.

[a] Major Soil Limitations:

1 Shallow Depth to Bedrock
2 Steep Slopes
3 Wetness
4 Frost Action
5 Flooding
6 Excess Organics
7 Restrictive Layer
8 Excessive Surface Stones
9 Susceptibility to Accelerated Erosion
10 Low Strength
11 Droughtiness
12 Poor Septic System Performance
13 Possible Permitting Considerations Due to Hydric Soils

[b] Possible Corrective Measures:

1 Additions of Granular Fill
2 Ditching, Culverts, Riprap, Filter Fabric or Building Roads Aboveground
3 Appropriate Erosion Control Plan and Measures
4 Removal of Ledge
5 Footing and Under Slab Drains, Sump Pump, Waterproofing, and/or Larger Footings
6 Proper Soil Preparing and Watering During Growing Season
7 Minimize Soil Disturbance
8 Proper Design and Layout of Site Improvements Such as Driveways, Buildings, Trails, and Accessory Structures
9 Avoid Steep Areas
10 Installation of Septic System Pretreatment Units, Loam Liners, etc.

BASELINE DEVELOPMENT SCENARIO FOR THE PLUM CREEK MOOSEHEAD PROJECT LANDS

Discussion Paper No. 1

Open Space Institute
Industrial Economics, Inc.

DRAFT -- 15 March 2006

EXECUTIVE SUMMARY

Plum Creek's Moosehead Lake Region Resource Plan is the largest development proposal ever considered by the Land Use Regulation Commission (LURC) in Maine's unorganized territories. The April 2005 proposal (which is now being revised by the company) covers 426,000 acres and includes the proposed subdivision and development of 975 residential lots. Plum Creek is seeking approval of the project from LURC not as part of LURC's traditional zoning and subdivision process but rather as a *lake concept plan*. This paper estimates the amount of potential development on Plum Creek's Moosehead Lake project lands under the various rezoning and subdivision options currently available to landowners in the Maine unorganized territories. The analysis suggests that, applying a mix of these approaches instead of a concept plan over the next 30 years and *assuming no major changes in land use regulations*, Plum Creek would still have the ability to develop between 447 and 800 lots on their Moosehead lands. These totals are fewer than have been initially proposed by Plum Creek in their lake concept plan, but would also require less permanent conservation. The assumption of no major changes in land use regulations is an important qualifier to these estimates. Future changes to existing zoning policies (*e.g.*, prospective zoning for the Moosehead region, legislative changes to the two-in-five provision) are certainly possible and could have substantial impact on Plum Creek's development opportunities on their Moosehead lands.

These are draft discussion papers and are being revised as we receive input on their content. We encourage you to provide us with comments and suggestions on the papers and to indicate your interest in receiving updates by emailing Peter Howell at phowell@osiny.org. We will post revised versions on this website in April.

INTRODUCTION

The Open Space Institute (OSI), in collaboration with Margaret Chase Smith Center at the University of Maine and Industrial Economics Inc., has embarked on a research initiative analyzing Plum Creek Timber Company's Moosehead Plan and potential alternatives to the company's proposal. This discussion paper, the first in the OSI series addressing Plum Creek's proposal, examines the development opportunities potentially available to Plum Creek through traditional zoning and subdivision practices. The results of this work serve as a starting point for the additional analysis of the financial impacts to Plum Creek of proposed and alternative development approaches and the value of the company's conservation commitments. These will be outlined in two subsequent working papers.

As detailed in this paper, there are many assumptions and uncertainties involved in projecting future development patterns in Maine's unorganized territories. It is anticipated that the findings and conclusions of this discussion paper will evolve as more information becomes available and these issues are discussed further. This paper only considers the residential development component of the Plum Creek Moosehead proposal and does not look at other development proposals included in the plan such as resorts, campgrounds, and sporting camps.

Plum Creek's Moosehead Lake Region Resource Plan is the largest development proposal ever considered by the Land Use Regulation Commission (LURC) in Maine's unorganized territories. The April 2005 proposal (which is now being revised by the company) covers 426,000 acres and includes the subdivision and development of 975 residential lots, two resorts, as well as sporting camps, campgrounds, and affordable housing and mill sites. Plum Creek has also proposed a variety of conservation measures, including conservation easements on undeveloped shoreline, protected trail corridors, and 30-year no-development provisions on a large expanse of forestland.

Plum Creek is seeking approval of the project from LURC not as part of LURC's traditional zoning and subdivision process but rather as a *lake concept plan*. LURC established the lake concept plan "as a flexible alternative to traditional shoreland regulation, designed to accomplish both public and private objectives. Lake concept plans are landowner-created, long-range plans for the development and conservation of a large block of shoreland on a lake or group of lakes" (LURC Comprehensive Land Use Plan, 1997). Evolution of lake concept plans has resulted in their use not only on shorelands but on backlands as well.

A key criterion for approval of a lake concept plan is a determination by the Commission "that the plan strikes a reasonable and publicly beneficial balance between development and conservation of lake resources, and that, taken as a whole, the plan is at least as protective of the natural environment as the development, management, and protection subdistricts which it affects."

The sheer size and scope of the Plum Creek proposal has generated widespread public interest and significant concerns from a range of organizations and individuals. In considering such a large-scale proposal, it is reasonable to ask what type and amount of development Plum Creek might be able to do on their lands absent a lake concept plan. This issue is of significance not only to the LURC Commissioners who will ultimately decide whether Plum Creek's proposal represents a favorable balance between development and conservation, but also to members of the general public trying to weigh the pros and cons of the project. Regardless of how it may be defined in the media, the issue before LURC and the public is not necessarily one of development versus no development. In all likelihood, if Plum Creek's lake concept plan proposal is turned down or withdrawn, we would expect the company to search out other regulatory avenues to develop portions of their Moosehead area land base.

Trying to determine a "baseline development scenario" (i.e., the term we apply to development that would likely be permitted by LURC without a lake concept plan) is also critical to the financial analysis of alternatives being conducted by the Open Space Institute. As will be discussed in greater detail in OSI Discussion Paper No. 2, we do not expect that Plum Creek will give serious consideration to alternatives that yield a financial return significantly less than what is likely under more traditional development approaches. Consequently, the financial returns under the scenarios discussed in this paper provide an important reference point for any alternatives analysis.

More generally, OSI believes that objective analysis to determine what a baseline development scenario might look like can help provide the appropriate context for consideration of the Plum Creek proposal and alternatives that may emerge. **Nonetheless, we are also very aware that projecting future development patterns and trends across a land ownership in the LURC jurisdiction is an inexact science that relies on numerous assumptions and estimates.** As such, the scenarios discussed below should be viewed as general indicators of development levels rather than firm projections.

DEVELOPMENT OPPORTUNITIES NOT REQUIRING LURC APPROVAL

Two-in-Five Land Divisions

Under Maine Law, landowners in the unorganized territories are permitted to divide their land to a limited extent without first having to obtain subdivision approval from LURC, which can be a difficult and costly process. The so-called "two-in-five" provision defines a subdivision as the creation of three or more lots in any five-year period. This allows a landowner to create two parcels of land in a five-year period without triggering a subdivision, thus the label of "two-in-five." Traditionally, large landowners have used the two-in-five exemption to occasionally split off a lot here and there across their ownership to create a camp lot or sell a non-strategic parcel.

LURC considers a parcel of land to include all contiguous ownership within a township. Depending on the configuration of the landownership within a township (divisions created by public roads, railroads, great ponds, *etc*.), the landowner may have several parcels within a single township. A landowner may create one new lot in a given five year period on each defined parcel. Under certain circumstances the creation of a second lot may be permitted.[1]

When viewed purely as a mathematical exercise, the two-in-five provision can provide the opportunity for large landowners like Plum Creek to create a significant number of lots over time. For example, if a landowner has three distinct parcels within a township, he or she could potentially create at least one lot per parcel every five years, which over 30 years (the length of Plum Creek's development proposal) would allow for at least 21 lots (3 lots every five years over thirty years and one day) within that township. Large landowners like Plum Creek typically own land in dozens of townships creating the opportunity for substantial numbers of lots across the landscape.

At the request of the Legislature, LURC is currently researching the extent of two-in-five land divisions within the unorganized territories over the past two decades. The final results are not yet available. The preliminary data suggest, however, that aggressive use of the two-in-five provision has been localized. It appears that large landowners, such as Plum Creek, have not used the two-in-five exemption to create

[1] LURC regulations allow a lot retained by the landowner for a period of five years and used solely for forestry, agricultural or conservation purposes to be exempt from the two-in-five calculation.

large developments across their ownerships; rather it has been used for occasional lot divisions. The reasons for this include:

- Landowners do not want to fragment their land base in a way that will disrupt their primary business of timber production;
- Many lots that are legally feasible are not well suited for development and/or have little development value;
- The cost of providing infrastructure (roads and utilities) to scattered lots is prohibitive; and
- Excessive use or abuse of the two-in-five provision would likely result in statutory changes that would limit its use (as occurred when the forty-acre lot exemption was abused) and ultimately harm large landowners.

It is important to note that LURC has little regulatory control over lots created by the two-in-five provision. Consequently, such lot creation can result in scattered, haphazard development patterns that may lead to the construction of camps and houses on high-value, remote lakes or in highly scenic areas. Furthermore, it is reasonable to expect that some lots created under the two-in-five provision would be high-priced "kingdom lots" encompassing entire ponds in order to maximize financial return to the landowners. Under two-in-five divisions, while the pace and amount of development is substantially restricted, the location and impact is not. Furthermore, unlike concept plans, a landowner developing under two-in-five is not required to take any specific conservation measures when creating a lot.

Application to Moosehead Plan Area

According to its own analysis, Plum Creek owns approximately 65 separate parcels within the 29 townships included in the concept plan area. In terms of mathematical possibilities, this would allow the creation of more than 450 lots over a 30-year timeframe. History suggests a more modest use of the two-in-five exemption over large ownerships, however, for the reasons cited above. For the purposes of framing a reasonable baseline scenario, we estimate that Plum Creek could be expected to create between 20 and 40 percent of the hypothetical maximum two-in-five build-out, with lot creation spaced evenly over the 30-year period (and a clear possibility of more lot creation in subsequent years). We would estimate that the majority (75 percent) of the two-in-five lots would be shorefront lots to maximize value. Applying these judgments suggests that Plum Creek would create between 90 and 180 lots over the next 30 years using a two-in-five approach. Since two-in-five lots require no LURC approval, we assume that in the baseline Plum Creek does not create dedicated conservation land as part of this strategy.

DEVELOPMENT OPPORTUNITIES REQUIRING LURC APPROVAL

Adjacent Subdivisions

Within the LURC jurisdiction, subdivisions are only permitted in Development Subdistricts with the exception of Level 2 Subdivisions described below. Generally speaking, LURC has not done prospective zoning for development in the unorganized territories except for the Rangeley Lakes region. Consequently, to seek a subdivision permit for a residential development, landowners must typically first seek approval to rezone land from a Management or Protection Subdistrict to a Development Subdistrict. LURC has numerous criteria that a rezoning petition must meet. The criterion that most significantly

limits the location and size of a subdivision is the so-called "adjacency" principle, which generally only allows rezoning for development within one mile (by road) from existing compatible development (usually an existing Development Subdistrict). The adjacency rule greatly limits the potential location of new subdivisions to a small portion of the jurisdiction. Furthermore, the "existing compatible development" component of the adjacency rule typically limits the size of a subdivision to that which is compatible with nearby development and may limit certain features such as access (water versus road), utilities, and character of development (large year-round homes versus small seasonal camps). This suggests, for example, that if there is an existing development composed of a dozen seasonal camps, LURC is unlikely to approve a proposed 40-lot subdivision nearby.

Application to Moosehead Plan Area

According to a LURC staff analysis completed in 2005 (Moosehead Region Lake Concept Plan – LURC Staff Analysis; January 28, 2005), Plum Creek's Moosehead region ownership includes lands "adjacent" to existing development on or near four lakes: Moosehead Lake (multiple locations); Brassua Lake (one location), Prong Pond (one location) and Upper Wilson Pond (one location). LURC also raised the possibility of adjacency being met on Penobscot Pond. LURC has since refined its analysis and identified several situations where adjacent subdivisions would likely be seriously restricted in order to meet the requirement for "existing compatible development." For example, the existing development on Moosehead Lake in Big W Township consists of seasonal camps that have water access only. Consequently, in that area it is likely to prove challenging for a landowner to use the adjacency criteria to create a new subdivision of large homes with road access and utilities.

Plum Creek's 2005 lake concept plan proposal includes proposed development in numerous locations that do not meet LURC's adjacency criteria. In addition, the type of development proposed by Plum Creek in certain adjacent locations may not meet LURC's requirement that such development be compatible with existing development.

One can broadly estimate the additional development that might be reasonably permitted by examining the amount of existing development on these lakes (both on Plum Creek lands and other lands) and LURC's overall density limits for the water body (1 residential unit per 400' of shoreline or 1 unit per 10 acres surface water area, whichever is less). Using this approach, we roughly estimate that approximately 90 to 136 shorefront lots and 62 to 94 back lots could be developed over the plan period through creation of adjacent subdivisions. No adjacent subdivision lots were attributed to Brassua Lake. Instead, the potential development of Brassua Lake is considered under the Management Class 3 Lake analysis below.

While conservation is not specifically required for a LURC rezoning or subdivision permit, landowners often incorporate conservation lands in their proposals to help facilitate a favorable response to their development applications. Conservation proposals associated with rezoning petitions and subdivision applications typically protect valued resources in close proximity to the proposed development and tend to be less expansive than the scope of conservation measures generally seen as part of a successful lake concept plan. While recognizing this as a real possibility, absent better information we have not attempted to quantify a specific amount of conservation land to be included with the subdivisions in the baseline.

Development on Management Class 3 Lakes

As part of its Lake Management Program, LURC identified a limited number of the lakes throughout the jurisdiction as "Potentially Suitable for Development." These so-called Management Class 3 lakes are considered by LURC as those that could be suitable for further development based upon an examination of water quality, access, conflicting uses, shoreland availability, water level fluctuation, location, and

regional considerations. In its comprehensive plan, LURC states that it "supports additional responsible development around Class 3 lakes, yet will take care to ensure that their significant resource values are conserved." Of particular importance, LURC will waive the adjacency criterion for development proposals on these lakes provided that it can be demonstrated that the lake has no existing or potential water quality problems and that soils are suitable for development. The waiver is strictly limited to shoreland lots and does not include backland acreage.

Application to Moosehead Plan Area

Plum Creek owns substantial shorefront acreage on three of the Class 3 lakes in the Moosehead Region: Brassua Lake (38 miles of shore frontage), Long Pond (13 miles of shore frontage) and Indian Pond (5 miles of shore frontage). The Comprehensive Land Use Plan does not offer clear guidance as to what level of development might be permitted in cases such as Plum Creek's where there is expansive ownership on Class 3 lakes, and there are few precedents on which to draw. The maximum build-out allowed by LURC on Plum Creek lands located on the three Management Class 3 lakes is 723 units. Based on our understanding of the very limited guidance and precedent from LURC addressing development on these lakes, we judge that LURC might permit between 20 percent and 40 percent of this potential build-out spaced over a 30-year period, or between approximately 145 and 290 shorefront lots. We also anticipate that LURC would require meaningful conservation measures to protect important resources associated with the proposed development, although we have not tried to estimate the extent of such conservation commitments.

Level 2 Subdivisions

Level 2 Subdivision is a very new LURC development option that allows small subdivisions in certain designated locations to occur without a zoning change. Level II subdivisions are limited to a maximum of 5 lots, or up to 15 lots if designed as a cluster development. The total size of a Level 2 subdivision is limited to 20 acres (30 acres if a cluster development) and lakeshore frontage is not allowed. Level 2 subdivisions are only permitted in certain townships and must be within 1000 feet of a public road and within one mile of an existing compatible development. Because this provision is so new, there is no experience or precedent to determine how often LURC will allow a landowner to seek Level 2 subdivision permits in an area.

Application to Moosehead Plan Area

Level 2 subdivisions are permitted in five of the 29 townships included in Plum Creek's plan. Plum Creek owns land that appears to meet the requirements for Level 2 subdivision development in four of these townships. LURC regulations permit a landowner to develop a Level 2 subdivision every five years. It is not known whether those areas on Plum Creek's ownership that are potentially eligible for Level 2 subdivisions include suitable and attractive development sites. Assuming that two to three Level 2 subdivisions per eligible area were developed over a 30-year period, it is estimated that between 60 and 100 back lots could be created over a 30-year period . If a Level 2 subdivision is proposed with up to five lots, no conservation is required. If between 6 and 15 lots are proposed, it must be designed as a cluster subdivision, which requires permanent protection of at least 50 percent of the developable land and shoreline.

HISTORICAL DEVELOPMENT TRENDS IN THE REGION AND IMPLICATIONS FOR FUTURE DEVELOPMENT

As described above, under existing regulations Plum Creek has substantial opportunities for development in the Moosehead region even absent approval of a lake concept plan. In most cases, however, these are largely hypothetical rather than assured opportunities, subject to a wide range of site factors and future permitting decisions. Another way to get a feel for the amount of development that might reasonably be expected to occur throughout Plum Creek's ownership absent a 30-year lake concept plan is to look at development in the region over the past 30 years.

Plum Creek provides the starting point for such an analysis in its LURC application. Focusing on an area encompassing 59 townships (29 townships that encompass the Plum Creek lands included in the proposed plan and an additional 30 townships beyond the boundaries of the plan), Plum Creek tabulated the number of new residences over the past 30 years and number of new lots created over the past 20 years. The company rationalized use of the larger area because Plum Creek's ownership is so dominant in the project area townships and the company (and the preceding landowners) purposely chose not to actively subdivide and develop these lands. The findings were as follows:

- 1,125 new residences were built over the past 30 years; and
- 1,553 new lots were created over the past 20 years.

In evaluating these numbers, several additional factors need to be considered. An estimated half of the lots that were created and a third of the residences constructed were the result of certain landowners (not Plum Creek or its predecessors) using the so-called "40-acre loophole" to avoid LURC oversight. This exemption in the state's subdivision law has been closed by the Maine Legislature as a result of the egregious abuse that is reflected in these numbers. Dropping the 40-acre lots over which LURC had little control, the figures indicate that approximately 750 new residences have been built over the last 30 years across an area encompassing about 1.4 million acres. An estimated 775 lots were created over this same area over the past twenty years (there is considerable overlap between these and the 750 residences constructed over the past 30 years). Plum Creek's ownership within the Moosehead Plan area encompasses about one-third of the land considered by this analysis. Applying this proportion, one could attribute 250 new residences over the past 30 years to a land base the size of Plum Creek's and 258 lots over the past 20 years. This translates into a rate of 8 to 9 new residences per year and 13 lots per year. Projecting this rate of subdivision and development on the Plum Creek lands out over the next thirty would result in a total of about 250 residences and 390 lots.

While the historical perspective provides some insights into rates of subdivision and development in the region, it should not be used as a strict guide to the future. Factors such as the major shift in forestland ownership and increased market demand for second-home properties will inevitably result in the evolution of new trends. That said, the historical rates of development provide an additional perspective from which to view future development on the Plum Creek lands.

OTHER FACTORS POTENTIALLY AFFECTING PLUM CREEK'S FUTURE DEVELOPMENT OPPORTUNITIES

Relying solely on an analysis of existing LURC policies provides a useful but necessarily imperfect vision of future residential development opportunities available to Plum Creek absent a lake concept plan. Public policy surrounding North Woods issues is continually evolving and there are several ongoing or

planned policy initiatives that could substantially alter the landscape for future development in the Moosehead Lake region.

New Comprehensive Land Use Plan

LURC is in the process of a 10-year update of its Comprehensive Land Use Plan (CLUP), which provides the foundation for future zoning and permitting actions. Recognizing changes to land ownership and increasing development pressures, the Commission is exploring new strategies for guiding and managing development. In fact, it is quite likely that the public interest generated by Plum Creek's Moosehead proposal will have an impact on revisions to the CLUP. It is anticipated that LURC will likely want to expand its capacity to guide and manage growth. At this point in time, however, it is not clear how this may impact the future development potential of Plum Creek's Moosehead ownership.

Moosehead Region Plan – Prospective Zoning

Even before Plum Creek developed its lake concept plan proposal, LURC had plans to develop a prospective zoning plan for the Moosehead Lake region based on the model first implemented in the Rangeley Lakes region. Such a plan would prospectively designate development subdistricts and development standards, while making future zone changes very difficult. The 1997 CLUP update included a Moosehead Plan in its "to do list." Since Plum Creek unveiled its Moosehead proposal, there has been a growing insistence from various interest groups and individuals for LURC to develop a Moosehead plan. In fact, there was a petition calling for a moratorium on development proposals until such a plan is put in place. While the Commission denied the petition, there does appear to be strong momentum for LURC to embark on a plan in the near future. Such a plan would provide landowners with certainty about where development would and would not be permitted. Whether and how such a plan might affect the Plum Creek's Moosehead development proposal is unclear.

Legislative Changes

There is always a possibility that the Maine Legislature will take actions that substantially alter LURC's ability to control development. The most important recent example of this was the passage of laws eliminating (for the most part) the 40-acre lot exemption, which was being widely abused by a number of land speculators and developers. As mentioned above, the Legislature has already directed LURC to examine the use of the two-in-five provision and report its findings back to the Legislature for possible action. If landowners aggressively take advantage of the "two-in-five" exemption or some other strategy to bypass LURC's regulatory oversight it is likely that the Legislature will respond. While it is impossible to predict whether and how the Legislature might act, it is fair to say that the trend over the years has been to take actions that enhance rather than diminish LURC's ability to guide development.

Public Response to Plum Creek's Proposal

Plum Creek's Moosehead proposal has captured the public's attention more than any other Maine Woods issue in recent years. Regardless of the outcome of the project, it is likely that the ongoing public debate will have a significant impact on future development projects in the unorganized territories, particularly in the Moosehead region. We have already seen evidence of this in the level of attention that has been focused on the Burnt Jacket development proposal on Moosehead Lake. There is no doubt that any future Plum Creek development proposals will undergo a higher level of public scrutiny than they would have previous to the submission of the company's Moosehead proposal.

CONCLUSIONS

Plum Creek Timber Company elected to propose a lake concept plan to the Land Use Regulation Commission that would provide a comprehensive development and conservation plan for their land holdings in the Moosehead region. This discussion paper highlights the fact that Plum Creek could seek to develop their Moosehead area lands using one or more other land division pathways permitted under LURC regulations. The various development strategies described above are not mutually exclusive—several or all of the strategies could conceivably be pursued at once. Combining the various estimates presented above into such a multi-faceted approach suggests that under existing land use policies, and absent an approved concept plan, Plum Creek would still have the ability to achieve a significant level of development on their Moosehead lands. Table 1 presents a comparative summary of the estimated opportunities.

Table 1
Estimated Plum Creek Development Through
Existing Zoning and Subdivision Processes

Lot Type	Plum Creek's April 2005 Proposal	Combined Opportunities Without Concept Plan
Shorefront	575 lots	303 - 561 lots
Back Lots	400 lots	144 – 239 lots
TOTAL	975 lots	447 – 800 lots

Others, particularly those with a specific agenda to advance, could undoubtedly come up with build-out scenarios that would diverge significantly from that presented in this paper. At one end of the spectrum, an analysis determining the hypothetical number of lots that could be created under existing laws and regulations would likely end up with several thousand lots. Alternatively, one could argue that while LURC regulations do permit large landowners to pursue these various development options across their holdings, there is no recent example of a large landowner aggressively pursuing development of their land on several fronts. If the pace of development were to far exceed historic norms, the result could be the type of public resistance that emerged in response to Plum Creek's initial proposal, which could in turn compel LURC to develop a restrictive Moosehead regional plan or take other actions that will restrict development to historic levels or even less.

Nevertheless, the totals cited above clearly suggest that Plum Creek could potentially develop a substantial number of residential lots with less permanent conservation absent a lake concept plan. There is, however, a high level of uncertainty as to the amount and location of development that Plum Creek may be able to achieve through these other options -- uncertainty which is generally not welcome when planning a company's financial future. Moreover, the alternatives to a lake concept plan generally require that development occur incrementally over an extended period of time, which lowers the net present value of that development to the company and lessens their ability to take advantage of a hot real estate market, as will be discussed in OSI's second discussion paper.

From a conservation perspective, it is clear that the two-in-five development option that Plum Creek could pursue would likely result in a scattered piecemeal pattern of development, some of which could occur with minimal LURC oversight in sensitive locations such as undeveloped ponds. The other development options are location-focused and limit the spread of development to outlying areas. In fact,

it appears that some of the development included in Plum Creek's original proposal would not be allowed under traditional zoning and subdivision policies. The lake concept plan requires that landowners provide a balance of development and permanent conservation. Other LURC development options do not require as clear of mandate for permanent conservation set-asides.

We hope that this discussion paper provides readers with a better context for evaluating Plum Creek's proposal and understanding the costs, benefits and risks associated with the company's plan and other alternatives that may emerge in the coming months.

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Development Baseline Evaluation Prepared by LURC Staff for Plum Creek's Proposed Concept Plan in Moosehead Lake Area, February 18, 2005

TOWNSHIP	LAKE/POND	AREA	MC	ADJ?	TOTAL PC SHORE FRONT	TOTAL LAKE SHORE FRONT	% PC	1/400 FT	1/10 AC	PC CAMPS	EXISTING CAMPS[1]	BO LAKE	LAKE SUBDIV
BRASSUA - LONG POND - BIG W AREA													
Big W Twp.	Moosehead Lake	74890	7	yes	33,000	1,295,661	3%	83	191		47	83	83
Brassua	Brassua Lake	8979	3		200,400	335,173	60%	501	537	2	1	499	499
Brassua	Fletcher Pond East	12	7	no	8,800	8,800	100%	22	1		0	1	0
Brassua	Fletcher Pond West	20	7	no	8,000	8,000	100%	20	2		0	2	0
Brassua	Leith Pond	18	7	no	7,000	7,000	100%	18	2		0	2	0
Long Pond	Fogg Pond	54	7	no	9,700	9,700	100%	24	5		0	5	0
Long Pond	Long Pond	3053	3		70,000	115,759	60%	175	185		49	175	175
Rockwood Strip West	Demo Pond	192	7	no	11,200	11,200	100%	28	19		1	19	0
Sandbar Tract	Moosehead Lake	74890	7	yes	500	1,295,661	0%	1	3		24	1	1
Sandwich Academy	Little Otter Pond	9	7	no	2,800	2,800	100%	7	1		0	1	0
Sandwich Academy	Otter Pond	12	7	no	3,800	3,800	100%	10	1		0	1	0
Sandwich Academy	Roderique Pond	44	7	no	7,400	7,400	100%	19	4		0	4	0
Soldiertown	Center Pond	51	7	no	8,300	8,300	100%	21	5		2	5	0
Taunton and Raynham	Moosehead Lake	74890	7	yes	4,200	1,295,661	0%	11	24			11	11
Thorndike	Fish Pond	211	7	no	15,500	15,500	100%	39	21	1	1	20	0
Thorndike	Lost Pond	10	7	no	2,700	2,700	100%	7	1		0	1	0
Thorndike	Luther Pond	154	7	no	13,700	13,700	100%	34	15	1	1	14	0
Thorndike	Mud Pond	50	7	no	8,750	8,750	100%	22	5		0	5	0
Thorndike	Muskrat Pond	100	7	no	10,000	10,000	100%	25	10		0	10	0
West Middlesex	Tomhegan Pond	356	7	no	14,500	14,500	100%	36	36		0	36	0
Sandwich Academy	Moose River			no	44,600								
TOTALS					**484,850**					**4**	**126**	**895**	**769**
KENNEBEC WEST AREA													
Big Moose	Burnham Pond	426	7	no	20,500	20,500	100%	51	43		0	43	0
Big Moose	Moosehead	74890	7	yes	8,000	1,295,661	1%	20	46		16	20	20
Chase Stream	10000 Acre Pond	37	7	no	5,810	5,810	100%	15	4		0	4	0
Chase Stream	Chase Stream Pond	75	7	no	3,900	3,900	100%	10	8	1	1	7	0
Chase Stream	Chub Pond	7	7	no	2,400	2,400	100%	6	1		0	1	0
Chase Stream	Ellis Pond	85	7	no	11,100	11,100	100%	28	9	1	1	8	0
Chase Stream	Flat Iron Pond	284	7	no	2,400	2,400	100%	6	28		0	6	0
Chase Stream	Horseshoe	27	7	no	5,700	5,700	100%	14	3	1	1	2	0
Chase Stream	Island Pond	24	7	no	5,700	5,700	100%	14	2		0	2	0
Chase Stream	Knights Pond	128	7	no	2,000	2,000	100%	5	13		0	5	0
Chase Stream	Long Pond	17	7	no	5,800	5,800	100%	15	2		0	2	0
Chase Stream	Mud Pond	17	7	no	3,700	3,700	100%	9	2		0	9	0
Chase Stream	Round Pond	30	7	no	4,850	4,850	100%	12	3		0	3	0

[1] These figures reflect the information Plum Creek originally provided to LURC staff, and do not necessarily reflect the latest information.

TOWNSHIP	LAKE/POND	AREA	MC	ADJ?	TOTAL PC SHORE FRONT	TOTAL LAKE SHORE FRONT	% PC	1/400 FT	1/10 AC	PC CAMPS	EXISTING CAMPS[1]	BO LAKE	LAKE SUBDIV
Chase Stream	Squirtgun Flowage	30	7	no	7,100	7,100	100%	18	3		0	3	0
Chase Stream	Bates Pond	3	7	no	1,300	1,300	100%	3	0		0	1	0
Indian Stream	Indian Pond	3746	3		27,300	207,300	13%	68	49		0	49	49
Misery	Chase Str Pond	31	6		4,140	4,140	100%				0	0	0
Misery	Cold Stream Pond	205	7	no	26,300	26,300	100%	66	21		0	21	0
Misery	Little Chase Stream Pond	17	7	no	4,840	4,800	101%	12	2		0	2	0
Misery	Misery Pond	36	7	no	11,500	11,500	100%	29	4		0	4	0
Misery	Unnamed Pond	10	7	no	1,300	1,300	100%	3	1		0	1	0
Misery	Upper Misery Pond	18	7	no	3,830	3,830	100%	10	2		0	2	0
Sapling	Moosehead Lake	74890	7	yes	16,900	1,295,661	1%	42	98		21	42	42
Sapling	Unnamed Pond		7	no	6,300	6,300	100%	16	0		0	0	0
Squaretown	Little Indian Pond	25	7	no	5,200	5,200	100%	13	3		0	3	0
Squaretown	Knights Pond	128	7	no	5,200	7,600	68%	13	9		1	9	0
Squaretown	Unnamed Pond	5		no	1,770	1,770	100%	4	1			1	0
Squaretown	Scribner Bog	15	7	no	6,300	6,300	100%	16	2			2	0
TOTALS					**211,140**					**3**	**41**	**252**	**111**
MOOSEHEAD EAST AREA													
Beaver Cove	Prong Pond	427	7	yes	30,850	43,528	71%	77	30	3	3	27	27
Beaver Cove	Mud Pond	249	7	no	15,600	15,600	100%	39	25	1	1	24	0
Beaver Cove	Mountain Pond	56	6		6,600	6,600	100%				0	0	0
Elliotsville	Secret Pond	12	6		3,700	3,700	100%				0	0	0
Elliotsville	Long Pond	643	7	no	2,500	49,873	5%	6	3	0	5	3	0
Frenchtown	Bluff Pond	10	6		2,500	2,500	100%				0	0	0
Lily Bay	Moosehead	74890	7	yes	7,980	1,295,661	1%	20	46		128	1	20
Spencer Bay	Jewett Pond	13	7	no	3,100	3,100	100%	8	1		0	1	0
Spencer Bay	Lucky Pond	93	7	no	29,600	29,600	100%	74	9		0	9	0
Spencer Bay	Spencer Pond	980	7	no	21,120	21,120	100%	53	98		0	53	0
Spencer Bay	Unnamed Pond	20	7	no	4,380	4,380	100%	11	2		0	2	0
T1 R13	Lazy Tom Bog	13	7	no	3,400	3,400	100%	9	1		0	1	0
West Bowdoin	Brown Pond	18	7	no	4,000	4,000	100%	10	2		0	2	0
West Bowdoin	Cranberry Pond	7	6		2,600	2,600	100%				0	0	0
West Bowdoin	Fogg Pond	23	6		5,600	5,600	100%				0	0	0
West Bowdoin	Hedgehog Pond	40	7	no	7,400	7,400	100%	19	4		0	4	0
West Bowdoin	Horseshoe Pond	160	7	no	300	17,800	2%	1	0		3	0	0
West Bowdoin	Indian Pond	70	7	no	10,400	10,400	100%	26	7		0	7	0
West Bowdoin	Mountain Pond	56	6		2,400	2,400	100%				0	0	0
West Bowdoin	Notch Pond	10	6		2,000	2,000	100%				0	0	0
West Bowdoin	Rum Pond	245	7	no	7,300	7,300	100%	18	25		0	18	0
West Bowdoin	Upper Wilson Pond	940	4	yes	41,700	44,700	93%	104	88	4	15	83	83
TOTALS					**215,030**					8	150	232	**130**
THE ROACHES													
Shawtown	1st West Branch Pond	119	7	no	16,300	16,300	100%	41	12		1	11	0
Shawtown	2nd West Branch Pond	214	7	no	13,000	23,700	55%	33	12	1	0	12	0

TOWNSHIP	LAKE/POND	AREA	MC	ADJ?	TOTAL PC SHORE FRONT	TOTAL LAKE SHORE FRONT	% PC	1/400 FT	1/10 AC	PC CAMPS	EXISTING CAMPS[1]	BO LAKE	LAKE SUBDIV
Shawtown	3rd Roach Pond	570	7	no	46,400	47,000	99%	116	56		3	53	0
Shawtown	4th Roach Pond	266	1,6		22,300	22,300	100%				0	0	0
Shawtown	4th West Branch Pond	3	7	no	1,600	1,600	100%	4	0		0	4	0
Shawtown	Beaver Pond	27	6		5,200	5,200	100%				0	0	0
Shawtown	Long Bog	15	7	no	4,665	4,665	100%	12	2		0	2	0
Shawtown	2nd Roach Pond	970	7	no	61,600	61,600	100%	154	97		0	97	0
Shawtown	Trout Pond	145	7	no	14,900	14,900	100%	37	15		0	15	0
T1 R12	Penobscot Pond	279	7	no?	11,500	12,600	91%	29	25	7	7	18	0
TOTALS					**197,465**					**8**	**11**	**212**	**0**
PLAN TOTALS					**1,108,485**					**23**	**328**	1591*	1010**

* Buildout by lake (BO Lake): The total potential buildout of 1591 is based solely on application of ONLY the 1/10 acre and 1/400 foot maximum development guideline of the Commission's Comprehensive Plan. It does NOT consider the many other criteria that must of necessity be factored into determining the appropriate level of development such as adjacency, need, and undue adverse impact.

** Lake Subdivision: Buildout by lake factoring in certain of the adjacency considerations. This demonstrates the reduction in development potential by applying the adjacency criterion where there is a nearby pattern of development. Adjacency is presumed on Mgnt Class 3 lakes. This evaluation does NOT factor in the compatibility of the nearby development nor need and undue adverse impact, which, when applied,would reduce this potential to an unknown extent. See Commission's guidance on "Clarifying the Rezoning Criterion of Demonstrated Need", April 1, 2004.

- This evaluation is most useful on a lake-by-lake basis rather than on an area basis since most of the development guidelines of the Commission's Comprehensive Plan only apply on a lake-by-lake basis. The potential on the larger lakes tends to over-shadow the potential on the smaller lakes.
- This evaluation does not attempt to apply the 2-in-5 development potential. While if applied in an extreme fashion it would greatly increase the development potential of any area, we know of no instance where it has been applied in an extreme fashion and thus do not consider it a realistic potential to introduce into this evaluation.
- Color coding: brown = remote ponds; blue = Management Class 3 lakes