

## 6. TRANSPORTATION

### Overview of State Highways in Raymond

Route 302/35 from the Raymond/Windham town line to the Raymond/Casco town line (3.81 miles) is classified by the MDOT as an arterial. The State is responsible for the maintenance of arterial highways. Both Route 85 from Route 302 to the Casco town line (7.26 miles) and Route 121 (Meadow Road) from Route 302 to the Casco town line (3.84 miles) are classified as minor collectors. On minor collectors, the State and the community share maintenance responsibilities. Capital improvements require a 33% municipal match.

**Traffic Counts.** Given its role as the primary link between Portland and the Lake Region, Route 302 carries the greatest amount of traffic in Raymond (see Table 1). Route 85 also carries a relatively large number of vehicles. Most of the traffic on Route 121 is travelling to and from Casco (and points north). The traffic volumes on all these major roads have been increasing steadily over the years, due to the increased year-round and seasonal development in the Lake Region and to an increase in the number of people commuting to and from the Greater Portland area.

Traffic volumes for numbered State Highways are listed in Table 1 below. The information is based on traffic counts performed by MDOT between 1981 and 2000. The Average Annual Daily Traffic counts are average counts that are generally lower than the actual field counts. During the 19-year period between 1981 and 2000, traffic counts on Route 302 have increased between 69% and 78%, depending upon location, while traffic on Route 85 has increased between 62% and 118%.

**Table 1  
Town of Raymond  
Traffic Counts on Numbered Highways**

| Road      | Location             | AADT<br>1981 | AADT<br>1987 | AADT<br>1995 | AADT<br>1997 | AADT<br>2000 | % Change<br>1981-2000 |
|-----------|----------------------|--------------|--------------|--------------|--------------|--------------|-----------------------|
| Route 302 | at Windham line      | 9,859        | 13,850       |              |              | 17,550       | 78                    |
|           | at 85                | 10,712       | 14,270       | 17,910       | 18,210       | 18,890       | 76                    |
|           | at Casco line        | 6,783        | 9,130        | 11,380       | 12,060       | 11,460       | 69                    |
| Route 85  | off 302              | 2,309        | 2,820        | 3,490        | 3,590        | 3,740        | 62                    |
|           | past Raymond Hill Rd | 1,351        | 1,488        | 2,050        | 2,280        | 2,330        | 72                    |
|           | at Plains Rd         | 907          | 1,280        | 1,660        | 1,960        | 1,980        | 118                   |
| Route 121 | at Casco line        | 275          | 500          | 1,830        | 1,910        |              | -                     |
|           | north of Main Street |              |              | 2,440        | 2,900        |              | -                     |

Source: Maine Department of Transportation

**Road Safety and Accident Summary.** MDOT has identified vehicle accident locations on public roads in Maine (both State and town owned), and has provided a summary of this information to Maine towns. For the period January 1, 1999 through December 31, 2001, there were a total of 253 accidents in Raymond including 102 accidents on Route 302, 56 accidents on Route 85, 21 accidents on Route

121, and 74 on all other roads combined. Based on a review of this data, there are no clear patterns, as illustrated in Table 2 for the Route 302 accidents.

A critical rate factor (CRF) is listed for each accident location. The CFR is a comparison of the actual accident rate to the expected accident rate based on road type, vehicle miles traveled, and statewide average accident ratios. A CRF greater than one indicates an accident rate higher than would be expected at that location based on State data.

**Table 2  
Town of Raymond  
Accident Summary, Route 302, 1999-2001**

| <b>Number of Accidents</b>    |                       |                          |                             |
|-------------------------------|-----------------------|--------------------------|-----------------------------|
| <b>Location</b>               | <b># of Accidents</b> |                          | <b>Critical Rate Factor</b> |
| 302/121 intersection          | 10                    |                          | -                           |
| 302/85 intersection           | 9                     |                          | 1.34                        |
| 302/Hawthorne Rd intersection | 6                     |                          | 1.08                        |
| 302/Deep Cove Rd intersection | 9                     |                          | 1.62                        |
| Other intersection            | 5                     |                          | -                           |
| Total intersection            | 39                    |                          | -                           |
| Non- intersection             | 63                    |                          | -                           |
| <b>Total</b>                  | <b>102</b>            |                          | -                           |
| <b>Type of Accident</b>       |                       |                          |                             |
| <b>Type</b>                   | <b># of Accidents</b> | <b>Type</b>              | <b># of Accidents</b>       |
| Object in road                | 1                     | Ran off road             | 11                          |
| Rear end/sideswipe            | 57                    | Deer                     | 7                           |
| Head on/sideswipe             | 4                     | Moose                    | 3                           |
| Intersection movement         | 15                    | Sled/bike                | 1                           |
| Pedestrian                    | 1                     | Non-collision            | 2                           |
|                               |                       | <b>Total</b>             | <b>102</b>                  |
| <b>Human Factor</b>           |                       |                          |                             |
| <b>Factor</b>                 | <b># of Accidents</b> | <b>Factor</b>            | <b># of Accidents</b>       |
| Failure to yield right-of-way | 10                    | Unsafe backing           | 1                           |
| Illegal, unsafe speed         | 6                     | No proper signal         | 2                           |
| Following too close           | 9                     | Driver inattention       | 31                          |
| Disregard traffic control     | 3                     | Driver inexperience      | 3                           |
| Driving left of center        | 1                     | Pedestrian violation     | 1                           |
| Improper passing              | 8                     | Physical impairment      | 1                           |
| Improper lane change          | 1                     | Vision obscured by light | 2                           |
| Improper stop/start           | 1                     | Other human factor       | 6                           |
| Improper turn                 | 3                     | <b>Total</b>             | <b>89</b>                   |

Source: Maine Department of Transportation

## **Route 302**

**Route 302 Improvement Committee** (Route 302 Development Committee). The Town of Raymond formed the Route 302 Improvement Committee in the 1990's shortly after the creation of the Tax Increment Financing District for the Portland Natural Gas Pipeline. The Committee retained a consultant team headed by Kent Associates to study conditions along the corridor and prepare a plan to increase safety for vehicles, pedestrians and bicyclists, give a positive, visual identity to the commercial strip, and to improve turning movements (access to and from businesses). The study/concept plan was completed in February of 1999. The Route 302 Committee held numerous public meetings and worked closely with businesses to obtain their support for the suggested improvements.

The Town hired the firm of Gorrill - Palmer to prepare detailed engineering plans for improvements identified in the Kent Associates Plan.

**Route 302 Improvements.** In 2003, the Town undertook a number of improvements to this corridor in conjunction with a State overlay of Route 302. The improvements were undertaken in accordance with the above-referenced plan for improving safety, signage, aesthetics, and pedestrian amenities. The Town worked with the State and with businesses to implement the plan.

**Route 302 and You Committee.** The Route 302 and You Committee was formed in 2001 by the Lake Region Development Council. The Committee is an advocacy group that is committed to improving traffic conditions along the Route 302 corridor. The Committee includes representative from Bridgton, Casco, Frye Island, Gray, Harrison, Naples, Raymond and Windham, along with representatives from local businesses. The Route 302 and You Committee has identified five short-term intersection projects to enhance the corridor:

- Raymond: Route 302 and Hawthorne Road - add a left turn lane and an acceleration lane on Route 302, to increase the safety of turning movements.
- Windham: Route 302 and White's Bridge Road – allow for the safer merging of five lanes of traffic into two lanes of traffic, by widening Route 302 and realigning the intersection of Angler's Road and Route 302.
- Naples: Route 302 and Route 11 – improve turn lanes and add a traffic signal. At Route 302 and Route 114, add a turning lane on Route 114.
- Casco: Route 302 and Quaker Ridge Road – improve the sight distances and associated safety relative to the turning movements at the intersection.

The Committee also supports previously planned or programmed projects including:

- Improvements at the intersection of Routes 302, 115 and 35;
- Reconstruction of Route 302, from the Westbrook line to Foster's Corner;
- Naples Village safety improvements;
- Raymond's Route 302 plan;
- Park and ride facilities at Raymond Beach;
- Windham's plan for its commercial center.

Representatives of the Route 302 and You Committee have also met with Turnpike officials to explore the possibility of a high speed, limited access road from the Turnpike to the Lake Region.

**MDOT Route 302 Study.** Partially in response to the work of the Route 302 and You Committee, the Maine Department of Transportation has commissioned a Route 302 corridor study in the Lake Region. The study is focusing on a 27-mile portion of the corridor between the Foster's Corner rotary in Windham and Route 93 in Bridgton. The purpose of the study is to successfully integrate sound land use planning principles within the transportation planning process to better manage growth and traffic flow along the corridor.

### **Access Management**

The Maine Department of Transportation has adopted access management regulations which require that property owners obtain a permit from the Maine Department of Transportation prior to constructing driveways and entrances on the State's arterial and collector highways. The regulations contain standards for:

- Sight distance
- Driveway width
- Corner clearances
- Turnaround area/parking
- Drainage standards
- Intersection angle/radius of edges
- Double frontage lots

There are additional standards for mobility arterials and retrograde arterials. A mobility arterial is a non-compact (not located in an urban compact area) arterial that has a posted speed limit of 40 mph or more and is part of an arterial located between urban compact areas or service centers that carries an annual average daily traffic of at least 5,000 vehicles per day for at least 50% of its length, or is part of a retrograde arterial located between two mobility arterials. A retrograde arterial is a mobility arterial where the access related crash per mile rate exceeds the 1999 state average for arterials of the same posted speed limit. The Town of Raymond will need to be aware of the new rules to avoid unintentionally supporting the creation of lots that cannot be granted an access management permit because they do not meet MDOT's standards.

## Bridges

Based on information obtained from the Maine Department of Transportation, there are six State bridge in Raymond (certain culverts are counted as bridges) as shown in Table 3.

| <b>Bridge</b>             | <b>Location</b>   | <b>Water Body</b>   |
|---------------------------|-------------------|---------------------|
| Bartlett Brook Bridge     | Raymond Hill Road | Bartlett Brook      |
| Fish Hatchery Bridge      | Mill Street       | Fish Hatchery Brook |
| Jordan River Bridge       | Route 302         |                     |
| Tenny's River Bridge      | Route 85          | Tenny's River       |
| Dingley Brook Bridge      | Cape Road         | Dingley Brook       |
| Thomas Pond Outlet Bridge | Route 302         | Thomas Pond Outlet  |

## Local Roads

According to the Public Works Director, there are about 46 miles of public local roads in Raymond. Town roads deemed to be in good condition include those that have been improved or reconstructed since 1998/1999 including Conesca Road, the first section of Cape Road (Raymond Cape Road), and a portion of the North Raymond Road between Poland and the Ganderbrook intersection. Beginning in the early 1990's, the Town appropriated about \$150,000/year for local road improvements. This rate of financial support would allow all public roads to be re-paved about every 40 years (they need to be re-paved about every 10 to 12 years). The Town needs to be spending significantly more per year to improve and adequately maintain its road network. Table 4 contains information on the Town's local public roads. This information was derived from Raymond's E911 list as of January, 2003. Mileages are based on data obtained in part from the Maine Department of Transportation and from an amendment to the plowing contract.

## Public Transportation System

Public transportation is limited in Raymond. The only public transportation available to Raymond residents is the Regional Transportation Program, Inc. (RTP). RTP is a non-profit organization operating out of Portland that provides demand response transportation service, on an advanced reservation basis, throughout Cumberland County. The countywide bus service consists of demand response transportation to the Windham malls, and to Portland and South Portland with main stops in downtown Portland, at the Maine Medical Center in Portland, and at the Maine Mall in South Portland. Other stops are arranged, if possible. Most county bus trips arrive in Portland at 10 A.M. and leave at 2 P.M. RTP's demand response service primarily provides transportation for medical and other trip purposes, and door-to-door service for persons with disabilities to a number of the sheltered workshops in the area.

**Table 4**  
**Town of Raymond**  
**Local Public Roads**

| <b>New Name</b>  | <b>Old Name</b>  | <b>F.L. #</b> | <b>Location</b>  | <b>Mileage</b> |
|------------------|------------------|---------------|--|----------------|
| Canal Rd         | Old Canal Rd     | 162           | From 85 towards Casco, 1st light off 302 after Mobil         | .49            |
| Cape Rd          | Raymond Cape Rd  | MR1           | Off 302 on left before Casco line, via Hawthorne Rd          |                |
| Caton Rd         | -                | 167-B         | From Peterson Rd to Crockett near Frost Harbor               | .18            |
| Chapel St        | Pinecrest Way    | 1             | Off Main St. on right past Meadow Rd                         |                |
| Conesca Rd       | -                | MR7           | Off Raymond Hill Road, opposite F.L. 190                     | 1.53           |
| County Rd        | Old County Rd    | 166           | Off 302 on right by Panther Run Marina next to Key Bank      | .23            |
| Crockett Rd      | Spiller Rd       | 167A          | Off Person Rd 1 <sup>st</sup> rd on right                    | .34            |
| David Plummer Rd | Plummer Rd       | 57            | Off 121 on right before Tower Rd                             | .57            |
| Deep Cove Rd     | Deep Cove Shores | 2             | Off 302 across from west end of Main St                      | 1.55           |
| Dolimount Rd     | Maples Rd        | 99A           | Off Gore Rd on right almost to Gray line                     | .30            |
| Dyer Rd          | -                | 276           | Off North Raymond Rd, just before Pond Rd on right           |                |
| Egypt Rd         | -                | MR9           | Off 85 next to Town garage                                   | 2.35           |
| Elizabeth Ave    | -                | 172           | Off 302 between shopping center and True Value               | .16            |
| Frye Rd          | -                | 282           | Off North Raymond Rd on right before Pond Rd                 | .14            |
| Gay Ave          | -                | 160           | Off Main St between Mill St and Dist 1                       | .1             |
| Giselle Lane     | -                | 53            | Off Meadows Rd on right                                      | .10            |
| Gore Rd          | -                | 99            | Off 85 on left from Dist 2 runs into Gray                    | .68            |
| Harmon Rd        | -                | 169A          | Off Patricia Ave 1 <sup>st</sup> on left                     |                |
| Hawthorne Rd     | -                | MR1           | Off 302 last left before Casco line, goes to Cape Rd         | .41            |
| Ledge Hill Rd    | -                | MR8           | From intersection of Valley, and Spiller Rd to N. Raymond Rd |                |
| Lloyds Lane      | -                | 115A1         | Off Martin Heights   |                |
| Lyn Court        | Pine Drive       | 167F          | From Birch Dr to Gardner Dr                                  |                |
| Mailman Rd       | -                | 274           | Off North Raymond Rd   | .10            |
| Main St          | -                | MR1,5         | Raymond Village  | .57            |
| Martin Heights   | -                | 115           | Off Webbs Mills Rd   | .755           |
| McDermott Rd     | -                | 210-1         | Right off Mountain Rd  |                |
| Mill St          | -                | MR4           | From Main St to Webbs Mills Rd                               | .87            |
| <b>New Name</b>  | <b>Old Name</b>  | <b>F.L. #</b> | <b>Location</b>  | <b>Mileage</b> |

|                      |                 |      |  |      |
|----------------------|-----------------|------|--|------|
| Mountain Rd          | -               | MR7  | Follow Raymond Hill, starts where Spiller Hill bears right   | 2.08 |
| North Raymond Rd     | -               | MR9  | Gray to Poland line  |      |
| Panther Pond Pine Rd | -               | 54   | Off Meadow Rd  |      |
| Patricia Ave         | -               | 169  | Off 302 on left between Portland Glass and Diner             | .13  |
| Peterson Rd          | -               | 167  | Off County Rd to Bayview                                     | .18  |
| Pine Lane            | -               | 172C | Between Elizabeth Ave and Viola behind shopping center       | .10  |
| Pipeline Rd          | -               | 172  | Off Elizabeth Ave into Windham                               |      |
| Plains Rd            | -               | MR2  | Meadow Rd to Webbs Mills Rd                                  |      |
| Pond Rd              | -               | 275  | Off North Raymond Rd   | .53  |
| Presidential View    | Silver Ridge Dr | 99-1 | Off 85 on left coming from Dist 2 after Rockwood Acres       | .22  |
| Raymond Hill Rd      | -               | MR6  | Off Webbs Mills Rd between Dist 2 and Tgown Hall on right    |      |
| Ridge Rd             | -               | 167C | Off Peterson Rd  | .16  |
| Salmon Run           | -               | 162B | Off Canal Rd   | .08  |
| Shaker Woods Rd      | -               | MR8  | Off North Raymond Rd directly across from Ledge Hill Rd      |      |
| Shaw Rd              | -               | 16   | Off Cape Rd on left to end of pavement                       | .13  |
| Spiller Hill Rd      | -               | MR6  | From intersection of Raymond Hill and Mountain bear right    | .14  |
| Tarkiln Rd           | -               | 102  | Off 85 on left, coming from Dist 2 before Gore Rd            | .23  |
| Tassle Top Drive     | -               | 173B | Off 302 across from shopping center                          |      |
| Tenney Hill Rd       |                 | 212  | Off Mountain Rd go straight up hill where Mountain goes left | 1.00 |
| Tower Rd             | -               | 66   | Off Meadow Rd on left after Panther Pond Pines area          |      |
| Valley Rd            | -               |      | Off Raymond Hill Rd on right at top of hill                  | 2.21 |
| Viola Street         | -               | 177  | Off 302 on left after shopping center next to brake shop     | .29  |
| Wawenock Rd          | Camp Wawnock Rd | 38   | Off Cape Rd  |      |
| Westview Drive       | -               | 97   | Off 85 on right after Raymond Woods, before Gore Rd          | .19  |