



From Frontier to **Crossroads**

With good connections and plenty of space,
Alberta is becoming western Canada's
warehousing and distribution hub

BY ERNEST GRANSON



Canoes and rivers, wagons and wheel ruts, steam engines and silver rails. These were the components of Canada's first transportation infrastructure. The breadth and width of the country demanded reliable ways of moving incoming settlers and supplying their needs. Because of the crucial roles they played, those transportation methods loomed large in the lives of early Canadians.

Constantly evolving technology has naturally increased the reliability, speed and capacity of our transportation infrastructure, but its presence is no less crucial to the country. The population has jumped exponentially and so has the demand for goods. Only the distances remain the same.

Alberta, with its rapidly growing population and surging economy, has become both a major consumer and producer of goods, commodities and services. Just as importantly, the province has emerged as a vital entrepot in the national transportation system, acting as a transfer point for other areas of North America.

According to Statistics Canada and Alberta Infrastructure and Transportation, close to \$67 billion worth of goods was exported from Alberta in 2004. Of that total, more than \$24 billion was transported out of the province by truck, rail, air and water. The remaining \$43 million, mostly oil and gas, was shipped by pipeline.

During the same year, Alberta imported \$13.6 billion in goods. Trucking and intermodal systems serve as the primary means of bringing in imported goods. Trucking alone was responsible for 46% of those shipments into Alberta, with rail-intermodal-marine bringing in 27% of imports and air transport 22%.

The growth of trade with Asia largely explains the growth of trucking and rail-intermodal transportation. Huge quantities of Asian imports make their way through the port facilities in the Vancouver area to Alberta for further distribution to not only Canada, but to the ma-

jor distribution hub of Chicago and on to U.S. Midwest markets.

For this reason, Alberta's two largest cities, Edmonton and Calgary, have gradually become the main distribution centres for the various transportation systems in Western Canada, challenging the long-standing hub of Winnipeg, which was oriented more towards trans-Atlantic trade. Calgary in particular has become a heavyweight distribution hub.

Warehouse space to support the supply chain and logistics sector in the city has grown from about 1.5 million square feet to almost 2.5 million square feet over the past five years. It's expected to double by 2008-09.

The importance of warehousing, shipping and receiving is highlighted by its contribution to employment. In 2005 almost 100,000 were employed in this sector in Calgary alone. That's not far behind the total number of workers in the oil and gas sector. Major retailers and distributors such as Wal-Mart Canada Corp., Canadian Freightways Ltd., Canadian Tire Corp. and Consolidated Fastfrate Inc. have located their distribution centres in Calgary.

Paul Derksen, vice-president and a principal of CBRichard Ellis Alberta Ltd. in Calgary and chair of the Calgary chapter of Supply Chain & Logistics Canada (SCL), says Calgary's geographical location is a major factor for the city's rapid evolution into one of North America's major distribution centres. "Calgary's proximity to the West Coast ports has turned it into an inland port," Derksen says. "We're located at the crossroads of the TransCanada Highway and the Canamex (Canadian, American, Mexican) Corridor. So when products arrive here, they can be shipped to other western locations very quickly."

Derksen points out that Edmonton's trans-

portation attributes are similar, only located further away from the TransCanada Highway and from the U.S. border. Even that disadvantage may dissipate once planned upgrades including a new container terminal are completed at the more northerly port of Prince Rupert, B.C., directly connected to Edmonton via the Yellowhead corridor.

The transportation sector is generally broken down into four areas: trucking, rail, air and intermodal, a combination of trucking, rail, air and marine transport, all using containers. Trucking is responsible for bringing in almost half of Alberta's imports. A significant quantity of the freight carried by trucks are imports from the U.S. In 2004, trucking brought in 2.17 million tonnes worth \$4.81 billion. Four-fifths of those goods cleared customs at the border crossing of Coutts-Sweetgrass. The heavy concentration of border crossings at this southern Alberta location has resulted in the construction of a new joint-use customs facility which employs innovative inspection and enforcement techniques.

With the odd exception, such as Highway 63 to Fort McMurray (which is in the process of being twinned), the standards of Alberta's highway transportation system are considered very accommodating to the movement of freight. The province's highways can easily handle loads up to 63,500 kilograms (140,000 lbs.) and lead to all the major western North American markets through continental routes such as the east-west TransCanada Highway and the north-south Canamex Corridor with its U.S. connector routes, the Camino Real Corridor, Interstate 5 and the NAFTA Superhighway.

The targeted completion date for twinning the \$1.4-billion, 1,170-kilometre Alberta por-



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tion of the Canamex Corridor is 2007. Once completed, it will stretch from the B.C. border just northwest of Grande Prairie to the U.S. border at Sweetgrass, Montana. Edmonton and Calgary are both scheduled to complete ring roads in 2007 to facilitate free-flowing traffic around those two major cities.

The trucking industry has an advantage operating its vehicles in Alberta in that the provincial average gasoline tax rate is four cents per litre below the Canadian average while the road diesel tax rate is 4.6 cents below the average provincial rate.

The rail and intermodal transportation system is also an integral element of Alberta's transportation system. Both Canadian Pacific Railway Co. and Canadian National Railway Co. operate major intermodal terminals in Calgary and Edmonton and will be upgrading and/or building new facilities. Those two continental rail lines, along with RailLink Ltd., Canada's largest short-line operator, maintain more than 7,500 km of track throughout the province. Northern Alberta, too, is making larger demands on the rail system.

The emergence of the Asian market as a producer and consumer of goods has led to a greater need for air cargo facilities in Alberta. Here Calgary's international airport has become the unrivalled air cargo facility in the province. In 2004, by value, 65% of Alberta's international air cargo exports were flown out of Calgary, 18% of air cargo left through Edmonton, with the remaining 11% being transported to Vancouver by other means, where it was flown out internationally.

The proportion was much the same for internationally imported cargo with 79%, by value, being received in Calgary and 21% in Edmonton. A major factor in this increase is the completion of the Calgary Airport Authority's five-year cargo plan, developed in 2002, to provide direct access between Calgary and Asia. A result of that was the addition of two carriers, Korean Air Cargo and Asiana Cargo, to the airport's transportation network.

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The authority's 20-year master plan includes a new parallel runway able to accommodate the world's largest airplanes as well as additional cargo and logistics areas, a new air freight "village" and the development of additional industrial trade parks.

Edmonton Airports also found its cargo volumes increasing, especially from all-cargo airlines such as CargoJet, UPS, DHL, FedEx and Menlo Worldwide. These carriers are responsible for flying in much of the oilfield supplies headed to northern destinations such as Fort McMurray. The Edmonton International

and City Centre airports are also instrumental as a base for regional air carriers such as Air Mikisew, Central Mountain Air, Integra, Northwestern Air Lease and Peace Air which service the smaller, northern Alberta communities.

While pipelines do not move supplies with the use of wheels or engines, they represent an essential mode of transportation for the province's most vital products, crude oil and natural gas. Western Canadian crude oil is transported to the various North American markets through three major pipelines: Enbridge, Terasen Express and Terasen Trans Mountain. Between these three primary pipeline systems and other connecting pipelines, Western crude is shipped to its core markets of western Canada, Ontario, the U.S. Midwest and the U.S. Rockies, as well as to extended markets.

The burgeoning production of Western Canadian crude could surpass the current pipeline capacity as early as 2007-08, but pipelines have already been examining the viability of increasing capacity while avoiding costly excess capacity. Enbridge has two pipeline proposals under consideration: the Gateway, which would stretch 1,200 km west from Edmonton to Kitimat, on B.C.'s north coast, and the Southern Access, running to Superior, Wisconsin. Terasen (a division of Kinder Morgan Canada), meanwhile, has an expansion proposal which would see its existing pipeline developed into a dual pipeline system between Edmonton and West Coast ports. TransCanada Pipeline Co. also recently announced a joint venture with ConocoPhillips Co. for the proposed Keystone pipeline project which will convert an existing natural gas pipeline for shipping crude oil. This project will originate at Hardisty, AB, and terminate at Oak Bluff, Man., with an additional 1,700 km of pipe being built to take the oil to its final delivery point at Wood River, Ill.

As the transportation sector stretches to accommodate ever-growing consumer and industrial demands, Derksen expects the next decade will be huge. ■

Knowledge at the Speed of Light

Mention the term "wireless" and it's likely a laptop computer or web-enabled cell phone will come to mind. While those two devices are doubtless popular technology these days, in Alberta, "wireless" is as likely to refer to a transmitter on a remote pipeline, communicating with a computer terminal at a Calgary oil company.

During the past 20 years, Alberta companies have been at the forefront in developing wireless voice and data communications to meet the needs of the oil and gas industry. The Alberta wireless and telecommunications sector has grown to some 300 companies generating \$3.5 billion in revenue and employing almost 16,000 people, according to WeTec Alberta, a non-profit industry group.

The Alberta Department of Innovation and Science goes further by stating that Alberta has become the highest per-capita user of wireless services and export of wireless products in North America, while province's latest economic review reports that Alberta ranks second in household Internet usage.

Those statistics will surely rise even higher since they were compiled prior to the recently completed Alberta Supernet, a joint venture by the government of Alberta, Bell Canada and operator Axia NetMedia. This high-speed, broadband network links almost 4,200 government, health, library and educational facilities in 429 communities right across the province.

Expectations by the province and the private sector are that business opportunities will be greatly enhanced, especially for those living in rural areas.

"Now, if you live in a smaller community and want to run a business from there, or if you are a businessman that wants to access rural Alberta as a market, you have that connectivity to access your markets," says Restructuring and Government Efficiency Minister Luke Ouellette. "We believe it will become a real economic driver for rural Alberta."

Ouellette points out it also means a business will not have to send its employees to the major cities for education or training. Instead, it can be done online through videoconferencing. That is happening already with the Northern Alberta Institute of Technology. Fifteen welder and six electrician apprentices from Edson, Drayton Valley, Grande Cache, Hinton and Jasper are currently participating in a pilot project, obtaining their training through videoconference over the Supernet. NAIT instructors use live video, presentation slides and computer animation for the theory portion, after which the apprentices receive hands-on training near their homes. In time, it is hoped this vehicle will carry top-level educational services to all corners of the province.