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Market Studies of United States

Shipping to Western United States, Hawaii and Alaska — Transportation Hints for Exporters in British Columbia, Alberta and the Yukon

TO:
DEPARTMENT OF EXTERNAL AFFAIRS
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SHIPPING TO WESTERN U. S. A., HAWAII AND ALASKA – TRANSPORTATION HINTS FOR EXPORTERS IN BRITISH COLUMBIA, ALBERTA AND YUKON

July, 1985

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UTAH
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COLORADO
Los Angeles
ARIZONA
NEW MEXICO
OKLAHOMA
TEXAS
Dallas

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PREFACE

The Government of Canada accords the highest priority to increasing Canadian exports, particularly to the United States which accounts for over three quarters of our exports and creates two million jobs in Canada.

This report has been prepared on behalf of the Department of External Affairs' United States Trade and Investment Development Division and the Canadian Consulates General in Dallas, Texas, Seattle, Washington and Los Angeles and San Francisco, California. These offices have identified many potential sales opportunities for Canadian products in the rapidly growing Western U.S. markets. In selling to these markets for the first time, some companies find that although their products are well accepted by potential customers and their "domestic" price seems reasonable, the final landed or delivered price of the goods in the United States, including freight, can end up being too high unless shippers explore and take advantage of the most economic means of transport they can find. The intention of this document, therefore, is to provide potential Western Canada exporters with basic background on transportation and distribution systems to help them penetrate these markets with ease.

The information herein is aimed at new British Columbia, Alberta and Yukon exporters who are interested in broadening their sales coverage to include exports to the Western United States, Hawaii and Alaska but who might not be employing fulltime traffic management staff knowledgeable of the supposed intricacies of exporting to the U.S. The report also should be of use to exporters who have had experience in selling to U.S. markets but who may be able to improve their competitive edge and increase their profit margins by exploring several economical transportation alternatives, thereby obtaining the most economical freight rates consistent with their particular needs.

SUMMARY

A good variety of feasible and economic alternatives exists for British Columbia and Alberta companies of all sizes and types exporting their products to growing markets in the Western United States. For companies with small urgent shipments of high value and/or delicate products, major cities in British Columbia and Alberta are linked directly or through interline arrangements by air transportation carriers, forwarders and overnight couriers. Small shippers in less of a hurry can obtain lower rates from licensed motor carriers. A number of intermediaries such as freight forwarders, transportation brokers, shippers' agents and shippers' associations offer small shippers lower rates by consolidating numerous small shipments of all kinds into full load lots. Some of these firms also offer export documentation, transportation and distribution advice and other services which can be very valuable to the first-time exporter and to companies that are not adequately staffed to coordinate and control transportation movements related to occasional export opportunities.

Manufacturers interested in exploring Hawaiian and Alaskan markets will find that their movements will necessarily involve ocean or air transport for most or part of the movement. Furthermore, current shipping patterns and services have evolved whereby the use of U.S. ports and airports (such as Seattle, Portland, Los Angeles) are the proven economical, if not only, means of shipping to Alaska and Hawaii. Intermediaries can assist where intermodal movements are required (e.g., truck from Vancouver to Seattle, and sea freight to Honolulu).

Companies whose U.S. export sales are somewhat larger and which can ship in full load lots (truckload, carload, trailerload, containerload), as compared to small shipments, will find transportation rates economical. Because rates offered by motor common carriers and railways are similar for the infrequent full load shipper, the choice of these will depend more on speed and quality of service considerations; motor carrier movements are faster and less susceptible to damage than rail (carload and intermodal) movements. Again, intermediaries can offer good rates on occasional full load shipments because of their bargaining power in acting on behalf of many shippers, and because they are often involved in the coordination of return loads, or backhauls, for independent truckers and private carriers. Rather than make the return journey empty, these truckers will make it known to intermediaries that their services are available at advantageous rates.

British Columbia and Alberta shippers whose export movements are voluminous and regular, and smaller exporters whose success allows their freight volumes to grow substantially should be able to negotiate volume discount rates with motor common carriers, railways, and airlines. Alternatively, exporters of large volumes to the Western United States may find themselves reaching a point where transporting goods in their own trucks is feasible. However, shippers of this size will likely be involved in many Western U.S. markets and will make use of several suitable alternatives depending on their individual circumstances, in order to minimize overall transportation and distribution costs.

Section I of this report discusses the relative attractiveness and simplicity of shipping to markets in the Western United States, discusses elements which an exporter trades off in deciding how to transport his product and illustrates how some successful exporters in British Columbia and Alberta have gone about making their transportation arrangements for exports to the U.S.. The different alternatives which are available to you in accessing U.S. markets are discussed in Section II. The

possibilities of dealing with carriers directly, using knowledgeable intermediaries, or transporting goods privately are presented and important characteristics of the transportation modes are provided to help you determine which one(s) is (are) most closely suited to your requirements. Section III illustrates the magnitude of costs that are involved in shipping to the Western U.S. and provides service and cost comparisons for export transportation to Hawaii and Alaska; a note on alternatives for Yukon firms wishing to ship to Alaska is also included.

Apart from transportation considerations, new exporters should be aware that the Canadian and American Governments require certain documents to be completed; the principal ones are highlighted in Section IV. Ways in which companies can reduce their overall transportation costs by using public warehousing in major U.S. centres, and/or redistribution centres in major cities in British Columbia and Alberta, are the subject of Section V.

Although this report is aimed at simplifying your transportation to the Western United States by making you more aware of options that are available, it is not intended as a substitute for common sense or your own personal research. In this regard, a selected listing of transportation organizations serving Western U.S., Alaskan and Hawaiian markets, and a number of additional sources of information are listed in Sections VI and VII respectively.

In order to help you organize your evaluation of alternatives now and for future shipments, we have also provided a check list of points you should keep in mind in the various stages of the transportation selection decision-making process. A glossary defining transportation terms concludes the document.

SECTION I - EASE OF TRANSPORTATION TO THE WESTERN UNITED STATES

Of all the world markets for Canadian exports, the continental United States is the most easily accessible and penetrable. The proximity of Canada and the United States and our long-standing trade relationship present many unique advantages to Canadian companies interested in exporting. For example, from a product acceptance point of view, certain similarities between our two nations facilitate Canadian firms' understanding of American market requirements.

From a transportation point of view, no other country offers Canada similar advantages in terms of:

1. the multitude of carriers offering service;

2. the frequency of direct and indirect service options between many Canadian and American city pairs;

3. the relatively lower costs of transporting goods to such a close export market;

4. the ease and relative inexpensiveness of communications which allow for good relationships between Canadian sellers and American buyers in important aspects such as rapid order processing and shipment tracing;

5. the simplicity of export documentation and trade formalities; and,

6. commonality of business practices and attitudes.

In particular, the 13 western states - Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington and Wyoming - plus Alaska and Hawaii present excellent market opportunities for manufacturers in British Columbia and Alberta. The total population of these 15 states has been growing at a rate of 2.4 per cent per year from approximately 49 million in 1970 to 60.5 million in 1980.

If you have already made some forays across the border, you will find that most of the decision-making principles and rules you would keep in mind in shipping to the nearby states of Washington, Idaho or Montana apply in the case of transporting goods to Texas, Arizona, Southern California, etc. except that these latter markets are more distant and generally more expensive to reach than the border states. Shippers exporting to Hawaii and Alaska will face a different but understandable set of decision-making parameters.

Therefore, to quote competitive and profitable delivered prices, you will need to evaluate more critically your transportation options to the more distant of these U.S. markets. Such evaluations should reveal to you that there are several actions you can take to export goods at a lower total distribution cost than might have been expected at first glance.

For example, if you are making several shipments in the same day or week to the same customer, you could consolidate goods into a single shipment and realize important savings. This is because carriers' rates have a minimum handling charge component that is part of every shipment regardless of size. Very often, twice the volume or weight can be shipped the same distance for just a small additional total cost. Savings of 20 to 50 per cent are possible by consolidating multiple shipments into one lot. Such savings of course must be weighed against the possible costs of slower delivery times and increased storage/inventory costs.

You should also be aware that many carriers (in particular trucking companies and railways) quote rates based on commodity classifications by grouping goods that have similar transportation characteristics into the same "class". Classifications are based on value, density (weight per cubic measure), susceptibility to loss, damage and pilferage, competitive considerations and the regularity and volume of similar movements. Very often, goods may be classified in more than one, in fact, many categories. Lower class ratings (and therefore rates) can be obtained by:

1. reducing carrier liability for loss and damage by reducing the declared value of the product to its true level;

2. shipping the product in different configurations (in bulk versus packages); and,

3. changing packaging (e.g., sending goods knocked down instead of set up)

Therefore, by properly describing your goods to the carrier, your efforts can often pay off by securing lower rates.

Shippers should also note the importance of maximizing the use wherever possible of those carriers who offer direct service from origin to destination or those carriers or intermediaries who will accept full responsibility and liability for the door-to-door movement. In a survey [1] of users' perceptions of transborder trucking services respondents expressed a preference for single line service over joint line (or interline) service for numerous reasons including:

1. interline freight has higher loss and damage ratios;

2. interline freight claims, particularly on hidden damage, are more difficult to resolve;

3. interline freight is harder to trace, expedite and control;

4. interline freight is less reliable and takes longer; and,

5. discounts are not always available on interline service.

Although the above mentioned study was oriented specifically to truck movements, the same observations can apply to situations where more than one airline or railway are involved.

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1. Maister, D. H. and J. M. Munro. Transborder Trucking: An Analysis of User Perceptions. Working Paper No. 25 Centre for Transportation Studies, University of British Columbia, April, 1977.

While this report addresses various means available to help shippers secure the lowest transportation costs, it is important to be aware that efficient goods distribution requires more than obtaining the lowest freight rate. It includes determining the lowest total cost consistent with service requirements to distribute goods from the factory to the customer's dock.

The concept of viewing distribution as a total system is most often referred to as "physical distribution or logistics management". Tradeoffs are at the heart of the concept. Reduced transportation costs can often translate to increased costs tied up in inventory. Slower modes such as rail also often result in higher loss and damage charges and higher obsolescence costs, although rates may be cheaper.

A simplified example shows how physical distribution analysis can help shippers evaluate the tradeoffs involved in selecting the best distribution channels. Consider the hypothetical case of a medium-sized Calgary manufacturer of industrial machinery parts shipping an annual volume of 500,000 lb. to customers in Phoenix and other cities in Arizona. Every day he produces 2,000 lb. of goods for export to Arizona worth approximately $20,000. The alternatives he has identified are to ship 10,000 lb. by air approximately once a week, 40,000 lb. by truck approximately once a month, or 100,000 lb. by rail, (without his own siding) every ten weeks. On the basis of these shipping sizes and frequencies, the company's total distribution costs would be as follows:

TRADE-OFFS IN DISTRIBUTION

		AIR	MOTOR CARRIER	RAILWAY
1.	Basic Cost of Transportation	$322,000	$ 65,300	$ 59,800
2.	Pick up and Delivery Charges	22,500	-	6,300
3.	Warehousing (prior to shipping)	2,000	20,000	30,000
4.	Interest on Preshipment Inventory and Goods in Transit	200	5,200	12,600
5.	Product Loss and Damage	2,500	5,000	7,500
TOTAL		$349,200	$ 95,500	$116,200
Distribution cost (cents) per pound		69.8	19.1	23.2

If this hypothetical shipper selected the transportation mode only on the basis of transportation costs (i.e., line 1) he would obviously select the rail mode. However, if the other physical distribution elements are taken into consideration, using a motor carrier would be the most cost effective.

Because the rail mode is the slowest and delivery times most variable, it requires the shipper to keep a larger inventory (in plant or on wheels) than would be required for other modes. (For air, minimal or no inventory is required.) Rail also ties up significantly more of the shipper's working capital in goods than do the other modes. Finally, loss and damage charges using rail are shown to be higher here for this imaginary shipper, because this mode could cause greater damage to fragile goods.

Looking at each mode's costs on a per-unit basis, the highway mode is shown to be the most economic for this shipper because while its transportation rates are not as low as that of the rail mode, the associated savings in warehousing, working capital costs, and loss and damage, more than compensate for this drawback. Thus, from a total physical distribution/logistics standpoint, this shipper should choose to ship by motor carrier.

Analyzing your transportation alternatives on an annual basis for shipments to a specific market as shown above is a beneficial exercise which will point you in the right general direction. However, changing circumstances in plant production capacity, new sales orders, inventory, terms and conditions of sale, customer delivery requirements, cash flow, availability of new carriers, transportation legislation, and a host of other factors mean that you should evaluate your transportation options frequently. For example, if your sales arrangements are "30 days net" and your company is one which carefully watches cash flow, it may be worthwhile occasionally to pay a premium transportation charge to get your goods to the customer as quickly as possible.

Futhermore, no two companies are exactly alike. Traffic managers in some of Canada's largest firms in the same industry competing in identical markets often make very different transportation arrangements for very good reasons, and with equally profitable results. For example, a second Calgary manufacturer of industrial machinery parts (in competition with our illustrated hypothetical shipper above) with parallel export volumes to Arizona would face a different set of options and decision-making criteria if he owns a fleet of trucks, or if his customer wishes to pay a premium for expedited delivery, or if his customer has negotiated special volume discounts or backhaul rates for input materials returning from Alberta to the Western U.S..

The fact is that for any industrial sector or regional group of companies, there is no "one mode fits all" conclusion as to the most efficient and cost-effective means of transportation. If in order to build a competitive edge in your Canadian markets you are doing things differently than your direct competitors, it stands to reason that you will be able and want to do different things to secure your export markets. **A guiding principle to remember in transportation is to never accept a no-choice situation; choices are available for you to seek out and evaluate.**

Although the type of evaluation you should be conducting requires some homework on your part, it will help you determine your true total transportation and distribution costs (as opposed to simply comparing freight rates) and allow you to pick the transportation alternative which allows you to ship to markets in the Western U. S., Alaska and Hawaii most profitably. A checklist at the end of this report takes you through the transportation selection process by raising questions you should be asking yourself, your potential (or actual) customers in the Western United States, Alaska and Hawaii and transportation companies, from the closing of the sale to final delivery of the goods in order to arrive at the best transportation decision.

SECTION II – TRANSPORTATION OPTIONS

A. CURRENT EXPORT TRANSPORTATION PATTERNS AND PRACTICES

Manufacturers in Alberta, British Columbia and the Yukon already participate in U.S. markets in a major way, shipping goods valued at nearly $15 billion in 1984. The 13 Western states, Alaska and Hawaii accounted for approximately 45 per cent ($6.6 billion) of these sales. The charts on the following page depict the 1984 value of Alberta, British Columbia and Yukon exports to the United States in total and the portion sold to the 13 Western states, Hawaii and Alaska. The proportion of these sales transported by various modes is also shown. In the case of B.C., road transport is by far the predominant mode (42%) used for exporting to the 13 Western states, Hawaii and Alaska, followed by water, rail and other (e.g., hydroelectric transmission lines). Other means of transport (primarily oil and gas pipeline) account for most of Alberta's export transportation to the 13 western states, Hawaii and Alaska; within the modes of intent to this report's audience, road and rail are the two predominant means of transport. In both B.C. and Alberta, air transport is used for a relatively small portion of export sales to these markets at 1.1% and 0.7% respectively. In the case of Yukon's small exports, the choice of modes is approximately evenly divided between air and road.

A number of companies across a wide spectrum of industry in British Columbia and Alberta are successfully exporting to western U.S. markets and offer a few helpful hints to new exporters.

S U C C E S S   S T O R I E S

1. Packaging Machinery from British Columbia to Points throughout the United States

Shipments to U.S. markets for this company have grown to the point where the establishment of a central sales office in Chicago backed up by distribution representatives across the U.S. became warranted. Except for the odd emergency situation where air freight is used, this firm serves all of its U.S. customers through a very large U.S. based trucker with operating authority from British Columbia, to and from the 48 mainland states. **In return for an exclusive contract to handle all of this manufacturer's export freight to the United States (over 125 shipments per year weighing an average of 1,200 pounds) the trucker has provided a special negotiated rate discounted off regular tariff bureau rates.**

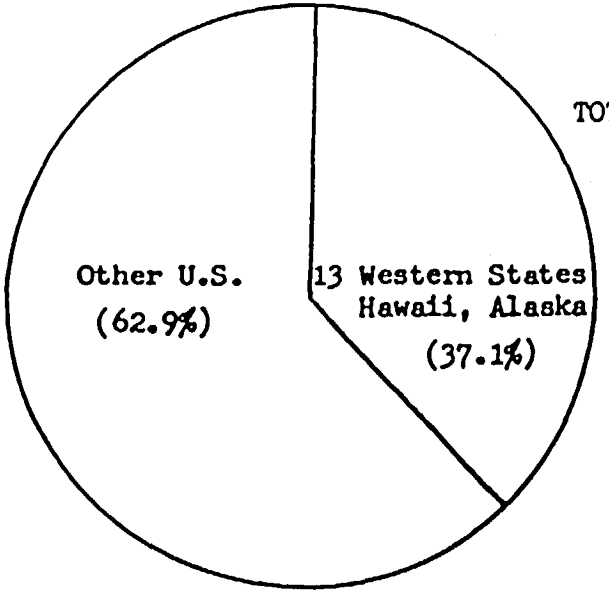
The manufacturer advises that these arrangements were the result of careful research and suggests that exporters (in circumstances similar to his own) get answers to the following questions before making a commitment to a carrier:

- does the company offer door-to-door services thus avoiding potential damage associated with excessive handling?

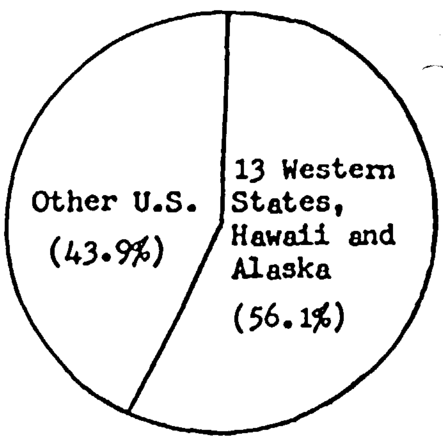
- does the carrier provide covered trailer service (or closed vans) to protect the shipment from weather damage?

Provincial Exports to 13 Western States, Hawaii and Alaska
(percentage of total U.S. exports)

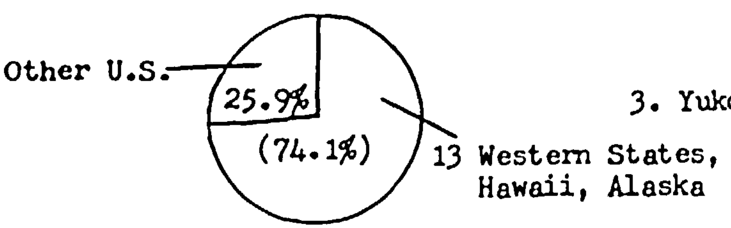
TOTAL EXPORT VALUE TO U.S.
($ millions Cdn.)



1. Alberta = $9334.2



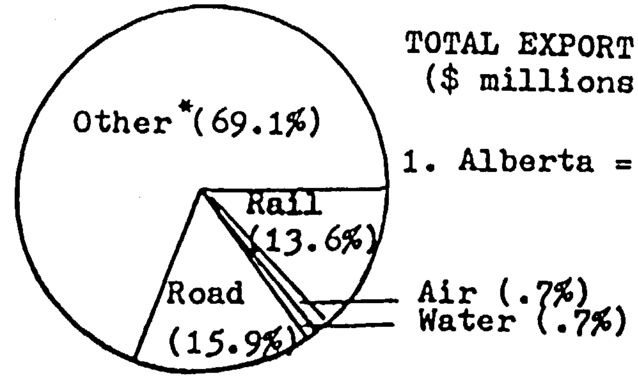
2. British Columbia
= $5645.2



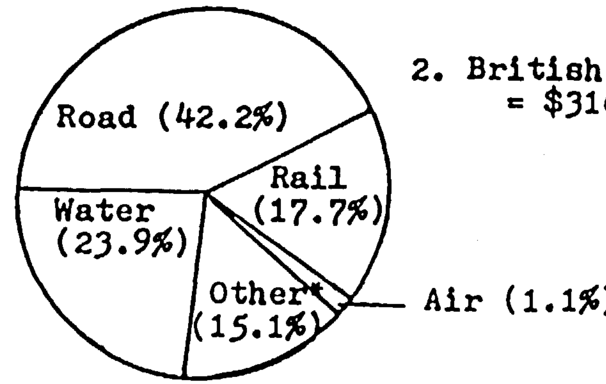
3. Yukon = $5.8

Modal Shares of Export Sales to the Thirteen Western States, Hawaii and Alaska from Alberta, British Columbia and Yukon (percentage of total)

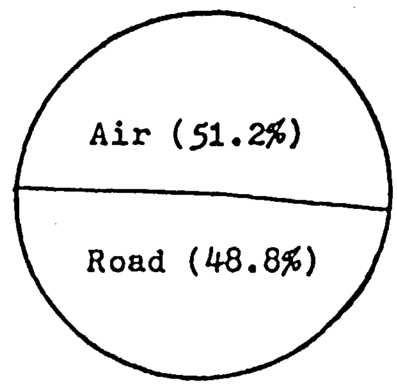
TOTAL EXPORT VALUE
($ millions Cdn)



1. Alberta = $3466.1



2. British Columbia
= $3169.6



3. Yukon = $4.3

*includes exports of electricity by hydro transmission lines, oil and gas by pipelines, parcel post, etc.

- is the transit time quoted reasonable and reliable?

- does the carrier have a track record of delivering goods damage free?

- is the company large or sophisticated enough that it offers computerized tracing to be able to advise of the location of the shipment at any time?

- does the company have a local representative who can look after your needs and troubleshoot for you if necessary?

2. **Doors from Interior British Columbia to Washington, California, and Alaska**

Having examined transportation costs before exporting, this manufacturer discovered less than truckload rates to be too high. They therefore limit their sales to large quantities (truckload lots) using 1,000 pound pallets for simplicity of loading and unloading. For mainland Western U.S. shipments this firm has found that trucking best meets their needs. In the case of shipments to Alaska, the most economical alternative is to truck the goods to Seattle for container stuffing and marine shipment to customers.

In seeking trucking services the firm make two recommendations. First, **non-unionized/smaller truckers are praised as offering lower rates.** For example, one large unionized tariff bureau carrier charges $4,300 for a truckload shipment from interior British Columbia to Los Angeles; the same carrier's non-tariff bureau, non-unionized subsidiary charges $1,900 for the same movement. Secondly, **this company recommends the use of backhaul truckers who would normally be returning to the U.S. empty.** Most carriers do not make it generally known that they have empty backhaul capacity so some probing is necessary. It is also noted that these backhaulers, although preferring full truckloads, will still offer a "decent" rate on a half truckload in order to avoid returning empty.

3. **Peat Moss from Alberta to Coastal and Southern States**

In some parts of Canada where Canada/U.S. rail links are very convenient, it makes sense to ship this product by rail. However, this Alberta producer avoids rail because of his perception that rail routing from Northern Alberta via Vancouver is circuitous. (Shipping by rail to many of his customers - most of which do not have rail sidings - involves no less than three different railways.) **The firm therefore makes use of fruit and vegetable haulers, who would normally make the return trip to the U.S. empty, for the great majority of their shipments.** This firm is in the fortunate position of being a large exporter offering some 2,500 truckloads per year. Many independent truckers/backhaulers know that they have a lot of freight to offer and seek out truckloads from them after they have unloaded their produce. **In these circumstances this company recommends that if a shipper wants to have regular access to backhaulers that payments be made on time; the independent trucker/backhauler network is large and negative news travels quickly.**

4. **Fresh and Frozen Food Products from British Columbia to Coastal States**

This medium sized exporter (approximately 1.2 million pounds per year to Western U.S. markets) requires refrigerated vans which are abundantly available because of the imbalance of fresh fruit and vegetables moving north into British Columbia compared to the amount of refrigerated freight moving south. The firm reports that it had been a rail user at one time but since deregulation of transportation in the U.S. has found that truck (especially independent truckers, backhaulers, and "gypsies") is cheaper and quicker. **The firm uses a transportation broker to identify a backhauler looking for a truckload whenever they have a shipment to make. The firm recommends that shippers talk to the other local manufacturers (keep your ears to the ground) to search for transportation bargains and to get references on truckers.** Air transport is used only occasionally where specified by a consignee who is in a hurry to obtain goods and is willing to pay a premium.

5. **Fresh and Frozen Seafood to Coastal States**

A number of this company's customers are willing to pay premium air freight costs to obtain fresh seafood. However, most of their customers are sensitive to costs and would rather wait a little longer to get the product in by truck at a lower cost. **This firm's advice to new exporters is that because transportation services and costs change frequently, you should never make a delivered price commitment to a customer before you have obtained transportation quotes.**

6. **Other Successful Exporters to the Western U.S.**

A few examples of other small and medium companies in British Columbia and Alberta which have penetrated western U.S. markets successfully include:

1. bulk agrifood products from British Columbia and Alberta to western United States, Alaska and Hawaii
2. concrete waterproofing chemicals from British Columbia to points throughout the U.S.
3. prepared meat products from Alberta to coastal states
4. specialty bakery products from Alberta to Northern and Southwestern U.S.
5. canned fish from British Columbia to California and southwestern states

The above movements are just a few examples of British Columbia and Alberta U.S. export success stories. As one current exporter states: **"Shipping into the U.S. is simple; you can do it too."** Pointers in this section and in the transportation checklist on pages 82 to 85 are intended to help make export transportation to the Western United States, Hawaii and Alaska, simple for you too.

B. DECIDING WHETHER TO "MAKE" OR "BUY" TRANSPORTATION

There is no immediate obvious rule of thumb to follow in terms of choosing the "right" mode by which to ship your goods without investigating the options. Shippers in British Columbia and Alberta have generally convenient access to all modes (except marine to a lesser extent for Alberta shippers) and will choose the appropriate means of transport predicated on their particular needs for a particular movement to a particular market. Which mode or means of transport should you use?

When sourcing materials to manufacture your products, you can either purchase them directly from primary suppliers, or obtain them through a middleman or broker, or make them yourself. Purchasing transportation services is much the same in that you can either make arrangements directly with the carriers in each mode (air, motor carrier, rail, intermodal and marine), or you can farm out your transportation arrangements by making use of the bargaining power of intermediaries (freight forwarders, transportation brokers, shippers' agents, and shippers' associations), or you can transport the goods yourself in your own private fleet of trucks.

The decision to make, buy, or farm out transportation services will depend on a number of factors. For example if your firm already owns its own private fleet of trucks and sufficient idle capacity is available, you may wish to "make" your own transportation to the Western U.S. (Detailed analysis discussed in the subsection on private carriage, pages 31 and 32, should be undertaken before purchasing a truck or a fleet of trucks for the single purpose of hauling your Western U.S. exports.) If your company does not have the staff resources to seek out different carriers, negotiate rates, prepare export documentation and monitor shipments there are a number of middlemen or intermediaries such as freight forwarders, transportation brokers, shipping agents and shippers' associations who can look after the arrangements on your behalf for a commission charged to the carriers they select and/or nominal fees to shippers for specific services rendered. Finally, if your domestic sales are large enough to have warranted your hiring full time transportation service management staff you may likely be in a position to "buy" transportation services directly from airlines, motor carriers (including independent contractors or backhaulers), railways and marine carriers.

Whether the internal resources you have available indicate that you should make, buy or farm out transportation services, your goods will ultimately move to the 13 Western United states, Hawaii and Alaska by either one of four modes - air, highway, rail or marine. (That is, if you "make" transportation your own trucks will carry the goods over highways. If you use an intermediary, they will also select one or combinations of the four modes.)

The nature of your goods or the terms of sale to customers are likely to have an important bearing on the type of transportation arrangements you may end up choosing. As example of points to ponder in making the decision, the following table rates the suitability of different types of modal arrangements on a high, medium, or low general efficiency basis according to the types of goods you will be exporting to the 13 Western States, Hawaii and Alaska.

GENERAL EFFICIENCY/SUITABILITY RATINGS OF ALTERNATIVE MODES OF TRANSPORTATION

NATURE OF GOODS	MODAL ALTERNATIVES			
	AIR	HIGHWAY	RAIL	MARINE
a) high value goods	**high**	medium	low	low
b) low value goods	low	medium	**high**	**high**
c) perishable goods	**high**	medium	low	low
d) goods required urgently	**high**	medium	low	low
e) small packages	**high**	medium	low	low
f) fragile goods	**high**	medium	low	low
g) bulk/granular commodities	low	medium	**high**	**high**
h) outsize shipments	low	medium	**high**	medium
i) low weight per cubic foot	low	medium	medium	medium
j) very heavy commodities	low	medium	**high**	**high**

C. THE CHANGING CANADIAN TRANSPORT ENVIRONMENT

As a result of both transportation deregulation in the United States and changing economic circumstances in Canada, the Minister of Transport has proposed broad changes in regulatory policy which will greatly affect the rules of the transportation game when implemented. Although a consultation process will take place in order to refine concepts outlined in Freedom to Move - A Framework for Transportation Reform,[1] the following highlights (quoted directly from material provided by the Minister of Transport) should make you aware of changes that are afoot which affect transportation options available to you in shipping to markets in the Western United States, Hawaii and Alaska.

> "Principles
>
> The proposals for a new transportation framework are based on the principles of greater reliance on competition and market forces, a reduction of government interference and regulation, and the creation of a regulatory process that is open and accessible.
>
> Competition
>
> The National Transportation Act will be revised to actively encourage competition among air, marine, rail and road sectors (intermodal), as well as within the various sectors (intramodal). Encouragement will be given to new multimodal services. Restrictions on mergers and acquisitions will be relaxed.
>
> Air
>
> Entry to any class of domestic commercial air service in Canada will be open to carriers meeting a "fit, willing and able" requirement. It will no longer be necessary for the carrier to establish that its service is required by "public convenience and necessity". Any operator submitting evidence of adequate liability insurance, and in possession of a Department of Transport operating certificate attesting to the adequacy of its equipment and its ability to conduct a safe operation, shall be granted a license.
>
> The new policy is expected to have particular impact on the encouragement of new local regional fixed-wing and rotating-wing carriers, in both charter and scheduled services.
>
> Discontinuance of services will require minimal notice - perhaps 60 days on monopoly routes, 30 days on others.

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1. Hon. Donald Mazankowski, Freedom to Move - A Framework for Transportation Reform, Transport Canada, Ottawa, Ontario, July, 1985. (Available from Supply and Services Canada, Cat. No. T22-69/1985E, ISBN 0-662-14172-5.)

Determination of routes and schedules of domestic air carriers will be exempted from regulation, permitting airlines to offer routes and schedules to meet perceived public demand.

There will be no ongoing regulation of domestic tariffs, except a review procedure on fare increases, with the power to overturn or reduce excessive increases.

Services which are deemed necessary in the public interest, but not provided for under normal market conditions, will be considered eligible for direct public support.

Consistent with Canada's obligations under bilateral air agreements, there will be continued regulatory control of market entry to international scheduled services and of international tariffs. However, the Government will pursue reduction of regulations on international routes through bilateral negotiations, such as those ongoing with the United States.

Railways

The Railway Act will be amended to permit railways to enter into confidential contracts with shippers for domestic, overseas and transborder traffic. Shippers will benefit by entering into confidential contracts with the railways for services at mutually-agreeable rates, which may be below published tariffs.

Shippers will now be able to negotiate services and rates, based on such factors as volume, routes and scheduling. Railways will be permitted to provide rebates. This will provide Canadian shippers with more flexibility in meeting international competition. Canadian railways will be able to compete more effectively with U.S. railways which, since 1980, have enjoyed such freedom of rate negotiation, and as a consequence have been able to capture significant transborder business from Canadian railroads.

Many Canadian companies and individuals are located in communities served by only one railway. In order to protect these "captive" shippers and to promote competition, shippers captive to one rail line will be given access to a competing carrier at the nearest transfer point, and provided with new rate appeal provisions.

Extraprovincial Motor Carriers

The Government proposes to revise the Motor Vehicle Transport Act (MVTA) under which federal economic regulatory responsibilities have been delegated to the Provinces since 1954. The amendments will reflect the regulatory reforms agreed to by the federal and provincial Ministers of Transport on February 27, 1985. These reforms included reduced entry controls, elimination of rate approval, the designation of special commodities exempt from regulation and streamlining of administrative members.

Marine

The Government proposes to revise the Shipping Conference Exemption Act which allows ocean-going marine carriers to act together to set common rates and limit capacity. These conferences consist of groups of marine carriers providing services between specific ports.

As it is not feasible to eliminate the conference system, the Government will regulate conference operations to produce the greatest benefit to shippers. Shippers will be permitted to enter into confidential negotiated service contracts. Legislation will clearly prohibit predatory conduct by shipping conferences.

New Regulatory Agency

It is the Government's view that the changing environment of regulatory administration, coupled with the determination to reduce government interference in the marketplace, requires the establishment of a new Regulatory Agency as a successor to the Canadian Transport Commission [CTC].

The organizational structure of the new national transportation authority will differ from the CTC, reflecting its reduced role due to lessened economic regulation.

The Minister of Transport will be empowered to issue binding policy directives to the agency. In cases of disagreement between the agency and interested parties, a number of dispute-resolving procedures, including mediation and final-offer arbitration will be available to settle disputes."

Conclusion

Although it is difficult to say how some of the above described proposals will evolve in final legislation, **it is very important to note that an environment is being created in which new transportation service options will emerge.** Whatever new options do arise however, shippers in British Columbia, Alberta and Yukon wishing to export to the Western United States, Hawaii and Alaska need to be aware of alternatives that are currently available. The purpose of the ensuing subsections is to point out the relative advantages and disadvantages of alternative transportation arrangements in terms of their individual characteristics. The current status of the modes and sensible practices to keep in mind when using any of them are also highlighted to assist you in making the right choice.

D. DEALING DIRECTLY WITH CARRIERS

Air Freight

Air freight is the fastest mode. Air rates are usually also the highest. Therefore, air is best used to move goods which are either high in value or which require fast delivery and thus either are able to or must bear the higher cost of moving them by air. Examples include jewellery, live animals, computer parts, pharmaceutical products, spare parts and other valuable items. One airline executive suggests that products worth $2 per pound or more are suitable for air transport. [3] Other products suitable for air transport are goods which are perishable or fragile, or which are required in an emergency. Moreover since air transport has been deregulated in the United States many air carriers have become very aggressive in seeking freight that might normally move by other modes and are willing to negotiate rates for actual or potential large volume air shippers.

Some shippers use air freight as a method of eliminating regional warehouse requirements thereby reducing one aspect of overall distribution costs. The speed and reliability of air freight can justify shipping directly to branches or clients eliminating not only the need for regional storage space, but also reducing point-of-origin inventory, cutting in-transit time and improving the flow of goods by allowing smaller but more frequent shipments.

Most carriers offering service to the mainland Western U.S., Hawaii and Alaska are able to offer next day (i.e., 24 hour) service, including origin pickup, terminal to terminal transportation, and destination delivery. In some cases, (i.e., between the highest density city pairs) more rapid service may be available at a premium. For export traffic, customs clearance at the destination airport is an important element of potential time consumption. If required export documentation is not prepared properly, (see Section IV), customs clearance delays can eliminate time savings associated with the speedy air mode. In this regard it is noteworthy that the majority of air freight shippers use the services of an air freight forwarder offering ancillary documentation services to ensure that the goods arrive at the premises of the consignee on time.

If you choose to organize an air cargo movement yourself, you should be aware that not all carriers are authorized to haul air freight from every origin to every destination. Therefore, certain carriers make extensive use of trucks for portions of the haul which can add to shipment time significantly. Other air carriers use a designated axis or hub through which all air shipments are routed for redistribution and delivery to final destination. Yet other air carriers, of necessity, have arrangements with associated airlines to interline air cargo over a common airport where the two airlines meet. Therefore when you are making the arrangements to ship goods by air you should find out which airline will be physically carrying the goods; if it is an airline other than the one with which you are making the

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3. Frank Kirkman, Cargo Manager of Nordair in Montreal as quoted in <u>Canadian Transportation and Distribution Management</u> - February, 1984 - "Eight Rules for Buying Air Cargo Service".

arrangements, it may pay to get an alternative quotation from the line which will actually be doing the hauling.

To avoid delays and extra costs for air shipments you should use the airline which has direct service between the city to which you wish to ship and the city closest to you. (For example, as there is no direct air service from Kelowna to any major U.S. market destinations, it may be much less expensive to truck your goods to Vancouver or Seattle for direct furtherance by air to final destination depending on the frequency of available truck services or the availability of your own trucks.)

Each carrier sets its own liability limits within minimum conditions governed by the Warsaw Convention. However, loss and theft rates for high value goods are lower in the air mode so reasonable insurance premiums are available. Shippers should refer to their transport insurance broker to determine whether private insurance arrangements are preferable to the use of carrier sponsored rates for shipment values in excess of declared values.

Shippers should review the cost of expedited air service rates against inventory savings and associated capital cost savings that can be achieved by using this mode. You must also evaluate available schedules and select the air carrier best fitting your service requirements.

In shipping by air, it will be necessary to define the average shipment configurations (weight; or measurement, i.e., length x height x width) in order to provide the air carrier with necessary data for rate computation. Rates are calculated on minimum densities so that very lightweight commodities with a high cube to weight relationship will be charged on the basis of a minimum density (pounds per cubic unit of measure).

Goods classification for ratemaking purposes in air cargo is much less complex than in the rail and motor carrier modes. It is estimated that approximately 80 per cent of all air cargo moves under general (i.e., FAK - Freight All Kinds) commodity rates, although extremely valuable goods may be assessed at higher rates. Air carriers often offer discounts to encourage movements during certain daytime periods. They also offer directional discounts in order to encourage the loading of their aircraft on predominantly empty flights. Still other discounts are offered for loading goods in air freight containers, of which there are an infinite variety.

Considering cost, speed and liability together, the air freight shipper's choices in declining order of quality are:

1. direct single plane service from origin to destination;

2. indirect single carrier service over a central distribution hub; and,

3. indirect multiple carrier interline routing over a common intermediate point.

The following matrix shows the availability of options from points in British Columbia and Alberta to selected U.S. markets as published in the Air Cargo Guide.

Single plane single carrier air cargo service is available between major centres in

British Columbia, Alberta and the Western United States as follows:

FROM Vancouver	FROM Edmonton	FROM Calgary
To:	To:	To:
Los Angeles	Los Angeles	Los Angeles
San Francisco	San Francisco	San Francisco
Denver	Dallas	Denver
Phoenix	Houston	Dallas
Seattle		Houston
Honolulu		

(Source, Air Cargo Guide, published by Official Airline Guides, Inc., Summer 1985.)

Single carrier connecting service is also available from Edmonton to Seattle. Air cargo services from other points in British Columbia, Alberta and Yukon to the Western U.S., Hawaii and Alaska are not published as such. However, there are cases where flights advertised only as passenger services exist and often at least a small amount of space in the baggage compartment remains available for small (i.e., less than 100 pounds) cargo shipments. This means that shippers wishing to use air transport to participate in markets other than those specifically mentioned above would have to contact locally available airlines (or air forwarders) to arrange interline shipments for which "sum of segments" or combination rates will be charged rather than a joint or through rate; in many cases separate payment to each participating airline will be required.

Air freight is becoming increasingly valuable as a marketing tool for the shipper, allowing him to deliver goods to the customer in a very rapid time frame. The value of this customer goodwill feature is hard to measure, yet it may sometimes mean the difference between selling goods in a market or not. Shippers must not only examine the relative cost of air versus other modes, but also examine the value of such expedited service from a physical distribution point of view. Slower modes require relatively larger inventories (and more time) to transport goods than do most expedited modes. The increased cost of expedited service must be weighed against the savings in reduced inventories at destination - that is, the cost of warehousing, storage and miscellaneous charges. [4]

The use of air freight will require you to become familiar with the many characteristics of this mode. The single most helpful document in this regard is the Air Cargo Guide (see page 71). Shippers should also be aware that each airline has its own rules and regulations and special restrictions and that the same carrier may offer different services at different airports. Therefore, the shipper's single most important task in securing firm rate quotes is to know the particular shipment characteristics

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4. James L. Heskett, Nicholas Glaskowsky, Jr. and Robert M. Ivie, Business Logistics, New York: Ronald Press Company, 1973.

and service requirements and then check with local air cargo agents. Air carriers serving Western Canadian and American city pairs are listed in this report as follows: Western Mainland U.S.A. - pages 51 and 52; Hawaii - page 59; Alaska - pages 62 and 65. Check the yellow pages of your telephone directory for local offices or toll-free numbers. Other sources of information on air transport are provided on pages 71 and 72.

Motor Common Carriers

Motor carriers provide transportation in trailerload (TL), or less-than-trailer load (LTL) quantities. Trucking is very flexible in that it can reach shippers and consignees not situated adjacent to rail lines or water routes. Motor carrier or truck is the fastest and most direct of the common carrier surface modes and can serve most Western Canada/Western continental U.S. city pairs in one to five days. Examples of motor carrier transit times as reported by firms consulted in the preparation of this report are:

AVERAGE MOTOR CARRIER TRANSIT TIMES (HOURS) [5]

[5]

CITY PAIR EXAMPLES	DISTANCE IN MILES	TRANSIT TIMES
1. Vancouver to Spokane	400	18.0
2. Calgary to Seattle	700	37.1
3. Vancouver to San Francisco	900	41.3
4. Kelowna to San Francisco	1,100	50.1
5. Edmonton to Denver	1,300	58.8
6. Vancouver, Kelowna, Calgary to Phoenix	1,500	59.9
7. Vancouver to Tucson	1,700	72.5
8. Prince Rupert to San Francisco	1,900	50.6
9. Prince Rupert to Los Angeles	2,100	67.6
10. Vancouver to Houston	2,400	84.5
11. Prince Rupert to Dallas	2,900	85.5

5. Average of various transit times supplied by several motor carriers operating in certain traffic lanes. Includes customs clearance at border and cases of interlining.

Transit times will vary depending upon the particular origin-destination pairs and the amount of traffic a carrier has won in marketing itself in certain traffic lanes.

Offering such equipment as straight trucks, tractor-trailer rigs including tank trailers, flat bed trailers, stake and rack trailers, refrigerated vans, air ride delivery (for fragile goods), tilt and load (to bring the truck body to the ground for easier loading), and float trailers (with a low bed to carry heavy or oversized goods), motor carriers can and do haul almost every imaginable commodity.

Apart from private carriage (discussed on pages 31 and 32) and contract carriage (for very large volume movements) two types of motor carriers are available - licensed common carriers and independent owner-operators. Properly licensed motor carriers receive their authority to operate in various service lanes from the Interstate Commerce Commission and Canadian provincial jurisdictions which impose different licensing restrictions. Some common motor carriers have specialized authority to haul particular goods such as agricultural commodities, household goods, construction materials, and other named commodities specifically mentioned in their licenses. Some carriers are licensed to haul goods only in truckload quantities between certain regions or points while others can provide less than truckload and international services to gateway cities in the U.S., all of course within the licenses authorizations and restrictions applicable to their respective lanes.

Motor common carriers are also generally liable for loss or damage to the goods while they are in a carrier's custody. The exceptions are for loss or damage of goods caused by an act of God, riots, strikes, a defect or inherent vice in the goods, default on the part of the shipper or consignee, etc. The amount for which the carrier is liable is computed on the basis of:

1. the value of the goods at the place and time of shipment including the freight and other charges if paid; or,

2. where a value lower than that referred to above has been represented in writing by the shipper or has been agreed upon, such lower value.

The amount of any loss or damage computed as above is not to exceed $2 per pound unless a higher value is declared on the bill of lading by the shipper.

Goods shipped by licensed motor carriers from British Columbia and Alberta to the Western U.S. move in one of three ways:

1. Canadian carrier with U.S. operating authority direct from origin to destination;

2. American carrier with Canadian operating authority direct from origin to destination; or,

3. through rate quoted by Canadian or American carrier with Canadian carrier hauling the goods from the Canadian origin to a U.S. transfer point such as Seattle, Washington or Coutts, Alberta where they are turned over to a U.S. carrier for furtherance to the final destination.

A set of through rates covering all three arrangements is published by tariff bureaux (associations of motor carriers) concerned with traffic moving between British Columbia or Alberta and geographic regions of the U.S.. In the event of a through rate for a certain movement not being published, shippers may apply to the tariff bureaux in question for the publication of a rate; providing that sufficient traffic volumes are available, the tariff bureau member carriers will establish and publish a through rate for the movement in question. Since the deregulation of American motor carriers in 1980, however, these published rates have served more as information or guidelines rather than set pricing rules.

"An Analysis of the Transborder Trucking Industry"[6] focussing on truck transportation from B.C. to the U.S., indicates that all of the major motor carrier competitors participate in Pacific Inland Tariff Bureau or Rocky Mountain Tariff Bureau rate tariffs and most offer some form of discount off these rates for single line (i.e., where only one carrier is involved) movements. The types of discounts available include straight percentage discounts off published rates, selected reductions on certain types of freight or for certain customers, and discounts in return for large volume commitments from shippers. That study goes on to report that no rate regulations exist to constrain price competition and there is no evidence of carrier collusion to prevent price competition. It is therefore evident that American and Canadian motor carriers have become increasingly competitive and many are prepared to negotiate special deals with shippers who have large volumes to offer.

In shipping to southern California and Texas, Western Canadian firms should note the equipment imbalance that exists. Some sources estimate that as many as half of the refrigerated trailers carrying fruit and vegetables to British Columbia and Alberta return to the Western and Southwestern U.S. empty. Licensed motor common carriers usually are willing to offer reduced backhaul rates in order to attract return loads. This situation presents an excellent opportunity for British Columbia and Alberta food, beverage and other perishable product producers to get their goods to Western U.S. markets cheaply with the assurance that their goods will be in the hands of a properly licensed motor carrier. These refrigerated vans are also suitable for other commodities (i.e., a "reefer" becomes a plain dry van when the temperature control unit is switched off).

In general, however, motor common carrier rates are based on the classification of the commodities hauled. Rates are very high for small shipments and become significantly lower as weight increases. However, some carriers interpret the commodities differently, resulting in different classifications and therefore different rates. For example, rates on office furniture would differ depending on whether the furniture was set up (SU) or knocked down (KD). Certain carriers who want the traffic badly might occasionally offer the KD rate (cheaper) instead of the SU rate. Furthermore, in the deregulated U.S. trucking environment, some motor carriers offer discount programs simply for the asking. The point is that it pays to check with several motor carriers before making a commitment regardless of whether your

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6. Garland Chow, "An Analysis of the Transborder Trucking Industry" in Proceedings of the 19th Annual Meeting of The Canadian Transportation Research Forum, Jasper, Alberta, May 1984.

volumes are large or small.

To summarize, shippers wishing to use motor common carriers should always do the following when seeking rate quotes:

1. fully describe goods for proper classification;

2. try to increase the shipment size by consolidating loads destined to the same place;

3. check on the availability of backhaul rates even to the point of contacting the carrier's office in the city to which you wish to ship;

4. check on the availability of non-tariff bureaux carriers who may offer very competitive rates; and,

5. ask for details about special discount programs.

A large number of motor carriers offer services between Western Canada and the Western mainland U.S.. Several motor carriers offer direct over the road service from Alberta and Northern British Columbia to Alaska, but for shipments to Alaska from the Vancouver area, motor carriers will make use of one of the marine services operating from Seattle. Consult the yellow pages of your telephone book, or any of the motor carrier directories listed on pages 72 and 73 for further information. A partial listing of motor carriers and their telephone numbers is provided as follows: Western Mainland U.S.A. - pages 52 and 53; Hawaii - pages 59 and 60, Alaska - pages 62, 63 and 65.

Independent Truckers/Owner-Operators/Backhaulers

The second type of motor carrier is the owner-operator or independent trucker, sometimes referred to as the "backhauler". They are a small "niche" in the transportation market place where individuals have found the freedom to act as entrepreneurs. Canadian and American legislation allows these owner-operators to lease their equipment and their driving services to shippers and common carriers who are increasingly using them to keep costs down. If you have sufficient volumes, you can make an exclusive contractual arrangement with an owner-operator to act in effect as a private carrier, or by seeking out common carriers who make extensive use of owner-operators you can obtain lower rates than those offered by carriers who operate employee driven fleets.

As pointed out by current B.C. and Alberta exporters to the U.S. (see pages 6 to 9), a certain attraction exists for using the independent trucker who, seeking return southbound loads, will sometimes haul goods for as little as the cost of the fuel. Although such truckers are primarily interested in full loads in the neighbourhood of 40,000 lb. some can be induced to offer special deals for loads as low as 10,000 lb. Again, fruit and vegetable haulers from California and Texas abound. However, because the address and the location of these operations amounts to the cab of their truck, it is impossible to trace the goods in transit, or even to locate the individual to press a claim if damage or non-receipt of the goods is reported by the consignee. Attractive backhaul rates can be obtained by contacting authorized licensed motor carriers and intermediaries . The importance of backhaul in securing attractive rates applies to every type of transportation arrangement.

Direct use of these independent truckers usually presumes that the shipper has truckload quantities to be moved. **Therefore, the best way for LTL shippers to use such operators is to deal through a freight forwarder, transportation broker, or other intermediary with whom many owner-operators have established a track record and who are willing to accept legal responsibility for the shipment.** In order to access the services of private truckers/backhaulers you can refer to the information sources listed on pages 77 and 78. In addition, a partial listing of transportation brokers, shippers' agents, shippers' associations and freight forwarders who may be able to identify independent truckers/backhaulers to carry your truckload traffic is provided on pages 54 to 57.

Rail Carload

Rail carload movements are most appropriate for large volume shippers with their own railroad siding and with large volumes of goods to be transported. A minimum rail shipment size is in the order of 40,000 lb. However, rail transportation becomes feasible when a shipper can fill a car to capacity (over 100,000 lb.) Goods which are suitable for rail transport are those which can be stowed compactly, wedged or tied down such as carpets, appliances, furniture and similar commodities (knocked down or folded flat), steel products, newsprint, paper, etc. Cargo which is susceptible to damage from knocking or jarring (such as computers and other sensitive equipment) is not usually shipped by rail because of frequent coupling and uncoupling of cars, humping, and shunting.

Unlike in Canada where in most cases one of our two transcontinental railways can haul your goods from origin to destination, shipping to most of the Western United States requires the use of at least two connecting rail carriers. This situation contributes to the relative slowness of the mode; transit time for carload shipments from British Columbia and Alberta to the more distant Southwestern and Western U.S. markets can reach 12 to 15 days or more. In these circumstances, rail would be most suitable where product value per pound is not exceptionally high and when expedited delivery is not of great importance.

With rail deregulation in the United States, the U.S. based carriers compete aggressively with each other and with motor carriers for traffic. A new era of competition brought about by the Staggers Rail Act of 1980 has produced a number of innovative rail pricing concepts, perhaps the most important of which is the confidential contract with an individual railway which can provide rebates to the shipper electing to use that particular railway. To date rail deregulation applies to agricultural commodities (e.g., fruits and vegetables), trailers on flat car (TOFC), containers on flat cars (COFC) and goods moving in box cars.

Current Canadian law does not permit Canadian railways to provide such rebates (although this matter may be resolved in the near future); therefore large volume Canadian shippers wishing to take advantage of confidential contracts may do so by approaching the U.S. railway which will be involved in the move. These carriers will quote a through rate for the Canada to U.S. move and arrange for the sharing of the revenue between themselves and the originating Canadian rail carrier. Therefore, if you are a large carload shipper and you know which railways would be involved in the movement of your goods, you would do well to obtain through rate quotes from each participating carrier and pick the lowest. **A general rule to remember, however, is that the more railways are involved, the higher the through rate will be and the longer will be the transit time.** In deciding whether to ship by rail, you should consult railway maps (See Section VII for further information) to determine if there is a choice of railways or routings serving the city to which you wish to ship.

In general, for single carload shipments, carload rates are competitive with motor carrier truckload rates and intermodal trailerload rates. **The railways are willing to be quite flexible in constructing rates which will satisfy the needs of volume shippers. In order to negotiate with rail carriers you should be prepared to provide specific details as to the nature and volume of the goods to be shipped.** Major savings in rail rates start to occur when you can offer the railways five to ten cars a week. **As the above implies, and because Canadian and American railways stopped carrying LCL (Less than Car Load) traffic years ago, rail transportation is not an alternative for small shippers.**

Prospective rail shippers should be aware that Canadian railways are willing to discuss rates for southbound shipments and, if possible, make modifications. It should be recognized, however, that Canadian railways can only adjust the domestic portion of international rates and that adjustments for the U.S. portion would have to come from American carriers. If the shipper, after negotiation with the carrier, is dissatisfied with the results, he may wish to pursue this matter through the Canadian Transport Commission (CTC), which currently has jurisdiction over railway freight rates. The CTC has an informal procedure for assisting shippers questioning freight rates, which includes the examination of disputed rates and a railway/shipper mediation service, if both parties are agreeable.

B.C. and Alberta office locations of Canada's two major railways are listed in Section VI (page 54).

Intermodal

Intermodal transportation, also called "piggyback", "trailer-on-flatcar" (TOFC) or "container-on-flatcar" (COFC), is a unique marriage of the rail and highway modes. The concept involves loading a highway trailer for shipment to a railroad piggyback ramp (terminal) for movement beyond by rail. For large volume users, TOFC features the lower cost of rail service combined with the convenience of door-to-door shipping available in motor carriage.

Some advantages of TOFC are:

1) all rail carriers provide shipment tracing services for full trailerloads;

2) through bills of lading from origin to distribution are provided;

3) Canadian shippers located near border points can explore possible advantages of this mode's low volume rates through moving their goods to U.S. railroad ramps, thus minimizing the number of carriers involved;

4) the rate structure is very simple - all rates are FAK (Freight All Kinds) with no differentiation by commodity; and,

5) deregulation has not affected rail carriers' liability for goods assigned to them by shippers (U.S. carriers must pay damage costs amounting to the full product value unless released rates are utilized).

However, shippers should be aware of certain disadvantages:

1) rail carriers indicate that they offer only 40-foot and 45-foot dry (non-refrigerated) vans for international movements. Additionally, Canadian railways indicate that they will not (as a rule) load their own equipment to U.S. points;

2) rates quoted by all carriers are per trailer regardless of commodity load or whether the trailer is loaded to capacity. Therefore, a small shipper would be at a disadvantage if he tendered an LTL shipment through rail carriers;

3) reduced (volume) rates are available only at very high volumes (e.g., greater than 100 trailers per month);

4) many rail carriers do not sell door-to-door services. They rely on middlemen such as shippers' agents to perform "retail" services such as arranging pickup and delivery, providing equipment, tracing shipments, soliciting traffic and consolidating loads;

5) because TOFC trailers move on trains they are subject to greater loss and damage potential (compared to motor carrier movements) due to humping, shunting and switching; and,

6) service is relatively slow, compared to direct haul motor carrier and expedited services. From western Canadian origins to southwestern U.S. destinations, shipping time would range from five to seven days or more depending on the number of railways involved.

Despite the fact that TOFC has been deregulated in the U.S. the small western Canadian exporter wishing to use this mode will find it relatively unattractive when compared with other alternatives. As third party shippers' agents and forwarders can obtain volume discounts and as they can also provide specialized equipment, and further, because other services (such as customs brokerage services) are often available from such organizations, these intermediaries represent a more appropriate choice for Canadian shippers wishing to utilize the intermodal option. Further information on rail carriers and intermediaries offering intermodal services is provided on pages 54 to 57.

MARINE

Among all the modes, water transportation is the least expensive and the slowest. The inland waterway system nearest to British Columbia and Alberta is the Columbia/Snake River System which runs eastward from Portland, Oregon to Lewiston, Idaho. This system is attractive to bulk commodity producers (grain, forestry products) located in southern Washington, northern Oregon and Idaho wishing to transport their goods at low marine rates to Portland for overseas ocean export transport. Bulk commodity shippers in British Columbia and Alberta will find it more practical from a cost and speed point of view to transport their large scale overseas exports by rail or truck to export position in Vancouver or Seattle.

Moreover, marine transportation is an important option for shippers wishing to export to Hawaii and Alaska. The several services which are available are discussed in detail in Section III.B (Shipments to Hawaii) and Section III.C (Shipments to Alaska).

E. USING MIDDLEMEN

Freight Forwarders

Freight forwarders act as intermediaries between shippers and carriers, arranging both domestic and international transportation. Forwarders' services range from the simple booking of transportation space to organizing and coordinating the movement of goods from door-to-door on behalf of their clients. Freight forwarders knowledgeable in all transportation modes can advise on the selection of mode best suited to your needs (speed, rates, etc.). For this reason, companies wishing to export to a new market for the first time could use a forwarder until they become familiar enough with the new market to handle matters themselves.

Forwarders derive much of their income from carriers (in particular, airlines) and charge shippers nominal fees for ancillary services. You can therefore tap into a freight forwarder's knowledge of transportation to markets which are unfamiliar to you for a dollar cost similar to what you would pay if you arranged the door-to-door export movement yourself, but at a much reduced personal time cost on your part.

The freight forwarder can act as an agent by arranging for the reservation of cargo space, the execution of handling and packaging requirements, and the loading/unloading of the goods for further transportation to/from central points as well as passage and transit operations. The freight forwarder can present and prepare the necessary shipping documents and arrange for appropriate insurance coverage (if requested), all without necessarily handling the goods himself. In addition, some freight forwarders will act as indirect carriers by pooling or consolidating small shipments into carload, truckload, or containerload lots, transporting them (using all types of carriers and sometimes including their own trucks) and delivering them to the ultimate consignee at a single rate for the through door-to-door movement. This rate is generally lower than the rate a small shipper could obtain if he dealt with the carrier directly. Air and surface forwarders also buy cargo space in large lots at wholesale prices from carriers and sell it at retail prices in small lots to shippers. The service and rates associated with consolidated shipments can be excellent if the forwarder controls large volumes in traffic lanes where his services are strong.

Rates are charged in accordance with tariffs that apply to the commodities being shipped depending on which mode the shipper and forwarder decide is most appropriate. For example, if speedy service is required, the relatively expensive air mode will be used; if cost is much more important than speed, a pool-car or piggyback consolidation may be selected. Therefore, while a shipper can avail himself of advantages through forwarders' bargaining power with a particular mode, the magnitude of rate relationships will still apply. **Furthermore, forwarders' speed of service and delivery reliablity are directly dependent on the type of mode/carrier they select on your behalf.**

It is also noted that independent U.S. truckers (owner-operators) often contact freight forwarders to seek backhauls. Some of these independents have contractual lease arrangements with forwarders in British Columbia and Alberta. These types of arrangements can enhance the attractiveness of rates that forwarders can offer to shippers of all sizes. However, not all forwarders can offer a full variety of arrangements so it is best to obtain firm rate quotes from several of them.

In addition to acting as "for hire" transportation managers, most freight forwarders offer export documentation, customs house brokerage, insurance, and many other services for a fee. Before finalizing an arrangement with any forwarder, you should specify all services you will require, check to see if special insurance arrangements are necessary, and ask if there are any other services the forwarder offers which will be to your advantage. Once you and the forwarder have arrived at a mutual understanding of the services to be performed, obtain a firm all-inclusive rate quote.

Freight forwarders claiming to offer service between British Columbia/Alberta and the U.S. are legion. It is therefore wise to survey several of them to determine which have strengths (and therefore better rates and services) between certain city pairs. For example, some forwarders specialize in overseas movements but dabble only in transborder movements, others are almost strictly air forwarders acting as "travel agents" for air freight, while still others coordinate extensive movements to particular markets on behalf of several clients and have available truck capacity to offer (often using independent backhaulers.) Such firms may have better rates to offer than those which make use only of regular common carriers.

In order to contact several of the many freight forwarders offering service between British Columbia/Alberta and the U.S., see pages 54 to 56 with regard to Western Mainland U.S.A, 60 and 61 in reference to Hawaii and 63 and 64 concerning Alaska or refer to the yellow pages of your telephone directory or any of the general multimodal transportation guides on pages 70 and 71.

Transportation Brokers

A transportation broker (not to be confused with a customs house broker) is a company that takes a shipper's freight and finds a carrier to haul it. A broker can act as a shipper, carrier, domestic and/or a foreign customs broker/forwarder, member of a shippers' association and/or co-broker. A dominant use of a broker's service is to find loads for owner-operators, independent or private truckers seeking backhauls from Canada to the U.S.. A transportation broker has been described as:

1) a freight forwarder without cargo liability and without tariffs;

2) shipper's agent that handles more than just piggyback freight; and,

3) a transportation consultant that secures the best transportation package available for shipper clients and lines up freight for carrier clients.

The recent easing or elimination of many regulatory restrictions on freight transportation in the U.S. has created new business opportunities for entrepreneurs holding themselves out as brokers. In some cases, broker subsidiaries of motor carriers and shippers have been established. Such licensed brokers help carriers and private fleet operators respectively, to obtain backhauls and to better utilize their equipment. A broker can co-broker with other brokers to put together any required combination of carrier/shipper arrangements. Brokers are strictly an American entity although a number of them operating in Washington State and a few operating under the name of broker in the greater Vancouver area offer transborder services. The use of a broker by a Western Canadian shipper would normally involve full load shipments to the U.S.. However, consolidation services may be provided.

In the United States any applicant found by the Interstate Commerce Commission to be "fit, willing and able" qualifies for a broker's license. Since all broker licenses cover the transportation of general commodities throughout all 50 states, a contract carrier's (including private carriers and independent truckers) permit to serve a broker fits in under the broker's authority and enables such carriers to handle any traffic that a broker tenders to them. Under these generally unrestricted conditions, brokers are beginning to number in the thousands and shippers would do well to seek references before making any commitments.

An important distinction between transportation brokers and other intermediaries and carriers is that, at least at present, brokers bear no liability for damage to or loss of freight. Finally, because the broker is an intermediary, their speed of transportation is as good as the type of mode used.

Further information on transportation brokers is available from the sources listed on page 76 of this report. A listing of transportation brokers participating in the B.C./Alberta market is found on page 56.

Shippers' Agents

Shippers' agents are another form of intermediary between shippers and carriers. Although shippers' agents will use any mode to satisfy a client's needs, their main area of activity is in intermodal transportation. Many are effectively retail extensions of the railroads, offering single trailer rates to two individual shippers then shipping two trailers on a railway flatcar. In fact, some rail carriers report that the majority of their TOFC traffic is generated by shippers' agents who in effect can be thought of as freight travel agents for shippers. Shippers' agents can obtain lower rates based on high traffic volumes through contracts with railways and pass these on to shippers.

Shippers' agent services include:

1) arranging door-to-door service for TOFC customers;

2) providing special equipment (e.g., refrigerated trailers);

3) providing complete door-to-door service from major distribution/consolidation points to major distribution centres;

4) paying the carrier involved directly and presenting one invoice to the shipper;

5) contacting customs to verify the documents required for exporting goods; and,

6) consolidating LTL and LCL lots into full load shipments.

The main advantage of dealing with shippers' agents for intermodal services is that it can be faster and cheaper than negotiating with a railway. Deregulation of TOFC traffic in the U.S. means that these large volume intermediaries have been able to negotiate excellent contract rates with American railroads. Further, as important rail users, shippers' agents keep themselves fully informed on ever-changing U.S. railway rates and service offerings, thereby eliminating a lot of complex "homework" for shippers trying to muddle through options in the deregulated U.S. rail environment.

The shippers' agent negotiates volume rates for trailers he expects to ship which enables him to quote a firm price to the shipper at the outset. Discounts which shippers' agents can negotiate range from 10 to 30 per cent on trailer rates normally quoted by intermodal carriers. In this fashion, the agent can still make a profit while providing rates that are better than shippers can obtain themselves. Rates quoted are FAK without commodity distinctions. Each shippers' agent has strengths and therefore better rates and services in certain traffic lanes.

Several shippers' agents offering service between British Columbia/Alberta and the Western Mainland United States are listed on pages 56 and 57. A shippers' agent providing service between Western Canada and Alaska is listed on page 64. More information on these intermediaries is available from sources provided on page 70.

Shippers' Associations/Co-ops

Another type of intermediary, shippers' associations or co-ops are non-profit organizations which consolidate freight for their members to take advantage of volume and multiple-trailerload or multiple-carload rates. As non-profit organizations they are not subject to ICC regulation and can offer substantial benefits to shippers. Discounts of 10 to 15 per cent below the normal rates of the various modes are offered to members who pay a yearly fee. However, the shipper and receivers must be located close to the consolidation/distribution points served by the association.

Once a shipper becomes a member of the association he may be required to spend time on the board of directors. Also, there is the disadvantage to the shipper of paying, through membership fees, for services that he may not use (such as LTL consolidation). Also, if the association goes out of business, members of that association may be liable for the co-op's debts even if the shipper has paid the co-op for all services rendered to him.

Some shippers' associations have established terminals at selected points of origin and destination. Once small shipments have been received at the terminal point of origin, they are consolidated into carloads and transported to the destination terminal point.

The member is charged the carload or truckload rate (as opposed to LTL rates) on his shipments plus the cost of handling. At the end of the year, the profit or loss is shared by the members in proportion to the volume of shipments transported through the association.

Shippers' associations also enter into contracts with railways which results in a measure of rate stability for members in the complex and changing deregulated American transport environment. Shippers' associations also provide information on export/import documentation and will assist members with any claim problems they may have.

Although shippers' associations are well established in the United States, the few that exist in Canada are involved primarily in domestic transportation. However, a number of Canadian firms are members of American based associations or co-ops.

At present, only one (U.S. based) shippers' association actively participates in the British Columbia/Alberta - United States market. This firm's particulars are noted on page 57. Sources of information on shippers' associations are provided on pages 76 and 77. You should also be aware, if you are a member of any large industry association (such as the Canadian Manufacturers Association), that transportation advisory services may be available from association staff.

F. ORGANIZING YOUR OWN TRANSPORTATION

Private Carriage

Deciding on whether to "make" your own transportation rather than "buying" it depends on several factors including:

1) the need for highly specialized equipment not generally or economically available from carriers or transportation intermediaries;

2) the objective of improving speed, quality and reliability of service to customers;

3) the possibility of reducing transportation costs; and,

4) the advertising value of having your own trucks on the road.

If you are not already operating your own fleet and are considering purchasing a truck (or trucks) for movements to the Western United States, you should undertake a cost-benefit analysis similar to that which would be necessary if you were considering purchasing a fleet for shipment from Western Canada to other parts of Canada. Such an analysis should start by considering only major movements where conditions exist which are conducive to a successful private trucking operation such as:

1) concentration of traffic in relatively few city pairs;

2) high traffic volume in those cities;

3) availability of return loads for many city pairs;

4) estimated empty mileage for the planned private carriage operation no greater than 30 per cent;

5) where multiple pick-up and delivery movements with a substantial portion of "minimum charge" shipments are necessary; and,

6) where there are multiple deliveries, perhaps combined with pick-ups of less than truckload lots in a territory where a truck can operate over a somewhat circular route finishing near the dispatch point. [7]

Information which will help you to conduct a detailed cost study is available from sources listed on pages 77 and 78 of this report. However, it is fair to say that unless you are already in the business of transporting goods in your own vehicles

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7. Canadian Institute of Traffic and Transportation, Canadian Traffic and Transportation Vol. 1, Toronto, Ontario, 1981.

within Canada, it is not likely that purchasing a truck for hauling goods to the more distant U.S. market destinations would be economic under any circumstances. Even when a Canadian firm is operating its own private carriage within Canada,extending that operation into the more distant of the Western U.S. markets is a significantly costly process that should only be undertaken under unique circumstances such as those listed above.

Unless common carrier service is so poor, rates so high and/or needs for specialized equipment very great, it is doubtful that the small to medium sized shipper will find any economics in private carriage. One author suggests that shippers explore every for-hire alternative before embarking on the private carriage option.[8]

A major concern relating to the use of private carriage across the border is the large amount of paperwork associated with such movements. Each state and the U.S. federal government require varying fees, licenses or permits and most require registrations and licensing within each state that the motor carrier crosses, except in cases where states or provinces have reciprocity agreements. The province of Alberta has reciprocity with Alaska and all 13 of the Western United States (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington and Wyoming). British Columbia has reciprocity with all of the above except Oklahoma and Texas.

With regard to size and weight limitations, the U.S. Surface Transportation Act of 1982 requires all states to accept federally approved weight, width and length standards for operations over the U.S. Interstate Highway System. The law allows at least a 48-foot tractor-semitrailer or a 28-foot semitrailer or full trailer in a twin trailer combination. Trailers can be no wider than 102 inches. Although some states allow slightly greater weights, in most states the maximum allowable gross vehicle weight is 80,000 lb.

Information on fees, permits and other documentation is available from the sources listed on pages 77 and 78. The addresses and phone numbers of the B.C. and Alberta motor transport regulatory boards which can assist you with your private fleet enquiries are listed on pages 79 and 80.

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8. Colin Barrett, The Practical Handbook of Private Trucking, The Traffic Service Corporation, Washington D.C., 1983, p.37.

SECTION III - TRANSPORTATION AND SERVICE COST COMPARISONS

For many of the modal alternatives discussed in Section II it is impossible to obtain hypothetical rates without providing the transport organization or carrier with exact details of a specific movement. The ballpark figures and published tariffs obtained from some of the companies, however, can be used to illustrate how rates vary according to weight and distance shipped by mode for exports to the 13 Western states. Rate variations are described in tabular form for small quantity shipments and for single (or occasional) and large annual quantity full load shipments.

In cases where no data is provided for one of the above types of movement, it is because service is not available or is impractical - for example railways do not handle less than carload shipments - or because the rates of intermediaries will always vary depending on the shippers' requirements and the mode selected. Service companies and rate examples for the special cases of Hawaii and Alaska are individually provided. Rate data provided herein are not to be taken as firm rate quotations but as illustrations of relative costs provided by transportation suppliers surveyed in May 1985.

A. Shipments to the Mainland Western States

Small Shipment Rates

Organizations involved in small (less than 10,000 lb.) shipment service include airlines, air forwarders, motor carriers, and surface intermediaries (that is, freight forwarders, brokers, shippers' associations and shippers' agents). Rates for air transport (including air forwarders) are the highest among the modes. The best air freight rates are available from those air carriers offering direct flights between the shipper's city of origin and the market destination city. Therefore, if your service requirements as discussed in Section II indicate you should ship by air, you should review the schedules or otherwise determine which airlines offer direct service.

Although most airlines will quote rates between most city pairs, rates to cities not served directly by them will be very high. If attractive rates are offered to a city not served by an airline, it is because that airline plans to truck your goods to one of its terminals from which it offers direct service to the Western U.S. point in question or, it will act as an intermediary by turning your goods over to another airline offering direct service and earn a substantial commission for itself. If such is the case, you would be better off to seek out the air carrier offering the direct service yourself, or give the assignment to an air forwarder whose rates are similar to, but less complicated than, those of the airlines.

For many small shipments (e.g., 100 lb.) motor carrier rates are also very high but taper down quickly as shipment size increases. Transportation selection suggestions discussed in Section II indicate that a shipper offering less than full load shipments is better off to use an intermediary who can select from a wide range of options (including low-cost independent truckers seeking backhauls) to provide the best rate possible. **The importance of trying to increase shipment size and of "shopping" for rates cannot be overemphasized.**

EXAMPLES OF MOTOR CARRIER TARIFF BUREAU AND AIR CARGO RATES: SMALLER SHIPMENTS
(rates in $Cdn. per cwt.)

	Tariff Bureau Motor Carriers			Air Carriers		
	100 lbs.	1000 lbs.	10000 lbs.	100 lbs.	100 lbs.	10000 lbs.
Vancouver-Spokane (400 miles)	36.44 *	27.73	11.60	47.50	43.25	43.25
Calgary-Seattle (700 miles)	50.16 *	38.08	20.38	41.40	37.70	33.60
Vancouver-San Francisco (900 miles)	84.05 **	30.55	17.07	41.40	37.70	33.60
Kelowna-San Francisco (1100 miles)	84.05 **	30.55	17.07	50.80	45.40	41.70
Vancouver-Los Angeles or Edmonton-Denver (1300 miles)	60.60 ***	42.65	32.24	60.30	54.00	51.30
Vancouver/Calgary-Phoenix (1500 miles)	105.92 **	40.22	22.48	69.75	64.50	64.40
Vancouver-Tucson (1700 miles)	109.67 **	41.81	23.36	67.00	60.00	60.00
Prince Rupert-San Francisco (1900 miles)	84.05 **	30.55	17.07	NA	NA	NA
Prince Rupert-Los Angeles (2100 miles)	94.59 **	35.37	19.77	81.90	76.73	73.48
Vancouver-Houston (2400 miles)	112.77 **	52.85	34.59	93.60	87.70	84.00

CAUTION: THESE RATES ARE ARE NOT TO BE TAKEN AS FIRM QUOTES BUT ONLY AS ILLUSTRATIONS OF THEIR RELATIVE MAGNITUDE AS OF MAY, 1985. ILLUSTRATED RATE PROGRESSIONS APPLY WHEN AVERAGING CARRIERS IN A MODE BUT NOT NECESSARILY FOR INDIVIDUAL CARRIERS DUE TO COMPETITIVE CIRCUMSTANCES IN CERTAIN MARKETS.

EXAMPLES OF RATES FOR SELECTED ORIGIN/DESTINATION PAIRS:
OCCASIONAL AND LARGE ANNUAL VOLUME FULL LOADS
(rates in $Cdn. per cwt.)

	Motor Carrier (tariff bureau membership) Occasional Full Load	+ Motor Carrier (tariff bureau member) Large Volume Full Load (avg. 15% discount)	Motor Carrier (non-member to tariff bureau) Occasional Full Load	Transportation Broker (backhauler) Occasional Full Load	++ Rail Large Volume Full Load
Vancouver-Spokane (400 miles)	7.10 *	6.03	1.92	2.23	2.50
Calgary-Seattle (700 miles)	12.52 *	10.64	3.43	3.25	5.84
Vancouver-San Francisco (900 miles)	11.68 **	9.93	3.80	3.00	5.83
Kelowna-San Francisco (1100 miles)	11.68 **	9.93	4.86	3.50	6.87
Vancouver-Los Angeles or Edmonton-Denver (1300 miles)	13.53 **	11.50	5.65	5.48	7.26 9.00
Vancouver/Calgary-Phoenix (1500 miles)	15.37 **	13.06	6.06	5.82	9.15
Vancouver-Tucson (1700 miles)	15.97 **	13.57	6.51	5.99	9.54
Prince Rupert-San Francisco (1900 miles)	11.68 **	9.93	6.60	4.75	NA
Prince Rupert-Los Angeles (2100 miles)	13.53 **	11.50	NA	5.50	NA
Vancouver-Houston (2400 miles)	25.66 **	21.81	9.70	6.11	13.47

CAUTION: THESE RATES ARE ARE NOT TO BE TAKEN AS FIRM QUOTES BUT ONLY AS ILLUSTRATIONS OF THEIR RELATIVE MAGNITUDE AS OF MAY, 1985. ILLUSTRATED RATE PROGRESSIONS APPLY WHEN AVERAGING CARRIERS IN A MODE BUT NOT NECESSARILY FOR INDIVIDUAL CARRIERS DUE TO COMPETITIVE CIRCUMSTANCES IN CERTAIN MARKETS.

* Pacific Inland Tariff Bureau
** Rocky Mountain Tariff Bureau

+ F.A.K. rates were not available. Quoted rates are for STCC class-100.
++ F.A.K. rates were not available. Quoted rates are for commodity class "office machinery", class-65.

Occasional and Large Volume Full Load Rates

As discussed in Section II, more attractive rates are available to shippers who are able to tender full truck, car or container load shipments to transportation companies. Rates improve further for shippers offering substantial regular volumes. For occasional full loads, one will find published class rates for motor carrier truckload, rail carload and intermodal trailerload to be essentially identical depending on the carrier and the commodity. Intermodal shippers' agents' rates would be about 10 per cent lower. Shippers who can offer large volumes (e.g., one hundred 40,000 lb. loads of a specific commodity to a specific destination per year) should be able to receive discounts off published rates in the neighbourhood of 25 per cent off class rates directly from carriers.

Various intermediaries such as forwarders, transportation brokers and shippers' associations making regular use of independent truckers (e.g., fruit and vegetable backhaulers to California and Texas) and who can obtain large volume discounts from all types of carriers, can offer rates averaging 25 per cent lower than common carrier rates. Finally, a shipper confident enough to make his own arrangements with an independent truck owner-operator might achieve savings of 50 per cent or more off common carrier class rates. The attraction of these various rates should be balanced against the service, speed, legal and liability considerations discussed in Section II.

Variations in Rate According to Commodity Class

The rate examples provided are based on shipments of freight all kinds. However, motor common carriers, railways, marine carriers and airlines often differentiate rates according to the commodity carried; the other transportation organizations (intermediaries) usually make no differentiation as to commodity. The following factors may be multiplied against rates shown for carriers which base rates on commodity classifications in order to estimate the rate you might expect to pay.

Sample Commodity Group		Rate Multiplication Factors
1.	Freight All Kinds	1.00
2.	Industrial Machinery and Equipment (drilling, excavating, etc.)	0.85
3.	Manufactured Products (e.g., office machinery)	1.00
4.	Wood Products (e.g., dressed lumber)	0.60
5.	Fabricated Wood Products (e.g., doors)	0.90
6.	Aircraft and Auto Parts	1.00
7.	Beverages (e.g., whiskey and wine)	1.00

8.	Perishable/Refrigerated Products (e.g., fresh/frozen fish, chilled meat, fruit...)	1.00
9.	Unprocessed Agricultural Products (e.g., baled hay and peat moss)	0.60
10.	Petroleum and Coal Products	0.70
11.	Chemical Fertilizer	0.65
12.	Fabricated Metal Products	1.25
13.	Electrical and Electronic Products	1.10

Cost of Private Trucking

The only person capable of determining the cost of shipping your products in your own trucks is yourself. The cost per mile of private carriage will depend on the number, size, age, capital cost, quality, and make of tractors and trailers in the fleet, annual mileage, annual payload, load factor and other considerations. These factors will directly affect your labour (driver), fuel, maintenance, depreciation and other costs. Once you have determined the per mile operating cost for a particular unit in your fleet, you can translate that cost into a private rate per hundred pounds and compare it to the rate examples given herein. Remember that in using your private fleet you will be facing a total "trip" cost which will be practically the same whether you are carrying 4,000 or 40,000 lb.

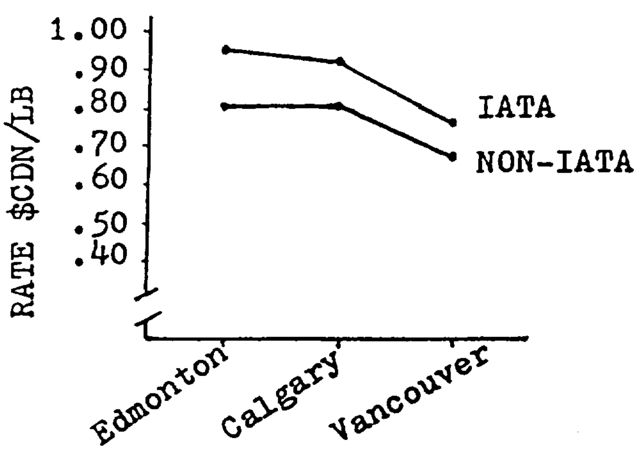
B. SHIPMENTS TO HAWAII

The two means of shipping to Hawaii are air transport and a combination of surface transportation to a west coast U.S. port such as Seattle and sea freight beyond.

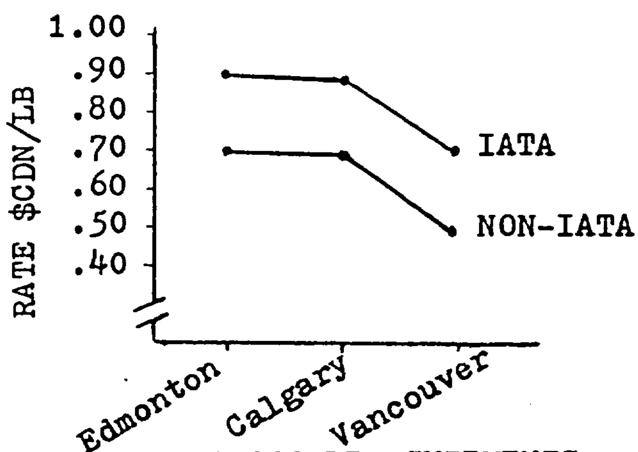
Air Cargo

As in the case of air shipments to mainland Western U.S. points in Section II.D, air service to Hawaii is provided directly from Vancouver, Calgary and Edmonton to Honolulu or, indirectly by two carriers interlining air freight at a common point on their routes such as Seattle or Los Angeles. Basically, two types of air cargo rates are available - IATA rates determined by the International Air Transport Association and charged by IATA member airlines and non-IATA rates offered by independent airlines. Examples of rates from Vancouver, Edmonton and Calgary to Honolulu for different weights are as follows:

IATA AND NON-IATA AIR CARGO BULK RATES FROM EDMONTON, CALGARY AND VANCOUVER TO HONOLULU
in Canadian dollars per pound
General Commodity Rates (Freight all Kinds)



100 LB. SHIPMENTS



1,000 LB. SHIPMENTS

In addition to the availability of general commodity bulk rates for shipment of loose cartons as noted above, many carriers (depending on the type of weight used) also offer pallet rates, special container (unit load device) rates, and specific commodity rates. In some cases, attractive contract rates may be available to those shippers able to commit significant regular volumes. In order to determine whether air transport is best suited to your needs in shipping to Hawaii you should review the notes provided on air transport in Section II.D. Air carriers currently serving Hawaii are listed on page 59.

Surface/Ocean Combinations

All other alternatives for shipping to Hawaii involve ocean transport which accounts for the great majority of movements to this destination. Because there is no ocean liner freight service from Vancouver to Hawaii, access to ocean transport services is gained through U.S. ports - Seattle, Portland, Oakland, Long Beach.

Two basic ocean transport services are in place. One involves the use of container ships capable of making the voyage in 5 1/2 days. The other uses tug and barge which can take three times as long but is significantly less expensive. Again, you will have to evaluate your overall distribution costs (inventory, interest on goods in transit, etc.) rather than just freight rates before making the choice. In obtaining quotes you (or your forwarder) should make sure the rate offered includes bunker and currency surcharges, arbitraries, heavy lift and extra length surcharges, and wharfage to avoid any surprises when the time comes to pay the bill. Finally, like any other type of carrier, marine lines serving Hawaii are willing to negotiate rates with shippers guaranteeing significant volumes.

None of the major lines serving Hawaii offer door-to-door transportation rates for shippers located much more than 30 miles outside the port area. Therefore British Columbia and Alberta firms wishing to ship to Hawaii will be responsible for arranging and paying for surface transportation to the U.S. ports of their choice. (See previous subsections of this report for details on selecting appropriate surface transportation.) It is noted that some full service motor carriers (see listings on pages 59 and 60) will arrange for the pick-up and delivery of full and part load shipments to Hawaii and provide a through bill of lading including ocean transport charges.

Alternatively several freight forwarders are capable of organizing the door-to-door movement on a through bill of lading on your behalf. Forwarders specializing in movements to Hawaii are predominantly California based. However, because most of the lines also call at Portland and Seattle, forwarders and consolidation services are available there as well.

As concerns the cost of ocean transport to Hawaii, the shipper's choice is between the speedy but expensive container ship and the slower but cheaper tug and barge system. Of course it is necessary to add surface transportation from British Columbia or Alberta to (for example) Seattle. Both types of marine carriers offer specific commodity full container rates which vary along the lines shown in the table of commodity group rate multiplication factors in Section III.A dealing with rates to the 13 Western mainland states. Again, the proper description of goods for classification purposes is very important. LCL shippers should contact a freight forwarder/consolidator or full service motor carrier for small shipments which would move under general commodity rates.

For purposes of illustration, consider a Calgary manufacturer of office machinery wishing to ship a single (one time only) 40,000 lb. container to Honolulu. Several options are available.

FULL LOAD SHIPMENT
to Hawaii in Canadian dollars per hundred pounds

	CONTAINER SHIP	TUG AND BARGE
Basic Marine Transport From Seattle to Honolulu	$ 8.36	$ 7.22
Add Surface Transportation to Seattle		
Option 1 - Tariff Bureau Motor Carrier	11.70	11.70
Option 1 - TOTAL	20.06	18.92
Option 2 - Rail Carload (COFC)	5.84	5.84
Option 2 - TOTAL	14.20	13.06
Option 3 - Non-Tariff Bureau Motor Carrier	3.36	3.36
Option 3 - TOTAL	11.72	10.58
Option 4 - Backhauler/Broker	3.25	3.25
Option 4 - TOTAL	11.61	10.47

In calculating the total cost of the movement, the shipper should recall two important factors:

1) wharfage charges ranging from $50 to $100 per container will be added and arbitraries and bunker and currency charges may not be included in the basic marine transportation rate

2) marine carriers are prepared to review shippers' applications to establish freight rates on the basis of properly described goods and committed volumes.

A listing of ocean carriers (page 61), motor carriers (pages 59 and 60) and intermediaries (pages 60 and 61) who can help you arrange transportation for exports to Hawaii is provided in Section VI.B.

C. SHIPMENTS TO ALASKA FROM BRITISH COLUMBIA AND ALBERTA

Alternatives for shipping from British Columbia and Alberta to Alaska include air transport, motor carrier and surface/sea combinations over Seattle, Tacoma or Prince Rupert.

Although goods move from northern British Columbia and Alberta via the Alaska Highway, the majority of freight moving into Alaska involves the use of coastal marine services. Furthermore, although rail/barge and truck/car ferry services operate from Prince Rupert to Alaska, the single most important point of Alaska-bound freight embarkation is Seattle.

Several major shipping lines offer roll-on/roll-off trailer (Roro) and container service which eliminates the need for dockside goods handling and facilitates the shipment of virtually any kind of product, including perishables requiring refrigerated or insulated vans or containers. Some of the companies will not accept small shipments but rather, only containers and trailers; others provide LTL consolidations at the ports of Seattle and Tacoma (or in some cases Portland) to Alaska; the shipper is responsible for arranging and paying surface freight charges to the port.

Moreover, you can contact any of several trucking companies (see pages 62 and 63) and freight forwarders (see pages 63 and 64) who provide door-to-door service from points in Alberta and British Columbia to Alaska, hauling the goods over the road to Seattle then on the ships of one of the Seattle-based lines or the CN Aqua-Train at Prince Rupert at a complete through rate. Such companies also provide LTL consolidation.

Ocean voyage time ranges from 5 1/2 days by Roro ship out of Tacoma (near Seattle) to Anchorage on one tug and barge operation out of Seattle. Unload time at the Port of Anchorage is 5 to 8 hours. Adding another day for truck transport from points in British Columbia and Alberta brings expected transit times to a range of 3 to 6 1/2 days depending on the marine line chosen. Shipments enroute to Fairbanks will take an extra day or more for inland truck transportation from Anchorage.

None of the major shipping lines routinely stop at Vancouver on their way up the west coast to Alaska. However if a Canadian shipper has a very large load to offer, it is possible to charter an entire barge and induce the line to call at Vancouver.

Forwarders, transportation brokers, a major shippers' association and other persons consulted in the preparation of this report identified the marine route through Seattle, Tacoma, or Portland as being the most frequently used for the shipment of Canadian goods to Alaska. There are several reasons for the popularity of this route the major one being that the shipping lines sailing to Alaska do not stop at Vancouver. While this necessitates the overland movement of goods from British Columbia and Alberta to these northwestern U.S. positions, this is generally not considered to be a great hindrance. Overland transportation to U.S. ports is relatively inexpensive; attractive backhaul truck rates can often be secured by Canadian shippers moving products southward into the U.S. as discussed earlier in this report.

Furthermore, shipping through U.S. ports to Alaska is a proven expedient system.

Cargo handling facilities at Seattle, Tacoma, and Portland are claimed to be excellent with facilities to handle virtually any kind of shipment (including the consolidation of LTL shipments). Even more important however, is the ease, speed and convenience of clearing customs on southbound truck or rail shipments to the U.S. Several U.S. brokers operating out of Vancouver note that if a problem should arise on clearing a Canadian shipment through U.S. customs, it is much preferred that the problem occur at the Canada/U.S. border nearby, rather than at Anchorage, Alaska.

Another alternative for routing goods from British Columbia and Alberta to Alaska involves the shipment by rail of goods from inland points to Prince Rupert where they are rolled onto a barge, shipped over water then rolled off onto railway tracks at Whittier, Alaska. Again, this marine service is less expensive than the direct overland trucking option but somewhat slower. Port to port transit time is four days onto which must be added vessel load/unload time and rail transportation to Prince Rupert. Provided a shipper is conscious of sailing schedules, it is possible to ship a carload from (for example) Edmonton to Alaska over a one week time frame. Sailings from Prince Rupert to Whittier are scheduled on ten day intervals. This alternative will only be attractive to those shippers who can offer carload lots weighing over 100,000 lb. as in the case with rail carload shipping discussed earlier. However, part load shippers can contact a freight forwarder offering pool car services to Alaska via Prince Rupert.

For those shippers wishing to haul goods to Alaska in their own trucks, a car/truck ferry service operates from Prince Rupert to Skagway. One way fares rather than rates are charged on a per vehicle basis depending on length. For example, the current one way fare from Prince Rupert to Skagway for a vehicle over 60 feet in length is $1,721 U.S. (approximately $2,350 Cdn.). Remember, you will have to add this fare onto your internal cost of trucking goods privately.

If you choose to use one of the marine services operating from Seattle, your goods can clear customs there, which may offer a convenience to shippers in the Vancouver area in the event problems arise. If the rail/barge or car/truck ferry options from Prince Rupert are chosen, the goods will clear customs at Skagway, Alaska.

The following table shows the magnitude of rates that shippers in Calgary, Edmonton, and Vancouver can expect to pay for shipments to Anchorage, Alaska under several alternative means of transport.

SAMPLE RATES TO ALASKA in Canadian dollars per 100 lb.
(General Commodities)

FROM:	Calgary	Edmonton	Vancouver
SMALL SHIPMENTS			
1. Air Cargo (100 lb.)	$ 71.00	$71.00	$ 71.00
Air Cargo (1,000 lb.)	57.00	57.00	62.00
2. Motor Carrier (100 lb.)	104.50	99.00	105.20
Motor Carrier (1,000 lb.)	46.20	41.28	46.50
FULL LOADS			
1. Rail/Sea via Prince Rupert (100,000 lb.)	11.75	10.92	8.35
2. Non Tariff Motor Carrier direct (over the road) (40,000 lb.)	18.37	16.79	NA*
3. Tug and barge from Seattle	11.88	11.88	11.88
+ truck to Seattle	12.52	13.70	4.19
= TOTAL	24.40	25.58	16.07
4. Tariff Bureau Motor Carrier (over the road) (40,000 lb.)	27.23	24.79	NA*
5. Container ship from Seattle	20.56	20.60	20.60
+ truck to Seattle (40,000 lb	12.52	13.70	4.19
= TOTAL	33.12	34.30	24.79

* Not Applicable

Although the most attractive full load alternative (from a rate point of view) is the rail/sea option over Prince Rupert, these rates are based on a minimum shipment of 100,000 lb. Shippers wishing to use this option who have smaller volumes (e.g., 40,000 lb. or less) should make alternative arrangements, possibly involving the use of a freight forwarder depending on the quantity of freight that can be offered.

Airlines (page 62), shippers' agents (page 64), motor carriers (pages 62 and 63), freight forwarders (pages 63 and 64) and marine shipping lines (page 64) offering transportation service from British Columbia and Alberta to Alaska are listed in Section VI.C.

D. SHIPPING FROM YUKON TO ALASKA

Transportation services for firms in Yukon wishing to export to Alaska are not abundantly available. At present, no motor common carriers are licensed to provide general commodity services from Yukon to Alaska directly; one operator is licensed to haul rough cut timber and logs. Indirect truck service is available by hauling goods from Yukon to Alberta from where they can be carried back to Alaska by a carrier authorized to operate between Alberta and Alaska. Alternatively, a shipper can haul goods in his own truck near the Alaska/Yukon border at Beaver Creek (approximately 284 miles or 457 kilometers from Whitehorse) where they can be turned over to a motor common carrier licensed to operate in Alaska if space is available on the truck passing through on a schedule. Because little or no freight moves in this manner, general published rate information is not available; you should therefore contact the organizations listed on page 65 to see what kind of arrangements can be made.

Apart from hauling goods directly to Alaskan markets in their own private trucks, Yukon shippers' only other alternative is to ship by air via Trans North Airways to Juneau, Alaska where the goods would be interlined with Alaska Airlines for furtherance to Anchorage, Fairbanks or other centres. Examples of through rates (in $Cdn.) from Whitehorse to Anchorage using this combination of airlines over Juneau are:

- $28.75 minimum charge
- $0.73 per pound for less than 75 pounds
- $0.56 per pound for 76 to 462 pounds

One alternative that Yukon shippers of documents and small packages have used is Canada Post. In general, however, existing traffic volumes have not given rise to attractive transport alternatives for the nominal current of exports from Yukon to Alaska. Perhaps changes in the regulatory environment and future increases in the amount of freight available to carriers and intermediaries will give rise to new efficient options in the future.

To more accurately assess rates and service in shipping from Yukon to Alaska you should speak to the contacts listed on page 65.

E. CONCLUDING REMARKS ON RATES

The rate information provided herein is intended to help you identify which transportation alternative is best suited to your particular circumstances, and to help you determine the total costs of selling in Western U.S., Hawaiian and Alaskan markets. (Other costs such as customs clearance duties, taxes, permits, etc. will also be involved.) **There is no substitute for obtaining firm rate quotes from transportation organizations, based on the specific details of your movements.**

Transportation deregulation in the United States has created a very competitive environment; in Canada, moves are afoot which will also substantially change the rules of the transportation game. **In these circumstances, the individual shipper will have to learn to become more of a rate negotiator than simply a rate taker.** As one author states: [9]

> When deregulation finally prevails, the time for "let's make a deal" will begin. Shippers will be in a position to offer all or part of their traffic to a common carrier in return for special rates and terms known only to the parties involved.

A number of shippers in British Columbia and Alberta have already been exposed to such negotiating situations in dealing with U.S. carriers for export movements. Indeed, a number of carriers and intermediaries consulted in the preparation of this report placed an important caveat on the rate information they supplied to the consultant; that is, rates provided are class or "paper" rates and the final rate paid for an actual movement will be the outcome of negotiation between a shipper and carrier based on specific information supplied by each. For a number of carriers, the negotiation process already governs all movements and eventually all carriers wishing to survive in the increasingly competitive environment will be willing to negotiate. In these circumstances shippers should always be prepared to negotiate rates and services based on their specific needs. **More and more carriers are becoming flexible in moving away from published rates and negotiating terms satisfactory to both the shipper and the carrier; it is your job to seek out those "flexible" carriers who can best meet your needs.** For assistance in the development of transportation negotiating skills, be on the lookout for occasional courses and seminars offered by consultants and educational institutions as advertised in transportation trade magazines and business newspapers.

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9. H. James Eckler "Negotiating Transportation Contracts", in Canadian Transportation and Distribution Management, Volume 88, No. 5, May, 1985.

SECTION IV - EXPORT DOCUMENTATION

Canadian Documentation

Canadian export documentation for shipments to the United States usually consists of an export declaration (B-13 Customs form) and, in certain cases, an export permit. Exporters can obtain B-13 Customs forms at any Canada Customs port. The Export Controls Division of the Department of External Affairs can provide additional information regarding export permit requirements (tel: (613)996-2387). See pages 68 and 69 for export/trade counselling and documentation assistance.

U.S. Documentation

In addition, U.S. Customs requires documentation generally consisting of a bill of lading or air waybill, a commercial invoice and packing list. **It is most important for Canadian exporters to ensure that the documentation presented to U.S. Customs is complete and accurate.** This not only results in prompt customs clearance but also avoids possible costly penalties. Further, since documentation required by U.S. Customs has reached such a degree of refinement today, it is advisable that exporters utilize the services of a U.S. customs house broker for preparing and submitting import entry documentation to the U.S. Customs Service, the posting of any necessary surety bonds and, generally arranging customs clearance of shipments on their arrival at the United States port of entry.

Bill of Lading or Air Waybill

A bill of lading names the mode, the carrier, conditions and destination. Each transportation mode has its own bill of lading and inherent characteristics. For example, a truck bill of lading is a receipt of goods for shipment and a contract of carriage. It is not a title of ownership. An air waybill is a contract of carriage once it has been signed by the shipper and the carrier or carrier's agent. It is also a proof of receipt of goods, a freight invoice, an insurance certificate, a customs declaration and an actual transport document. Like the bill of lading, it is not a title of ownership.

U.S. Customs will accept a shipping receipt only if they are satisfied that a bill of lading or air waybill was never issued. Entry and release of merchandise may be permitted without the bill of lading or air waybill if satisfactory bond is given in a sum equal to one and one-half times the invoice value of the merchandise. In certain circumstances, a carrier's certificate or duplicate bill of lading or air waybill is acceptable.

The Commercial Invoice

Although one copy is required by U.S. Customs, it is usual to forward at least two copies of the commercial invoice. One is for U.S. Customs' use at the port of entry, and one is for the customs house broker's files.

The commercial invoice requires such information as:

1. U.S. A. port of entry through which the merchandise is to be entered;

2. invoice numbers and date, place of shipment, and identifying the seller, purchaser, shipper and consignee;

3. the terms of sale, payment and discount;

4. a detailed description of the merchandise, including the quantities of each item packed, together with the marks and numbers of the packages;

5. the purchase price of each item and specification of the currency of settlement (e.g., - U.S.$);

6. if the merchandise is shipped otherwise than as a result of a purchase or an agreement to purchase, the value for each item, in the currency in which identical purchase transactions are usually made, or, in the absence of such value the settlement price that would have been received for such merchandise if sold in the ordinary course of trade and in the usual wholesale quantities in Canada;

7. all charges upon the merchandise itemized by name and amount including freight, insurance, commission, license fees, royalties, cases, containers, coverings and cost of packing. (Where such charges are not itemized on the invoices originally prepared, [e.g., a single all-inclusive landed price] they should be shown on an attachment to the invoice);

8. all rebates, drawbacks and bounties, (separately itemized) allowed upon the exportation of the merchandise;

9. the country of origin of the merchandise;

10. all goods or services furnished for the production of the merchandise (e.g., assists such as dies, moulds, tools, engineering work) not included in the invoice price; and,

11. name of responsible individual. (Each invoice of imported merchandise should identify by name a responsible employee of the exporter who has knowledge, or who can readily obtain knowledge, of the transaction.)

District directors of U.S. Customs are authorized to waive the presentation of properly completed commercial invoice if satisfied that the importer, because of conditions beyond his control, cannot furnish a complete and accurate invoice, or that the examination of merchandise, final determination of duties and collection of statistics can properly be made without such an invoice. In these cases, the importer must file the following documents:

1. any invoice(s) received from the seller or shipper;

2. a statement pointing out in exact detail any inaccuracies, or other defects in invoice(s);

3. a properly executed pro forma invoice; and,

4. any other information required for classification, appraisement or statistical purposes.

The Packing List

The packing list describes the contents as well as marks and numbers of each box, barrel or package in the shipment. The list includes weights, dimensions, quantities, items and model numbers. If the shipment is uniformly packed or, unitized, this can be stated on the invoice indicating the number of items in each container. The packing list is also used for customs inspections and to determine proper transportation stowage.

Entry at Customs

Goods may be entered for consumption or warehousing at the U.S. port of entry or they may be transported in bond to another port within the U.S.A. and entered there under the same conditions. Respective benefits should be weighed by the exporter.

SECTION V - WAREHOUSING AND DISTRIBUTION

At one time, warehousing was thought of only as a means of temporarily storing goods before shipping them to fill orders. Today, with most warehouses offering a multitude of services and the most modern of equipment available, many shippers find them invaluable as distribution centres.

Public warehousing in central market locations can be used by British Columbia and Alberta shippers wishing to penetrate U.S. markets in two important aspects - transportation consolidation and improved customer service. The consolidation of a number of small shipments destined to an individual shipper's many customers helps achieve overall savings in transportation and handling costs. As is evident from rate information presented in Section III, the rate for a single large shipment is lower than for numerous small shipments.

For example, if our hypothetical Calgary (see page 3) shipper must fill ten orders of 1,000 lb. each for customers in different locations in Arizona at similar times, he would do well to consolidate the ten 1,000 lb. shipments to each destination into a single 10,000 lb. shipment to a centrally located warehouse in Tucson or Phoenix from which the goods can be redistributed to the ten individual customers at a relatively low cartage cost. The following table dramatizes the cost savings achieved by our hypothetical Calgary shipper.

Cost Savings Through Freight Consolidation and Warehousing

DISTRIBUTION OF COST COMPONENT	BEFORE	AFTER
a) Shipment size	1,000 lb.	10,000 lb.
b) Number of shipments	10	1
c) Rate in $Cdn. per cwt.	40.22	22.48
d) Cost of transportation	4,022	2,248
e) Warehousing costs (minimum charge would apply) for less than 30 days	-	150
f) Cartage to 10 customers $50/trip	-	500
g) Interest charges (15 days 15% on $20,000 worth of goods	-	125
h) Total distribution cost	$4,022	$3,023

COST SAVINGS (i.e., difference) $999

In this example, the shipper would save nearly a quarter of his freight bill. Savings would be even more dramatic if truckload lots could be justified. In order to make the decision to consolidate shipments and redistribute through warehouses, the exporter should basically determine whether the total cost of warehouse handling and storage, interest on inventoried goods, redistribution drayage, plus the cost of a larger quantity or full truckload shipment is less than the LTL costs of shipping the equivalent quantity in many small shipments.

Making well-planned use of warehousing in one or more major western U.S. centres can also serve as a valuable marketing tool through improvements in customer service that can be brought about through the shortening of delivery times, and by avoiding or reducing out-of-stock situations. Customers will also appreciate the reduction in their own storage requirements and inventory carrying costs made possible by quick order processing and delivery by the shipper's warehouse/distribution centre. **Your company can gain an enhanced reputation, when customers begin to recognize it as a quick, reliable and cost-competitive supplier.**

Warehousing rates are based on storage, handling, and clerical charges. As is the case with transportation modes, rates are negotiable and vary with commodities stored, type of storage and other services required.

Another way in which you can achieve savings in the costs of shipping into western U.S. markets is through local warehousing in your own city. Generally speaking, provided you have the space available, it is cheapest to store goods under your roof and you would only use public warehousing when your own building is filled to capacity. However, certain public warehousemen offer consolidation and transportation/forwarder services which may yield significant benefits for the small but regular exporter. Once you have reported a confirmed sale to your warehouseman offering transport/forwarder services, he will pool your small shipment with that of other exporters having made sales to the same market area and hopefully offer you an attractive consolidation rate as discussed in the section of this report dealing with freight forwarders. Again any savings in line-haul freight and local cartage costs must be evaluated against warehousing and inventory costs.

Sources of further information on warehousing and related physical distribution matters are provided in Section VII. More information on the use of local public warehousing is available by contacting freight forwarders or warehousemen listed in the yellow pages of your telephone directory or the public warehouses listed on pages 57 and 58 of this report.

SECTION VI – SELECTED LISTINGS OF CARRIERS AND TRANSPORTATION SERVICE ORGANIZATIONS

A. WESTERN MAINLAND U.S.A.

A large number of Canadian and American carriers, transportation service organizations, and combinations thereof, serve Alberta/British Columbia-Western U.S./Hawaii/Alaska traffic lanes directly or indirectly. The continuing effects of U.S. deregulation and pressure to allow more American carriers to serve major Canadian cities directly means that new alternatives will steadily become available. Therefore the following partial listing of transportation companies reflects only a sample of possible options. You can keep up to date on new companies by obtaining any of the directories listed in Section VII of this directory, and by consulting with colleagues in your industry and community.

AIR CARRIERS

1) Alaska Air Lines	Anchorage	(907)243-3322
	Fairbanks	(907)452-1186
	Juneau	(907)789-7378
	Seattle	(206)433-3266
	Portland	(503)249-4765
	Spokane	(509)747-2255
2) Air Canada Cargo	Vancouver	(604)278-1262
	Edmonton	(403)955-8111
	Calgary	(403)276-0400
3) Air New Zealand	TOLL FREE	(800)663-9811
4) Canadian Pacific Airlines	Calgary	(403)276-0562
	Edmonton	(403)955-8465
	Vancouver	(604)278-2131
	Prince Rupert	(604)624-6161
	Fort Nelson	(604)774-6681
	Fort St. John	(604)785-4514
	Prince George	(604)963-9111
	Terrace	(604)635-6822
	Watson Lake	(403)536-7408
	Whitehorse	(403)668-7378
5) Continental Airlines	Calgary	(403)250-0810
	Edmonton	(403)955-6676
6) Northwest Orient	Anchorage	(907)266-5656
	Edmonton	(403)955-8204
	Fairbanks	(907)452-3274

	Portland	(503)249-4826	
	Seattle	(206)433-3747	
7) United Airlines	Vancouver	(604)276-5898	
		(604)278-9664	
	Calgary	(403)276-0562	(CP Air)
	Edmonton	(403)955-8465	(CP Air)
8) Wardair	Vancouver	(604)278-1262	
	Edmonton	(403)955-8111	
	Calgary	(403)276-0400	
9) Western Airlines	Vancouver	(604)278-6242	
	Edmonton	(403)955-8191	
	Calgary	(403)276-0700	

For more information on air carriers see Section VII, pages 71 and 72.

MOTOR CARRIERS

1) ABF Freight System Inc.	Seattle	(206)622-7991
2) Canadian Freightways Ltd.	Calgary	(403)243-7711
		(403)243-7701
	Edmonton	(403)453-3611
		(403)455-3181
	Coutts	(403)344-3967
	Vancouver	(604)420-2030
		(604)420-4044
	Prince Rupert	(604)624-3249
	Kamloops	(604)374-5544
	Watson Lake	(403)536-7300
3) CN Route	Vancouver	(604)665-4310
	Edmonton	(403)421-6246
	Calgary	(403)236-0045
4) CP Express and Transport	Calgary	(403)266-3108
	Edmonton	(403)426-3858
	Lethbridge	(403)382-2311
	Medicine Hat	(403)527-4455
	Red Deer	(403)346-5521
	Vancouver	(604)526-6728
	Seattle	(206)859-0191
	Victoria	(604)383-1144
	Campbell River	(604)286-6255
	Courtenay	(604)334-2466
	Duncan	(604)746-6711
	Nanaimo	(604)754-4421
	Port Alberni	(604)723-9461

	Kamloops	(604)372-3382
	Kelowna	(604)860-3386
	Castlegar	(604)365-3356
	Vernon	(604)545-0637
	Prince George	(604)563-3684
	Cranbrook	(604)426-2238
5) Direct Transportation Systems Ltd.	Vancouver	(604)299-6211
	Trail	(604)367-7537
	Kelowna	(604)763-2221
	Edmonton	(403)489-3301
	Calgary	(403)279-9441
6) H & R Transport Ltd.	Kelowna	(604)762-7000
	Lethbridge	(403)328-2935
7) Heyl Truck Lines Inc.	Akron, Iowa	(712)568-2451
	TOLL FREE	(800)527-5538
8) Kingsway Freightways Ltd.	Vancouver	(604)525-4304
	Edmonton	(403)474-0100
	Calgary	(403)236-1727
	Lethbridge and Coutts	(403)328-5521
	Red Deer	(403)343-1512
	Fort McMurray	(403)743-2255
	Grande Prairie	(403)532-5590
	Medicine Hat	(403)548-3958
9) The Waggoners Trucking	Vancouver	(604)273-3529
	Calgary	(403)279-5515
	Edmonton	(403)468-2714
10) Trans-Mutual Trucklines Ltd.	Calgary	(403)279-7587
11) Tri-Line Expressways	Vancouver	(604)941-9636
	Vernon	(604)545-7335
	Edmonton	(403)469-1371
	Calgary	(403)279-7070

For more information on motor carriers, consult the directories listed on pages 72 and 73.

RAILWAYS - CARLOAD AND INTERMODAL

1) CP RAIL	Vancouver	(604)665-2418
	Kamloops	(604)374-3631
	Calgary	(403)266-9525
	Edmonton	(403)428-6011
	Cranbrook	(604)489-6311
	Lethbridge	(403)329-7700
2) CN Rail	Vancouver	(604)665-4254
	Prince Rupert	(604)624-9151
	Prince George	(604)563-0511
	Kamloops	(604)372-7181
	Kelowna	(604)763-3120
	Calgary	(403)279-2560
	Edmonton	(403)421-6621

Refer to rail transport directories and multimodal transport guides for names and phone numbers of U.S. domiciled railways.

FREIGHT FORWARDERS

Many freight forwarders offer a variety of transportation export documentation and related services for British Columbia and Alberta shippers wishing to export to markets in the Western U. S., Hawaii, and Alaska. Not all forwarders offer all services to all markets; you will therefore have to shop to find the forwarder offering services to the markets in which you are interested. Following is a selected listing of forwarders participating in U.S. export markets.

1) Astra International Forwarding Ltd.	Vancouver	(604)270-4144
2) Bostrum-Warren Inc.	Vancouver	(604)276-2657
	Seattle	(206)622-9355
		(206)248-3150
	Portland	(503)223-9136
	Long Beach	(213)432-3943
3) Continental Air Freight (CAF)	Calgary	(403)276-9573
	Edmonton	(403)955-7284
	Vancouver	(604)273-2861
4) DHL Worldwide Express	TOLL FREE	(800)663-9504
	Vancouver	(604)278-7131
	Victoria	(604)385-5451
	Calgary	(403)276-7972
	Edmonton	(403)955-7424

	Anchorage	(907)243-1503
	Fairbanks	(907)456-1707
	Portland	(503)257-3551
	Seattle	(206)763-4222
	Spokane	(509)456-6200
5) Davidson & Sons Customs Brokers Ltd.	Vancouver	(604)681-5132
	Richmond	(604)273-3941
	Surrey	(604)531-2966
	Calgary	(403)265-5367
	Edmonton	(403)426-2776
6) Drummond Transportation Services	Calgary	(403)230-3221
7) Lep International Inc.	Vancouver	(604)685-8111
	Edmonton	(403)955-7275
	Calgary	(403)233-2940
8) Meadows Freight Canada Ltd.	Vancouver	(604)278-5158
	Edmonton	(403)426-3972
		(403)426-3134
	Calgary	(403)266-3737
		(403)266-8686
9) Mid-West Custom Brokers (Adanac Int'l Forwarders)	Vancouver	(604)736-8611
	Edmonton	(403)426-2776
	Calgary	(403)234-8833
10) Milne & Craighead Customs Brokers (Canada) Ltd.	Vancouver	(604)683-4121
		(604)273-5585
	Edmonton	(403)429-4241
		(403)955-7259
	Calgary	(403)250-5640
	Coutts, Alberta	(403)344-3878
	Burnaby	(604)420-3426
11) Murray & Robinson Services Division Blaiklock Inc.	Vancouver	(604)687-7491
12) Pac-Ex Services Ltd.	Vancouver	(604)687-1331
	Calgary	(403)265-5356
	Edmonton	(403)426-2776
13) Pace Pacific Air Cargo	Vancouver	(604)270-8881
	Calgary	(403)250-3261
	Edmonton	(403)955-8585
14) Redman Couch Int'l Forwarders Ltd.	Calgary	(403)279-7821

15) Schenker of Canada Ltd.	Vancouver Edmonton Calgary	(604)688-8511 (403)420-6920 (403)230-2704
16) Sea Van International Freight, Inc.	Richmond	(604)276-2611
17) Thomas Meadows & Co.	Vancouver Edmonton Calgary Coutts, Alberta	(604)278-5158 (403)955-6632 (403)266-3737 (403)344-3732
18) Trax Cargo	Vancouver	(604)270-3131

For names of additional freight forwarders consult the yellow pages of your telephone directory or write to the Canadian International Freight Forwarders Association (10 Glenmore Road, Toronto, Ontario, M4L 3L9).

TRANSPORTATION BROKERS

1) Afcon Freight	Surrey	(604)531-4040
2) Bostrum-Warren Inc.	Vancouver	(604)276-2657
3) Bitter Route International	Missoula, Montana	(406721-6320
4) Great West Traffic Consultant Inc.	Surrey	(604)584-3324
5) Greelite Transportation Services	Surrey	(604)536-4477
6) Trailer Express	Seattle	(206)282-1640

For further information on brokers offering service to the Western United States, consult with the Transportation Brokers' Conference of America - Oak Forest, Illinois (312)687-0222.

SHIPPERS' AGENTS

1) Can-Am Freight Services	TOLL FREE	(800)268-0268
2) Interamerican Transport Systems Inc.	TOLL FREE	(800)268-4575
3) Red Leaf Transportation Services Ltd.	TOLL FREE	(800)387-3400

4) Westway Forwarding International Ltd. — TOLL FREE — (800)268-0268

SHIPPERS' ASSOCIATIONS

1) Washington-Oregon Shippers Co-operative Association Inc.	Seattle	(206)282-1640

For more information on shippers' associations contact the American Institute for Shippers' Associations (202-628-0933).

PUBLIC WAREHOUSING

1) Crest Cartage and Warehousing Ltd.	Vancouver	(604)435-4196
2) Johnston Moving & Storage Ltd.	Vancouver	(604)874-7371
3) Johnston Warehousing and Distribution	Vancouver Calgary Edmonton	(604)876-7371 (403)272-5571 (403)451-2651
4) Kuehne & Nagel Distribution Services	Vancouver Edmonton	(604)273-5576 (403)470-1370
5) Lake City Distribution Ltd.	Vancouver	(604)420-1330
6) Leader Terminals Ltd.	Richmond	(604)273-2031
7) Livingston Distribution Centres Inc.	Calgary Edmonton	(403)279-8600 (403)452-9880
8) Locher Evers Int'l	New Westminster	(403)669-6622
9) MTE Warehousing and Distribution	Edmonton	(403)451-2450
10) M. W. Distribution Centres Ltd.	New Westminster	(604)524-9411
11) MacCosham Storage and Distribution Centres Ltd.	Calgary Edmonton	(403)279-1030 (403)425-1910
12) Milcrae Warehouses Ltd.	Richmond	(604)273-9511

13) Schenker Warehousing Ltd.	Vancouver	(604)273-1271
14) Seaway/Midwest Ltd.	Burnaby Calgary Edmonton	(604)437-4481 (403)253-8221 (403)452-9880
15) To-Market Services Ltd.	New Westminster	(604)521-7777
16) Trans-Canada Freezers	Edmonton	(403)479-4221
17) Triangle Transportation & Warehousing System Ltd.	Vancouver	(604)433-1271
18) Vancouver Distribution Centres Ltd.	Vancouver	(604)435-5531
19) Vancouver Storage & Rentals Ltd.	Vancouver	(604)276-2223
20) Wallace Transfer Ltd.	Burnaby	(604)294-6601

For more information on public warehousing, consult sources on pages 80 and 81.

B. SERVICES TO HAWAII

AIR CARRIERS

1) Air Canada Cargo	Vancouver	(604)278-1262	
	Edmonton	(403)955-8111	
	Calgary	(403)276-0400	
2) Air New Zealand	TOLL FREE	(800)663-9811	
3) Canadian Pacific Airlines	Calgary	(403)276-0562	
	Edmonton	(403)955-8465	
	Vancouver	(604)278-2131	
	Prince Rupert	(604)624-6161	
	Fort Nelson	(604)774-6681	
	Fort St. John	(604)785-4514	
	Prince George	(604)963-9111	
	Terrace	(604)635-6822	
	Watson Lake	(403)536-7408	
	Whitehorse	(403)668-7378	
4) Continental Airlines	Calgary	(403)250-0810	
	Edmonton	(403)955-6676	
5) Northwest Orient	Anchorage	(907)266-5656	
	Edmonton	(403)955-8204	
	Fairbanks	(907)452-3274	
	Portland	(503)249-4826	
	Seattle	(206)433-3747	
6) United Airlines	Vancouver	(604)276-5898	
		(604)278-9664	
	Calgary	(403)276-0562	(CP Air)
	Edmonton	(403)955-8465	(CP Air)
7) Wardair	Vancouver	(604)278-1262	
	Edmonton	(403)955-8111	
	Calgary	(403)276-0400	
8) Western Airlines	Vancouver	(604)278-6242	
	Edmonton	(403)955-8191	
	Calgary	(403)276-0700	

MOTOR CARRIERS

1) ABF Freight System Inc.	Seattle	(206)622-7991
2) Canadian Freightways Ltd.	Calgary	(403)243-7711
		(403)243-7701

	Edmonton	(403)453-3611
		(403)455-3181
	Coutts	(403)344-3967
	Vancouver	(604)420-2030
		(604)420-4044
	Prince Rupert	(604)624-3249
	Kamloops	(604)374-5544
	Watson Lake	(403)536-7300
	Whitehorse	(403)667-6238
3) CP Express and Transport	Calgary	(403)266-3108
	Edmonton	(403)426-3858
	Lethbridge	(403)382-2311
	Medicine Hat	(403)527-4455
	Red Deer	(403)346-5521
	Vancouver	(604)526-6728
	Seattle	(206)859-0191
	Victoria	(604)383-1144
	Campbell River	(604)286-6255

FREIGHT FORWARDERS

1) Astra International Forwarding Ltd.	Vancouver	(604)270-4144
2) Davidson & Sons Customs Brokers Ltd.	Vancouver	(604)681-5132
	Richmond	(604)273-3941
	Surrey	(604)531-2966
	Calgary	(403)265-5367
	Edmonton	(403)426-2776
3) DHL Worldwide Express	TOLL FREE	(800)663-9504
	Vancouver	(604)278-7131
	Victoria	(604)385-5451
	Calgary	(403)276-7972
	Edmonton	(403)955-7424
4) Honolulu Freight Services	Seattle	(206)622-0955
	Portland	(503)227-6697
	Honolulu	(808)836-2244
5) Lep International Inc.	Vancouver	(604)685-8111
	Edmonton	(403)955-7275
	Calgary	(403)233-2940
6) Milne & Craighead Customs Brokers (Canada) Ltd.	Vancouver	(604)683-4121
		(604)273-5585
	Edmonton	(403)429-4241
		(403)955-7259
	Calgary	(403)250-5640
	Coutts, Alberta	(403)344-3878

		Burnaby	(604)420-3426
7)	Pac-Ex Services Ltd.	Vancouver Calgary Edmonton	(604)687-1331 (403)265-5356 (403)426-2776
8)	Pace Pacific Air Cargo	Vancouver Calgary Edmonton	(604)270-8881 (403)250-3261 (403)955-8585
9)	Redman Couch Int'l Forwarders Ltd.	Calgary	(403)279-7821
10)	Sea Van International Freight, Inc.	Richmond	(604)276-2611
11)	Thomas Meadows & Co.	Vancouver Edmonton Calgary Coutts, Alberta	(604)278-5158 (403)955-6632 (403)266-3737 (403)344-3732

MARINE SHIPPING LINES

1)	Crowley Maritime Corporation	Seattle	(206)583-8100
2)	Matson Line	Seattle	(206)223-2456

C. SERVICE TO ALASKA

AIR CARRIERS

1) Air Canada Cargo	Vancouver	(604)278-1262
	Edmonton	(403)955-8111
	Calgary	(403)276-0400
2) Alaska Air Lines	Anchorage	(907)243-3322
	Fairbanks	(907)452-1186
	Juneau	(907)789-7378
	Seattle	(206)433-3266
	Portland	(503)249-4765
	Spokane	(509)747-2255
3) Northwest Orient	Anchorage	(907)266-5656
	Edmonton	(403)955-8204
	Fairbanks	(907)452-3274
	Portland	(503)249-4826
	Seattle	(206)433-3747
4) United Airlines	Vancouver	(604)276-5898
		(604)278-9664
	Calgary	(403)276-0562 (CP Air)
	Edmonton	(403)955-8465 (CP Air)
5) Western Airlines	Vancouver	(604)278-6242
	Edmonton	(403)955-8191
	Calgary	(403)276-0700

MOTOR CARRIERS

1) Alaska-West Express	Edmonton	(403)468-2152
	Seattle	(206)922-5022
2) CN Route	Vancouver	(604)665-4310
	Edmonton	(403)421-6246
	Calgary	(403)236-0045
3) CP Express and Transport	Calgary	(403)266-3108
	Edmonton	(403)426-3858
	Lethbridge	(403)382-2311
	Medicine Hat	(403)527-4455
	Red Deer	(403)346-5521
	Vancouver	(604)526-6728
	Victoria	(604)383-1144
	Campbell River	(604)286-6255

4)	Canadian Freightways Transport	Calgary	(403)243-7711
			(403)243-7701
		Edmonton	(403)453-3611
			(403)455-3181
		Coutts	(403)344-3967
		Vancouver	(604)420-2030
			(604)420-4044
		Prince Rupert	(604)624-3249
		Kamloops	(604)374-5544
		Watson Lake	(403)536-7300
		Whitehorse	(403)667-6238
5)	Kingsway Freightways Ltd.	Vancouver	(604)525-4304
		Edmonton	(403)474-0100
		Calgary	(403)236-1727
		Lethbridge and Coutts	(403)328-5521
		Red Deer	(403)343-1512
		Fort McMurray	(403)743-2255
		Grande Prairie	(403)532-5590
		Medicine Hat	(403)548-3958
6)	Lynden Transport	Edmonton	(403)438-3505
7)	The Waggoners Trucking	Vancouver	(604)273-3529
		Calgary	(403)279-5515
		Edmonton	(403)468-2714
8)	Tri-Line Expressways	Vancouver	(604)941-9636
		Vernon	(604)545-7335
		Edmonton	(403)469-1371
		Calgary	(403)279-7070

FREIGHT FORWARDERS

1)	Astra International Forwarding Ltd.	Vancouver	(604)270-4144
2)	DHL Worldwide Express	TOLL FREE	(800)663-9504
		Vancouver	(604)278-7131
		Victoria	(604)385-5451
		Calgary	(403)276-7972
		Edmonton	(403)955-7424
		Anchorage	(907)243-1503
		Fairbanks	(907)456-1707
		Portland	(503)257-3551
		Seattle	(206)763-4222
		Spokane	(509)456-6200
3)	Davidson & Sons Customs Brokers Ltd.	Vancouver	(604)681-5132
		Richmond	(604)273-3941

	Surrey	(604)531-2966
	Calgary	(403)265-5367
	Edmonton	(403)426-2776
4) Lep International Inc.	Vancouver	(604)685-8111
	Edmonton	(403)955-7275
	Calgary	(403)233-2940
5) Milne & Craighead Customs Brokers (Canada) Ltd.	Vancouver	(604)683-4121
		(604)273-5585
	Edmonton	(403)429-4241
		(403)955-7259
	Calgary	(403)250-5640
	Coutts, Alberta	(403)344-3878
	Burnaby	(604)420-3426
6) Northern Air Freight	Fairbanks	(907)243-430
7) Pace Pacific Air Cargo	Vancouver	(604)270-8881
	Calgary	(403)250-3261
	Edmonton	(403)955-8585
8) Sea Van International Freight, Inc.	Richmond	(604)276-2611
9) Thomas Meadows & Co.	Vancouver	(604)278-5158
	Edmonton	(403)955-6632
	Calgary	(403)266-3737
	Coutts, Alberta	(403)344-3732

SHIPPERS' AGENTS

1) Alaska Ocean Express	Vancouver	(604)682-8278

MARINE SHIPPING LINES

1) Crowley Maritime Corporation	Seattle	(206)583-8100
2) Lindon Transport	Seattle	(206)575-9614
3) TOTEM Ocean Trailer Express	Seattle	(206)628-9287
	Tacoma	(206)383-5841
4) Knappton Corporation	Portland	(503)286-0631
	Seattle	(206)935-5967
5) CN Aqua-Train	Vancouver	(604)665-4368

other points - see CN Rail Listing on Page 55.

6) Sealand Inc.	Tacoma	(206)922-3100

D. SERVICE FROM YUKON TO ALASKA

MOTOR CARRIERS

1)	Canadian Freightways Ltd.	Whitehorse	(403)667-6238
2)	Lynden Transport	Edmonton	(403)438-3505
3)	Kingsway Freightways	Whitehorse	(403)668-2157

AIR CARRIERS

1)	Alaskan Airlines	Anchorage Fairbanks	(907)465-3941 (907)243-3322
2)	Trans North Airways	Whitehorse	(403)668-6616

SECTION VII - SOURCES OF FURTHER INFORMATION

Just as there are many options to choose for transporting goods to the Northwestern, Southwestern United States including Hawaii and Alaska, there exist a great number of contacts, guides, directories, and manuals from which you can obtain more detailed information. If you plan to make use of several types of transportation services, any one of the "general" guides listed below will be useful. For companies keenly interested in understanding transportation and distribution systems management more fully, any one of several texts are available by special order from any bookstore. If your information needs are mode or alternative specific, you can choose from a variety of specialized publications listed below. The cost of all publications is expressed in Canadian dollars as of June, 1985.

GENERAL MARKETING INFORMATION

External Affairs Canada has conducted a number of market studies exploring potential export opportunities for Canadian manufacturers. These include:

1. Opportunities in Offshore Drilling Equipment and Technology in Southern California (1984)

2. Residential Furniture in the Northwestern U.S.A. (1984)

3. Canadian Pulp and Paper Mill Machinery, Southeastern U.S.A. (1984)

4. Opportunities for Canadian Data Processing Hardware and Software Products in the Southwestern U.S.A. (1983)

5. The Marketing Potential for Canadian Manufactured Packaging Machinery and Systems in California (1982)

6. Opportunities for Canadian Forest Harvesting Machinery and Equipment in the Southeastern United States (1982)

7. The Market Potential for Canadian Packaging Materials in California (1981)

8. The Potential for Marketing Canadian Beef Breeding Stock in the Nine State Area of the Southern United States (1982)

9. The Potential for Marketing Canadian Swine Breeding Stock in the Nine State Areas of the Southern United States (1982)

10. The Market Potential for Canadian Woodworking Machinery in the State of California (1981)

11. On-Board Fishing Vessel Equipment: Accessing U.S. West Coast Markets (1981)

12. The Marketing Potential for Selected Canadian Manufactured Wood Products in Southern California (1981)

These reports as well as pocket sized reference guides explaining intricacies of selling in these markets are available from:

- Department of External Affairs   tel: (613)995-6720
  Trade Publications - Distribution (SCS)
  Cultural and Public Information Bureau
  125 Sussex Drive
  Ottawa, Ontario K1A 0G2
  Charge: Free

<u>In Canada</u>, contact should be made with regional trade officers:

- Department of External Affairs   tel: (613)993-5911
  United States Trade and Investment
  Development Bureau
  125 Sussex Drive
  Ottawa, Ontario K1A 0G2

- The Department of Regional   tel: Edmonton (403)420-2944
  Industrial Expansion   Calgary (403)231-4575
  Cornerpoint Building   (branch office)
  10179 - 105th Street, Suite 505
  Edmonton, Alberta T5J 3S3

- The Department of Regional   tel: (604)666-0434
  Industrial Expansion
  P. O. Box 49178
  Bentall Postal Station
  Bentall Tower IV
  1101-1055 Dunsmuir Street
  Vancouver, British Columbia V7X 1K8

- The Department of Regional   tel: (403)668-4655
  Industrial Expansion
  Suite 301
  108 Lambert Street
  Whitehorse, Yukon Y1A 1Z2

<u>In the United States:</u>

Covering the States of Texas, Arkansas, Kansas (excluding Kansas City) Louisiana, New Mexico and Oklahoma:

- Canadian Consulate General   tel: (214)922-9806
  St. Paul Tower, Suite 1700
  750 N. St. Paul Street
  Dallas, Texas 75021-9990

- Canadian Government Trade Officer tel: (713)627-7433
  3935 Westheimer, Suite 301
  Houston, Texas 77027

Covering the states of Arizona, California (ten southern counties), and Clark County in Nevada:

- Canadian Consulate General tel: (213)627-9511
  510 West Sixth Street
  Los Angeles, California 90014-1377

Covering the states of California (except the ten southern counties), Colorado, Hawaii, Nevada (except Clark County), Utah and Wyoming:

- Canadian Consulate General tel: (415)981-2670
  One Maritime Plaza
  Alcoa Building, Suite 1100
  Golden Gateway Center
  San Francisco, California 94111-3468

Covering the states of Alaska, Utah, Oregon and Washington:

- Canadian Consulate General tel: (206)223-1777
  412 Plaza 600, Sixth and Stewart
  Seattle, Washington 98101-1286

EXPORT COUNSELLING AND DOCUMENTATION ASSISTANCE

First time exporters or exporters facing a specific problem can seek direction or assistance from External Affairs Canada's Export Information Division by calling:

"Info Export Hotline"
1(800)267-8376

- Export permit requirements and applications (if required) are available from:

  Export Controls Division tel: (613)996-2387
  Special Trade Relations Bureau
  Department of External Affairs
  Ottawa, Ontario K1A 0G2

Information relating to the entry of Canadian goods into the United States is available from:

- Market Entry Section
  U.S. Marketing Division
  Department of External Affairs
  Ottawa, Ontario K1A 0G2
  tel. (613)993-7484

PROVINCIAL GOVERNMENT TRADE ASSISTANCE

The Governments of Alberta and British Columbia can provide advice and assistance to exporters as well:

- Alberta Economic Development
  International Trade
  11th Floor Sterling Place
  9940-106th Street
  Edmonton, Alberta
  T5K 2P6
  tel: (403)427-4809

- B. C. Ministry of International Trade
  and Investment
  Robson Square, Suite 315
  800 Hornby Street
  Vancouver, British Columbia
  V6Z 2C5
  tel: (604)660-4567

TRANSPORTATION ADVISORY COUNSELLING

Provincial government officials in British Columbia and Alberta can also provide assistance with transportation problems:

- Ministry of Transportation and Highways
  Transport Policy Branch
  2631 Douglas Street
  Victoria, British Columbia V8T 4X7
  tel: (604)387-5996

- Department of Economic Development
  Transportation Services Branch
  9th Floor Sterling Place
  9940 - 106th Street
  Edmonton, Alberta T5K 2P6
  tel: (403)427-0743

GENERAL MULTIMODAL TRANSPORTATION GUIDES

- Transportation Guide - 1985

Southam Business Publications tel: (416)445-6641
1450 Don Mills Road
Don Mills, Ontario M3B 2X7
Charge: $35.95/yr. includes monthly magazine
Canadian Transportation and Distribution Management

This is a guide to Canadian distribution services and organizations which includes a directory of Canadian intermodal rail services, air cargo, forwarders, brokers, pool car operators, small package firms, U.S. connecting carriers, marine carriers, public warehousing and interprovincial motor carriers.

- Distribution Guide 1985

Chilton Publishing Co. tel: (215)964-4000
Chilton Way
Radnor, PA 19089
Charge: (includes monthly magazine)$50/yr.

The Distribution Guide lists air freight carriers and forwarders, truck lines, rail intermodal services (U.S. and Canada), forwarders and consolidators, shippers' associations and warehouses.

- Traffic Management 1985 Directory

Cahners Publishing Co. tel: (617)536-7780
221 Columbus Avenue
Boston, MA 02116
Charge: Free to shippers

This guide provides data on air freight carriers, air freight forwarders, motor carriers, state agencies, intermodal facilities, services, steamship/container lines, ports, free trade zones and transportation/distribution organizations.

- Inbound Traffic Guide 1985

Thomas Publishing Co. tel: (212)290-7336
One Penn Plaza
New York, NY 10119
Charge: Free to shippers

In addition to many "how to" articles, this directory lists air express firms, air freight firms, customs house brokers, surface forwarders, freight consolidators, motor carriers, rail intermodal, shippers' associations, steamship lines, and warehouses.

PHYSICAL DISTRIBUTION MANAGEMENT TEXTS

- Bowersox, Donald J. Smykay, Edward M., and LaLonde, Bernard J. Physical Distribution Management. Toronto, Ontario: Collier-MacMillian Canada Ltd., 1983

- Heskett, James L., Glaskowsky, Nicholas Jr., and Ivie, Robert M. Business Logistics. New York: Ronald Press Company, 1973

- Taff, Charles A. Traffic and Physical Distribution. Georgetown, Ontario: Richard D. Irwin, 1978.

AIR TRANSPORT

- Air Cargo Guide

Official Airline Guides, Inc. tel: (312)654-6000
2000 Clearwater Drive
Oak Brook, Il 60521
$85.95 per year plus shipping including quarterly supplement.

This monthly guide contains complete world wide information on the commercial air cargo industry. It includes domestic and international cargo flights, special cargo services, restricted articles, labelling information, local and toll-free phone numbers, etc.

- Air Cargo From A to Z

Air Transport Association of America tel: (202)626-4000
1709 New York Avenue, N. W.
Washington, DC 20006
Charge: free

This document features a glossary of air freight industry terms, including accessorial charges and storage, zones used in establishing rates for priority mail packages moved by air, and types of air freight containers. The booklet also includes a section on packaging tips.

- IATA Air Waybill Handbook

International Air Transport Association tel: (514)844-6311
Publications Assistant
2000 Peel Street
Montreal, Quebec H3A 2E4
Charge: $16.56

This handbook contains diagrammatic instructions explaining illustrations of the use of the various boxes on the air waybill, ratings for all categories of cargo, disbursements, restricted articles, etc.

MOTOR CARRIERS

- B. C. Motor Transport Directory — tel: (604)299-7407
  British Columbia
  Motor Transport Association
  4090 Graveley Street
  Burnaby, British Columbia V5C 3T6
  Charge: $15.00

- Alberta Motor Carrier Transport Directory — tel: (403)253-8401(Calgary) (403)468-3195(Edmonton)
  P. O. Box 5520
  Station "A"
  5112 - 3rd Street S. E.
  Calgary, Alberta T2H 1X9
  Charge: $22.50

- Pacific Inland Tariff Bureau — tel: (503)226-2841
  P. O. Box 4131
  Portland, Oregon 97208
  Charge: Tariff No. 352 - $34.50
  Tariff No. 190 - $40.23 bi-yearly

The Pacific Inland Tariff Bureau provides information with regard to local, joint, and proportional class and commodity rates for motor carriers operating between points in Canada and points in Idaho, Montana, Oregon and Washington. Further information on participating motor carrier members within the specified tariff can be obtained by subscribing to tariff no. 190 which is published every six months.

- Rocky Mountain Motor Tariff Bureau — tel: (303)433-6731
  P.O. Box 5746
  Denver, Colorado 80217
  Charge: Tariff no. 583 - $76.69
  Tariff no. 170 - $78.66

Information on maximum tariff rates by commodity and origin/destination in British Columbia is published by the Rocky Mountain Motor Tariff Bureau in text and computer diskette versions. The computer diskette version or tariff number 583 is IBM PC/most compatible. Tariff number 170, a similar version of number 583, is published in printed form and provides a members list of motor carriers participating within the tariff bureau.

- Canadian Highways Guide

  Southam Business Publications tel: (416)445-6641
  1450 Don Mills Road
  Don Mills, Ontario M3B 2X7
  Charge: $36.95/yr. plus postage and 9% sales tax

A national listing of municipalities in Canada served directly by truck, details on each Canadian general-merchandise common motor carrier serving them, contact data on over-the-road small-parcel specialists and U.S. connecting highway carriers is provided.

- American Motor Carrier Directory

  Guide Services Inc. tel: (404)955-3000
  Suite 140 - 6201 Powers Ferry Rd.
  Atlanta, GA 30329
  Charge: $122.82/yr.

This (biannual) directory lists all known general-commodity carriers, including their terminal locations and all points served throughout the U.S., Canada and Mexico. It also contains interline gateway maps, state routing maps, and 10 territorial maps. A special section lists common motor carriers offering specialized services. Annual subscription includes a supplement, and a warehousing/distribution directory, listing warehouses and distribution services throughout the U.S.

- Official Motor Carrier Directory tel: (312)939-1434
  1130 South Canal Street
  Chicago, Illinois

This directory covers motor carriers, their terminals, equipment and insurance limits, as well as state and federal regulatory agencies, and national trade organizations related to the transportation field. A section on air carriers is also included.

- Guide to Cutting Your Freight Transportation Costs
  Under Trucking Deregulation

  Bohman Industrial Traffic Consultants tel: (617)632-1913
  335 East Broadway
  Gardiner, MA 01440
  Charge: $27.53

This source identifies 31 major categories of rates, allowances and discounts that ICC-certified truckers currently publish, enabling shippers to cut freight costs by up to 75 per cent. Pricing methods discussed include volume incentives discounts, LTL commodity rates, aggregate-delivery discounts, loading allowances, and reduced release value rates.

RAIL

- The Offical Railway Guide

  National Railway Publication Company tel: (212)714-3100
  424 West 33rd Street
  New York, NY 10001
  Charge: $102.12/yr.

This bi-monthly guide lists U.S., Canadian and Mexican rail freight schedules, mileages, connections, maps, personnel listings, TOFC ramp locations, key intermodal personnel and bulk transfer facilities for handling liquid and dry commodities. A station index for 50,000 points, with line and schedule cross-references and a late news digest are also provided.

INTERMODAL

- The Official Intermodal Guide

  Intermodal Publishing Co. Ltd. tel: (212)714-3100
  424 West 33rd Street
  New York, NY 10001
  Charge: $62.10/yr.

Information is given on intermodal carriers and facilities handling highway trailers and containers. The guide also lists personnel, service areas, telephone contacts, other pertinent data, and regional maps. An index refers to the location of towns in relation to intermodal facilities, and a list of drayage and non-local highway carriers is provided. This particular guide is published biannually in the spring and fall.

- Intermodal Carrier/Agent Selection Guide

  The Land, Air, Sea Transportation tel: (212)777-0780
  Publishing Company
  Published for American Resources
  Development Group
  67 Irving Place
  New York, NY 10003
  Charge: $27.53

This guide is a complete directory of carriers and agents offering transportation services in today's deregulated marketplace. More than 6,000 companies are listed alphabetically, by type of service and state. Included are irregular-route common carriers, contract carriers, registered transportation brokers, and shippers' associations. Listings include company name, address, and telephone, telex or TWX number. An explanation of the rules governing companies' activities is also given.

MARINE

- Brandon's Shipper and Forwarder Guide

  International Thomson Transport Press — tel: (212)714-3100
  424 West 33rd Street
  New York, NY 10001
  Charge: $48.30

This guide published on a weekly basis provides the subscriber with comprehensive marine line sailing schedules and telephone numbers for rate and booking inquiries.

- Pacific Shipper — tel: (413)981-7171
  1137-39 Howard Street
  San Francisco, California 94103
  Charge: $60.72

Published on a weekly basis, the Pacific Shipper provides the subscriber with specific information as to sailing schedules, contacts and telephone numbers of marine lines.

- See "General Multimodal Transportation Guides" and "Marine Carrier" listings in Section VI.

FREIGHT FORWARDERS

- See "General Multimodal Transportation Guides"

- A Guide to Selecting the Freight Forwarder

  International Trade Institute — tel: (513)276-5995
  5055 North Main Street
  Dayton, Ohio 45415
  Charge: $24.15

This guide discusses how to identify which service your forwarder does and doesn't offer and includes a questionnaire to help you evaluate freight forwarders' service.

- Canadian International Freight Forwarders Association — tel: (416)698-1966
  10 Glenmore Road
  Toronto, Ontario M4L 3L9

CIFFA publishes an annual membership directory and a "Code of Ethics and Standard Trading Conditions" (free of charge) which describe the obligations of forwarders who are members of this organization.

TRANSPORTATION BROKERS

- Truck Broker Directory

J. J. Keller & Associates Inc. tel: (414)722-2848
145 West Wisconsin Avenue
P. O. Box 368
Neenah, WI 54956
Charge: $34.50

This directory lists truck and product brokers, shippers, growers, etc. by city and state - more than 4,000 sources - and is designed to minimize backhaul problems for private and exempt carriers, produce haulers, and owner-operators.

- The Transportation Brokers' Conference of America tel: (312)687-0022
P. O. Box 209
Oak Forest, Illinois 605452

The conference may be contacted for general information on brokers and for a membership listing.

SHIPPERS' AGENTS

- See "General Multimodal Transportation Guides"

SHIPPERS' ASSOCIATIONS

- AISA Guide to Shipping Cooperatives

American Institute for Shippers' Associations tel: (202)628-0933
1411 K Street, N. W.
Suite 700
Washington,DC 20005
Charge: $20

This guide to shippers' associations and co-ops identifies phone numbers and contacts, services offered, cargo limitations, consolidation points and distribution points for 109 shippers' associations.

- National Directory of Agricultural Cooperatives That can Legally Haul Your Freight

Bohman Industrial Traffic Consultants tel: (617)632-1913
335 East Broadway
Gardiner, MA 01440
Charge: $16.95

This directory lists more than 100 agricultural cooperatives that have taken advantage of provisions of the Motor Carrier Act of 1980 permitting them to transport non-farm, non-member regulated commodities in interstate commerce - up to 25 per cent of their total annual tonnage - totally free of ICC regulation.

PRIVATE TRUCKING

FROM: Kearney Management Consultant Ltd. tel: (416)977-6886
Box 10, 20 Queen Street West
Toronto, Ontario M5H 3R3

- The Private Fleet Cost Index

This report is based on an annual survey of private fleet operating costs and is designed to provide comprehensive cost data and operating statistics for all types of private fleet operations including local delivery and over the road in both Canada and the United States. Available in the fall of each year; $25, 1985.

FROM: The Private Carriers Conference tel: (202)797-5404

Amercian Trucking Association
1616 P. Street, N. W.
Washington, DC 20036

- Reciprocity Guide for Private Carriers

The Reciprocity Guide lists state and provincial regulations, fuel-purchase laws, mileage taxes, trip permits, excess size and weight permits, registration requirements, and reciprocity agreements faced by private carriers. $20 for first copy; $10 for additional copies.

- Compendium of Federal Laws And Regulations Governing Private Carriers of Property by Motor Vehicle and Volume II, Labour Compendium.

All federal laws applicable to private carriers are compiled herein. The compendium also contains sections on ICC leasing regulations, tax regulations, safety regulations, ICC-DOT personnel, plus a complete bibliography. Vol. II contains all applicable labour laws and NLRB rulings pertaining to private trucking and a layman's discussion of each.

FROM: J. J. Keller & Associates, Inc. tel: (404)722-2848
145 West Wisconsin Avenue
P. O. Box 368
Neenah, Wisconsin 54956

- Federal Motor Carrier Safety Regulations Pocketbook

This publication covers qualifications of drivers, the driving of motor vehicles, parts and accessories, reporting of accidents, hours of drivers' services, inspection and maintenance, and transportation of hazardous materials. Charge: $3.11

- National Backhaul Guide

The Backhaul Guide brings together the regulation laws, and administrative rulings pertaining to trip leasing. An extensive listing of carriers and source of loads and a comprehensive discussion of the field of exempt transportation services are also published. Charge; $131.10 Updating service available.

- Trucking Permit & Tax Bulletin

This is a monthly bulletin presenting up-to-date federal and individual state changes in regulations governing the trucking industry. Annual subscription $78.66

- Vehicle Size and Weights Manual

Oversize and overweight permit information for the federal government and all states are given. One-time purchase $95.22. Updating service available.

- Specialized Transportation Services Guide

In addition to providing a complete listing of private carriers, contract carriers, freight forwarders, rail carriers and shippers' associations, this is a guide to carriers/organizations that can help a shipper move goods at reduced rates. It excludes regular route common carriers. The directory also has information on consultants, brokers, equipment leasing services, insurance requirements, and various groups/organizations by state helpful to a shipper doing business in each state. Charge: $131.10 with updating service available.

- State Regulations for Private Truck Operators

Private Truck Council of America Inc. tel: (202)785-4900
1011 Seventeenth Street, N. W.
Washington, DC 20036
Charge: Members $89.70 first year,
$75.90 per year for subsequent year
Non-member $117.30 per year

Special requirements for private truck operators; registration and proportion, fuel taxes, road, axle, or mile permits, size and weight limits, and toll roads and turnpikes.

MOTOR TRANSPORT REGULATORY AUTHORITIES

Firms considering purchasing a private fleet and/or seeking permits/licences for hauling to the United States should contact:

- British Columbia Motor Carrier Commission

  Ministry of Transportation & Highways tel: (604)438-5511
  Suite 203, 535 Thurlow Street
  Burnaby, British Columbia V6E 3L2

FIELD OFFICES

42-6th. Ave. S.
Cranbrook, BC
V1C 2H3
(604)426-1262

201-921 Laval Cresent
Kamloops, BC
V2C 5P4
(604)828-4321

Cliff Centre
204-155 Skinner St.
Nanaimo, BC
V9R 5E8
(604)754-2111

2631 Douglas St.
Victoria, BC
V8T 4X7
(604)387-5474
(604)387-5473

202-1508-102
Dawson Creek, BC
(604)784-2301
(604)784-2302

241-189 Springfield Rd.
Kelowna, BC
V1Y 5V4
(604)860-2267

Room 510
Bank of Nova Scotia Bldg.
1488-4th Ave.
Prince George, BC
V2L 4Y2
(604)562-8131 (ext 222)

- Alberta Motor Transportation Board — tel: (403)340-5230, (403)340-5224

  4th Floor, Provincial Building
  4920-51st Street
  Red Deer, Alberta
  T4N 6K8

FIELD OFFICES

101-5920 1A St. SW
Calgary, Alberta
T2H 0G4
(403)297-8541

Twin Atrium Bldg.
4999-98th. Ave.
Edmonton, Alberta
(403)427-7991

Room 272
Provincial Bldg.
Lethbridge, Alberta
T1J 4C7
(403)381-5216

Room 3301
Provincial Bldg.
1020-99th. St.
Grand Prarie, Alberta
T8V 6J4
(403)538-5420

WAREHOUSING

- Distribution Management
  Canadian Warehousing Association — tel: (416)366-6292
  205 Church Street
  Toronto, Ontario M5B 1Y7

This information is free upon request by shippers.

Listings of warehousing facilities throughout the United States including available square footage, special services, addresses, phone numbers and personnel can be obtained free of charge by contacting:

- American Warehousemen's Association — tel: (312)787-3377
  1165 N. Clark Street, Suite 613
  Chicago, Illinois 60610

- International Association of Refrigerated Warehouses — tel: (301)652-5674
  7315 Wisconson Avenue, Suite 700W
  Bethesda, Maryland 20814

Publications from:

- Marketing Publications Inc. tel: (301)585-0730
  8701 Georgia Avenue
  Silver Spring, Maryland 21901

  - Warehousing Productivity Report
    A four-page monthly newsletter with feature articles on warehousing topics and news items on trends and developments.
    Price: $74.52

  - The A B C's of Marketing
    Focusses on the "what, where and why" of warehousing and provides useful instruction on warehousing functions, operations, and decision-making. Price: $20.70

TRANSPORTATION SELECTION CHECK LIST

Information in the preceding sections has been designed to help you evaluate the transportation alternative best suited to your particular company's needs for shipping to markets in the Western United States, Hawaii and Alaska. The following list of questions you should be asking of your U.S. customers will help you organize your transportation as simply as possible.

Questions For Your Customers

_____ Is the customer willing to pay for freight and duty charges on top of the cost of the goods or does he want an all-inclusive delivered price quote?

_____ Does the customer prefer to arrange and pay for the transportation himself?

_____ How urgently (within how many days) is the shipment required?

_____ Will the customer slightly increase or decrease the order size to fit standard shipping sizes such as pallets or containers?

_____ Does the customer have space available in his own private fleet of trucks returning from having delivered his own products to his customers in British Columbia and Alberta?

_____ Can the customer recommend a good transportation organization with which he is already doing substantial business and receiving discounts?

_____ Does your customer have his own rail siding or is he located near an airport?

Questions to Ask Yourself

_____ Have you checked with all your production departments or sales people to see if there are several shipments going to the same city (or points nearby) which can be consolidated into a larger load?

_____ Is there another nearby company that might be interested in pooling shipments with you to get a better rate?

_____ Have you prepared an accurate description of your goods so that they may be properly classified by carriers?

_____ Is your product susceptible to damage and does it require special packaging or crating and insurance for a long distance haul?

_____ Can your product be knocked down and packaged as compactly as possible?

_____ If you have your own fleet of trucks, can you spare one for four or five days for the long haul and will you be able to arrange a return load?

_____ If you are thinking of using your own fleet have you worked out a "per mile" truck operating cost to compare to rates charged by carriers and intermediaries?

_____ Is your plant equipped with a rail siding or located near an airport?

_____ If you are unsure as to which transportation organizations are best for you, have you checked with colleagues in your industry or with transportation specialists in the federal government or Governments of British Columbia or Alberta?

_____ Do your sales forecasts allow you to offer carriers large and regular volumes over time in return for lower rates?

_____ Can you prepare all of the necessary export documentation yourself or would you feel more comfortable having an intermediary do it on your behalf for a small fee?

_____ Having answered all of these questions, which transportation alternative is best for you and which kind of transportation companies should you be calling upon?

Questions For or About Carriers and Intermediaries

_____ Is there more than one company offering service on a particular route or between city pairs and, if not, are alternate routings and carriers available?

_____ Have you sought out carriers who would normally return to the Southwestern U. S. empty and who are willing to offer attractive rates on backhauls?

_____ Does the carrier have legally licensed operating authority to haul goods on the route?

_____ Is the company well established (i.e., does it have a track record)?

_____ Does the company offer:
- _____ through bills of lading?
- _____ proper equipment on demand?
- _____ computerized shipment tracing?
- _____ a guaranteed delivery schedule?
- _____ sufficient insurance coverage (liability)?

______ discount plans?
______ customs brokerage and export documentation services?
______ other unique services?

______ Will the goods be shipped directly from origin to destination by the same carrier, or if not, how many (and which) carriers will be involved?

______ If several carriers are to be involved, who has the final responsibility (liability) for the safe delivery of the goods?

______ Can somebody in your industry association or a colleague in your community give the transportation company a good reference (or have you asked the company for references)?

______ Has the company quoted you an all-inclusive rate and guaranteed delivery time? (Avoid companies that will not commit themselves to a rate or that will let you you know how much the cost is after the fact.)

______ What extra costs (if any) will you have to incur beyond the cost quoted?

______ Are you satisfied that the transportation company rather than your company will be fully liable for the safe delivery of the goods?

______ Have you checked with more than one carrier before making a decision to ship?

______ For purposes of comparison, did you check with U. S. domiciled carriers for lower backhaul rates?

______ Have you included intermediaries (middlemen) such as shippers' agents, forwarders, brokers, and shippers' associations in your evaluation?

Questions to Ask After the Movement

______ Did the customer receive the shipment on time and in good order?

______ After you have received payment for the goods and have paid all transportation and related charges, did you make a profit on the shipment?

______ If you lost money, have you analyzed what went wrong to see if there is a better shipping arrangement that can be made for the next time?

______ If you used an intermediary for your first few shipments, are you now familiar enough with the territory, or are your sales volumes growing enough for you to deal with carriers directly?

_____ When using a carrier or intermediary on subsequent occasions are you comparing current rate quotes to past ones to make sure you are paying no more than you did the last time?

_____ After using a transportation organization for several shipments, have you re-evaluated other organizations to see if you are still getting the best rates and service?

_____ If you have regular movements, and are knowledgeable of your commodity characteristics and service requirements, have you considered negotiating specific commodity rates (as opposed to class rates) with common carriers?

_____ Are your sales within a region growing enough for you to consider larger volume shipment consolidation to a central warehouse in the Western U.S. for redistribution to your growing list of customers?

_____ Are you reading trade and transportation publications, and generally keeping your eyes open for new, innovative, and perhaps cheaper transportation alternatives?

GLOSSARY

accessorial service - a service rendered in addition to the physical transportation service, such as heating, refrigeration, storage, packing, etc.

backhaul - to haul over part of a route which has already been travelled on the headhaul.

bonded goods - goods deposited in a bonded warehouse.

class commodity - a general rate for goods with similar characteristics falling within a broad classification.

container on flat car (C.O.F.C.) - surface transportation of an ocean freight container on a railway flat car from an inland origin to an ocean port of exit or to an inland destination from an ocean port of entry.

commodity rate - a rate for goods specifically named in a tariff of tolls.

common carrier - a carrier who is licensed to carry all goods offered to it within the terms of its operating authority for compensation.

density - the weight of an article per cubic unit of measure.

drayage - the hauling of freight from the shipper's dock to the carrier's origin terminal and from the carrier's destination terminal to the consignee's dock.

free on board (F.O.B.) - loaded aboard a carrier's vehicle at the point at which responsibility for risk and expense passes from seller to buyer.

freight all kinds (F.A.K.) - general unclassified freight

gateway - the point at which freight is interchanged or interlined between two carriers or at which a carrier joins two operating authorities for the provision of through service.

interlining - the transference of freight from one carrier to another, the joining together of whose individual operating authorities allows for the point to point transportation of goods.

liability - legal and/or financial responsibility for the safe, damage-free delivery of goods.

physical distribution management - the activities concerned with the efficient movement of raw materials from the sources of supply to production and finished products to the customer including transportation, warehousing, materials, handling, packaging, inventory control, order processing, sales forecasting and customer service.

pool car - a rail car used by intermediaries to transport the consolidated shipments of several clients.

reciprocity - the granting of privileges by a state or province to vehicles or vehicle owners from another state or province in return for similar privileges.

released value rates - special low rates offered by certain types of carriers in return for their being released from liability for damage by the shipper.

through bill of lading - a single bill of lading presented by an issuing carrier covering the door-to-door movement of goods.

tracing - the act of determining the physical location of goods in transit.

trailer on flat car (T.O.F.C.) - transportation by rail of a highway trailer to/from railway intermodal terminals; also known as piggyback.

waybill - a transportation form issued for each shipment, showing all details.

Sources: - Canadian Institute of Traffic and Transportation
- E. M. LUDWICK & ASSOCIATES INC.

Canada

(publié également en français)