

Resource found on the internet

TABLE 2 Types of freight rail cars, goods typically transported, and number and share (percentage) of the U.S. fleet, January 1, 2009

Car type	Principal commodities/goods transported	Number in fleet	Percent of total fleet ^a
Box	Commodities that must be protected from the elements, such as paper products, appliances, auto parts and building materials. Insulated boxcars transport food products, canned goods, beer, and wine	114,282	8.2
Gondola:		220,238	15.8
- uncovered	Coal, ores, and wood chips	(b)	(b)
- covered	Steel coils and flat steel	(b)	(b)
Hopper:			
- uncovered (usually smaller cars)	Heavy bulk commodities such as coal, coke, stone, sand, ores, gravel, and scrap metal	168,338	12.0
- covered	Light bulk material such as grain, fertilizer, flour, salt, sugar, clay, and lime	414,418	30.0
- covered small cube	Heavy commodities such as cement, ground limestone, and glass sand	(b)	(b)
Flat	Intermodal containers and road trailers, and bulk and finished goods such as lumber, pipes, plywood, drywall, and pulpwood	170,543	12.2
Refrigerated	Perishable foodstuffs	19,085	1.3
Tank	Liquids, including chemicals and petroleum	281,442	20.1
Other:		5,247	(c)
- center beam cars	Lumber and other building products		
- bi- and multilevel cars	Large vehicles (bi-level) and automobiles (multilevel)		
- intermodal cars	Trailers, multimodal shipping containers		
- coil cars	Steel coils		

Source: AAR, *Railroad Equipment Report*, 2009, 2009.

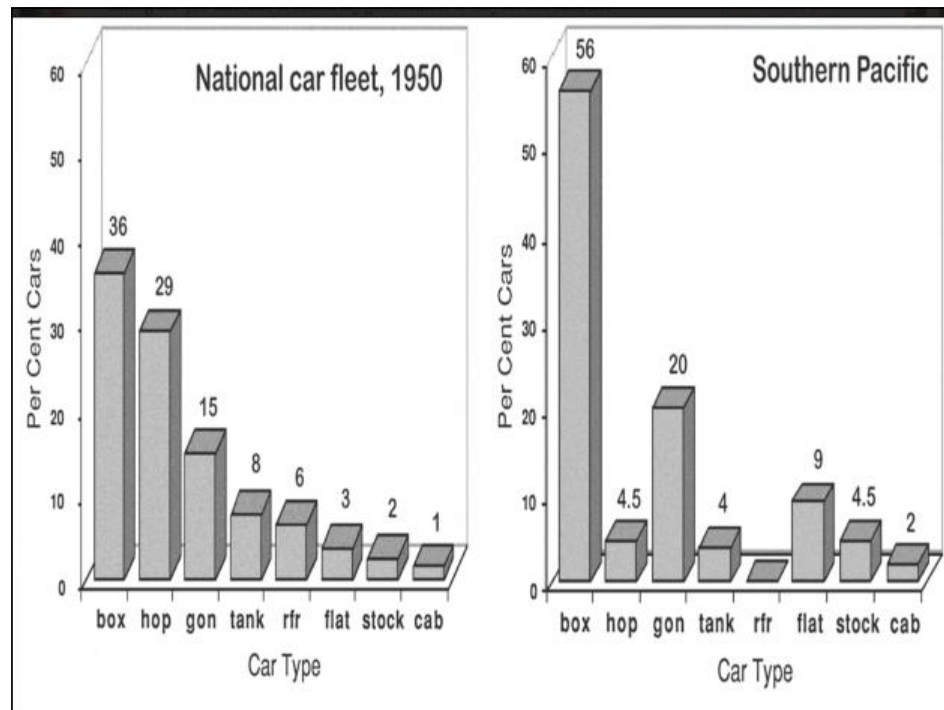
^aPercentages do not add up to 100 because of rounding.

^bUnknown.

^cLess than 1.0 percent.

This Federal study has more tables in in than the cafeteria at the Pentagon

Car Code	Car Type	Home Road	Primary connecting railroads	Secondary connecting Roads	Misc Others	Sub Total	%
XM	Box Car	17	11	5	1	34	34%
HM - HT	Hopper	12	5	3	2	22	22%
LO	Covered Hopper	4	3	1	2	10	10%
GB	Gondola	5	3	1	2	11	11%
T	Tank Car	2	1	1	4	8	8%
FM	Flat Car	4	2	1	1	8	8%
R	Refrigerator	2	1	1	2	6	6%
S	Stock Car	1	0	0	0	1	1%
	Sub Total	47	26	13	14	100	
		47%	26%	13%	14%		100%



Freelance

- You can mix customers

You can put a Coal mine next to a
Manufacturing plant, next to a
Meat Packer, next to a
Grain Elevator



Freight Traffic Analyses

What commodities come in to your industry?

Type of car(s) used

Frequency of delivery

Empties for loading



Freight Traffic Analyses

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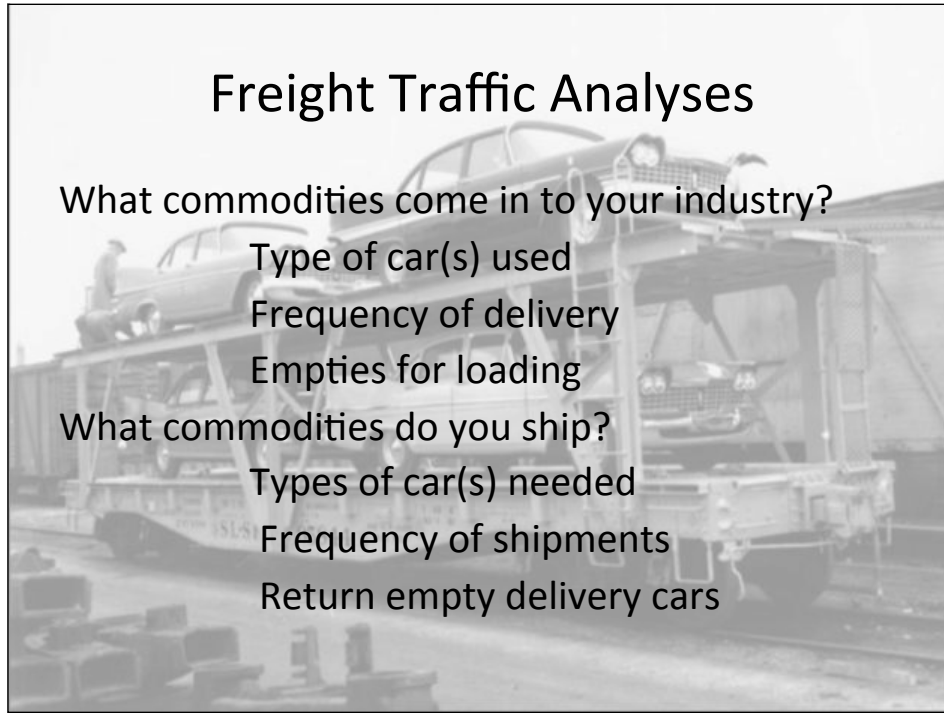
Empties for loading

What commodities do you ship?

Types of car(s) needed

Frequency of shipments

Return empty delivery cars



This table only contemplates loads arriving at or shipped by the destination and does not include returning or reusing empties.								
Sort	City	Industry	Receives	Car Type	Frequency	Ships	Car Type	Frequency
	Loda	Heritage Grain	MT	LO	3 *	Grain	LO	4
		Heritage Grain	Misc	XM	1			
		Lehigh Lime	Machinery	XM	1	HM / LO	Lime	4
			Machinery	GB	1			
	Tracy	Engine House	Machinery	XM	2	** Frequency		
			Machinery	GB	1	** 1 = every 3rd session		
			Machinery	FM	1	** 2 = Every other session		
			Sand	LO	2	** 3 = every session		
			Diesel Fuel	T	2	** 4 = 1.5 to 2 per session		
			Lube Oil	XM / T	1	** 5 = 5 per session + / -		
						** 6 = Over 10 per session, such as intermodal or grain transfers		
	?	Valley Lumber	Lumber	FM/FL	3	Machinery	LO	2
			Poles	FM / GB	1			
			Hardware	XM	2			
	Rockdale	DuWayne/Dell	Paper	XM	3	Printed mats	XM	2
			Ink	XM / T	1			
		H/L Crane	Various	F / GB	2	Various	F / GB	2
		Tank Farm	Various	T	2	Various	T	2
	Joliet Yard	Scrap Yard			*	Scrap	GB	3
	Joliet Yard	Engine House	Machinery	XM / GB	1			
			Machinery	FM	Rare			
			Sand	LO	1			
			Diesel Fuel	T	2			
			Lube Oil	XM / T	Rare			
		Richland Mine	Machinery	XM / GB	Rare	Aggregate	HMA	6
		Richland Mine	Fuel Oil	T	1			

Freight Traffic Analysis



Some cars can be used for multiple commodities

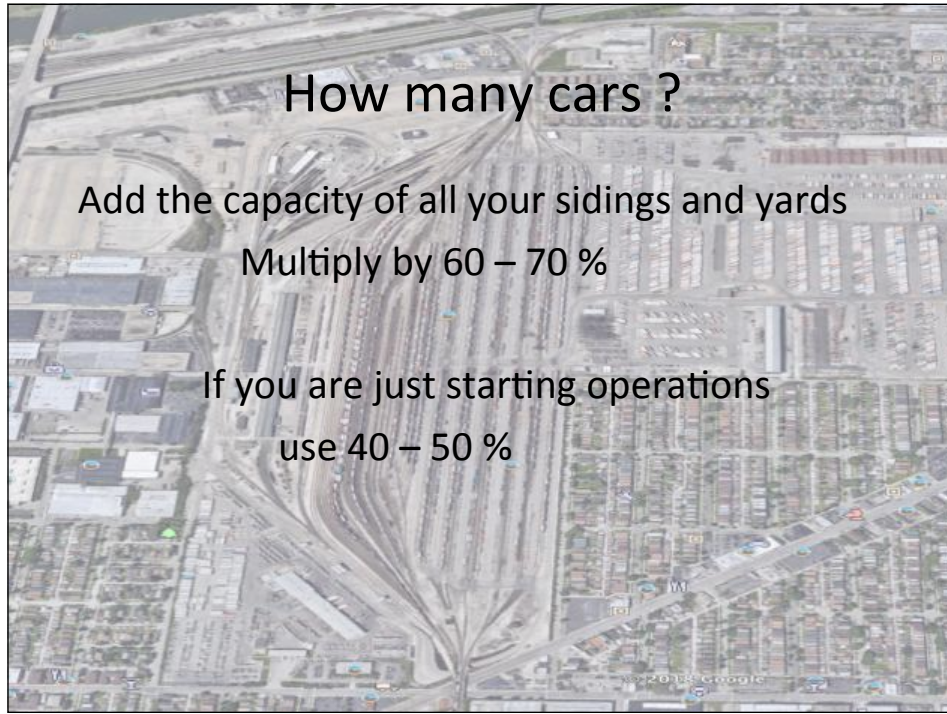
How many cars ?

Add the capacity of all your sidings and yards

Multiply by 60 – 70 %

If you are just starting operations

use 40 – 50 %



Time Frame

- Both your rolling stock and your industries should be appropriate for your time frame.

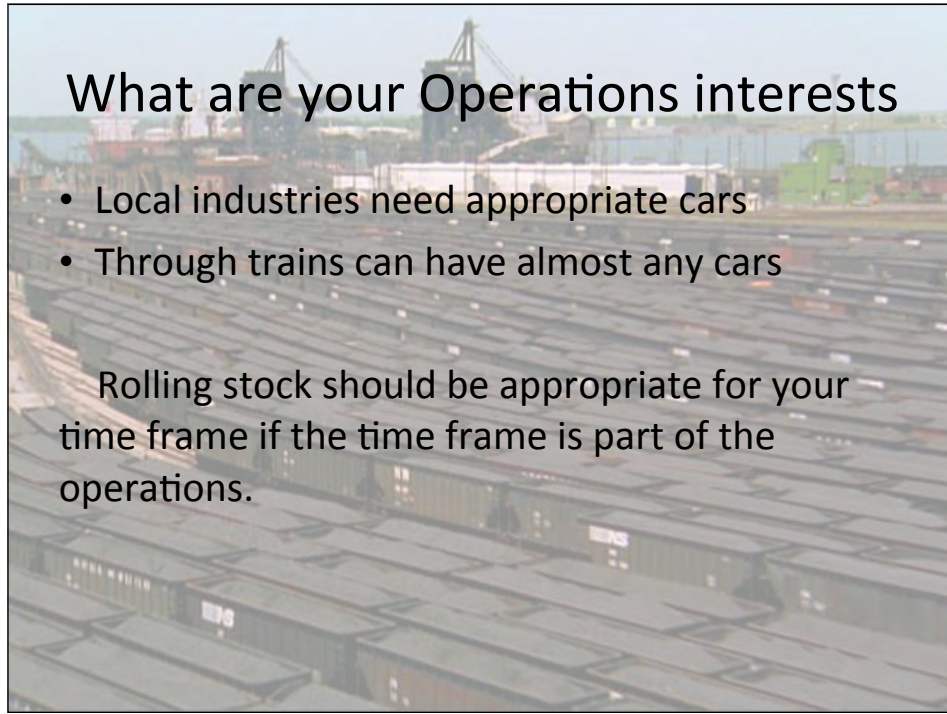
A rustic gold or silver mine looks good
But not next to an automobile assembly plant

Perhaps the Gold mine looks better next to the BMW Dealer

What are your Operations interests

- Local industries need appropriate cars
- Through trains can have almost any cars

Rolling stock should be appropriate for your time frame if the time frame is part of the operations.



What does a Freight Car See ?

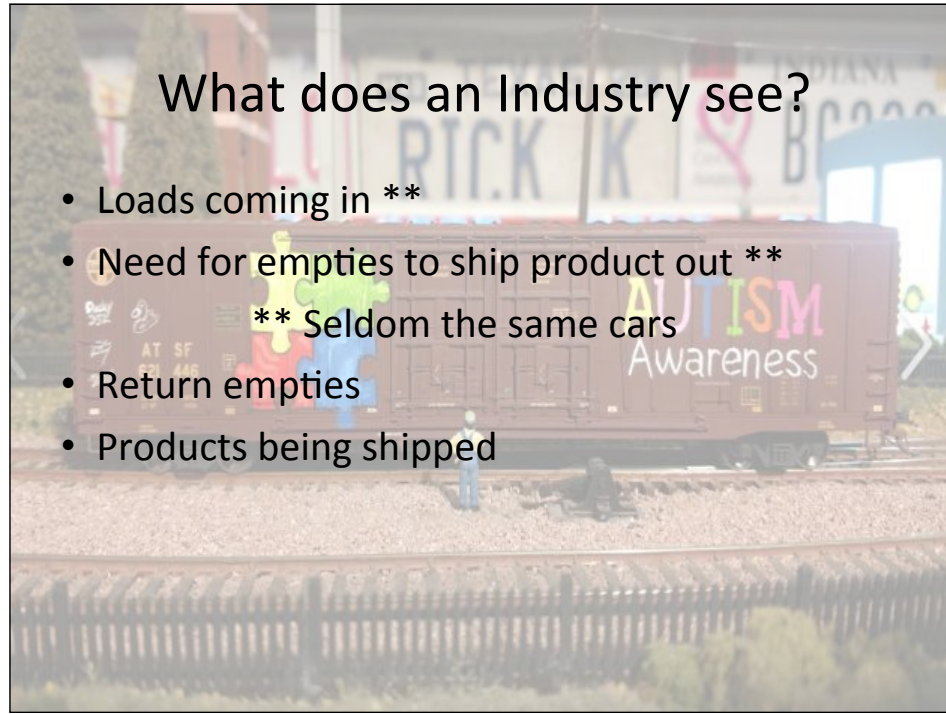
- A Load to pick up
- A destination and route
- A delivery to make
- A route home

Railbox and Trailer Train were formed to take out the



What does an Industry see?

- Loads coming in **
- Need for empties to ship product out **
- ** Seldom the same cars
- Return empties
- Products being shipped



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Sort	City	Industry	Receives	Car Type	Frequency	Ships	Car Type	Frequency
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		H/L Crane	Various	F / GB	2	Various	F / GB	2
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		Richland Mine	Fuel Oil	T	1			



Comment on FRL use of coal transfer. Interchange you haul – Bridge traffic uses their own power with one of your engineers aboard as the pilot

Freight Traffic Analyses

What about bridge traffic ?



And yes, This was CSX

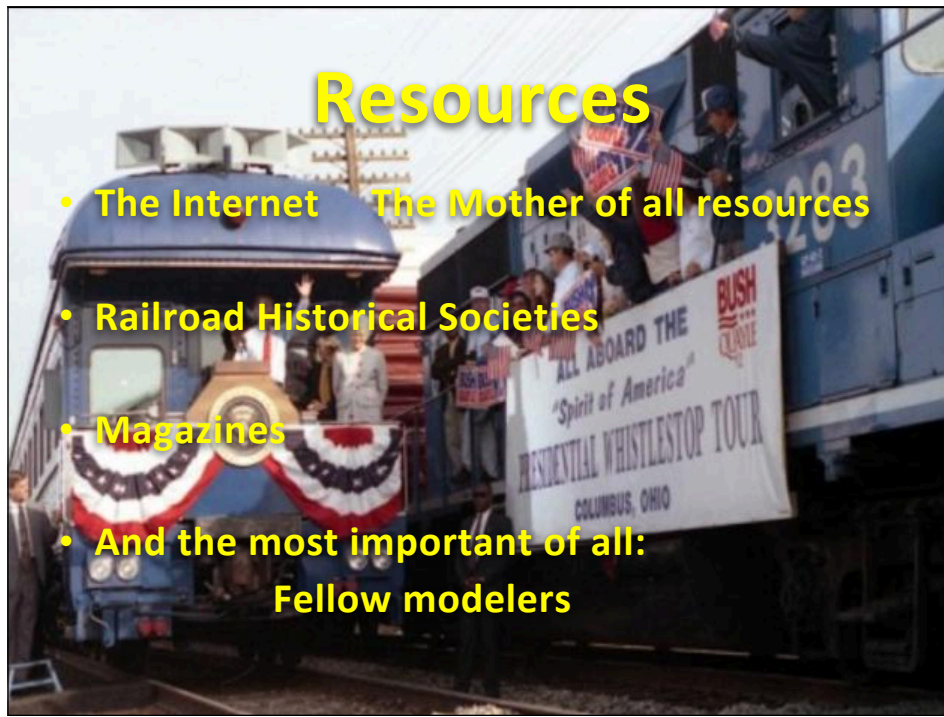
Industries serving the Railroad

- Car shops repairing or cleaning cars
- Scrap dealers dismantling your first kits.
- Tank Car Washing
- Icing facilities



Resources

- The Internet The Mother of all resources
- Railroad Historical Societies
- Magazines
- And the most important of all:
Fellow modelers



Credits

- **Books:**

How to Operate Your Model Railroad

By Bruce Chubb

Operations Handbook for Model Railroaders

By Paul Mallery

The HO Model Railroading Handbook

By Robert Schleicher

A compendium of model railroad operations

OpSig

Prototype of a pig train

Credits

- Tony Thompson
- Jim Kubajak Fall River Line
- Tom Grant Cairo & St. Louis
- Will County Model Railroad Association
- Rik Kempf



Tailoring your Freight Car fleet for Operations

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And that folks brings us to the end.