Operations without the Aggravation

"Car routing without all the paperwork"



Other Options

Random Car Forwarding

Pick up and deliver any car, anywhere, anytime

- Pros:
 - Easy to set up
 - Never make a mistake
 - No cost
 - No rules
- Cons:
 - No real purpose
 - Not very exciting
 - Does not simulate the prototype



Other Options

Markers on Cars

- Place markers on cars indicating where they are to be delivered
 - Cardstock: ¼ inch by ½ inch, place on car with tweezers
 - Plastic Tabs: Uses plastic H column
 - Thumbtacks: Drill hole in car
 - Sticky notes of various kinds
- Generally incorporates color coding and lettering
 - Color can indicate town or train
 - Use single code on thumbtacks
 - Letters or Numbers
- Friendly for clubs and new operators
- Avoids having to read reporting marks



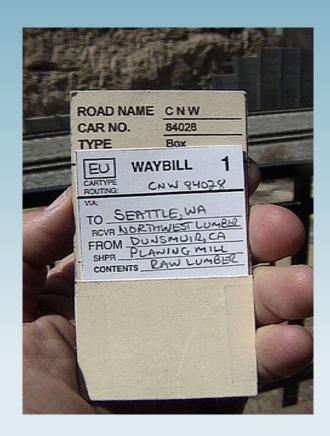
Other Options Wheel Report

- Dne piece of paper per train
 - Does not require reading reporting marks
 - Indicates locations to be switched
 - Indicates car types to be switched
 - Pick up like cars to replace cars set out
 - Many ways of organizing the paper work

Train:	Engine:	DCC address:	Origin:	Destination:
Car type	Destination 1	Destination 2	Destination 3	Destination 4
Box				
Flat				
Gondola				

Other Options Car Cards and Waybills

- Each car has an associated envelope labeled with the reporting remarks of the car.
- A multi-sided way bill is inserted into the envelope that shows the car's destination.
- Multi-sided way bills can show a sequence of destinations.
- Cards for cars not in trains are kept in boxes located along the railroad.



Other Options Car Cards and Waybills

• Pros:

- Easy to see where to deliver a car
- Easy to see which cars to pick up
- Low cost



Other Options

Car Cards and Waybills

- Cons:
 - Decks of cards are awkward to handle/sort during sessions
 - Requires holding boxes and sorting racks
 - Manual synchronization
 - Requires a lot of setup time and work (Manual or Computer)



Other Options

Switch Lists

- Switch List Car Forwarding:
 - A single sheet of paper lists all switching activity

• Pros:

- Easy to see where to deliver a car
- Easy to see which cars to pick up
- Only one paper to handle
- No racks or holders required
- Follows prototype practice

Virg	inia Mid	dland Sv	vitch List										
	: 10-2												
Trai		V160	Yard =	Toh									
Depart time:		7:20	025										
	omotive		Z99	256	-					-			
LUU	Jillouve	(0).	211	-200	1								
	Stry Wor	rk at: Spe	cialized Be	everage		Industr	y V	Vork a	at: Klotz E	lect	ial Di	stributors	
Mum	DM	#'s	WI	Spot	Remarks			RM	#'s	WI	Spot	Remarks	_
1	VC	9017	PL	1	V		1	RFP	4097	PU	1	~	
- 2	CIRR	2600	PU		V		2	60	486221	PU	7	V	
3	VC.	1004	PV		V		3	NS	450665	PI	1	-	
4	SP	1004	PL	2	1		4	REP	40250	PL	2	-	
5	DME	5454	PL	3	V		5	-					
6							6						
		k at: Mid-	Atlantic F	eeds									
Seq													
Num			WI	Spot	Remarks								
1	CSXT	142831	PV		~								
2	ABOX	50496 4076	PL	1	V.								
3	KFP	4076	PL	2	V								
4													
		k at: Old	Dominion	Foods									
Seq		AN -	LA II	01	Descri								
Num	KM		WI	Spot	Remarks								
- 1	UPFE	54806 D	PU		V								
3		19570	PL	1	-								
							-						-
		K at: Patr	iot Industr	ies			-						
Seq Num	DM	#'s	WI	Spot	Remarks								
Num	4/64	86471	PU	Spot	Remarks		-					-	
2	FATT	864 II	PU		1		+			-			
2	VITIX	641685		1	-		-						
		132262		2	1		1			-			
Indus	try Wor	k at: Ame	rican Woo				1			-			
	Car	an rulle		. 50.			1						
Num 1	RM	#'s	WI	Spot	Remarks		1						
2							1						
3							7						
4													
Key:													
	work ins	truction					J						
	pick-up						J						
PL.	place						J						
	reporting						J						
l's	car num	bers					1						

Other Options Switch Lists

• Cons:

- Significant set up time (manual or computer)
- Manual synchronization
- Requires clipboard or hard surface to write on

Switch List Bakersfield	-1-	August 24, 2011 4:23 PM
JMRI Operations Demo Railroad		
Switch List for Bakersfield		
Valid 8/24, 2011 16:23		
Scheduled work for train (LS) Lakeview - Susanvil	lle	
Departs Lakeview at 07:20 expected arrival 08:04,	, arrives Westbound	
[] Pick up ATSF 10407 Boxcar 50' Tuscan L <oad< td=""><td>i> from yard</td><td></td></oad<>	i> from yard	
[] Set out MRL 9089 HopGrain 36' Gray L <wheat< td=""><td>t> to #68 Bkrsfld Grain</td><td></td></wheat<>	t> to #68 Bkrsfld Grain	
[] Set out SOO 177514 Boxcar 50' White L <oad></oad>	to #68 Pabsb&Son Cold Strge	•
[] Set out G&F 442 Boxcar 50' Green L <oad> to #</oad>	#68 Pabsb&Son Cold Strge	
[] Set out GARE 812 Reefer Milk 38' Green E <mp< td=""><td>pty> to yard</td><td></td></mp<>	pty> to yard	
[] Set out N&W 42120 Boxcar 40' Black L <oad> t</oad>	to yard	
Scheduled work for train (BB) Bakersfield - Sweep	per	
Departs Bakersfield Eastbound at 07:50		
[] Pick up SP 1019 SW1200 from Engine Termina	al	
[] Pick up NH 681 Caboose 34' Black from Caboo	ose Track	

Other Options

Operations Software and Resources

Free (\$)



Commercial \$

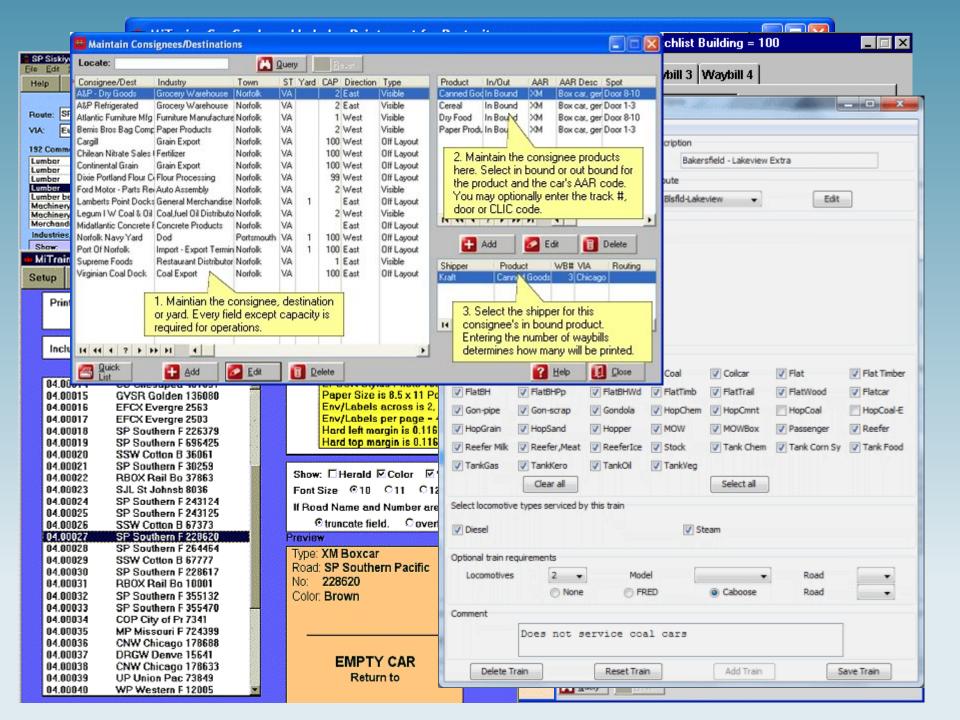
- JMRI Operations Module
- Flex Bill Free Trial
- Model Operations Processing System
- Model Railroad System
- Programmable Traffic Generator
- SwitchList Generator for Macs.

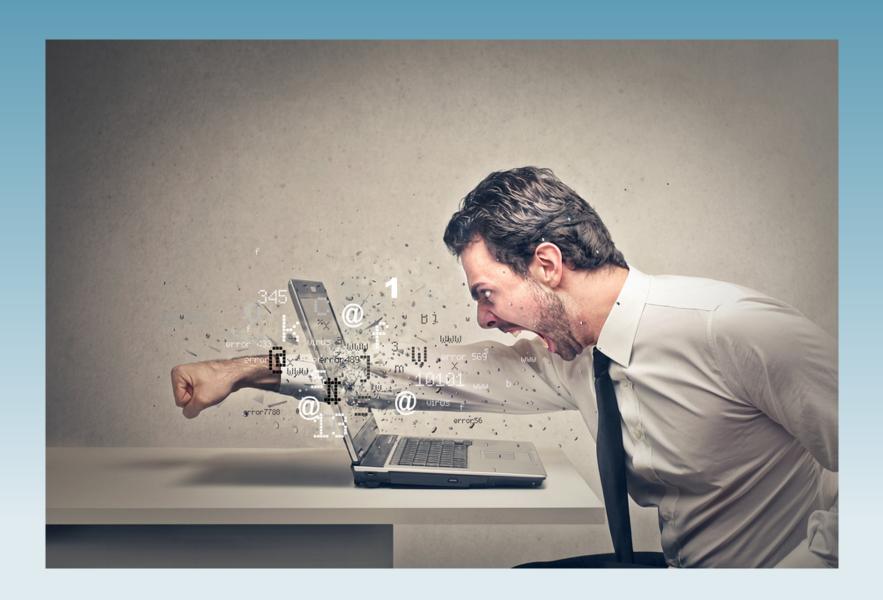
- Protrak, RailOp
- ShipIt and ShipIt CarCards Module
- Interchange: Model Rail Car Dispatch System
- MiTrains Inventory and WayBills
- Model RailRoad Manager (MRRM)
- Railroad Management System
- Decapod Systems offers CarRoute and PRR

http://home.cogeco.ca/~trains/rrfrtops.htm

http://www.opsig.org/reso/

http://www.gatewaynmra.org/model-railroad-operations/





Car Orders

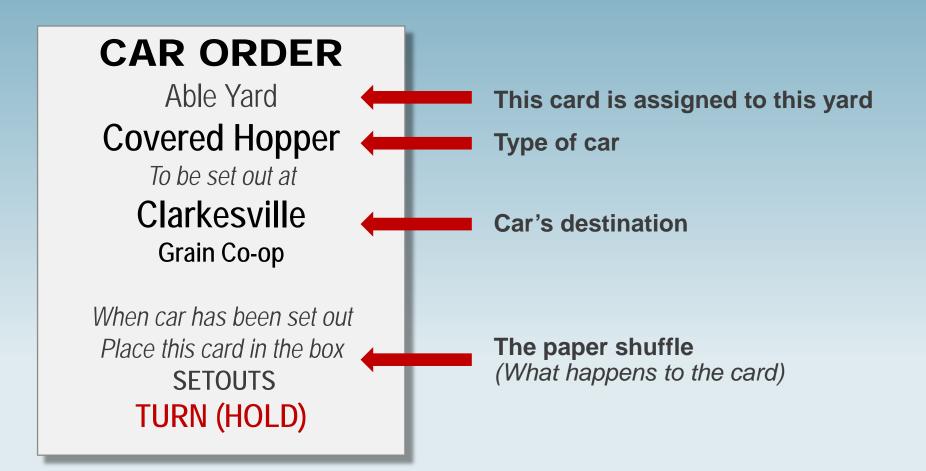
"Car routing without all the paperwork" What's this all about?

- An easy way to get cars moving around the layout in a meaningful, prototypical way
- A way to Simplify paperwork and setup time
- A way to Eliminate the worry about reporting marks
- No lost cards!
- No lost cars!
- No more eye strain!



The Car Order Form

Card Front



The Car Order Form

Card Back



Able Yard

Covered Hopper

To be picked up at

Clarkesville

Grain Co-op

Road crew to setout car at Able Yard on West bound track. When car has been setout turn this card and place in

CAR ORDERS

This card is assigned to this yard

Type of car

Car's location

Car's next destination

The paper shuffle (What happens to the card)

Car Order Storage

Where do they go on the layout?







Car Order Storage

Where do they go on the layout?



Car Order Storage

Where do they go on the layout?



How it all works

Train arrives at Able Yard

The CAR ORDERS box is checked to see if there is an available car in the train. We have an available box car.

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville

Box Industry

CAR ORDERS

SETOUTS

HOLD

PICKUP

Train arrives at Able Yard

The Car Order is removed from the CAR ORDERS box and moved to the SETOUTS box. This box car is destined for Clarksville. The Able Yard Master will makeup a train for Clarksville. The Car Order is given to the engineer of the train and the Clarksville train departs Able Yard.

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville

Box Industry

CAR ORDERS

SETOUTS

HOLD

PICKUP

The engineer places the Car Order in the SETOUT box at Clarksville.

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville

Box Industry

SETOUTS

HOLD

PICKUP

After the engineer sets out the box to the Box Industry. They can make the decision about what happens to the car for pickup.

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville

Box Industry

SETOUTS

HOLD

PICKUP

The engineer will turn over the Car Order to the Pickup Order side and place it in the HOLD box. The HOLD box can be used to delay the pickup of the car until a future session. This can be used to represent a delay by the industry do to a holiday, supply shortages or whatever reason you can think of. Or...

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville

Box Industry

Road crew to setout car at Able Yard on West bound track. When car has been setout

SETOUTS

HOLD

PICKUP

The engineer can place the Car Order in PICKUP box. The next scheduled train that arrives in Clarksville will look in the PICKUP box to see if there are any cars that need to be added to their train.

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville Box Industry

Road crew to setout car at Able Yard on West bound track. When car has been setout

turn this card and place in

SETOUTS

HOLD

PICKUP

A new train arrives at Clarksville

When the next scheduled train arrives at Clarksville the engineer will look to see if there are any cars that need to be picked up. The car will be added to the train and the Car Order will be removed from the PICKUP box and taken to Able Yard.

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville

Box Industry

Road crew to setout car at Able Yard on West bound track. When car has been setout turn this card and place in

CAR ORDERS

SETOUTS

HOLD

PICKUP

The new train from Clarksville arrives at Able Yard

The engineer places the Car Order in the SETOUTS box. According to the Pickup Order the car needs to be set out on the West Bound track of the Yard.

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville

Box Industry

Road crew to setout car at Able Yard on West bound track. When car has been setout turn this card and place in CAR ORDERS

CAR ORDERS

SETOUTS

HOLD

PICKUP

Able Yard Master

Once the car has been set out to the west bound pickup track of the yard, the Car order is placed in the PICKUP box. The car is now ready for the next West Bound train to pick it up.

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville

Box Industry

CAR ORDERS

SETOUTS

HOLD

PICKUP

A new West Bound train arrives

A new West Bound train has arrived and sees that a car for the train is ready to pickup. The car is added to the West Bound train and it departs Able Yard.

PICKUP ORDER

Able Yard

Box Car

To be picked up at

Clarkesville Box Industry

CAR ORDERS

SETOUTS

HOLD

PICKUP

Able Yard Master

After the West Bound train departs, the Able Yard Master will remove the Car Order from the PICKUP box and turn it over to the Car Order side. The Car Order is the return to the CAR ORDERS box so it is ready to be used by the next scheduled train that arrives at Able Yard.

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville Box Industry

CAR ORDERS

SETOUTS

HOLD

PICKUP

Now we will follow the process for two trains on the Able Bravo Railroad



- Through Freight: T10
 - Begins at East End Staging



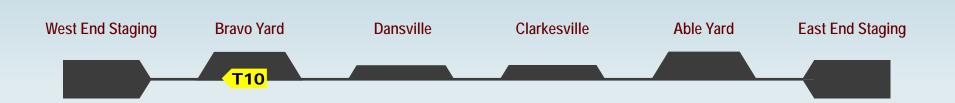


- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard





- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard





- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard
 - Terminating at West End Staging

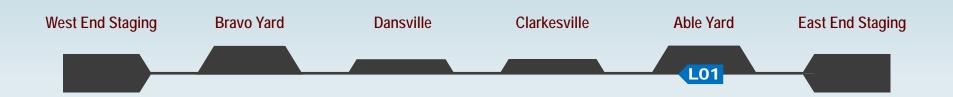
West End Staging Bravo Yard Dansville Clarkesville Able Yard East End Staging

T10



- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard
 - Terminating at West End Staging

- Local Freight: L01
 - Begins at Able Yard

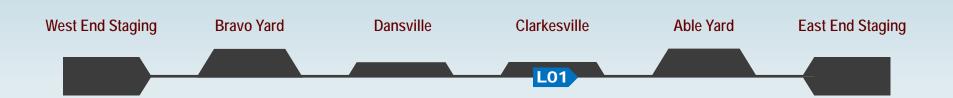




West Bound Trains

- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard
 - Terminating at West End Staging

- Local Freight : L01
 - Begins at Able Yard
 - Completes setouts and pickups at Clarkesville



← WEST A.B. RAILROAD EAST →



West Bound Trains

- Through Freight: T10
 - Begins at East End Staging
 - Stops only at Able Yard and Bravo Yard
 - Terminating at West End Staging

- Local Freight : L01
 - Begins at Able Yard
 - Completes setouts and pickups at Clarkesville
 - Returns to Able Yard and terminates.

Bravo Yard Dansville Clarkesville **Able Yard East End Staging** West End Staging L01

> WEST A.B. RAILROAD FAST

First up we will build the Through Freight T10 in the staging yard

West End Staging Bravo Yard Dansville Clarkesville Able Yard East End Staging

T10

- Staging Yardmaster :
 - Creates the train from stored cars off the layout
 - Creates the train from cars already in the staging yard
 - Creates the train from a random number generator



EAST

Building a Train Using a Random Number Generator

#	Road	Car #	Desc	Length	Color	Location
1	ATSF	2248	Reefer	50	Orange	U3D6
2	ATSF	145356	Boxcar	40	Brown	U3D8
3	BAR	6017	Boxcar	50	Red/White/Blue	U2D9
4	BCIT	800103	Boxcar	50	Green	U4D3
5	BCT	800348	Boxcar	60	Green	U2D9
6	BCT	818455	FlatBulk	60	Green	U2D7
7	BM	74706	Boxcar	40	Black	U3D6
8	ВО	381429	Boxcar	40	Brown	U3D1
9	ВО	467079	Boxcar	40	Blue	U3D8
10	ВО	UN1	Boxcar	40	Silver	U3D6
11	CBQ	17302	Boxcar	40	Gold	U3D8
12	CBQ	17786	Boxcar	40	Gold	U3D9
13	CBQ	53062	Stock	40	Green	U4D2
14	CBQ	61417	Boxcar	40	Gold	U3D9
15	CBQ	95279	Flatcar	50	Red	U2D7
16	CBQ	180229	HopGrain	35	Brown	U1D7
17	CBQ	180234	HopGrain	35	Brown	U3D3
18	CG	1595	Boxcar	50	Blue	U2D9
19	CLC	1206	FlatBulk	50	Blue	U2D7
20	CMO	20032	Boxcar	40	Green	U3D1
21	CN	370708	HopGrain	50	Rainbow	U3D3
22	CN	501417	Boxcar	40	Brown	U3D1
23	CONX	617	Tank	40	Silver	U3D2
24	CONX	619	Tank	40	Silver	U3D2
25	CONX	2571	Tank	35	Silver	U3D2
26	CONX	3111	Tank	35	Silver	U3D2
27	CONX	3141	Tank	35	Silver	U3D2
28	DRGW	20032	FlatTOFC	50	Black	U2D3
20	DRCM	6/127	Stock	40	Rrown	TND3

Building a train with this method adds a way that keeps the play value of operating trains fun and nobody knows exactly what to expect each operating session.

Setup a spread sheet with a sequential number from 1 to the total number of cars you have available. For my layout, I have a total of 219 pieces of rolling stock.

Building a Train Using a Random Number Generator

Random Number		: · · · · · · · · · · · · · · · · · · ·								
Min : 1		Result								
Max: 219		184, 211, 48, 20, 58, 189, 176, 7								
Quantity: 8										
Decimal Places: 0										
✓ Non repeating numbers										
You will need an app for your phone, tablet, PC program or from online to able to generate random numbers. This program should allow you to enter a minimum and maximum number as well as the quantity of numbers you want generated.										
Generate	Copy to clipboard									

Building a Train Using a Random Number Generator

#	Road	Car #	Desc	Length	Color	Location	
1	ATSF	2248	Reefer	50	Orange	U3D6	
2	ATSF	145356	Boxcar	40	Brown	U3D8	
3	BAR	6017	Boxcar	50	Red/White/Blue	U2D9	
4	BCIT	800103	Boxcar	50	Green	U4D3	
5	ВСТ	800348	Boxcar	60	Green	U2D9	
6	ВСТ	818455	FlatBulk	60	Green	U2D7	
7	BM	74706	Boxcar	40	Black	U3D6	
8	ВО	381429	Boxcar	40	Brown	U3D1	
9	ВО	467079	Boxcar	40	Blue	U3D8	
10	ВО	UN1	Boxcar	40	Silver	U3D6	
11	CBQ	17302	Boxcar	40	Gold	U3D8	
12	CBQ	17786	Boxcar	40	Gold	U3D9	
13	CBQ	53062	Stock	40	Green	U4D2	
14	CBQ	61417	Boxcar	40	Gold	U3D9	
15	CBQ	95279	Flatcar	50	Red	U2D7	
16	CBQ	180229	HopGrain	35	Brown	U1D7	
17	CBQ	180234	HopGrain	35	Brown	U3D3	
18	CG	1595	Boxcar	50	Blue	U2D9	
19	CLC	1206	FlatBulk	50	Blue	U2D7	
20	CMO	20032	Boxcar	40	Green	U3D1	
21	CN	370708	HopGrain	50	Rainbow	U3D3	
22	CN	501417	Boxcar	40	Brown	U3D1	
23	CONX	617	Tank	40	Silver	U3D2	
24	CONX	619	Tank	40	Silver	U3D2	
25	CONX	2571	Tank	35	Silver	U3D2	
26	CONX	3111	Tank	35	Silver	U3D2	
27	CONX	3141	Tank	35	Silver	U3D2	
28	DRGW	20032	FlatTOFC	50	Black	U2D3	
20	DRGW	6/127	Stock	40	Rrown	TND3	

Result

184, 211, 48, 20, 58, 189, 176, 7

In this example the 7th car on our list has been chosen. That car is a black Boston & Maine box car with the road number 74706. The rest of cars are added to the train from their position on the list.

West End Staging Bravo Yard Dansville Clarkesville Able Yard East End Staging

T10

Staging Yardmaster :

- Creates the train from stored cars off the layout
- Creates the train from cars already in the staging yard
- Creates the train from a random number generator
- The train's consist is based on cars needed by layout industries
- Other cars can added to represent run-through deliveries

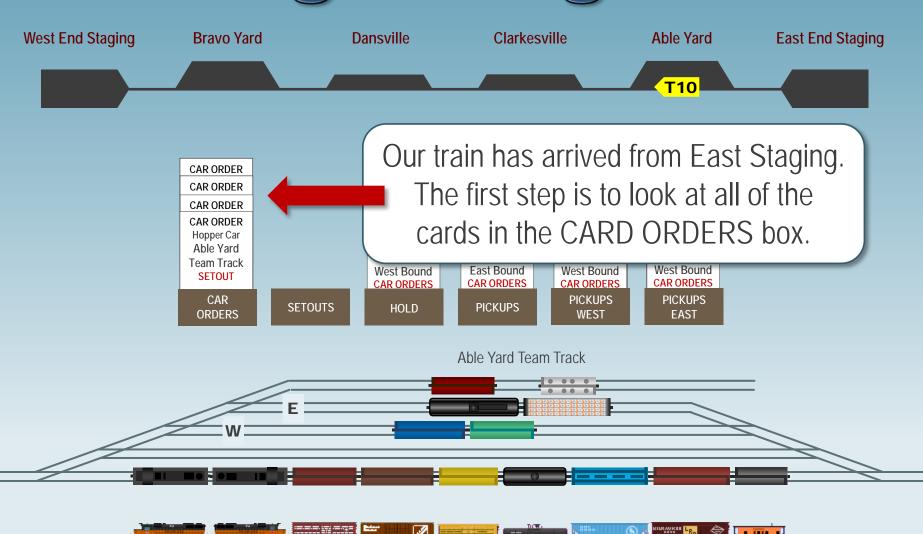


West End Staging Bravo Yard Dansville Clarkesville Able Yard East End Staging

T10

The Staging Yardmaster now has the train built and calls for the crew to take the train. The first stop for Through Freight T10 is Able Yard.





ABLE YARD

EAST

We can see that we do not have a hopper car in the train. We do have a choice of two box cars and a covered hopper. We do not have a flat car available in the this train.

Staging

CAR ORDER

West End

Able Yard

Hopper Car

RDE

RDE

RDE

r Ca

Yard

Γrac

To be set out at

Able Yard Team Track

When car has been set out Place this card in the box SETOUTS TURN (HOLD)

CAR ORDER

Able Yard

Box Car

To be set out at

Clarkesville Box Industry

When car has been set out Place this card in the box SETOUTS

TURN (HOLD)

CAR ORDER

Able Yard

Covered Hopper

To be set out at

KUP

lk He

Able

eam

est

Clarkesville Grain Co-op

When car has been set out Place this card in the box

SETOUTS TURN (HOLD)

Able ratu teatti track

CAR ORDER

Able Yard

Flat Car

To be set out at

Able Yard Team Track

When car has been set out
Place this card in the box

SETOUTS TURN (HOLD)

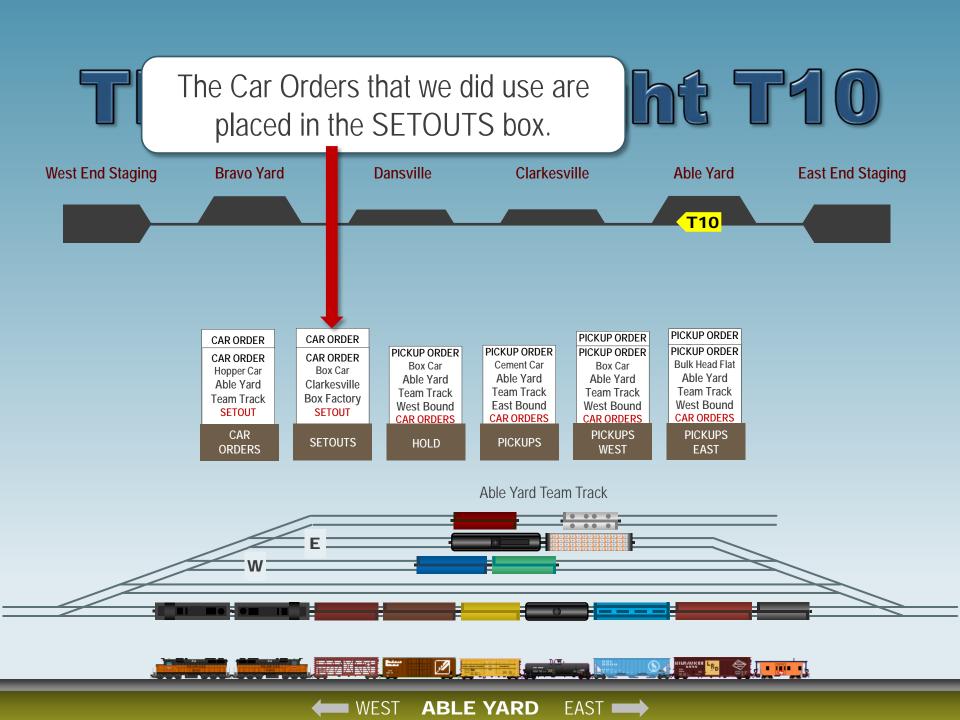


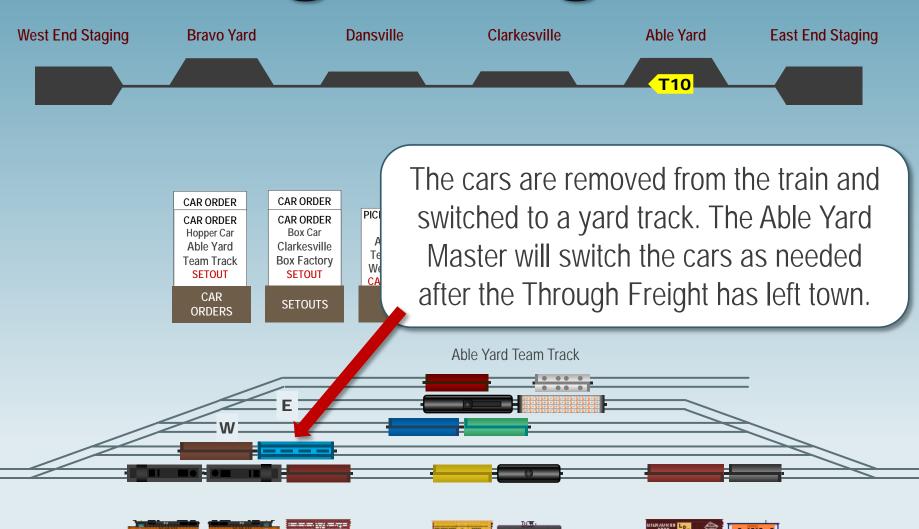
The Car Orders that we did not use are ht T10 returned to the CAR ORDERS box. West End Staging o Yard Bra **Dansville** Clarkesville Able Yard **East End Staging** T10 **CAR ORDER CAR ORDER** Able Yard Able Yard **Box Car Covered Hopper** DER To be set out at To be set out at CAR ORDER DER CKU CAR ORDER Clarkesville Clarkesville Flat Hopper Car Abl rd **Box Industry Grain Co-op** Able Yard ack ear Team Track und ast **SETOUT** When car has been set out ERS When car has been set out CAR Place this card in the box Place this card in the box **ORDERS SETOUTS SETOUTS** TURN (HOLD) TURN (HOLD) Aple Yard Team Track

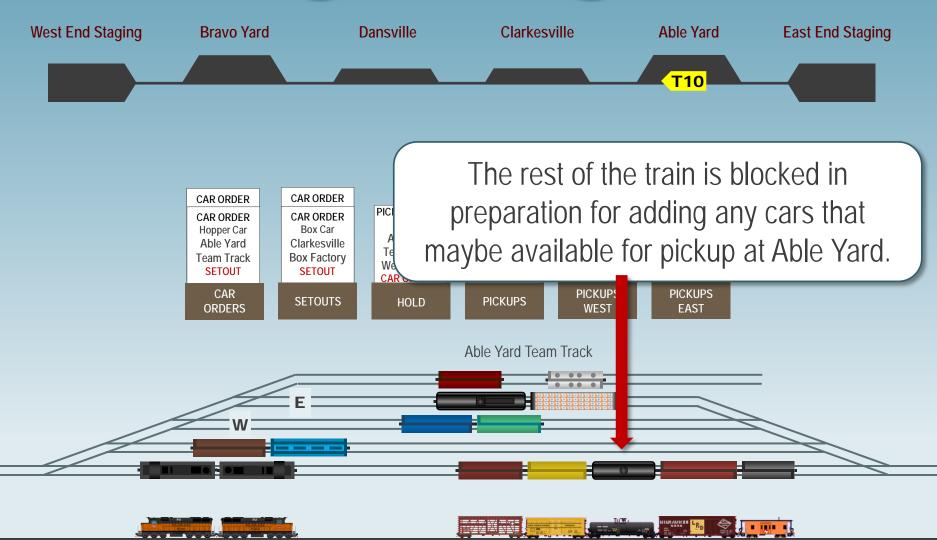
ABLE YARD

EAST

WEST

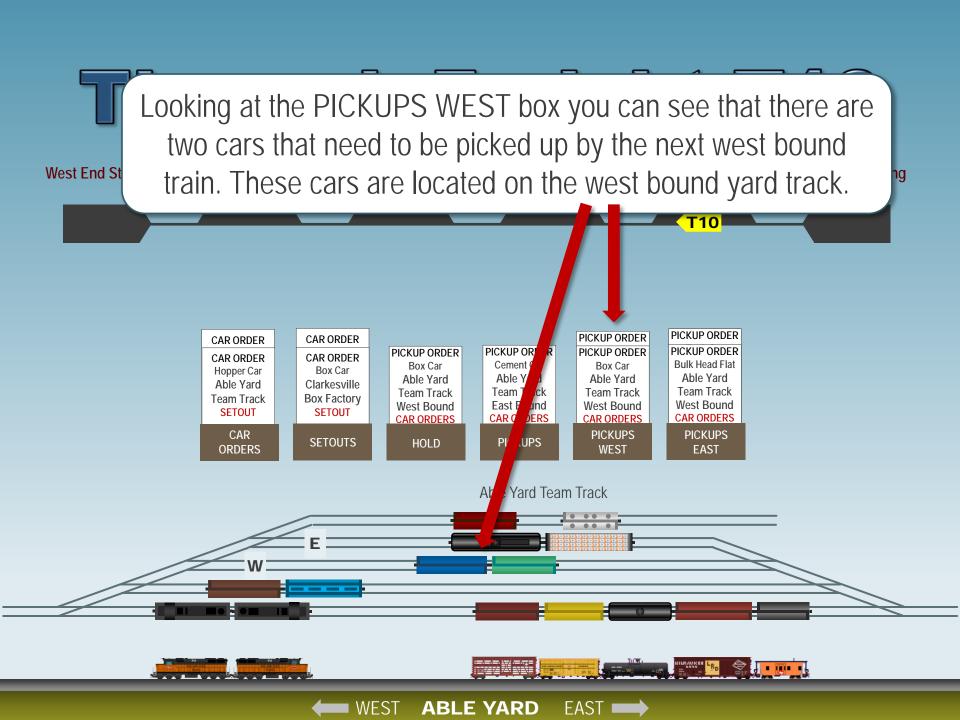






ABLE YARD

EAST



West End Staging

Rravo Vard

Dancvilla

Clarkocvilla

Ahla Vard

East End Staging

The west bound cars are added to the train and the engineer is given clearance to leave the yard.



CAR ORDER

Hopper Car Able Yard Team Track

> CAR ORDERS

CAR ORDER

CAR ORDER
Box Car
Clarkesville
Box Factory
SETOUT

SETOUTS

PICKUP ORDER

Box Car Able Yard Team Track West Bound CAR ORDERS

HOLD

PICKUP ORDER Cement Car

Able Yard Team Track East Bound CAR ORDERS

PICKUPS

PICKUP ORDER
PICKUP ORDER

Box Car Able Yard Team Track West Bound CAR ORDERS

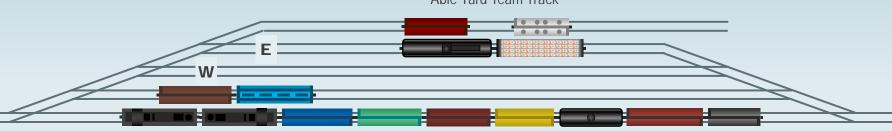
> PICKUPS WEST

PICKUP ORDER

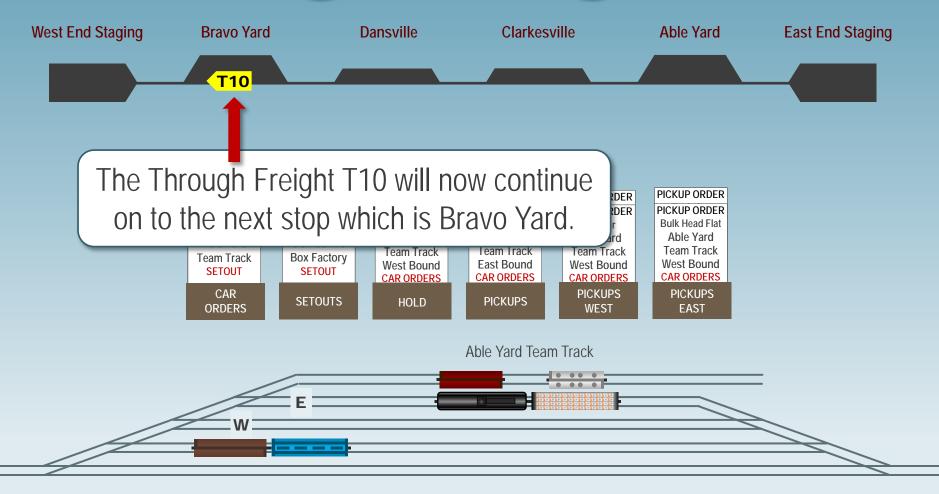
PICKUP ORDER Bulk Head Flat Able Yard Team Track West Bound

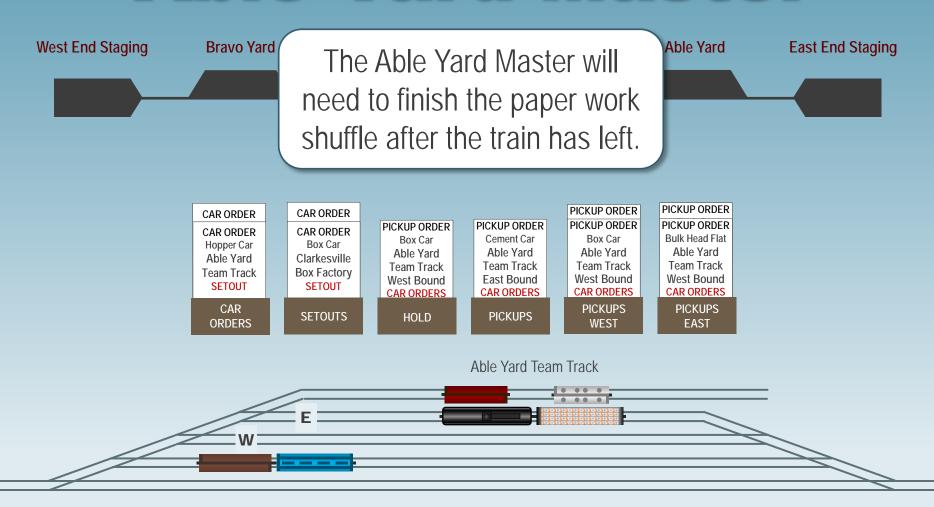
CAR ORDERS
PICKUPS
EAST

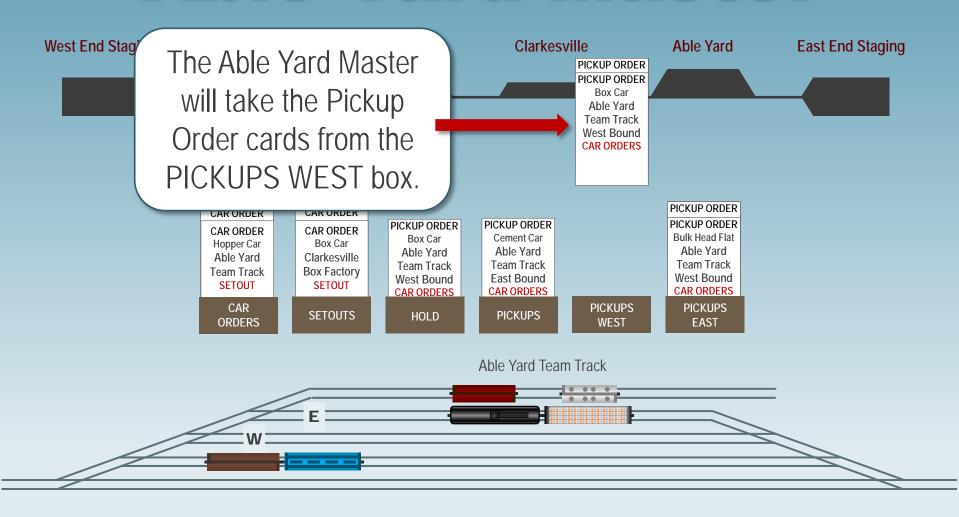
Able Yard Team Track

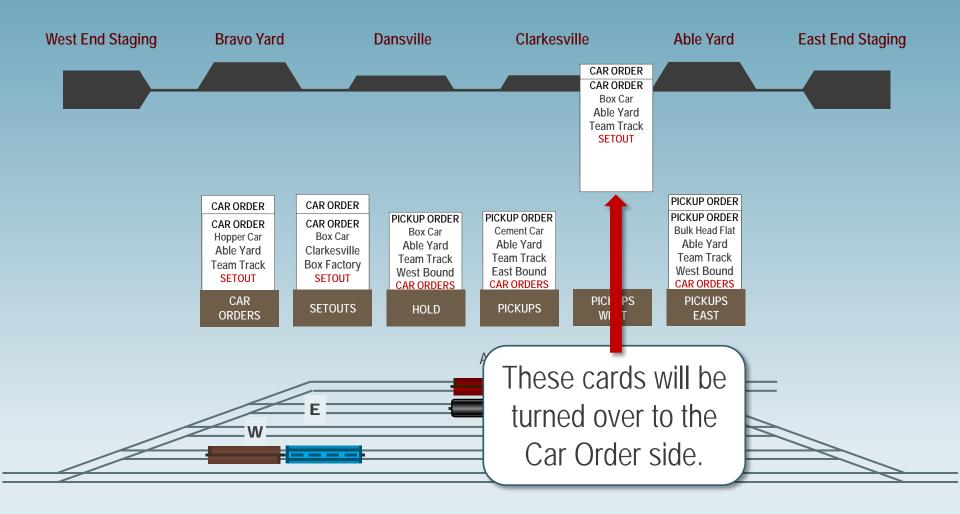


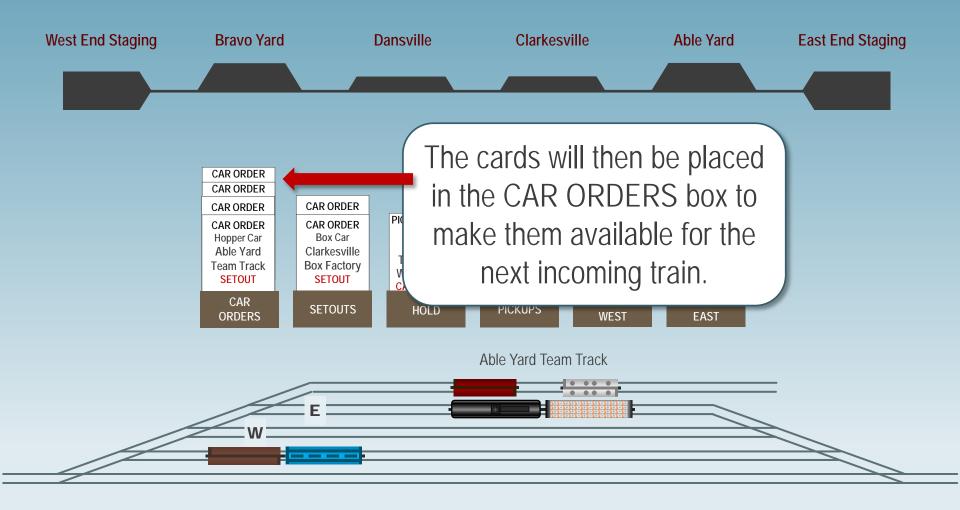


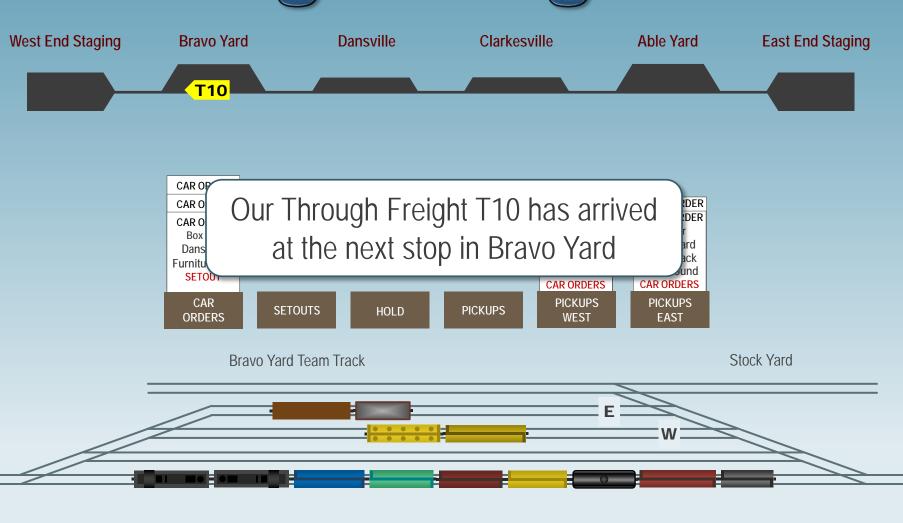




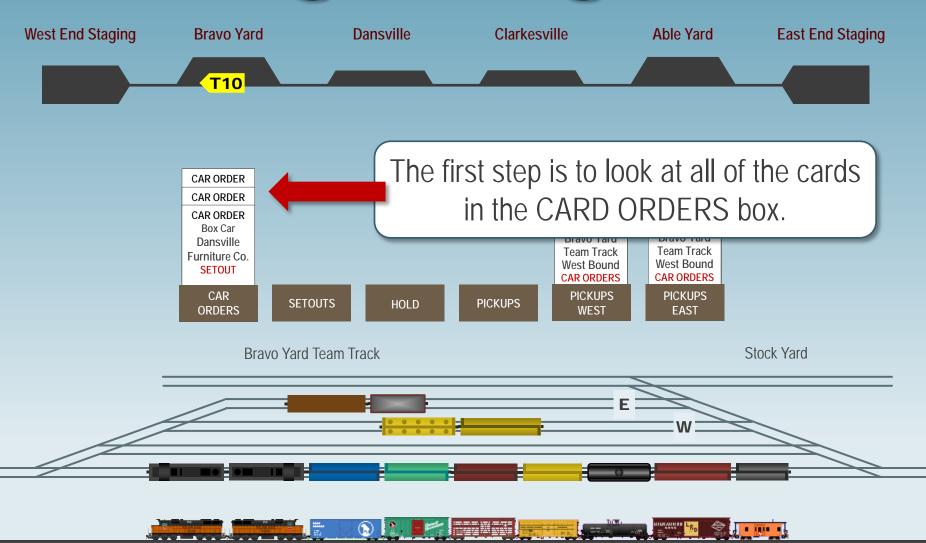












BRAVO YARD

EAST

West End

We can see that we do have a stock car in the train.

Staging

T10

CAR ORDER

Bravo Yard

Stock Car

To be set out at

Bravo Yard Stock Yard

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

CAR ORDER

Bravo Yard

Box Car

To be set out at

Dansville

Furniture Company

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

CAR ORDER

Bravo Yard

Tank Car

To be set out at

Bravo Yard

Team Track

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

ard



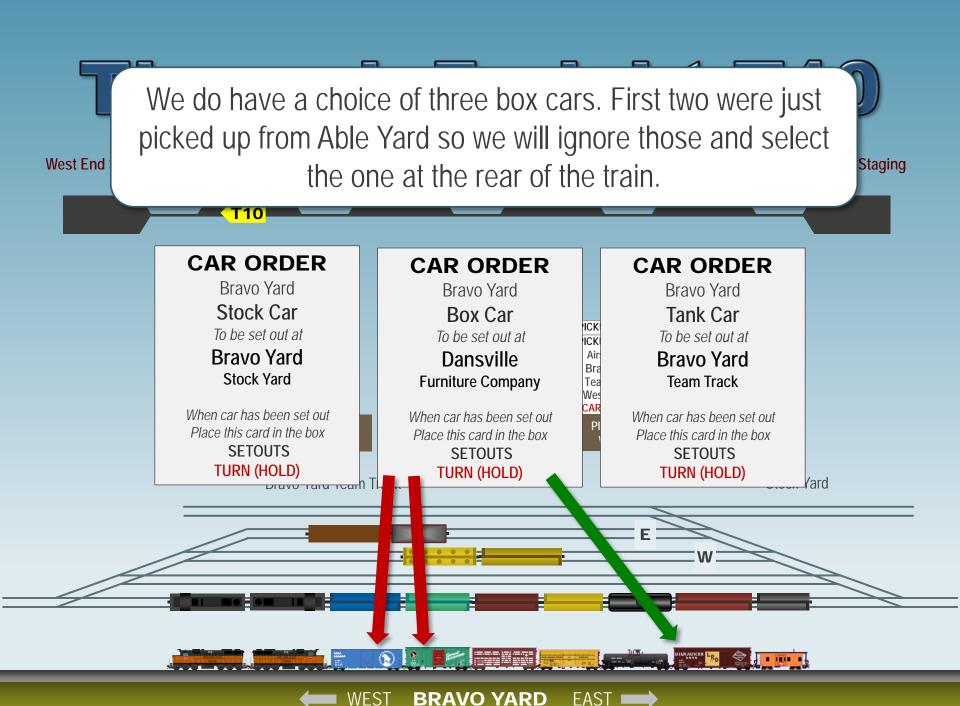
WEST

ICK

Air

Bra

Wes



West End

We also have a tank car available.

Staging

T10

CAR ORDER

Bravo Yard

Stock Car

To be set out at

Bravo Yard Stock Yard

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

CAR ORDER

Bravo Yard

Box Car

To be set out at

Dansville

Furniture Company

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

CAR ORDER

Bravo Yard

Tank Car

To be set out at

Bravo Yard

Team Track

When car has been set out Place this card in the box

SETOUTS

TURN (HOLD)

ard

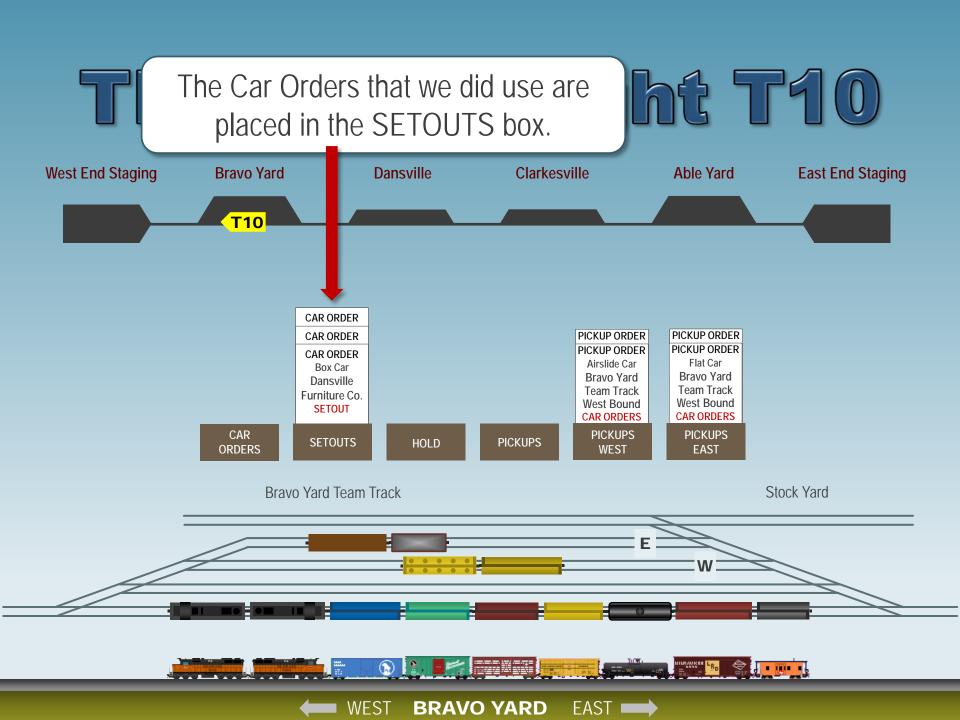
WEST

ICK

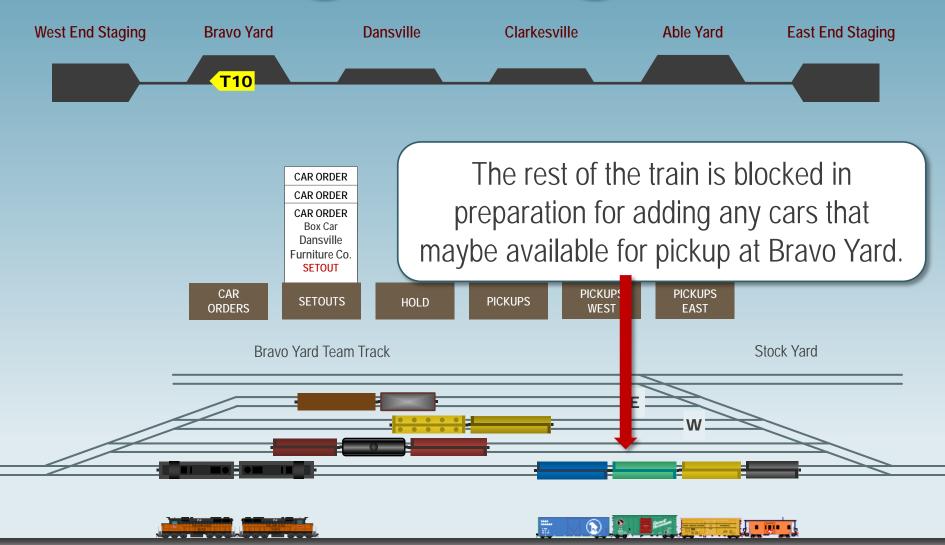
Air

Bra

Wes

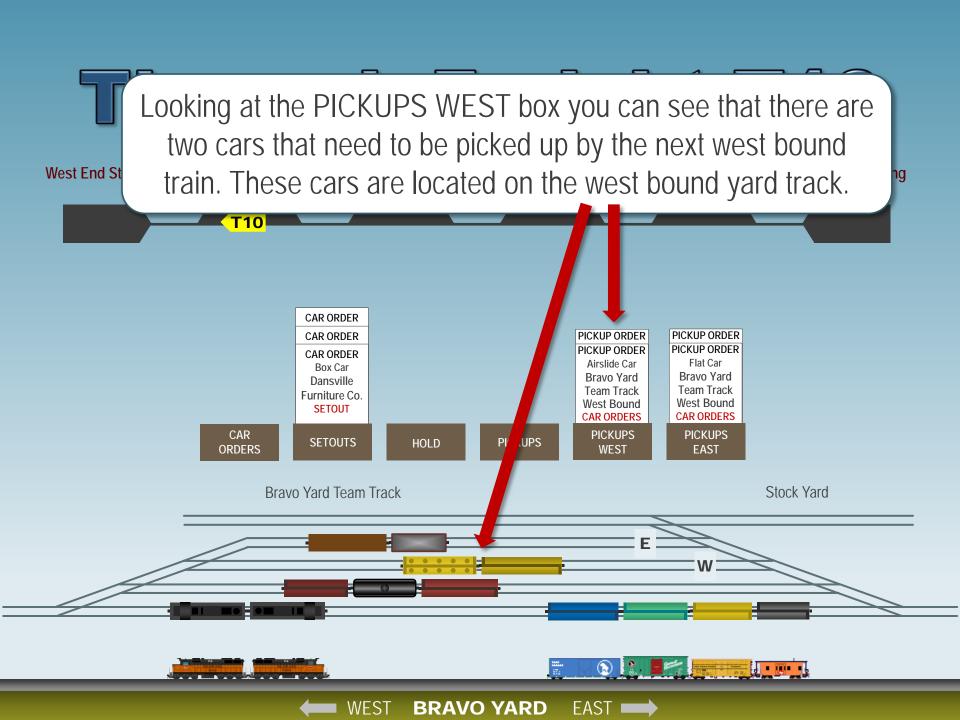


West End Staging **Bravo Yard Dansville** Clarkesville Able Yard East End Staging T10 The cars are removed from the train and CAR ORDER switched to a yard track. The Bravo Yard CAR ORDER CAR ORDER Box Car Master will switch the cars as needed Dansville Furniture Co. **SETOUT** after the Through Freight has left town. CAR SETOUTS **ORDERS** Bravo Yard Team Track Stock Yard



BRAVO YARD

EAST



West End Staging

Rravo Vard

Dancvilla

Clarkacvilla

Ahla Vard

East End Staging

The west bound cars are added to the train and the engineer is given clearance to leave the yard.

CAR ORDER
CAR ORDER
Box Car
Dansville
Furniture Co.
SETOUT

CAR ORDERS

HOLD

PICKUPS

PICKUP ORDER
PICKUP ORDER
Airslide Car
Brayo Yard

Bravo Yard Team Track West Bound CAR ORDERS

PICKUPS WEST PICKUP ORDER PICKUP ORDER

Flat Car Bravo Yard Team Track West Bound CAR ORDERS

> PICKUPS EAST

Bravo Yard Team Track

Stock Yard



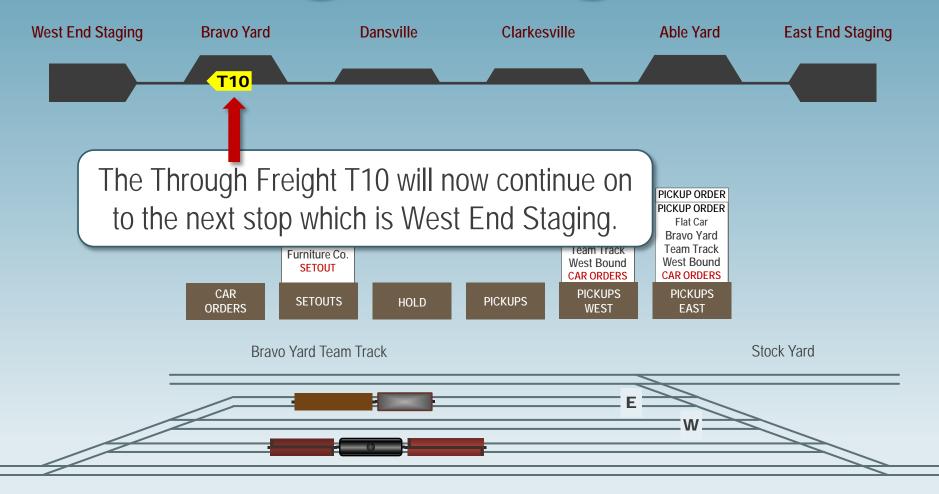




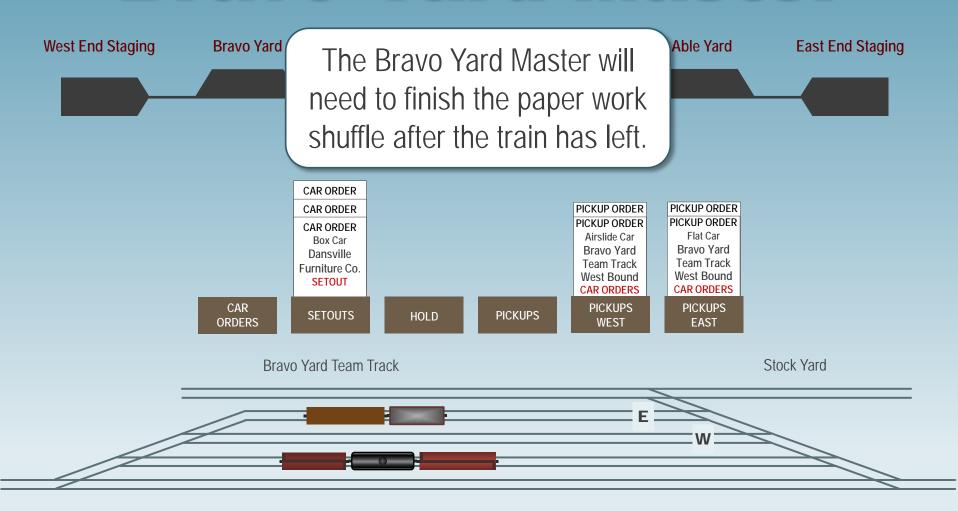
BRAVO YARD

EAST

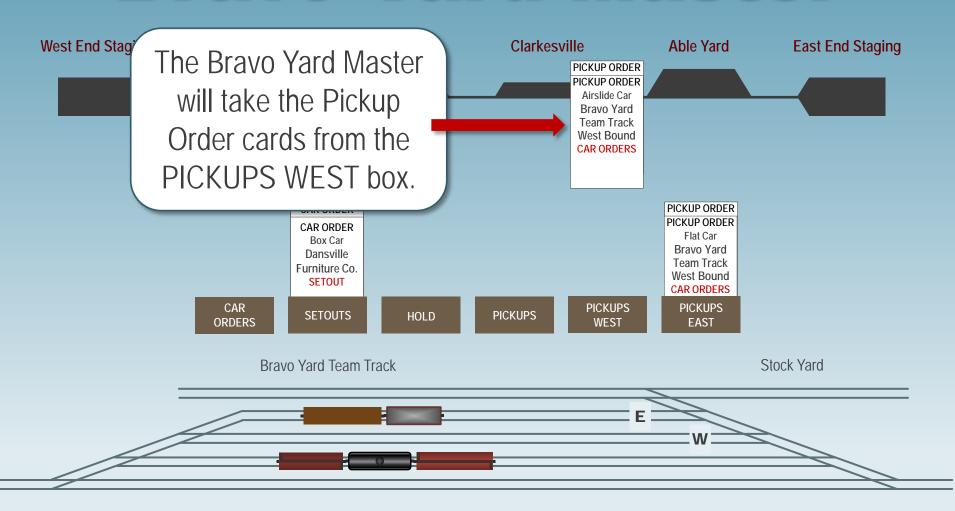




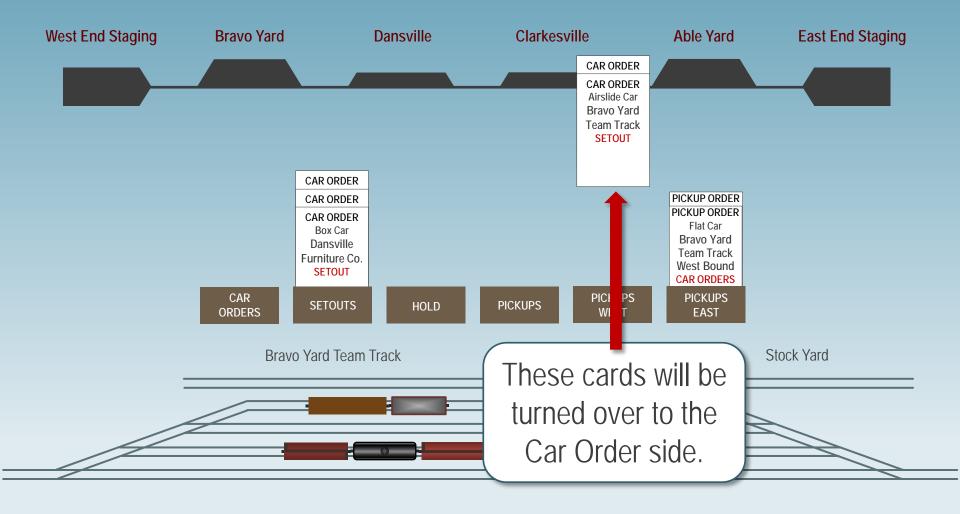
Bravo Yard Master



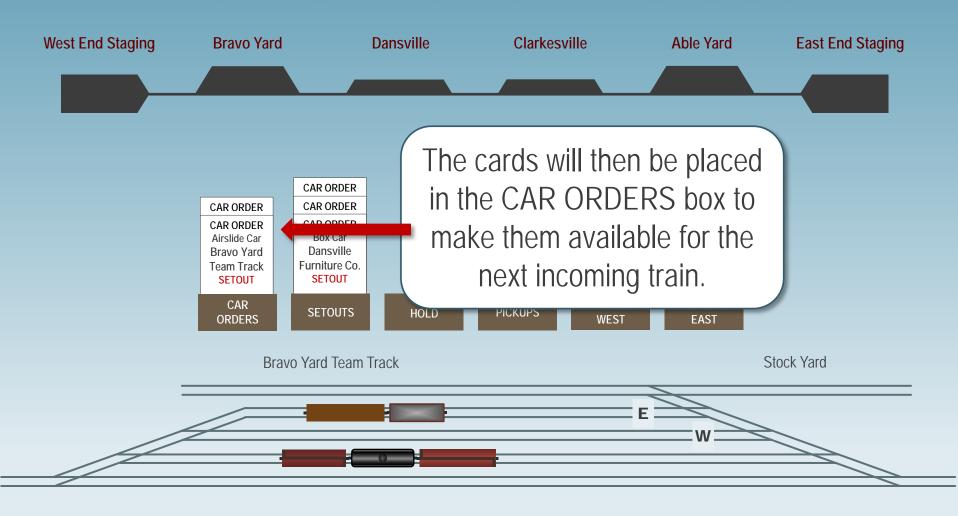
Bravo Yard Master



Bravo Yard Master



Bravo Yard Master

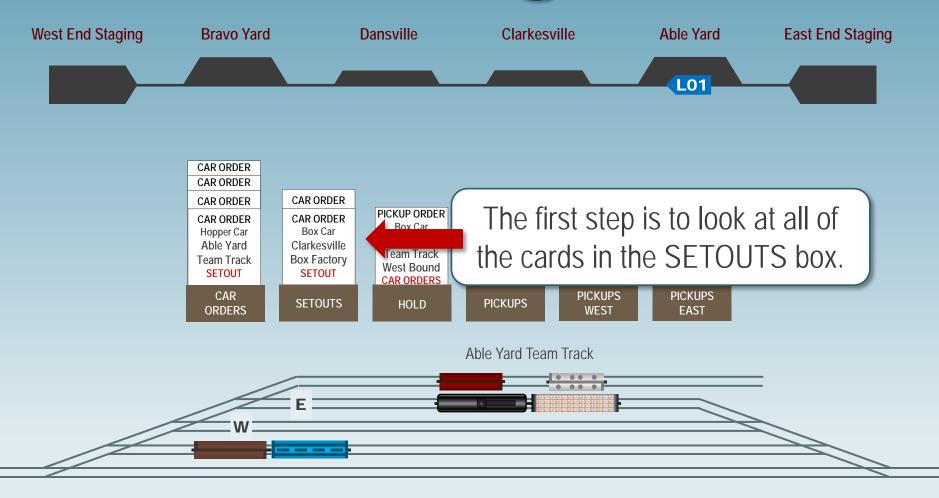


Now we will follow the process for Local Freight L01 at Able Yard

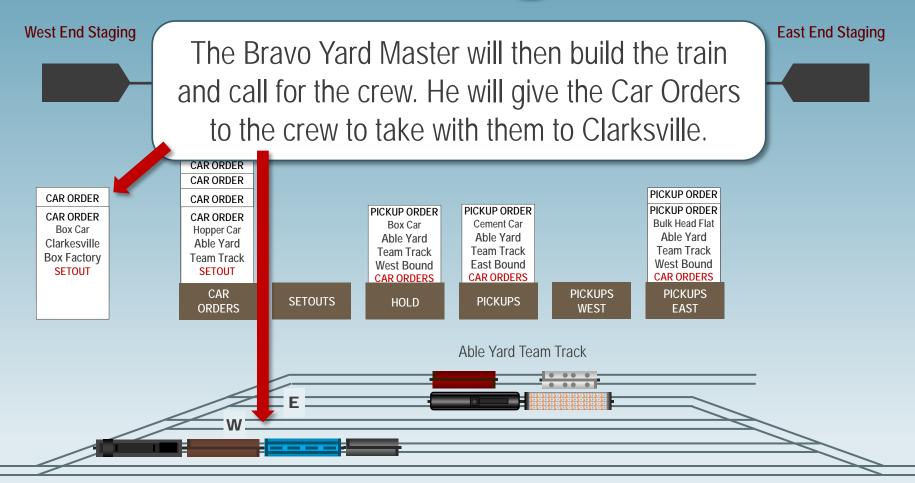
West End Staging Bravo Yard Dansville Clarkesville Able Yard East End Staging

The Able Yard Master will need to build the train for Local Freight L01. The train will pick up cars at Able Yard and do pickups and setouts at Clarksville. It will then return to Able Yard.

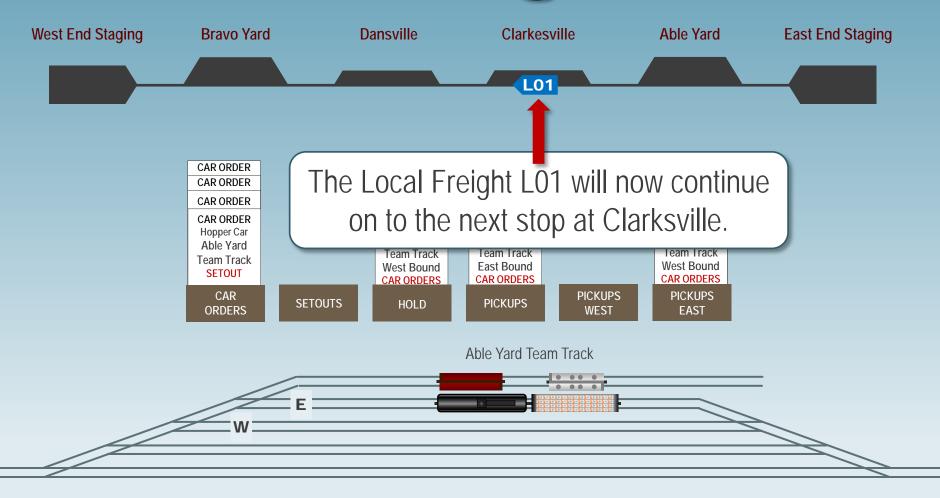


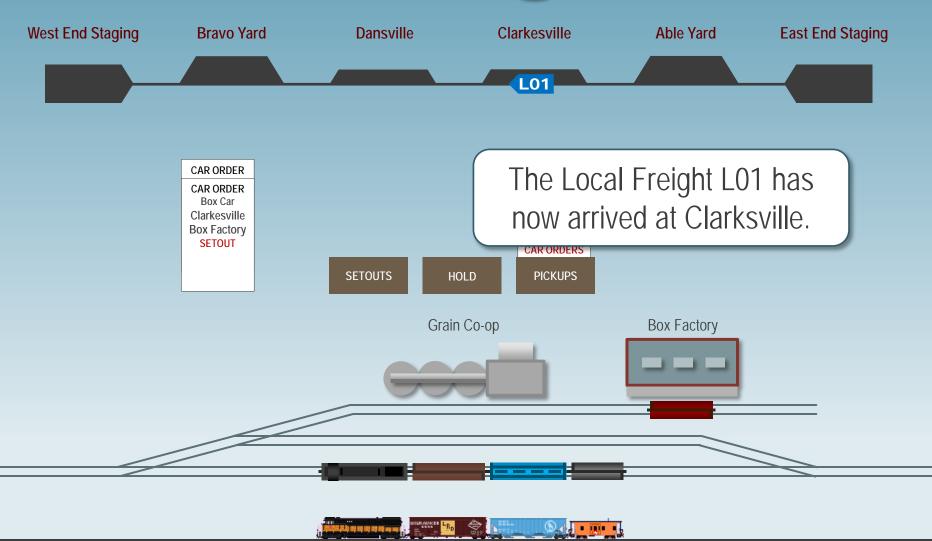


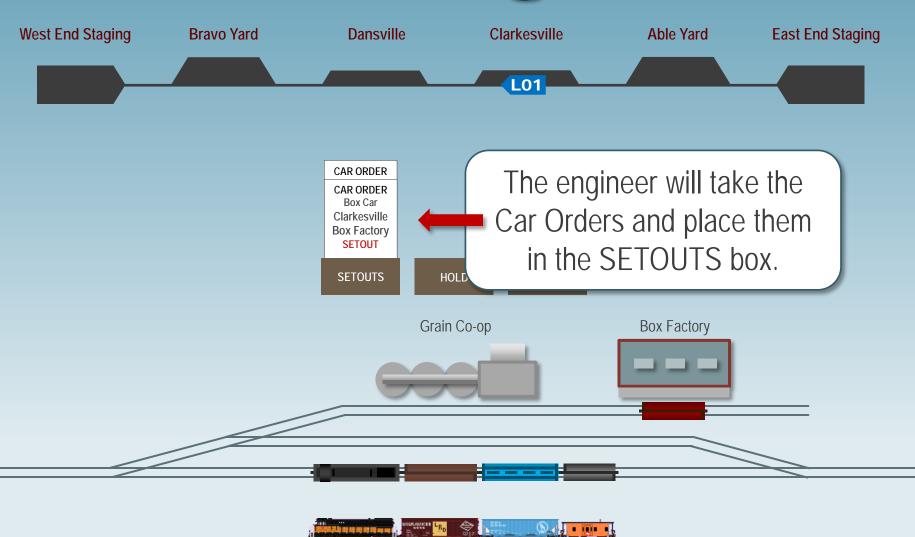
West End Staging We can see that both cards are for Local Freight L01. **CAR ORDER CAR ORDER** Able Yard Able Yard CAR ORDE **Box Car Covered Hopper** CAR ORDE To be set out at To be set out at KUP ORDER CAR ORDE KUP ORDER Clarkesville Clarkesville CAR ORDE Ik Head Flat Hopper Ca **Box Industry Grain Co-op** ble Yard Able Yard eam Track Team Trac est Bound **SETOUT** When car has been set out When car has been set out R ORDERS Place this card in the box Place this card in the box CAR PICKUPS ORDER! **SETOUTS SETOUTS EAST TURN (HOLD) TURN (HOLD)** Able Yard Team Track





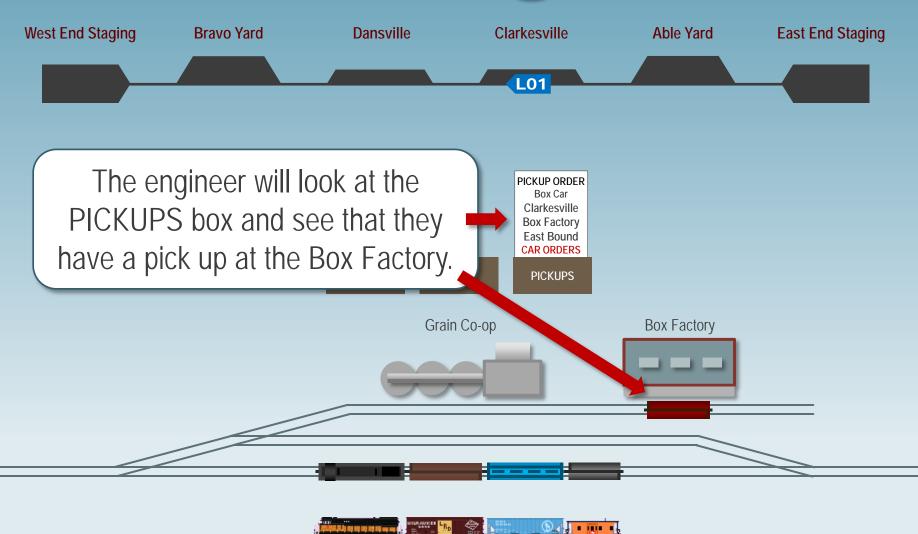


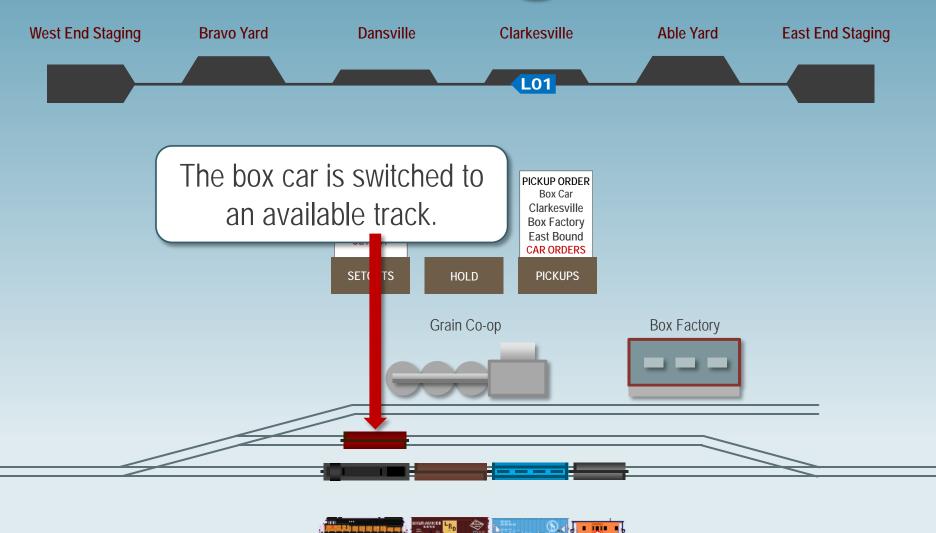


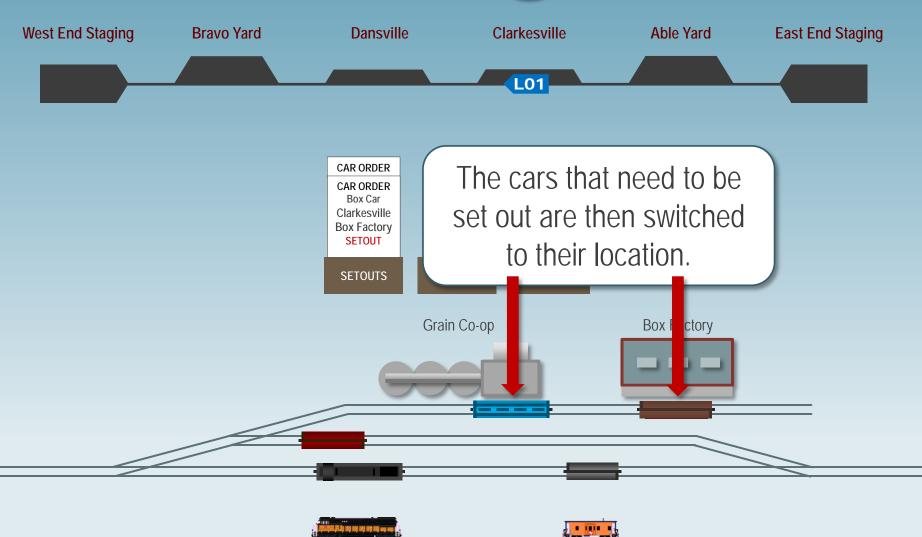


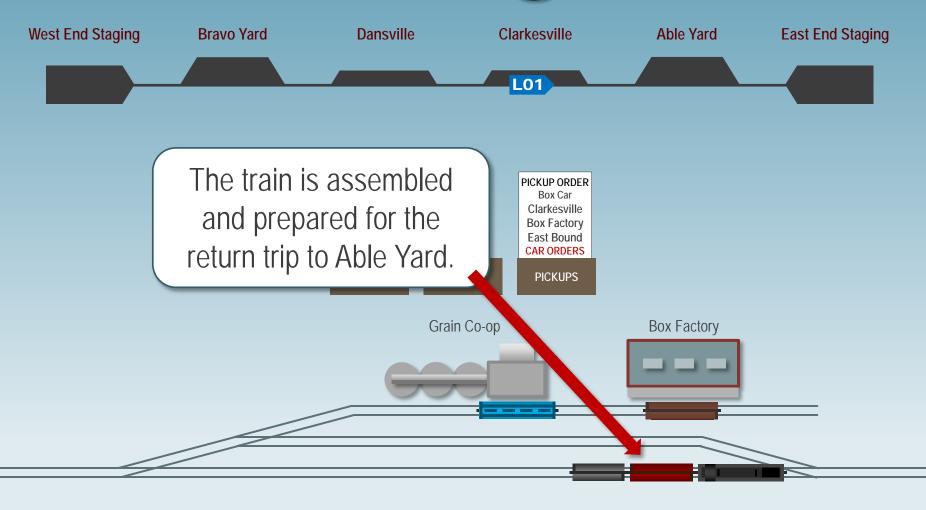
CLARKESVILLE

EAST

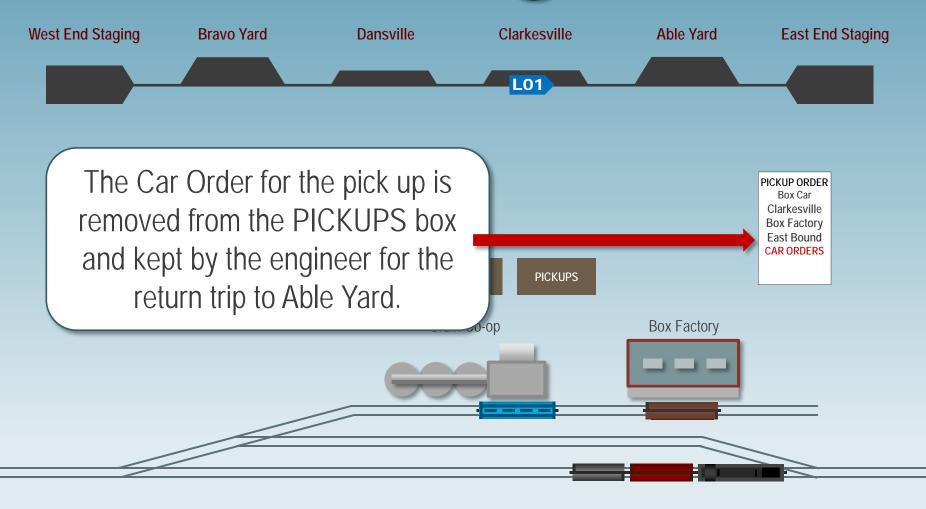














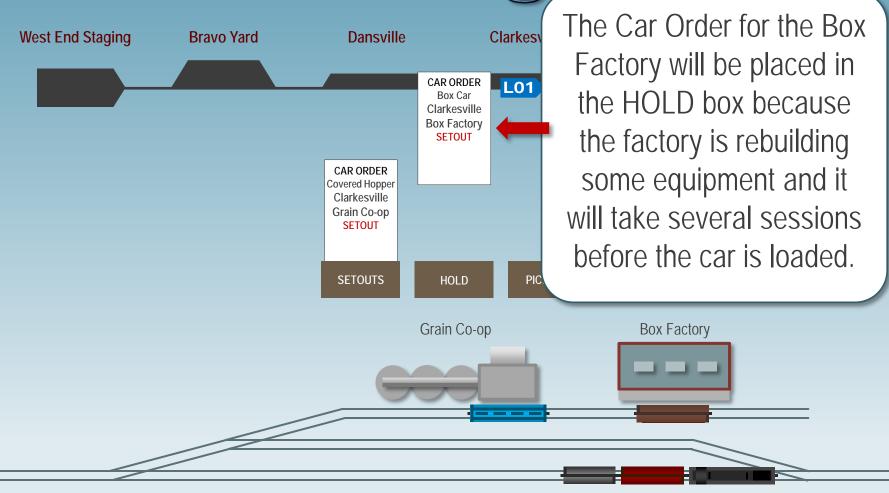
Before the engineer can leave Clarksville he must finish the paper shuffle. The Car Orders from the SETOUTS box need to be placed in the appropriate HOLD or PICKUPS box.

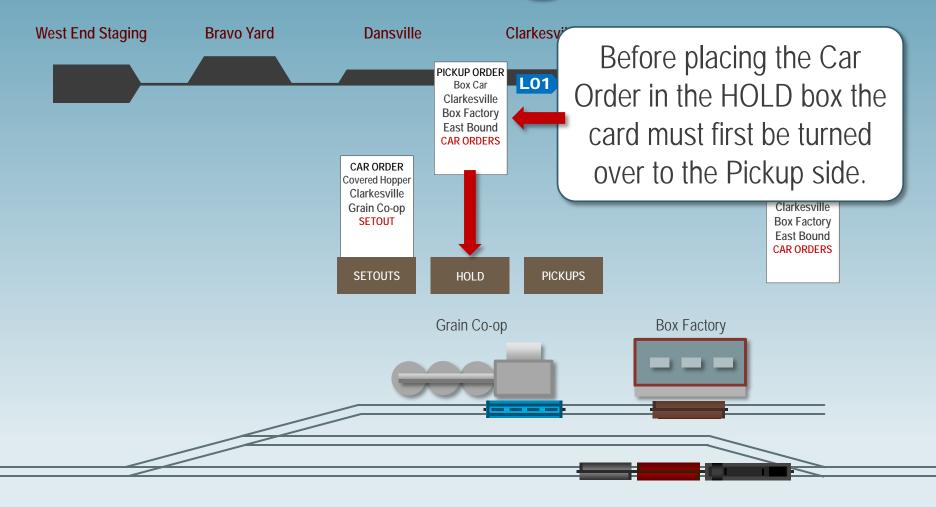
West

CAR ORDER PICKUP ORDER CAR ORDER Box Car Box Car Clarkesville Clarkesville **Box Factory Box Factory** East Bound **SETOUT CAR ORDERS SETOUTS HOLD PICKUPS** Grain Co-op **Box Factory**



ging





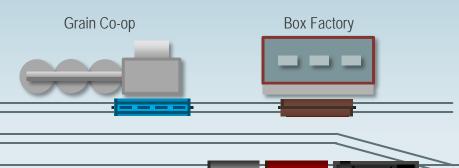


EAST

The Car Order for the Grain Co-op will be placed in the PICKUPS box so that the grain can be shipped to the customer as soon as possible.

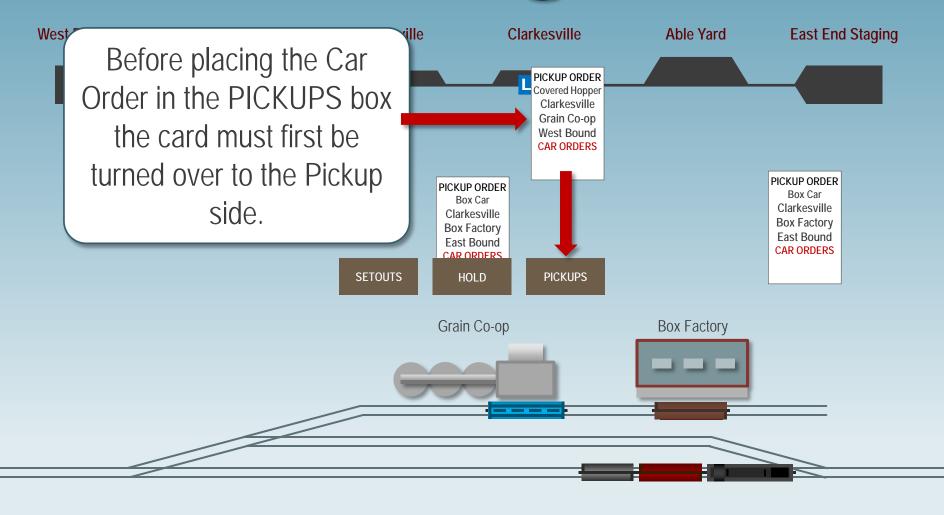
PICKUP ORDER
BOX Car
Clarkesville
BOX Factory
East Bound

Clarkesville Able Yard **East End Staging** CAR ORDER Covered Hopper Clarkesville Grain Co-op **SETOUT** PICKUP ORDER Box Car Clarkesville **Box Factory East Bound CAR ORDERS** CAR ORDERS **PICKUPS** HOLD

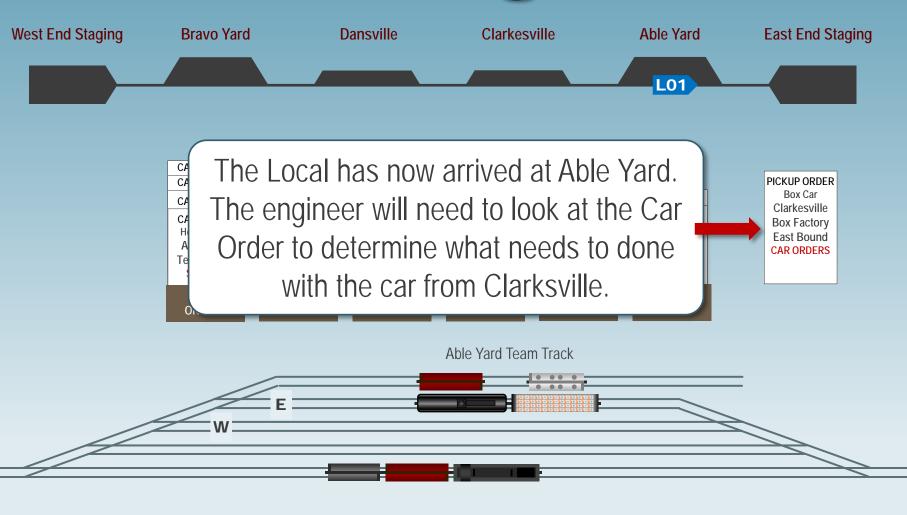


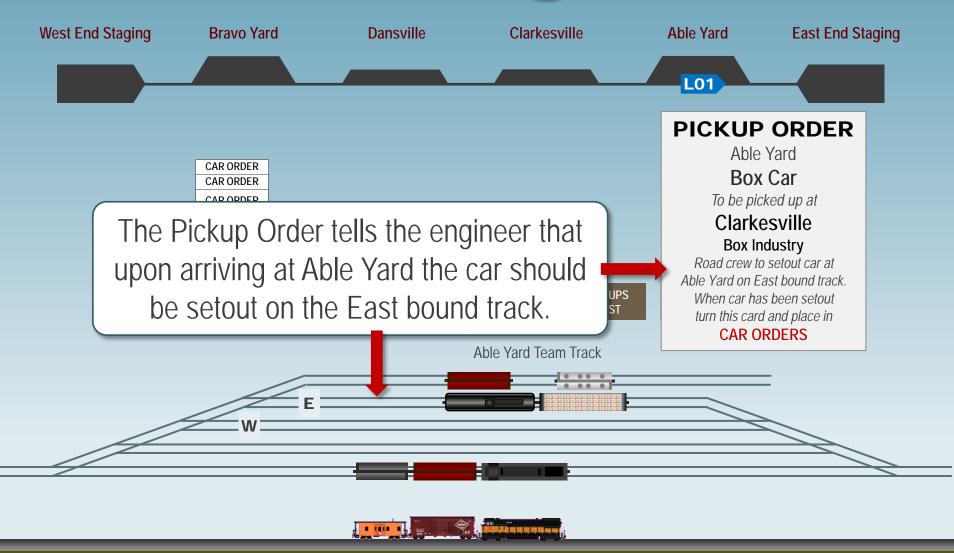


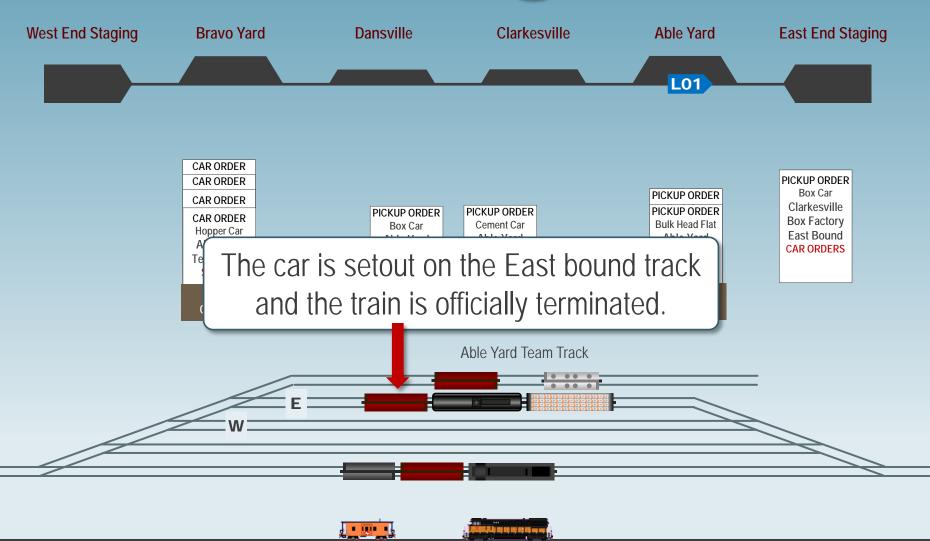
SETOUTS



Wes Able Yard **East End Staging** Now that the paper shuffle is complete the engineer can get clearance to L01 proceed to Able Yard PICKUP ORDER PICKUP ORDER PICKUP ORDER Box Car Box Car **Covered Hopper** Clarkesville Clarkesville Clarkesville Box Factory **Box Factory** Grain Co-op East Bound East Bound West Bound **CAR ORDERS** CAR ORDERS CAR ORDERS **SETOUTS** HOLD **PICKUPS** Grain Co-op **Box Factory**

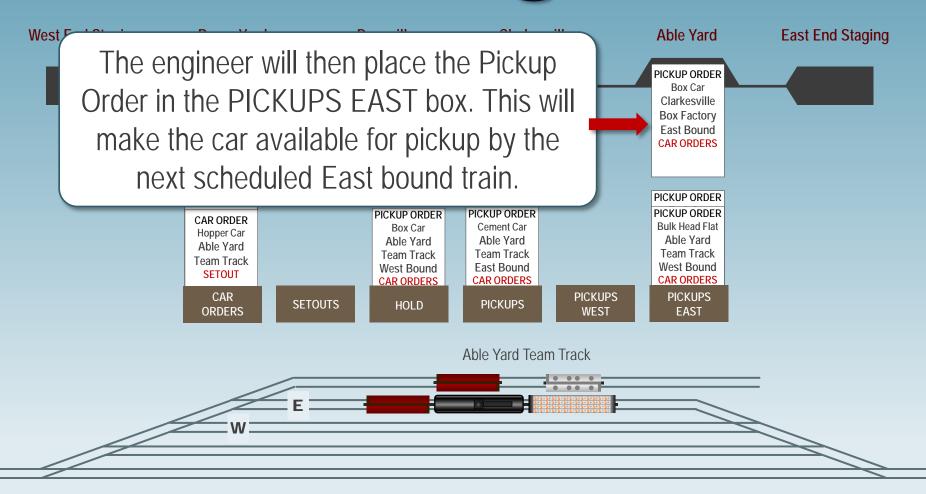






ABLE YARD

EAST



How to Setup a Car Order System

Start with a blank grid (Spread Sheet)

TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
	Total Spots Total Car Orders							

 The first column of the spread sheet lists each town in order as they appear on your layout



TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
Able Yard								
Clarkesville								
Dansville								
Bravo Yard								
Total Spots			T	otal Car Orders				

- The first column of the spread sheet lists each town in order as they appear on your layout
- The second column list each industry in order by town they are in



TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
Able Yard	Team Track							
Clarkesville	Grain Co-op							
	Box Factory							
Dansville	Furniture Company							
	Coal & Gas							
	Grain Co-op							
Bravo Yard	Team Track							
	Stock Yard							
	Total Spots		T	otal Car Orders				

- In column 3 list the number of car spots that each industry has
- In this example: The Able Yard Team Track is on a long spur that can handle 6 cars total so we list 6 spots



TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
Able Yard	Team Track	6						
Clarkesville	Grain Co-op	2						
	Box Factory	2						
Dansville	Furniture Company	2						
	Coal & Gas	2						
	Grain Co-op	2						
Bravo Yard	Team Track	4						
	Stock Yard	2						
Total Spots			Т	otal Car Orders				

- Next list the type of car to go each of the car spots
- Only 1 car per car spot



TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
Able Yard	Team Track	6	Box Car	Flat Car	Hopper Car	Tank Car	Covered Hopper	Cement Hopper
Clarkesville	Grain Co-op	2						
	Box Factory	2						
Dansville	Furniture Company	2						
	Coal & Gas	2						
	Grain Co-op	2						
Bravo Yard	Team Track	4						
	Stock Yard	2						
	Total Spots		T	otal Car Orders				

Complete the list for each town

	TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
	Able Yard	Team Track	6	Box Car	Flat Car	Hopper Car	Tank Car	Covered Hopper	Cement Hopper
	Clarkesville	Grain Co-op	2	Covered Hopper	Covered Hopper				
	Clarkesville	Box Factory	2	Box Car	Box Car				
		,							
	Dansville	Furniture Company	2	Box Car	Flat Car				
		Coal & Gas	2	Hopper Car	Tank Car				
		Grain Co-op	2	Covered Hopper	Covered Hopper				
	Bravo Yard	Team Track	4	Box Car	Flat Car	Hopper Car	Tank Car		
1		Stock Yard	2	Stock Car	Stock Car				
		Total Spots		T	otal Car Orders				

- Total the number of Car Spots
- Total the number of Car Orders
- These should equal each other
- Now it's time to make the Car Order Cards

TOWN	INDUSTRY	# OF SPOTS	SPOT 1	SPOT 2	SPOT 3	SPOT 4	SPOT 5	SPOT 6
Able Yard	Team Track	6	Box Car	Flat Car	Hopper Car	Tank Car	Covered Hopper	Cement Hopper
Clarkesville	Grain Co-op	2	Covered Hopper	Covered Hopper				
	Box Factory	2	Box Car	Box Car				
Dansville	Furniture Company	2	Box Car	Flat Car				
	Coal & Gas	2	Hopper Car	Tank Car				
	Grain Co-op	2	Covered Hopper	Covered Hopper				
Bravo Yard	Team Track	4	Box Car	Flat Car	Hopper Car	Tank Car		
	Stock Yard	2	Stock Car	Stock Car				
	T	22						

- Many different ways to create the Car Order Cards
 - Hand written
 - Microsoft Word (Windows & Apple)
 - Microsoft Excel (Windows & Apple)
 - Word Perfect (Windows)
 - Open Office (Windows)
 - Pages (Apple)
 - Numbers (Apple)
 - Google Docs & Sheets (Universal)













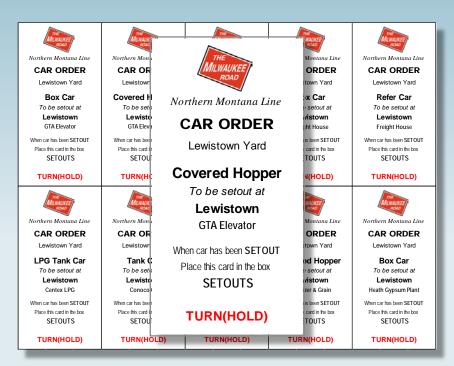


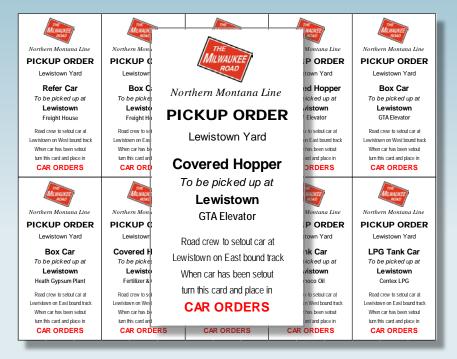




Example: For my Northern Montana Line

- Software used: Microsoft Excel
- Printed on Inkjet Business Card paper (2" x 3½")
 - Avery 8371 or Office Depot 717-631





The 10 Best Reasons to use Car Orders

#10

Night Operations

Since you do not need to read car reporting numbers all that is needed is enough light to read the Car Order and be able to see the car type

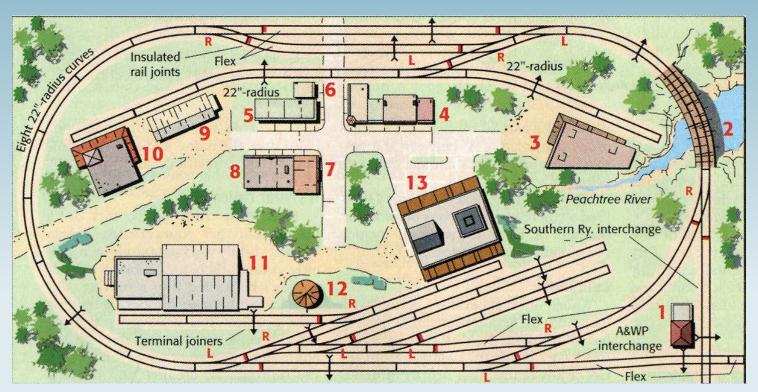




Size does not matter!

Car orders works well any size layout!

SMALL

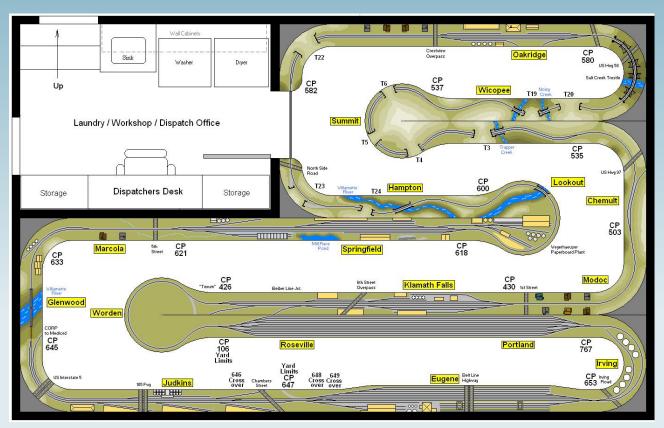




Size does not matter!

Car orders works well any size layout!

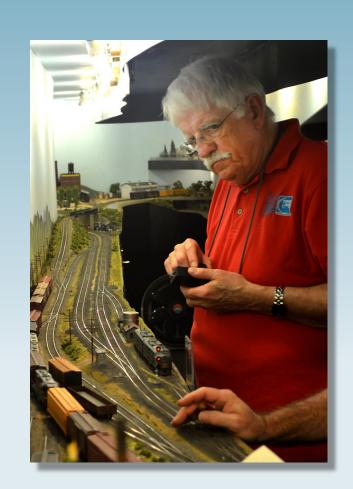
Or LARGE





Self Correcting

- If a car is in the wrong place the crew can either leave it or pick it up. Their decision does not affect any other operations.
- Find a car with no "PICKUP ORDER", pick it up and route it on the next through freight
- Find a "PICKUP ORDER" with no car, turn the form over to "CAR ORDERS" and place in car order pocket.
- It's so simple even Jack could do it!





Adjusting Your Rolling Stock

- Want to add a car to your Rolling Stock?
- Just put it on the layout, no need to make out new car cards, new waybills or change your computer program.





Adjusting Your Rolling Stock

- Want to take a car out of service... just take it off
- This works well in clubs where members bring in or take home equipment.





Adjusting Your Industries (Car Spots)

Want to add a new spur and Industry?

Put it on the layout, figure the number of car spots and

car type for each spot

Make out new Car Orders

Want to remove or change an industry?

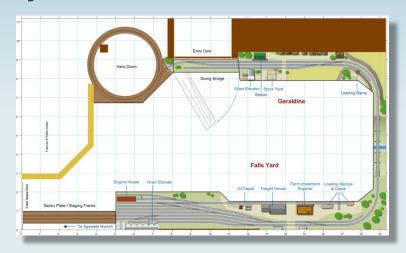
Tear up the old Car Orders.

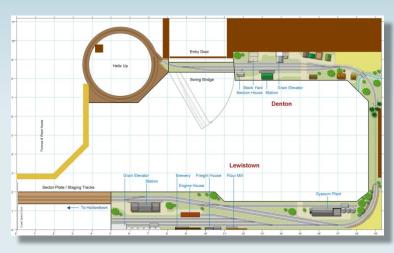




Requires Less Setup

- On my home layout "The Northern Montana Line" I have 17 Industries requiring a total of 35 car spots and I have a total of 219 cars in my car fleet
- I will use this information to demonstrate the differences between a traditional waybill & car card system and CAR ORDERS







WB & CC

- Required
 - 87 two position waybills
 - 219 car cards
 - For a total of 306 pieces of paper
 - Months to create





Car Orders

- Required
 - 35 Car Orders
 - 6 hours to create the grid and cards



Northern Montana Line

CAR ORDER

Lewistown Yard

Covered Hopper

To be setout at

Lewistown

GTA Elevator

When car has been SETOUT
Place this card in the box
SETOUTS

TURN(HOLD)



Northern Montana Line

PICKUP ORDER

Lewistown Yard

Covered Hopper

To be picked up at

Lewistown

GTA Elevator

Road crew to setout car at Lewistown on East bound track

When car has been setout turn this card and place in

CAR ORDERS



Provides For Continuous Operations

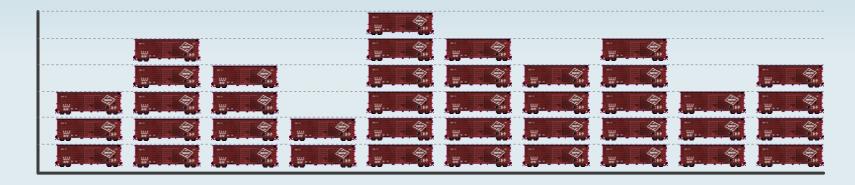
- Since the paperwork is done when a car is setout or picked up it is immediately ready for the next train
- Since through freights do not need any waybills or paperwork they are ready for the next run as soon as they get to a staging yard or the end of their run





Provides for a Random Rise & Fall in Traffic

- Since a Car Order can be filled by only one car
- It changes the makeup and size of the local freights until that Car Order returns to the Car Order Pocket
- Which changes the size and makeup of other trains
- Which affects the Car Orders that can be filled on future sessions



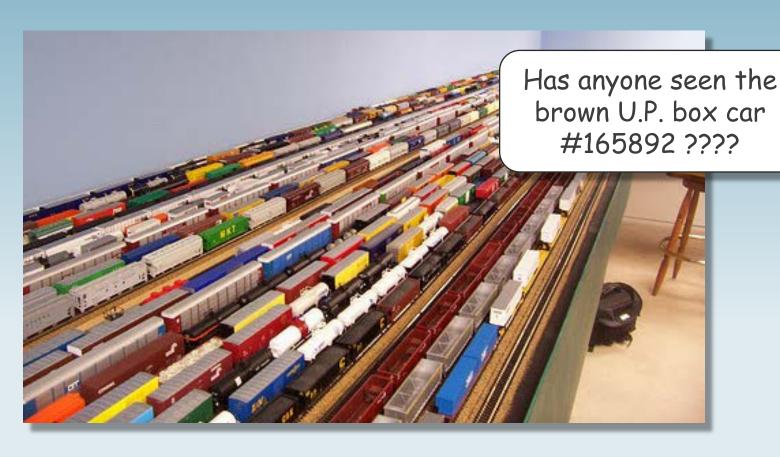


You will not have to worry about confusion caused by duplicate car numbers!





You will never have to worry about finding the right car by it's number!



Additional Information

Yahoo Group

https://groups.yahoo.com/neo/groups/carordersmrr/info

Website

http://home.comcast.net/~maxrob/rr/carcards/car.htm

Publication

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