Modeling the Can Job

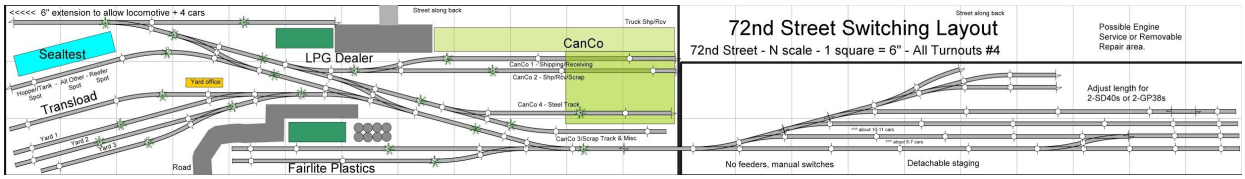
A Model Railroad Industry

August 30, 2020 - for OpSig

Based on Union Pacific “Seymour” - 72nd & F

Geography and Sizes modified to fit a shelf.

Industries “inspired” by prototype.



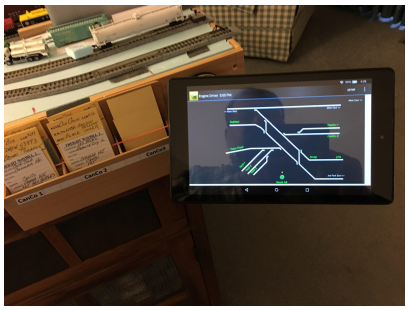
Layout is loosely based on an industrial area around 72nd and F. Parallel to UP main & Interstate 80. Three dense areas at 72nd, 96th 132nd streets.

The Switching Layout

Original intent - ops with grandkids

Learn about DCC, JMRI, and other newer techniques

Original intention: temporary learning platform, Current Intention: upgrade and keep



Returned to the hobby at the end of 2013.
Have a plan for a 10x16 in the basement. However, this seems to be enough.
Will rebuild a few things. Replace foam with plywood. Reinforce yard to eliminate warp. Add one turnout decoder.

The Switching Layout

Two modules - removable staging - 18” x 11’

Industry - CanCo, Sealtest, Wm. H. Harvey*, Transload, Fairlite Plastics, Utility Yard

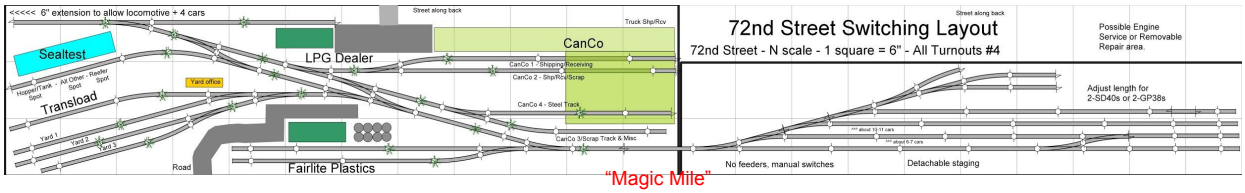
Op session - about an hour, simulates 4 hours with 4:1 fast clock

NCE system - using ProtoThrottles - 1 or 2 operators - JMRI PanelPro

Max Speed - 10 mph, 6-7 fast minutes to transit 11ft.

Early version described in DO - January 2015

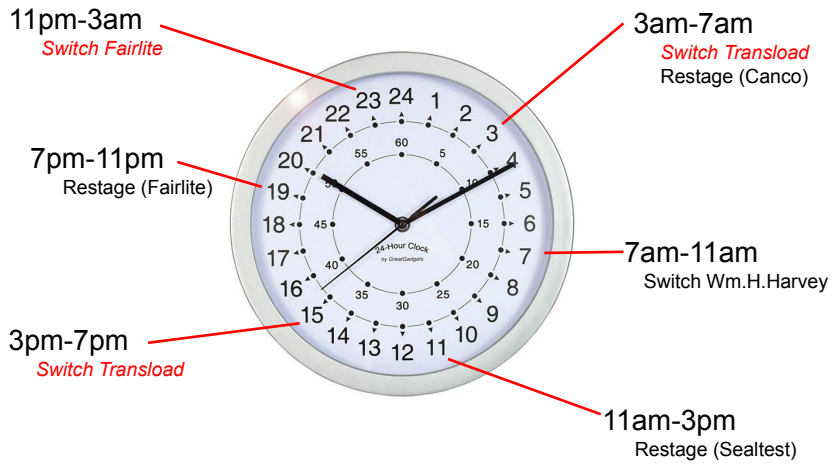
*previously LPG dealer



“Magic Mile”

Canco based on Canco (Based on Continental Can,). Wm. H. Harvey, Fairlite (Based on Airlite Plastics) are real. Sealtest and Transload are fabrications.
Yard extension was only added a few months ago. Simulates Five track yard where Jerry G says they blocked cars for delivery.

Six Sessions per Work Day - 4:1 Fast Clock



- Prototype - 12 Hour Shifts, job site reporting
- Most industries also switched anytime, as needed
- *Fairlite and Transload only switched as designated*

Restaging simulates the crews trips to the Omaha Yard (now gone.)
Cars weren't blocked in the yard. That was done at the local yard.
Crews were often held up at yard, waiting for permission to get on the UP main.
Omaha Plant - switched 2x per shift : Chicago Plant - 3x per shift

Car Cards and SpreadSheet

Spreadsheet determines number of Car Cards to pull for the op session

Three trips to yard in 24 hours - (*only part of spreadsheet shown*)

Car Type	Mon 7AM	Tue 7AM	Wed 7AM	Thu 7AM	Fri 7AM	Sat 7AM	Sun 7AM	Rule
Number of MT boxcars for CanCo	3	3	4	2	2	4	3	Random Selection of 2-4, excess over three? move to night shift
Number of Steel Cars for CanCo	3	4	4	4	2	4	4	Random selection of 2-4, excess over 3 goes to night shift
Total	6	7	8	6	4	8	7	excess over 12 move to night shift
Several columns are calculated, just change an empty cell to force a recalcualtion								
Car Type	**Mon 3PM**	**Tue 3PM**	**Wed 3PM**	**Thu 3PM**	**Fri 3PM**	**Sat 3PM**	**Sun 3PM**	**Rule**
Number of MT reefers for Sealtest	4	2	5	5	3	5	1	Random selection of 1-5, excess over 3 goes to night shift c
								Random Selection

Only shows upper third of complete sheet. Parts of 3pm and all of 11pm not shown.
I print out 2 or 3 of these, double sided. That gives me enough for several operating sessions with no need to go back to the printer.
Car Cards are in a drawer, sorted by type.
Lots more cars than can fit on layout. So repeats are quite far apart.
For instance. Only 6-8 boxcars on layout at a time, but probably 80-100 to pick from.

Storage and Staging

425 cars in storage - Usually no more than 12-15 or so on the layout for any one session.
“Hi - my name is George and I’m a Train-o-holic”
Restaging takes about 10 minutes. Always one “day” ahead.
Outgoing cars are pulled from Yard to temp holding tray.
Incoming cars are moved from drawer to Yard.
New car cards are drawn, based on spreadsheet.
New rolling stock moved to the drawer for the next session.
Old stock is returned to drawer.

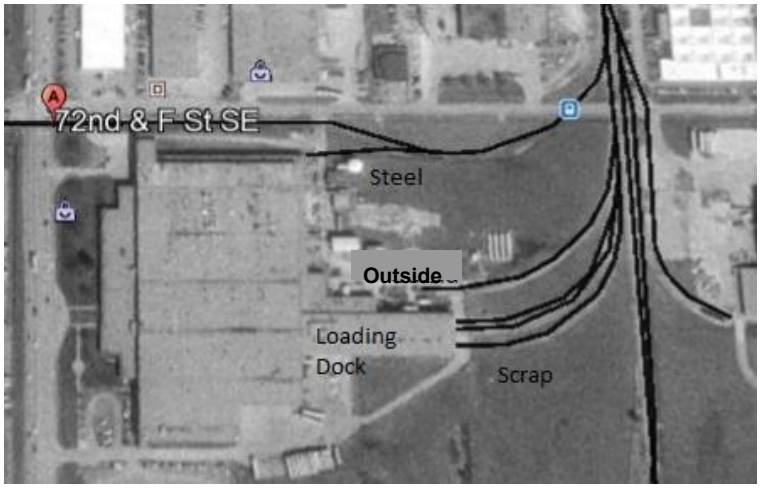
Centerpiece - Continental Can, Omaha, early 1970s

Industrial Area near 72nd and F, Omaha, Nebraska

5 tracks
- Incoming Steel
- “Outside” fuel, misc.
- 2 loading dock
- Empty gons for scrap

Switched 2x in 12 hours

Based on Discussion with Engineer and Plant Mgr.



Jerry - curves were tight, had to go slow, could only push a few cars
Empty boxcars were stenciled “can service only,” all were UP boxcars.
I wasn’t allowed on steel dock, only could see through doors
That’s where I first saw Canstock Cars

Operational changes

Based on 1970s shipping volume + a bit

Truck Traffic moved to Rail

Car/locomotive types updated to modern era

- In the 70s - GP38
- Currently - GP60
- 50ft boxcars, add HiCube
- Steel shipped in Canstock Cars,
  - Covered Gons, add Modern Coil cars

Jerry started in 1964 - early Geeps, last used GP38-2.
I'm currently using GP-30.
Will move to GP60 and Bay Window shoving platform.
CanStock car had offset door to enable forklift to escape after loading. Allowed 1 more coil than traditional boxcar.
Only made about 200, as can plants installed overhead cranes for unloading coil cars replaced these.

Scrap

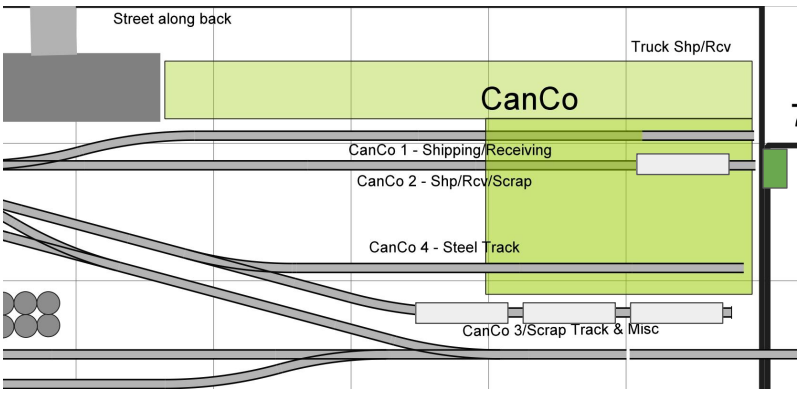
Crusher at End of CanCo2

Gon always in place

4-24 hour load time

"Hey Google, Pick a number"

Empty gons on "Scrap Track" - Canco 3



U-shape loading dock around CanCo 1 and 2
Might change Scrap loading time max from 24 to 12 hours after reviewing Jerry's interview notes.
Explain the 4-way load-unload card.

Low Volume Product -

Ham, Spam, Coffee,
Small Sausage, Chicken,
Vegetables, other

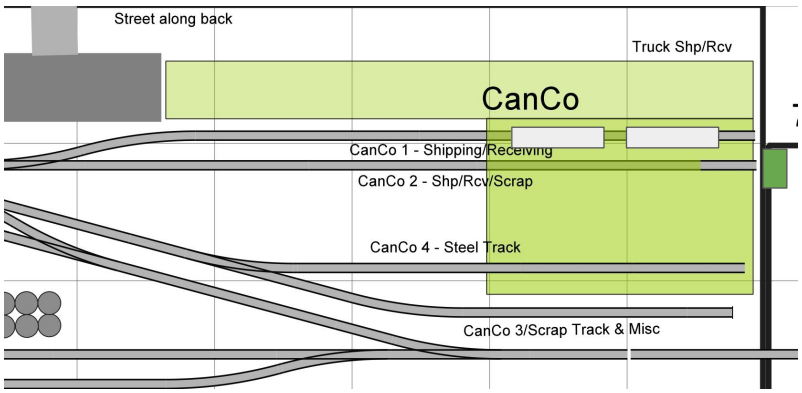
Loose, seldom Boxed -

Loaded by Hand -

8 hour load time

Load on Canco 1 only

Behind High Volume
Loads



Loaded loose, with fork like device
Every few columns were faced off with a paper divider held in place with wood strips

Close up

The guys in the photos are actually unloading.
12-14 Production lines - lots of overhead conveyors
When a line emergency stop didn't work - it would rain cans

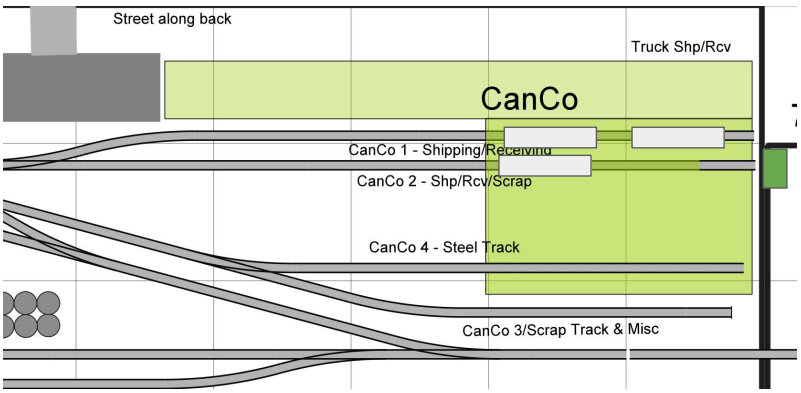
High Volume Product

Soda and Beer

Loaded by Forklift -

4 hour load time

Load on Canco 1 or 2



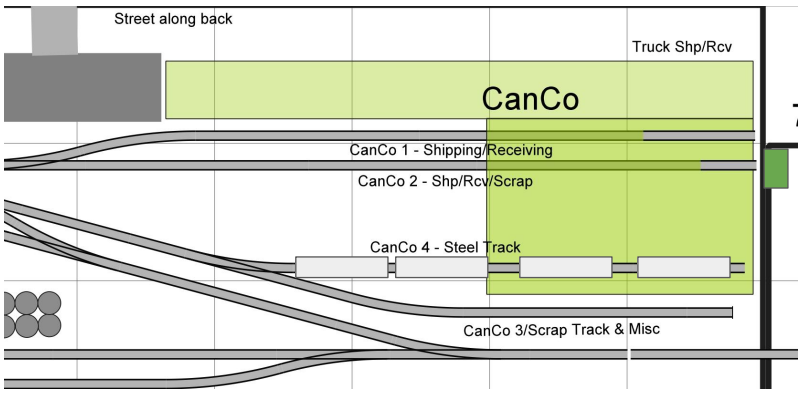
2-4 production lines, based on season. Each ran at about 400 cans per minute.
High volume cans were automatically palletized and shrink wrapped, loaded by forklift
Could be stacked several pallets high

Steel

Coils or Sheets

4-8 hour unload time

Also shipped printed steel sheets to other plants



Coiled steel was cut into sheets - today, soda cans are aluminum and coil can be fed directly
Sheets were then printed, cut into individual blanks and formed into the cylinder
All plants didn't have litho presses, so printed sheets were often reshipped..

Misc. Incoming

Slip Sheets

Plastic Wrap

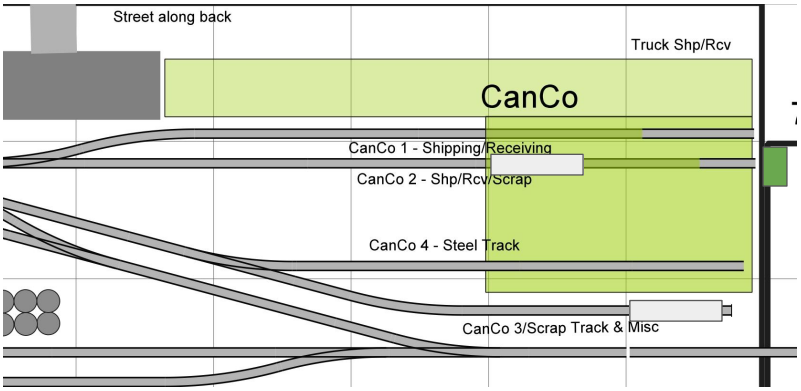
Pallets

Printing Ink

Lubricants

Machinery

Heating Fuel



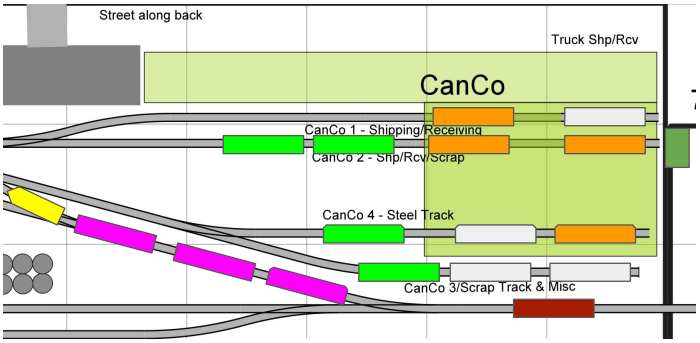
Typical Job

Pickup
- Box from CanCo 1
- Box from CanCo 2
- Gon from CanCo2
- Coil from Canco 4

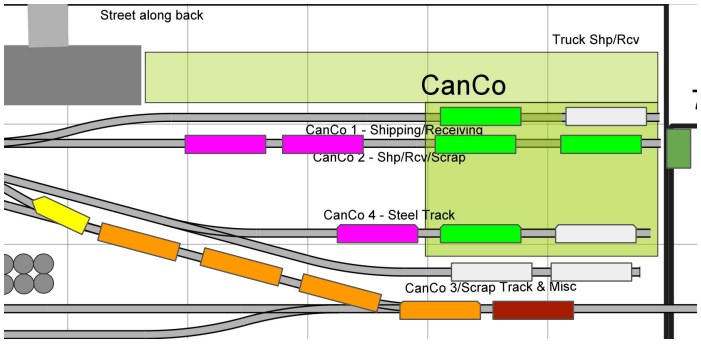
Move
- Boxes to Canco 1&2
- Coil to Canco 4
- Gon to Canco 2

Drop
- Boxes to Canco 2
- Coil to Canco 4

Before



After



Block the job in the local yard - usually put steel cars at end of train
Pull Train fully forward - switch out tracks steel first then “bottom up”
UP crew actually would try to minimize blocking streets by running switch job in two passes. Pickups first, then drops.

Step by step version starts here - if time permits

Typical Job

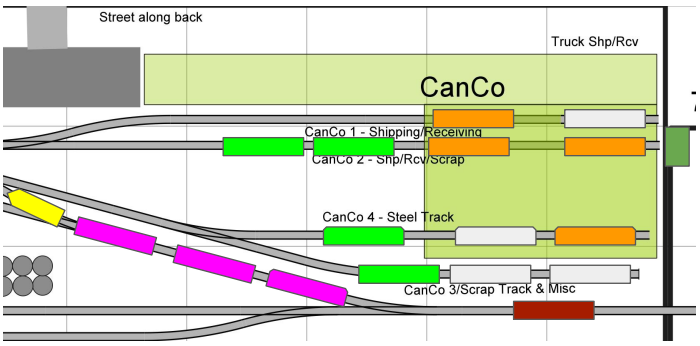
Pickup
- Box from CanCo 1
- Box from CanCo 2
- Gon from CanCo2
- Coil from Canco 4

Move
- Boxes to Canco 1&2
- Coil to Canco 4
- Gon to Canco 2

Drop
- Boxes to Canco 1
- Coil to Canco 4

Step 1

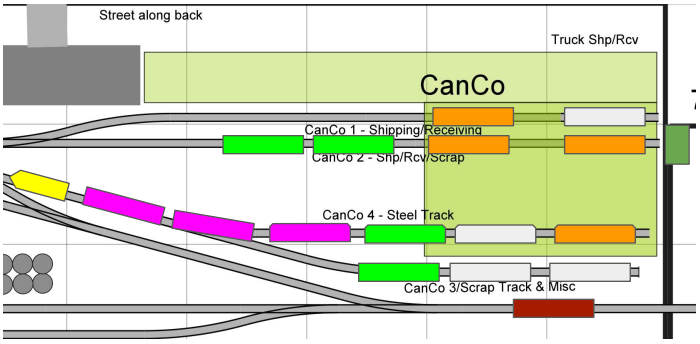
Cut off caboose and pull forward



Step 2

Back onto Steel track

Pull the whole track



Block the job in the local yard - usually put steel cars at end of train
Pull Train fully forward - switch out tracks steel first then “bottom up”
UP crew actually would try to minimize blocking streets by running switch job in two passes. Pickups first, then drops.

Typical Job

Pickup
- Box from CanCo 1
- Box from CanCo 2
- Gon from CanCo2
- X - Coil from Canco 4

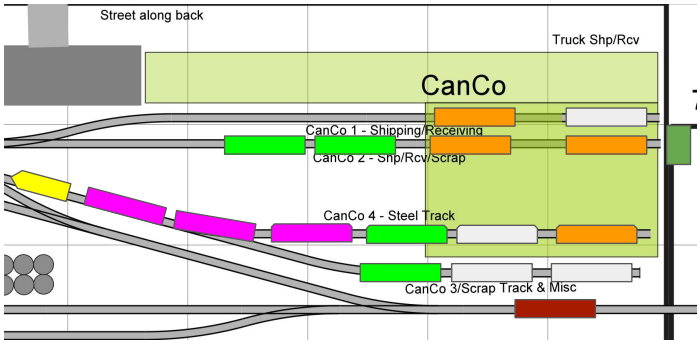
Move
- Boxes to Canco 1&2
- X - Coil to Canco 4
- Gon to Canco 2

Drop
- Boxes to Canco 1
- Coil to Canco 4

Step 2

Back onto Steel track

Pull the whole track

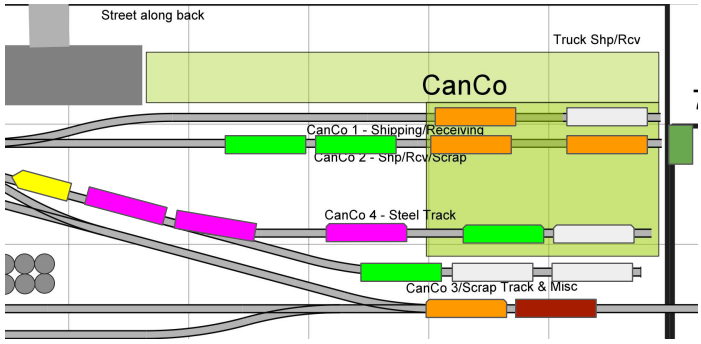


Step 3

Pickup MT coil car

Move 2 loaded Coil Cars

Drop 1 new loaded Coil Car



Only one of a several way to approach this -

In step 3 -

We've picked up the empty coil car and added it to the caboose

Then returned to to the steel track to shove the remaining coil cars into the loading dock, and drop the new coil car outside

Typical Job

Pickup

Box from CanCo 1
X - Box from CanCo 2
X - Gon from CanCo2
X - Coil from Canco 4

Move

Boxes to Canco 1&2
X - Coil to Canco 4
Gon to Canco 2

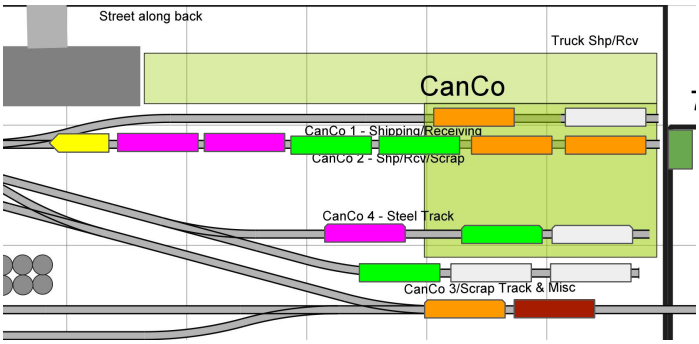
Drop

Boxes to Canco 1
X - Coil to Canco 4

Step 4

Back onto Canco 2

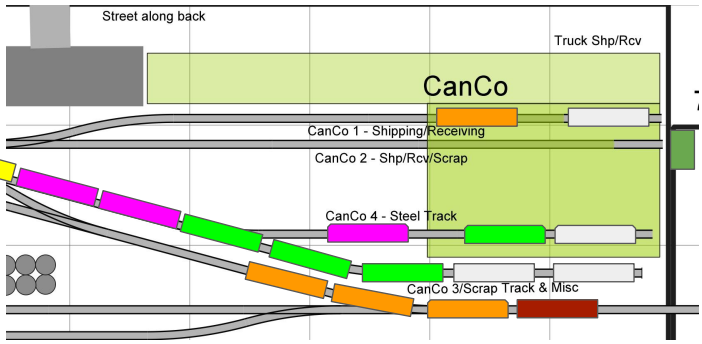
Pickup loaded scrap gon and boxcar



Step 5

Add loads to outgoing -

Back onto scrap track to pickup up an empty gon for canco 2



In step 4
We've pulled out of the steel track and backed onto canco 2 where
We've grabbed the 2 empty boxes, the loaded box and the loaded scrap gon
In step 5
We've added the two loaded cars to our outgoing train
Pulled forward, then backed onto the scrap track to get an empty gon

Typical Job

Pickup

- X - Box from CanCo 1
- X - Box from CanCo 2
- X - Gon from CanCo2
- X - Coil from Canco 4

Move

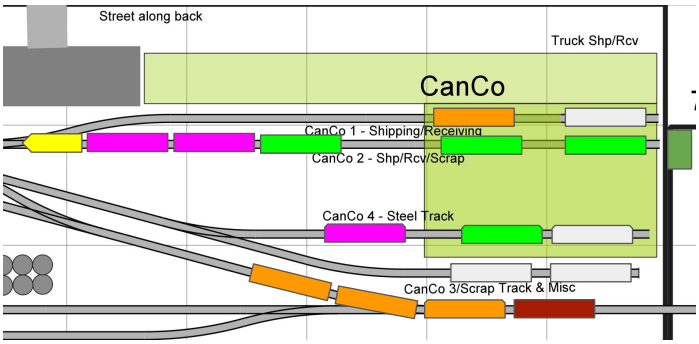
- X - Box to Canco 1
- X - Box to Canco 2
- X - Coil to Canco 4
- X - Gon to Canco 2

Drop

- X - Boxes to Canco 1
- X - Coil to Canco 4

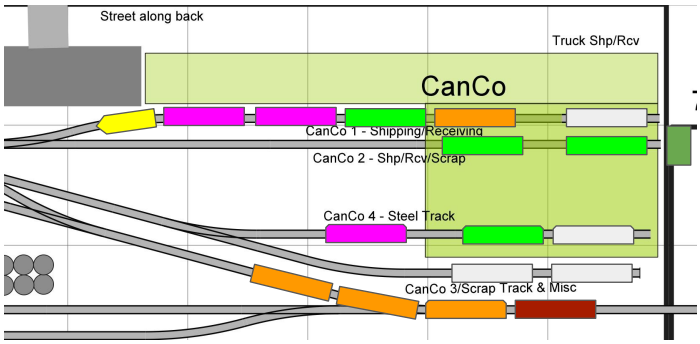
Step 6

Move the Gon and an MT boxcar onto Canco 2



Step 7

Back onto Canco 1 - Pickup Loaded Boxcar



In step 6
We've backed on to canco 2 and
Moved the empty scrap gon and one of the empty boxcars to the loading dock
In Step 7
We've pulled forward
Then backed onto Canco 1 to get the loaded boxcar

Typical Job

Pickup

- Box from CanCo 1
- X - Box from CanCo 2
- X - Gon from CanCo2
- X - Coil from Canco 4

Move

- Box to Canco 1
- X - Box to Canco 2
- X - Coil to Canco 4
- X - Gon to Canco 2

Drop

- X - Boxes to Canco 1
- X - Coil to Canco 4

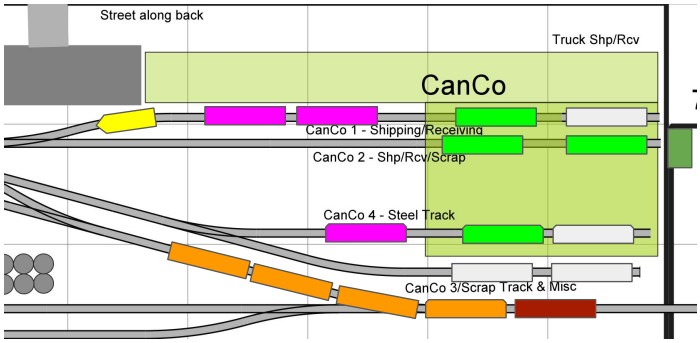
Step 8

Add boxcar to train

Return to Canco 1

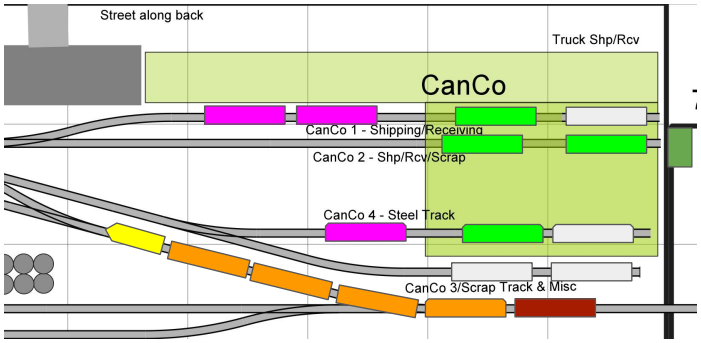
Move MT box to loading dock

Drop remaining 2 MTs outside



Step 9

Return to train and shove back to yard



In step 8

We've added the empty boxcar to our outgoing train
Pulled forward and returned to Canco 1 where we have
Dropped one Boxcar at the loading dock and two more outside

In step 9

We've returned to our train and will shove back to Seymour yard

End of the Line - Questions?

Two modules - removable staging - 18” x 11’

Industry - CanCo, Sealtest, Wm. H. Harvey*, Transload, Fairlite Plastics, Utility Yard

Op session - about an hour, simulates 4 hours with 4:1 fast clock

NCE system - using ProtoThrottles - 1 or 2 operators - JMRI PanelPro

Max Speed - 10 mph, 8-12 fast minutes to transit 11ft.

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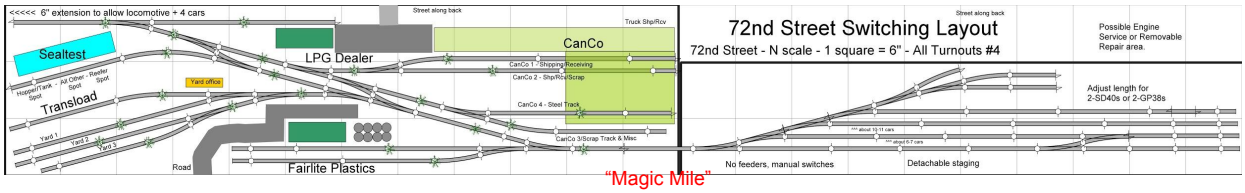

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Yard extension was only added a few months ago. Simulates Five track yard where Jerry G says they blocked cars for delivery.

Additional Industries.. If time available

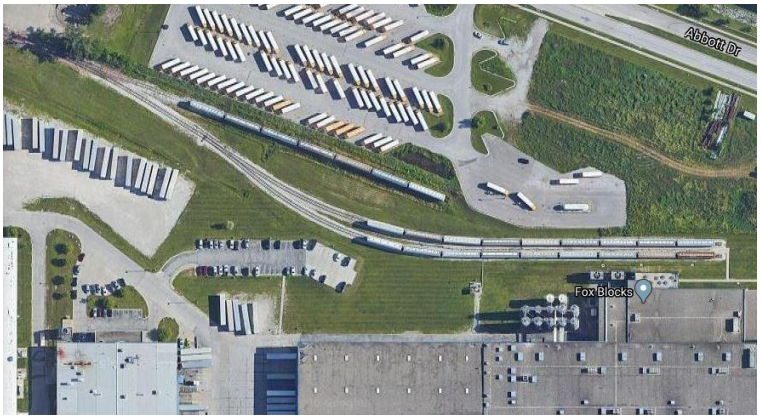
Airlite Plastic, Omaha, Abbott Drive, present day

3 tracks
- 2 Incoming Pellets
- 1 Overflow

Switched 3x per week

Unload by vacuum hose from any spot to silos

Based on Discussions with PR rep and Facilities Mgr.



Actually in several miles away in North Omaha near airport.
Service 3x per week - Monday, Wed, and Friday between 11am and 4 pm. Usually a GP38
Tracks 761 and 762 - same numbers as when plant was at a different location, storage track is 744
Unload by vac hose from any spot to any silo -
Be Kind to railroad - they could spot the cars anywhere
The crew would often just pull everything, switch at a nearby yard (Seward St.) and return with the rearranged cars

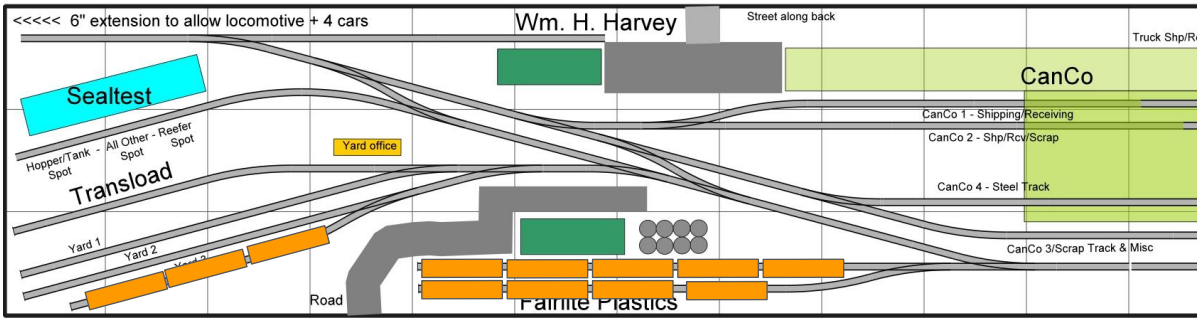
As Built On Layout -

About ½ capacity -

Similar track arrangement -

Facility off layout -

Switch 2x per 24 hours
As needed



Unload two hoppers at a time - 8-12 (4-8 actual) hours each. So at slowest - all won't be unloaded in a day - this builds a little extra fro the train to switch.

Typical Job

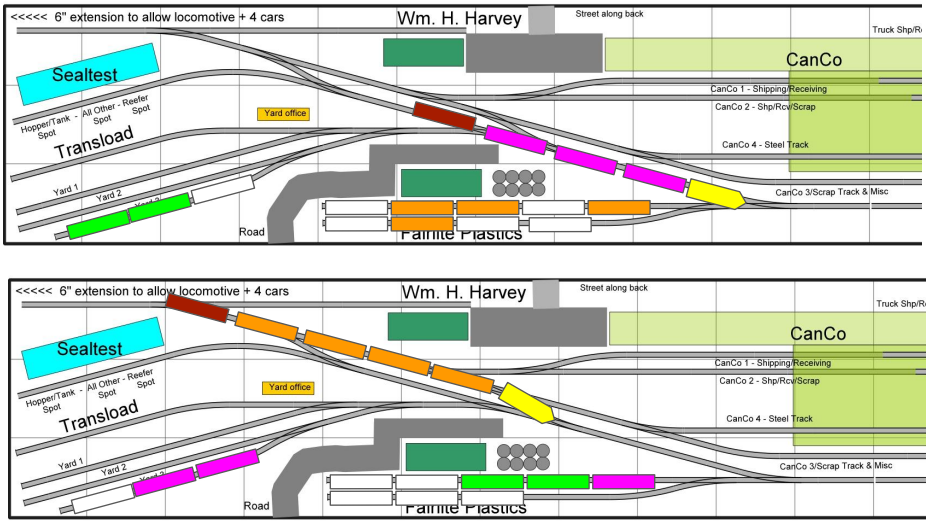
Before

Pickup - 4

Move - 2

Drop -3

After



Unload by vac hose from any spot to any silo -
Be Kind to railroad - they could spot the cars anywhere
The crew would often just pull everything, switch at a nearby yard (Seward St.) and return with the rearranged cars

Wm. H. Harvey, Omaha, 67th Street, Present day

1 tracks
    2 unloading spots
        Plus Overflow

Liquid Petroleum - in

Wax Rings - out (by truck)

Switched as needed

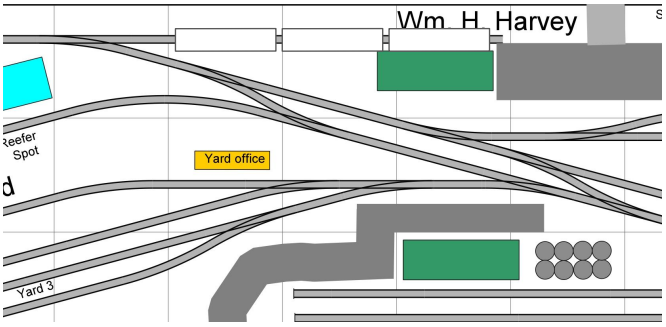
Based on Discussion with Plant Manager

If you've ever replaced a toilet, you know what this is
Oatey brand products are made here

As Built On Layout -

1 unloading spot plus overflow -

Facility - Background Flat



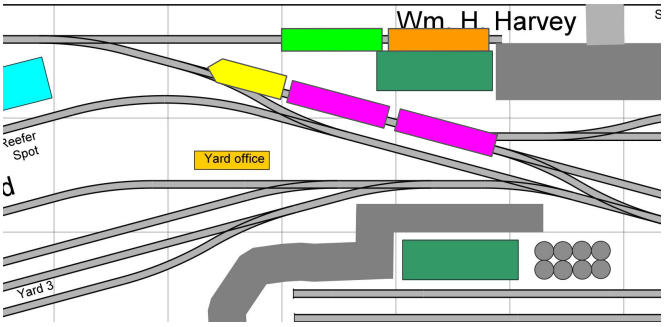
Typical Job

Pickup - 1

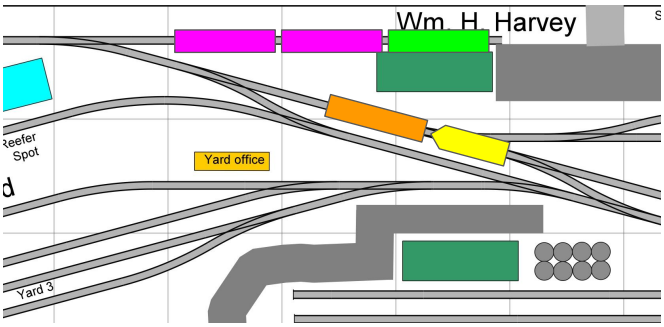
Move - 1

Drop -2

Before



After



Sealtest -

LaLa Products - not rail served

Nash-Finch Grocery Distribution Center -

No Longer Rail Served

Fabricated version - combining characteristics of a couple of actual facilities
Sealtest is based on LaLa Ice Cream products. Not rail served, but provided shipping/receiving info.
Nash-Finch was rail served years ago. Split into refrigerated and non-refrigerated spots.

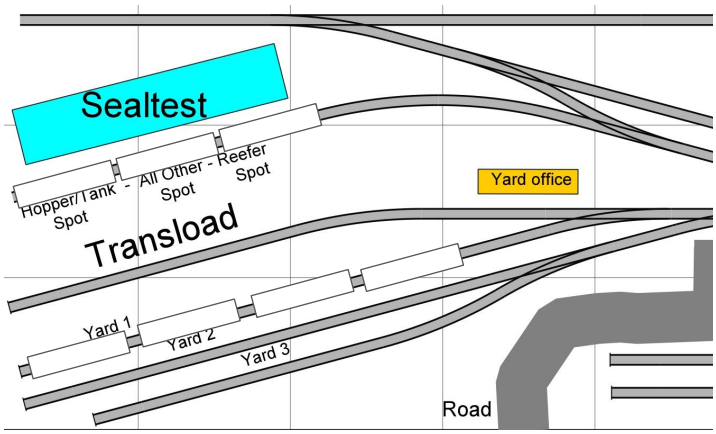
As Built On Layout

Dr 1 - Refrigerated - product out

Dr 2 - Non-Refrigerated -
Nuts, Fruits, Pkg Mtl, etc.

“Dr 3” - Bulk Product - in
Salt, Sugar, Corn Syrup, etc.

Cleanout and Cool on Yard 1



Reefers shoved onto service track (yard 1) between 3pm and 7pm.
Contractor cleans out the cars, tops off fuel, and they chill till next op session.

Typical Job

Ice Cream Product - out

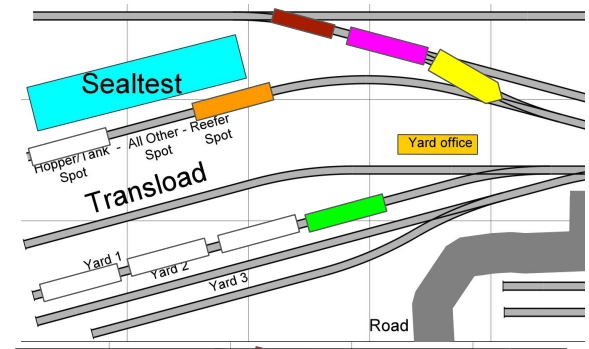
Bulk Product - in
Salt, Sugar, Corn Syrup, etc.

Non-Refrigerated - in
Nuts, Fruits, Pkg Mtl, etc.

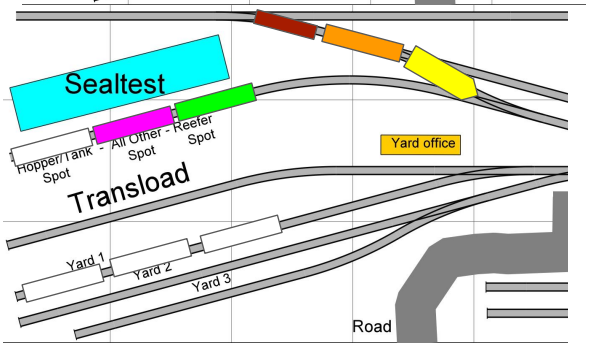
Cleanout, Fuel & Cool
on Yard 1

Pickup 1
Move 1
Drop 1

Before



After



Transload Track, switched up to 2x per day

Typical Loads

Outgoing -

- Used Cooking Oil - Empty Tank - from recycler to processing plant

Incoming -

- Sugar, Salt, Flour - Covered Hoppers - for Bakery
- Habanero Puree - Tank - for Food Packager
- Electronics, Appliances, Furniture - Boxcar - for Wholesale Distributor
- Lumber, Roof Trusses - Center Beam Flats, Boxcar - for Lumber Yard
- Road Sand - Open Hopper - for City
- Wire Cable Reels - Flats - for Power Company

Thanks to Mike Fifer for the “Bulk Hot Sauce” idea
All others are also actual examples - they may or may not have come from this area

End of the Line - Questions?

Two modules - removable staging - 18” x 11’

Industry - CanCo, Sealtest, Wm. H. Harvey*, Transload, Fairlite Plastics, Utility Yard

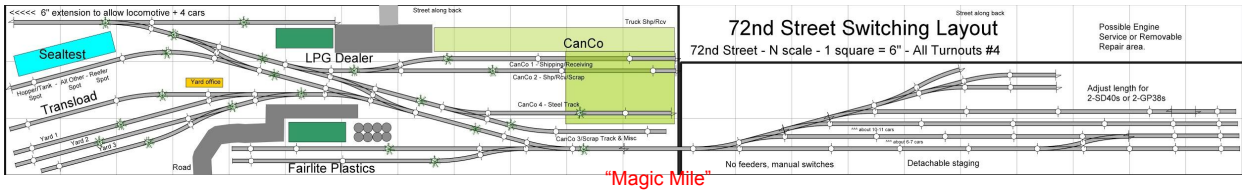
Op session - about an hour, simulates 4 hours with 4:1 fast clock

NCE system - using ProtoThrottles - 1 or 2 operators - JMRI PanelPro

Max Speed - 10 mph, 8-12 fast minutes to transit 11ft.

Early version described in DO - January 2015

*previously LPG dealer



“Magic Mile”

Canco based on Canco (Based on Continental Can,). Wm. H. Harvey, Fairlite (Based on Airlite Plastics) are real. Sealtest and Transload are fabrications.
Yard extension was only added a few months ago. Simulates Five track yard where Jerry G says they blocked cars for delivery.

Extra stuff -

Compressed Speed Curve -

Max Speed 10 mph

High momentum smooths transition between throttle notches

Above notch 4 - only sound changes

High momentum enables long “coast” time

Variable Brake enhances slow speed operation

Expanding Layout - the basement awaits

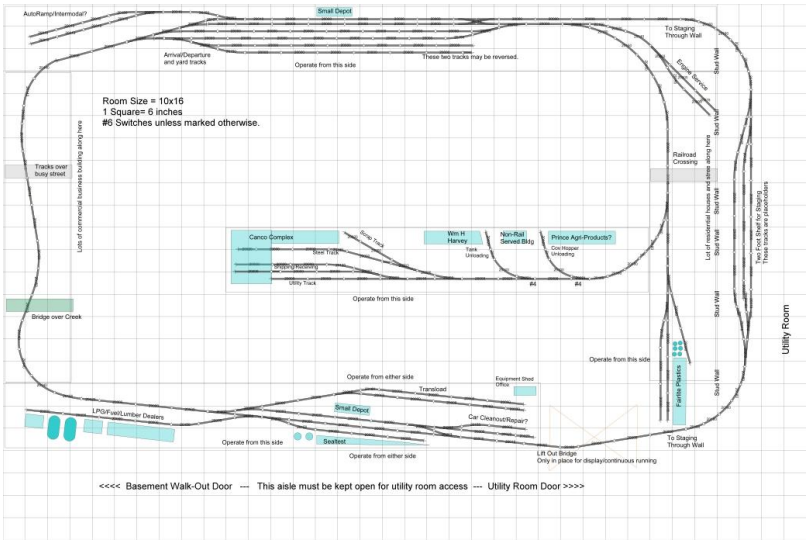
10 x 16 - N scale

1-4 operators

Point to point for normal ops (remove lift gate)

Continuous run for visitors

Maybe experiment with signals



Maybe - Maybe Not
Just a slightly expanded version of the the switching layout
Added a continuous run for visitors, and maybe experimentation with signals
Probably will not get around to it