

LAMRS MULTI-LAYOUT OPERATIONS PLAN

MULTIPLE LAYOUT OPERATIONS

OPSIG MEETING

MARCH 7, 2021

Welcome to the WCRC!

- The **Western Consolidated Railroad Company** was formed through the acquisition of several Class I routes in the western US and several strategic short lines. The formation began as a Co-Op to compete against the larger Class I's. *“We can get you from the harbor to the city, from the desert to the mountains.”*
- The WCRC connects lumber, oil and natural resources from the mountains of Colorado and California to the industry city centers of Coalton and Gardena, and finally connecting to the rest of the world via the Pacific Harbor.
- We have recently added reefer car service through our complex network of icing stations, produce suppliers and export/import and frozen storage.
- Our motto, “No matter where you are, we can get there!” shows how diverse our reach is.
- Freight may pay the bills, but connecting people is what makes us happy. We proudly offer passenger service on our rail network, too.



FORMATION OF THE WCRC

- We saw a need in railroad traffic!
 - LAMRS had monthly operating sessions.
 - Club sessions varied by era and theme such as transition era to modern, TT&TO, CTC, Narrow Gauge, Lumber/Logging, Industrial Ops (oil refinery), etc.
 - Some LAMRS members have their own layouts at home.
 - Member's layouts vary from standard gauge to narrow gauge and from HO to N scale, with some G scale/garden, too.
 - Layouts vary by size from club-size layouts to small switching "door" layouts.
 - We can't operate at the club, so how can we leverage what we have at home to keep ops going?
- A plan is formulated
 - Considered "remote controlled" Ops, but too many tech hurdles
 - One layout (Oakhurst) integrates HO and G scale with a train passing between the two – from indoors to garden.
 - Brainstorming at weekly club Zoom meetings lead us to developing ideas and a test run.



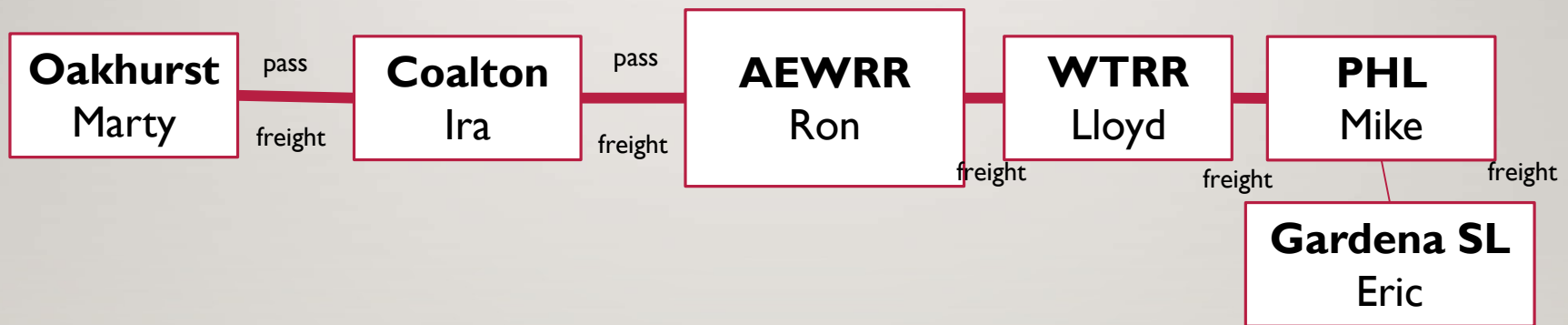
DEVELOPING AN OPERATING SCHEME

- “Pass the Baton” Operations
- Setup: Each person will operate their own layout
- Setup: Each layout is organized to reflect a point-to-point scheme
- Setup: One point is called “West” and is an entry point for eastbound traffic. The “East” end point is the exit point for that traffic.
- Setup: Switching layouts without mainline capabilities designate a spur or siding as an “Interchange Track”
- Setup: The layouts were strung together end-to-end to form one system
- Layout operators stage trains on their layout before Op Session
- Cars to be picked up by through-freight may not be staged prior to op session. This is what the operator has to complete before scheduled train arrives on their layout.

WCRC - GENERAL SCHEMATIC

West

East



1. Most trains pass through AEWRR where we have the most crew and space – the mainline.
2. AEWRR also has a main yard and can be a “source and sink” for cars
3. We run trains from the harbor to the mountains and anywhere in between
4. Oakhurst to AEWRR uses a Switch List. AEWRR to Gardena uses Mike’s car-card method

DEVELOPING AN OPERATING SCHEME

- A train starts on one layout with a particular manifest of cars and moves across that person's layout in a point-to-point fashion.
- At the end of their layout, a "hand-off" occurs where the train picks up on the next person's layout.
- The train runs through the second layout to the end point where it is handed off again, and the process continues.

DEVELOPING AN OPERATING SCHEME

- A train can start or terminate on any layout
- Local freights (i.e., trains that only operate on an owner's layout) are controlled only by the layout owner (think "Extras" or "Yard Limits and Yardmaster" controlling the movements)
- Train manifest is determined through switch lists. Blocks of cars are dropped off and picked up at each layout.

POSITIONS

1. Dispatcher/Trainmaster

- Call for new trains, Coordinate layout handovers, Update & display timetable

2. Zoom Director – MC of event

- Manage Zoom meeting, admit participants, showcase video action, mute participants as needed, answer participant questions on working Zoom

3. Layout Operators

- Stage and run through trains. Report progress to the Dispatcher at each station on the Timetable
- Perform switching for express freights
- Perform local switching on your layout
- Coordinate train handovers with the Dispatcher/Trainmaster
- Set up one or more cameras. Work with the Zoom Director. Priority is operating trains rather than making a “movie” though.

4. Freight Clerk???

- Organize switch lists for freight trains
- Not yet implemented

5. Spectators



Day In the Life Of WCRC #34E-Freight

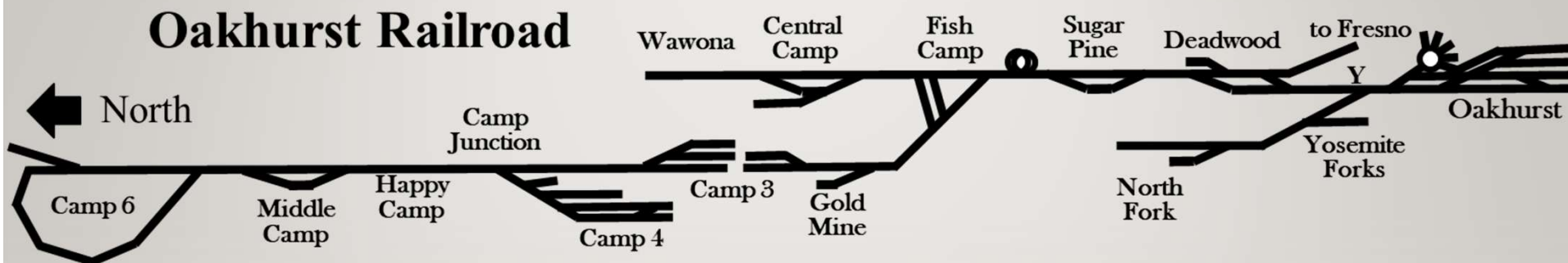
Railroad Time: 10:00:00 AM

		Eastward read down					Westward read up										
DIVISIONS		Xtra	Xtra	Xtra	1 st Class	1 st Class	LAMRS VIRTUAL Railroad					1 st Class	1 st Class	Xtra	Xtra	Xtra	
		X38E	X34E	X36E	#8	#20			#7	#21	X43W	X41W	X45W				
		Xfreight	Xfreight	Reefer	pass	pass			pass	pass	Reefer	Xfreight	Xfreight				
OAKHURST	Marty		~10:00a		11:25a		Lv	CAMP #4	Ar	11:16a							
			↓		11:36a		Ar	CAMP #3	Lv	11:05a							
					11:38a		Lv	Oakhurst	Ar	11:03a							
					11:48a		Ar		Lv	10:53a							
					11:51a		Lv	FRESNO	Ar	10:50a							
					11:56a		Ar		Lv	10:45a							
COALTON	Ira				12:00p		Lv	ENGINE READY	Ar	1041a							
					12:01p		Ar	Whistle Stop	Lv	10:40a							
					12:03p		Lv		Ar	10:38a							
					12:04p		Ar	Aventura	Lv	10:37a							
					~10:00a		12:06p		Lv	10:35a							
			↓		12:07p		Ar	AD TRACK	Lv	10:34a							
AEWRR	Ron				12:11p		Lv	MESA GRANDE	Ar	10:30a							
					12:15p		Ar	Wickenburg	Lv	10:27a							
					12:17p		10:06a	Lv		Ar	10:25a	12:06p					
					12:21p		10:10a	Ar	Robert Station	Lv	10:19a	12:02p					
					12:23p		10:12a	Lv		Ar	10:17a	12:00p					
					12:30p		10:23a	Ar	Hog Haven	Lv	10:10a	11:53a					
					12:32p		10:25a	Lv		Ar	10:08a	11:51a					
			10:00a?	Ice	12:35p	10:30a	Ar	INDIAN WELLS	Lv	10:05a	11:48a	Ice	~10:40a				
			↓		12:37p	10:32a	Lv		Ar	10:03a	11:46a	Ice					
WESTERN TERM RR	Lloyd						Lv	CIENEGA	Ar								
							Ar	Alcey	Lv								
							Lv		Ar				Ice?				
						Ice?		Ar	Terminal	Lv							
								Lv		Ar				Ice?			
								Ar	Pelton	Lv							
PHL	Mike						Lv	SAN PEDRO	Ar								
							Ar	Wilmington	Lv								
							Ar	LONG BEACH	Lv				↑	TBD			
GARDENA SHORTLINE	Eric						Lv	WEST END	Ar								
							Ar		Lv								
							Lv		Ar								
							Ar	EAST YARD	Lv						↑	TBD?	

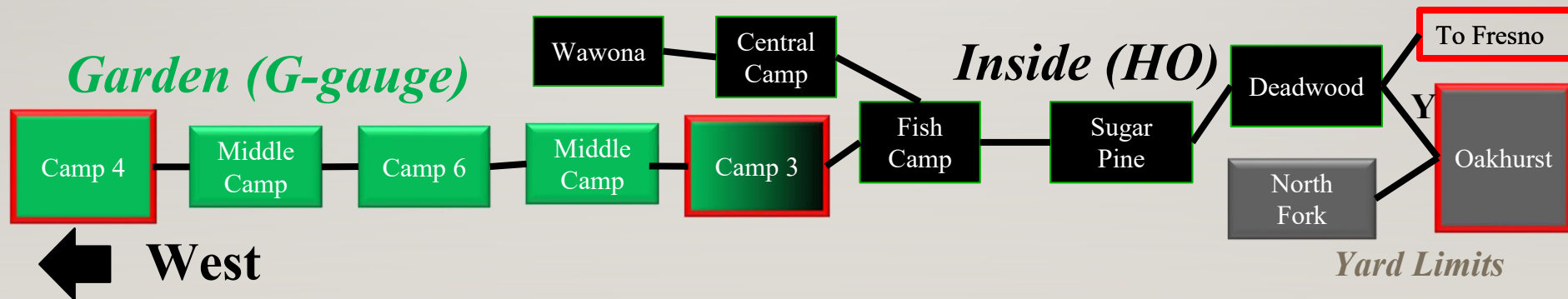
DILO WCRC X34E-FREIGHT

Oakhurst				Oakhurst	
Sawmill	1 Box	Sawmill	1 Box	Drop:	Drop:
Logging Co. Warehouse	1 Box	Logging Co. Warehouse	1 Box		1 Flat 1 Tank 3 Box 1 Ore
Oakhurst RR Fuel	1 Tank	Oakhurst RR Fuel		Add:	Add:
Mine	1 Ore	Mine	1 Ore		
Camp #4	1 Box	Camp #4	1 Box	3 Box 1 Flat 1 Tank 1 Ore	
Camp #6	1 Flat	Camp #6	1 Flat 1 Tank		
Transfer				3 Box 1 Flat 1 Tank 1 Ore	1 Flat 1 Tank 3 Box 1 Ore
Coalton				Coalton	
Scrap	1 Gon	Scrap	1 Gon	Drop:	Drop:
Crate & Barrel	1 Box	Crate & Barrel	1 Box	1 Box 1 Tank	1 Gon 1 Box 1 Coal
Sandy's Fuel	1 Tank	Sandy's Fuel	1 Tank		
Ice House		Ice House			
Paper	1 Box	Paper	1 Box	Add:	Add:
Coal	1 Coal	Coal		1 Tank 1 Gon 1 Box	1 Box
Transfer				1 Flat 1 Tank 3 Box 1 Gon 1 Ore	1 Flat 3 Box 1 Tank 1 Gon 1 Ore 1 Coal
AEWRR				AEWRR	
Wickenburg Heavy Transfer	1 Flat	Wickenburg Heavy Transfer	1 Flat	Drop:	Drop:
Wickenburg Transfer	1 Box	Wickenburg Transfer	1 Box	1 Flat 1 Tank 3 Box 1 Gon 1 Ore	
Wickenburg Merchandise	1 Box	Wickenburg Merchandise	1 Box		
Sherman Williams	1 Box	Sherman Williams	1 Box	Add:	Add:
Stauffer Chem	1 Tank	Stauffer Chem	1 Tank		1 Flat 3 Box 1 Tank 1 Gon 1 Ore 1 Coal
Limey Lime	1 Gon	Limey Lime	1 Gon		
Yard	1 Ore	Yard	1 Coal 1 Ore		

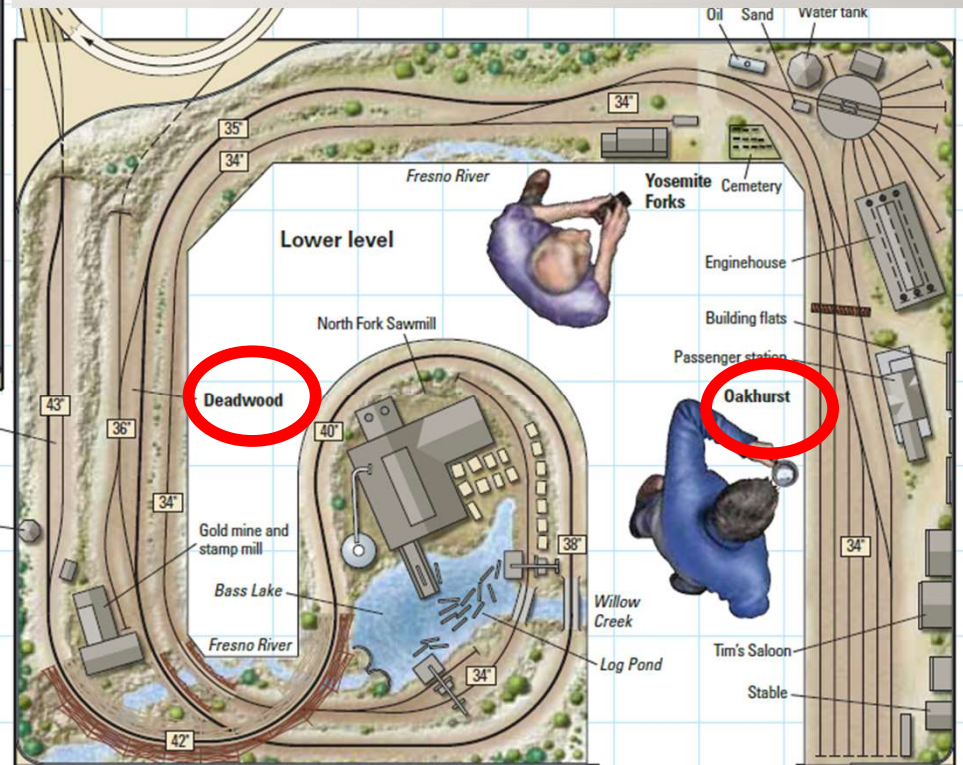
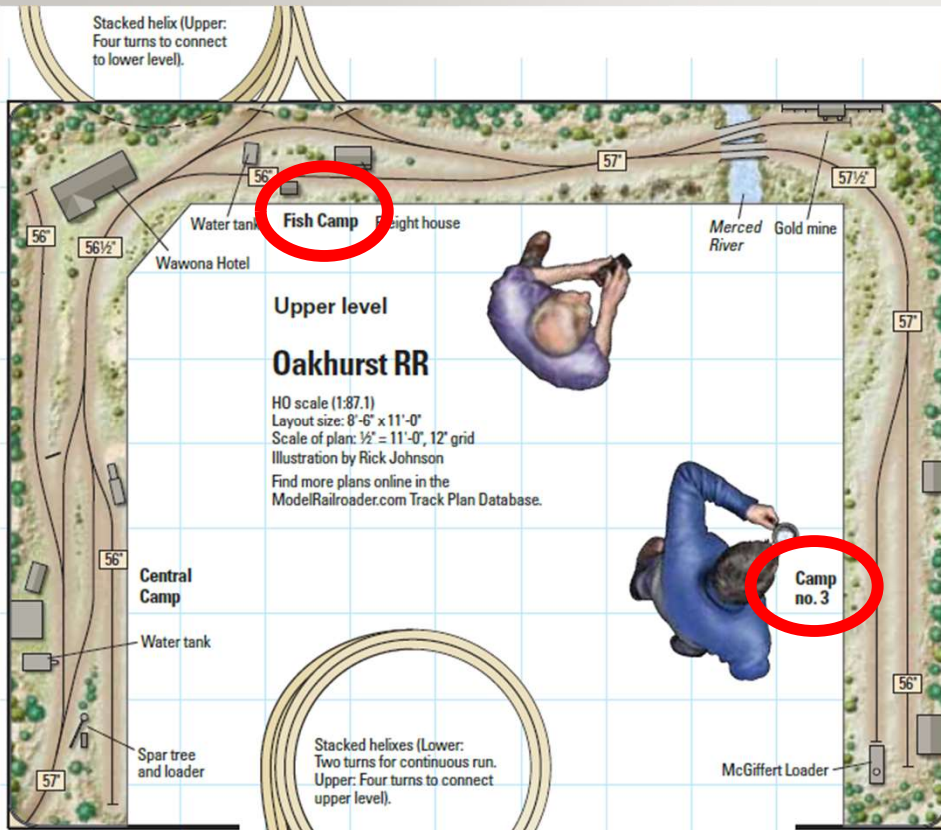
OAKHURST - MARTY



Oakhurst Railroad (as run for multi-layout virtual ops.)

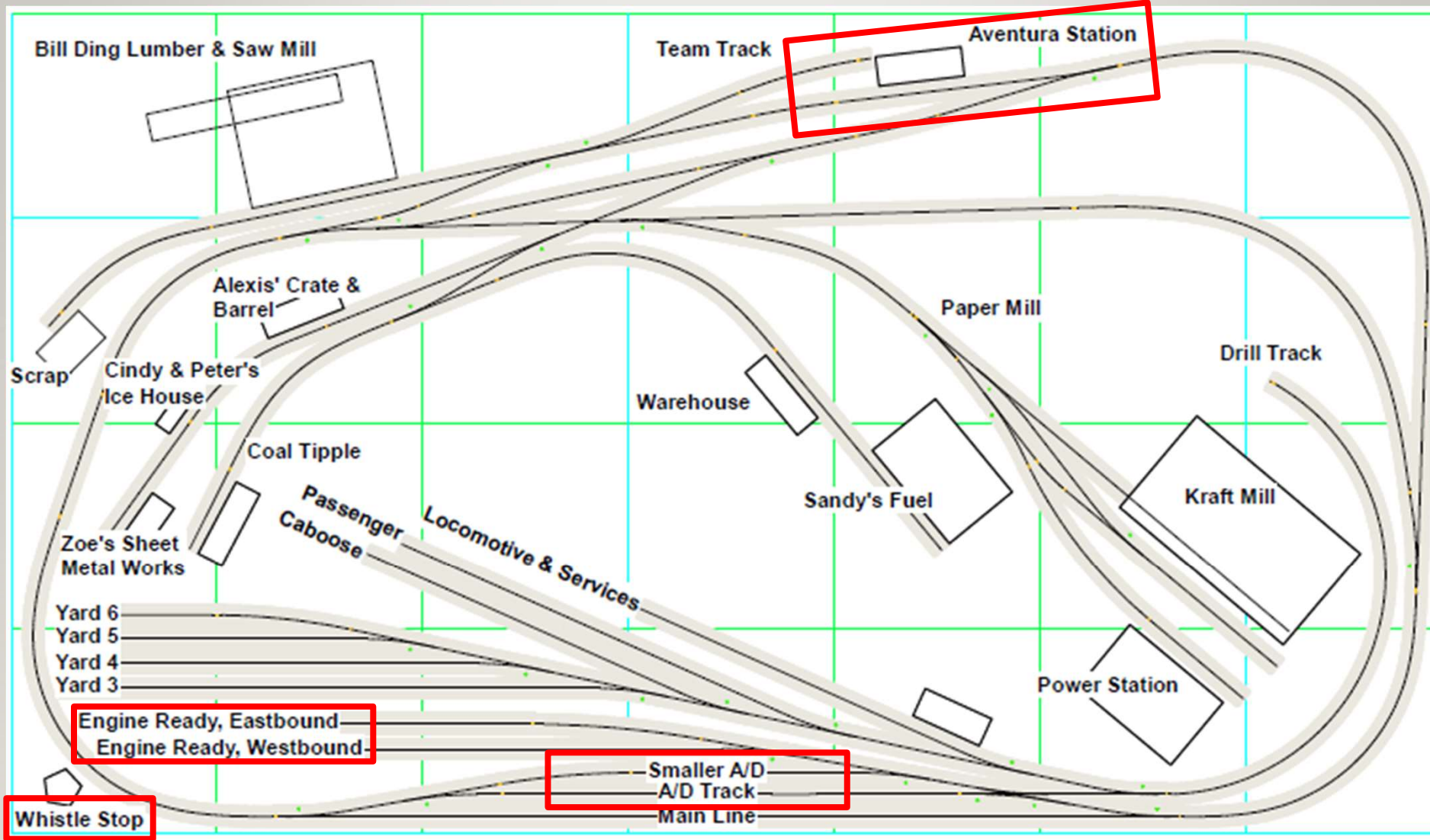


OAKHURST - MARTY

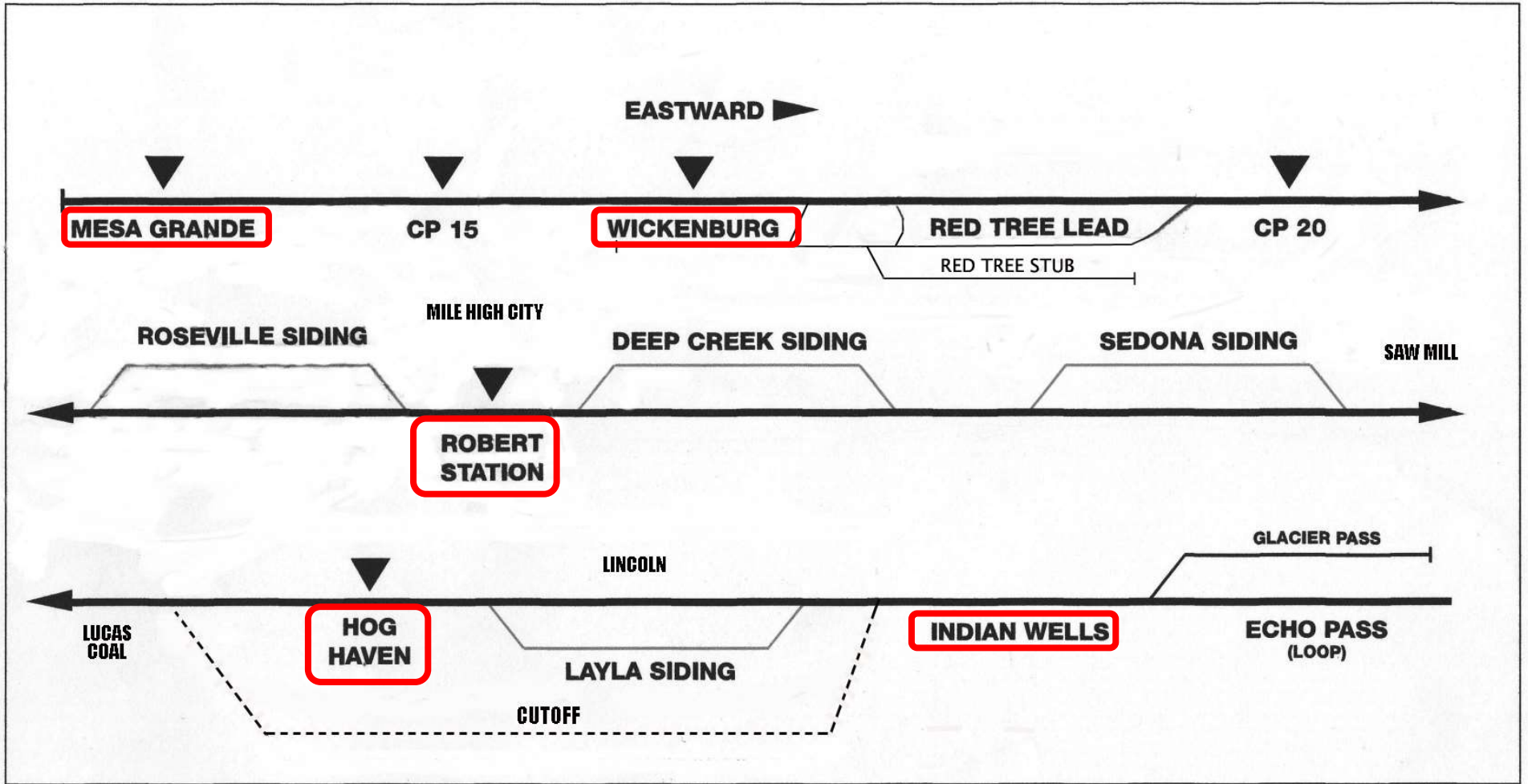


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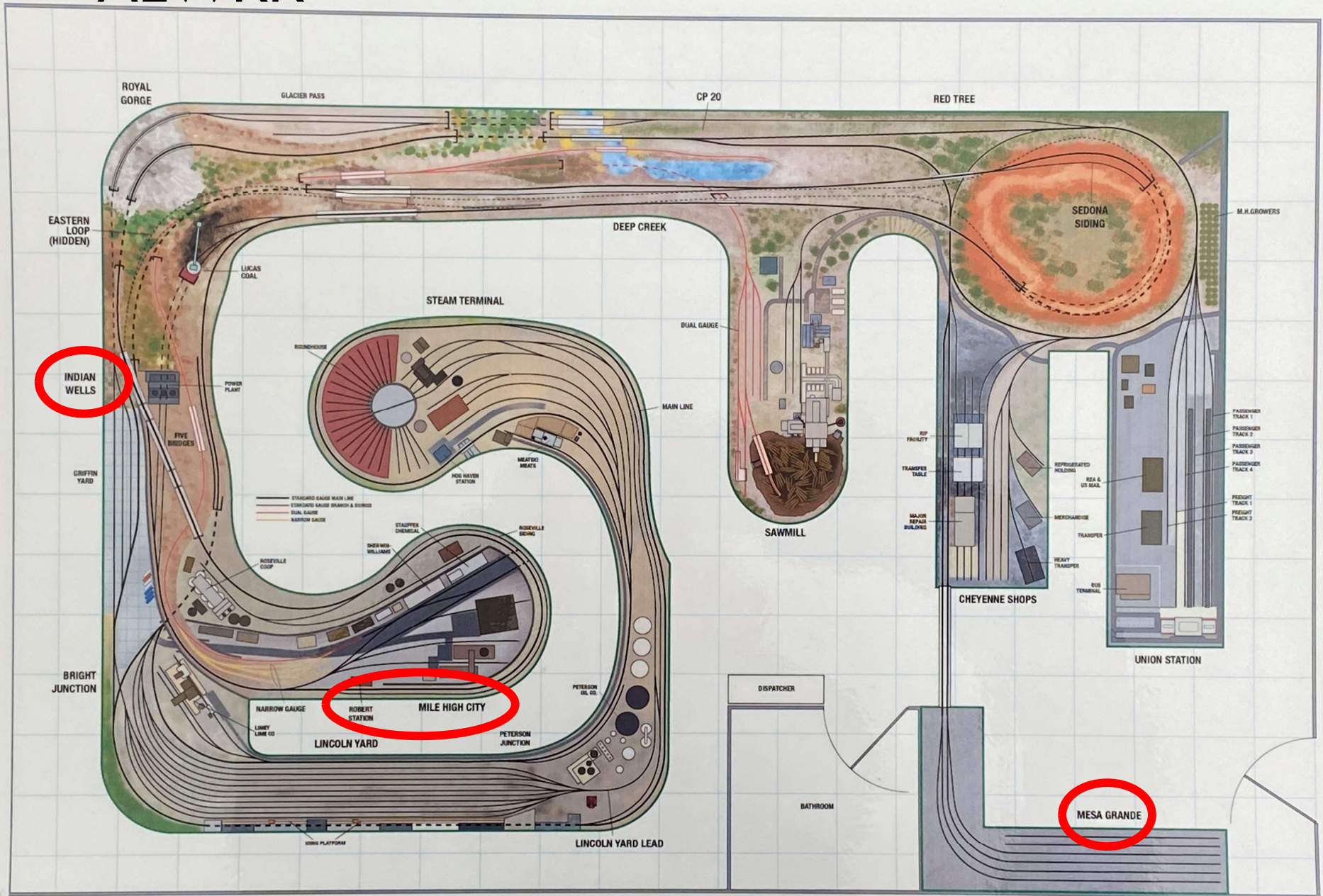
COALTON - IRA



AEWRR



AEWRR



GRID IS 24" SQUARES

VIDEO

x34E Freight 0:00-06:30
x36E Reefer 06:37-10:21
x43W Reefer 10:23-15:21



INTERCHANGE EXAMPLE – LAMRS V-OPS

PHL (MIKE)

Ind.	Spots	Types		
Cargill Syrup	8	Tank - Corn Syrup		
Baker Cold Storage	3	Refer	Tank Ammonia	
Nat's Gypsum	3	Bulkhead	Ctrbeam	Box
Vopak	3	Tank-Veg Oil		

WTRR (LLOYD)

Ind.	Spot	Types		
Bakery	1	Tank – Corn Syrup		
Autint Pwr	3	Hopper-Coal		
Wharehse	3	Box	Flat	Refer

Western Terminal CAR ORDER

Refer
TO BE SETOUT AT

**Terminal
Warehouse**
Track1, Spot 1

WHEN CAR HAS BEEN
SETOUT PLACE THIS CARD IN
BOX LABELED

PICKUP

*** INTERCHANGE ***

Pacific Harbor Line CAR ORDER

Tank – Corn Syrup
TO BE SETOUT AT

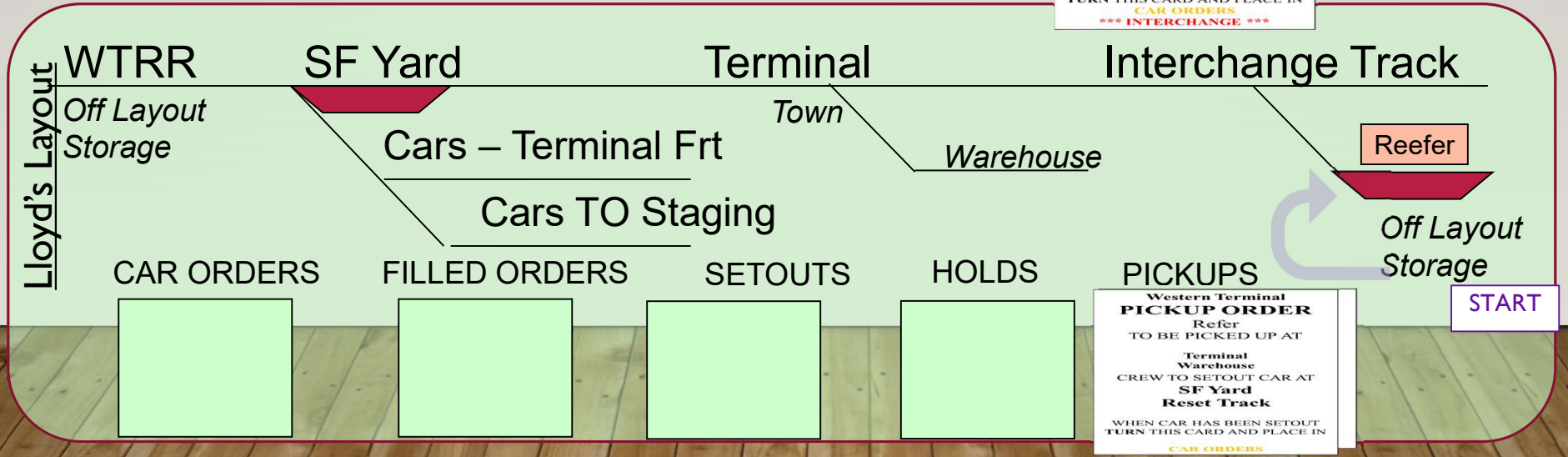
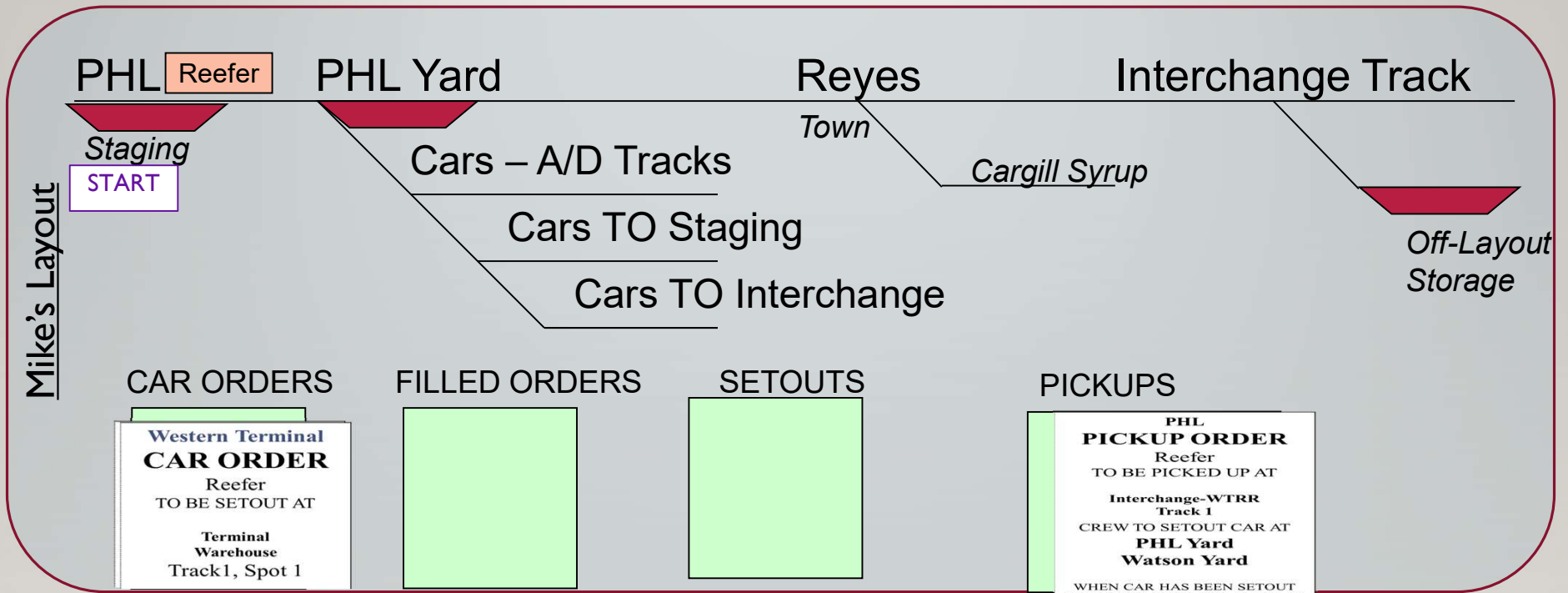
**Reyes Sub
Cargill Syrups**
Track1, Spot 2

WHEN CAR HAS BEEN
SETOUT PLACE THIS CARD IN
BOX LABELED

PICKUP

*** INTERCHANGE ***

CAR MOVEMENTS AND PAPERWORK SHUFFLE



LESSONS LEARNED

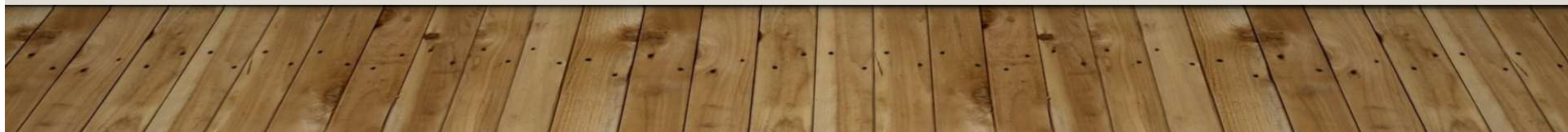
Layout	Description	Observation	Adjustment
Coalton	<ul style="list-style-type: none"> ▪ N-scale ▪ Door Layout ▪ Loop around mainline 	Runs point to point in 1-2 minutes	Twice around to create more of a timeline from entry to exit
PHL and Gardena RR	<ul style="list-style-type: none"> ▪ HO switching ▪ Point to point single track w/ sidings 	Layouts in progress No Staging/yard 28 foot “mainline” One operator No stations	No passenger service, freight only No through freight, interchange traffic only Designated spurs as PHL side of interchange track Car Order system used
WTRR	<ul style="list-style-type: none"> ▪ Started as Std Gauge and NG, now only NG, 	Short mainline Passenger was really a doodlebug type train only Terminal RR made through-freight harder	Limited to freight only Key interchange traffic with PHL and Gardena
AEWRR	<ul style="list-style-type: none"> ▪ 1500sf private layout 	Needs multiple operators Different technical issues	“Pod” of operators Leverage new technologies

LESSONS LEARNED

Issue	Description	Observation	Adjustment
Communication	<ul style="list-style-type: none"> ▪ Synch of fast clock (1:1) ▪ Everyone see the same timetable ▪ Visibility into schedule 	<p>Needed one clock for all to see</p> <p>Needed one timetable for all to see</p> <p>Needed one place for progress to monitored</p>	<p>Created Dispatcher</p> <p>Timetable is live and updated to reflect actual times</p> <p>Tracks OS at stations</p> <p>Shared screen with Excel TT on it</p>
Interchange	<ul style="list-style-type: none"> ▪ Cars need to move between layouts 	<p>Need car forwarding system that crosses layouts</p>	<p>Leveraging Car Order car forwarding system. Car Order is based on car type, not car number.</p> <p>Copy of car orders each car to be interchanged kept at each interchanging layout</p>
Visual Monitor and follow train through the layouts	<ul style="list-style-type: none"> ▪ Want to see what's happening on other's layouts 	<p>Use Zoom</p> <p>Several cameras on various layouts</p>	<p>Use OBS,</p> <p>Camera Cars,</p> <p>IP Cams</p> <p>Tablets and whatever people have</p>
Layout Roles	<ul style="list-style-type: none"> ▪ Owners wearing too many hats 	<p>Owner = Trainmaster + Yardmaster + Engineer + Conductor + Zoom + cameraman</p>	<p>Some layouts had guests as appropriate</p> <p>Added Zoom Coordinator/MC</p> <p>Reduced cameras to few fixed</p>

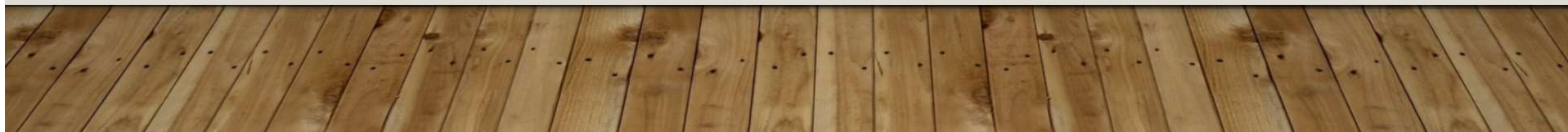
LESSONS LEARNED

Issue	Description	Observation	Adjustment
Continuous Improvements	<ul style="list-style-type: none"> Learn as we go 	Needed to make changes to keep improving	Debrief after sessions and at following weekly meetings
Technology	<ul style="list-style-type: none"> Cameras, Zoom, WiFi, Rpi, camera cars, headsets, speakers, phones and laptops, layouts 	Every piece of technology is link in the process that can break. At some point, we have had one of these break during a session	<p>Test! Test! Test!</p> <p>Zoom has improved and best for the price, but definitely not built for this type of usage</p> <p>Remember, it's supposed to be fun!</p>
Murphy was invited several times	<ul style="list-style-type: none"> ___ Happens. Layouts short, points break, technology goes down. 	"We know a thing or two, because we've seen a thing or two!"	Flexible design to ops – can virtually run on a layout and “pretend” it made it's stops, or just time-warped to end.
Balance complexity vs feasibility	<ul style="list-style-type: none"> Varying levels of skills and interests Run vs paperwork 	More proto => More challenges	<p>Keep it simple, slowly add sophistication</p> <p>Concessions have to made to achieve goal</p>



LESSONS LEARNED

Issue	Description	Observation	Adjustment
Train traffic/Meets	<ul style="list-style-type: none"> ▪ Most layouts are small and have one operator. 	Very hard to run 2 opposing trains by yourself. Switching is real time and everything is in serial with one operator	<p>Experience has enabled us to handle more trains.</p> <p>Priority passenger with freights to fill in</p> <p>Added Reefer service recently</p>
Zoom	<ul style="list-style-type: none"> ▪ Love/Hate ▪ Communicate train movements/reporting (OS) ▪ Railfanning 	Not ideal, but good enough Stream of consciousness vs scripted reality	<p>Zoom has improved as a platform</p> <p>Best for communicating + visual</p> <p>Viewing is hit/miss – Added Zoom Director/Narrator to help MC ops</p>
Layout Progress	<ul style="list-style-type: none"> ▪ Increased motivation to work on one's layout ▪ Troubleshooting and improvement ▪ Improved reliability 	Being on camera for an ops session is a great motivator to working on your layout!	<p>Some layouts were improved operationally</p> <p>One layout had major redesign work</p> <p>Substantial progress on one switching layout</p> <p>Lots of gremlins have been addressed</p>



OLD AND BACKUP MATERIAL

ZOOM MEETING INFORMATION

- Sunday Jan 31, 2021 10 AM
- Marty Bradley is inviting you to a scheduled Zoom meeting.
- Join Zoom Meeting
- <https://us02web.zoom.us/j/89943397682?pwd=QndMOFJ3K2h2UUx0YVRxTXZ0YnNKUT09>
- Meeting ID: 899 4339 7682
- Passcode: Alamosa
- Dial by your location
- +1 669 900 9128 US (San Jose)



OPERATIONS PLAN

- Passenger Service – Timetable of passenger service is running from AEWRR to Oakhurst.
- Freight Extras – Natural resources are sourced from our mountain operators to supply manufacturers and for export.
- Reefer Extra – Starts at Mesa Grande, goes to Long Beach, Returns to Mesa Grande. Ices at Lincoln Yard each way.
- Increased freight traffic

OAKHURST FREIGHT TRAFFIC

- Sawmill: up to 2 cars. Box or Flat.
- Logging Co. Warehouse: 1 car. Box or Flat.
- Oakhurst RR Fuel: 1 Tank.
- Mine: 1 car. Ore or Box.
- Camp #4: up to 2 cars. Box, Flat, or Tank.
- Camp #6: up to 2 cars. Box, Flat, or Tank.
- All cars are 26-40 ft.

COALTON FREIGHT TRAFFIC

- Ron, Ira has coal industries and I have a warehouse that can provide food stuffs. I provide milk

AEWRR FREIGHT TRAFFIC

- I can support as many reefers as you want to send me. I should have up to five helpers for my layout by the end of January. My icing dock will handle 900 feet of train. If we use mechanical reefers we do not need an icing dock, I have need to supply four industries for reefer goods.
- Does anyone else have an coal industries, I can supply coal cars and oil to other divisions. I need food stuff on my division, who can supply the AEWRR?
- Other divisions let me know what you need, and I will let you you if I have an industry that can supply you.

WTRR FREIGHT TRAFFIC

- The W&T has production of citrus and avocados, hay, washed sand, large commercial bakery products, fresh and frozen seafood, fresh meat, lumber, iron hardware, petroleum crude, bandini style fertilizer and Pelton water wheels.
- It consumes sugar, flour, refined petroleum products, explosives, papergoods, general consumer commodities, cyanide powder, structural iron, calcium and phosphorous compounds, vehicles, farm goods, preachers, prostitutes, tourists and merchant marines.

PHL FREIGHT TRAFFIC

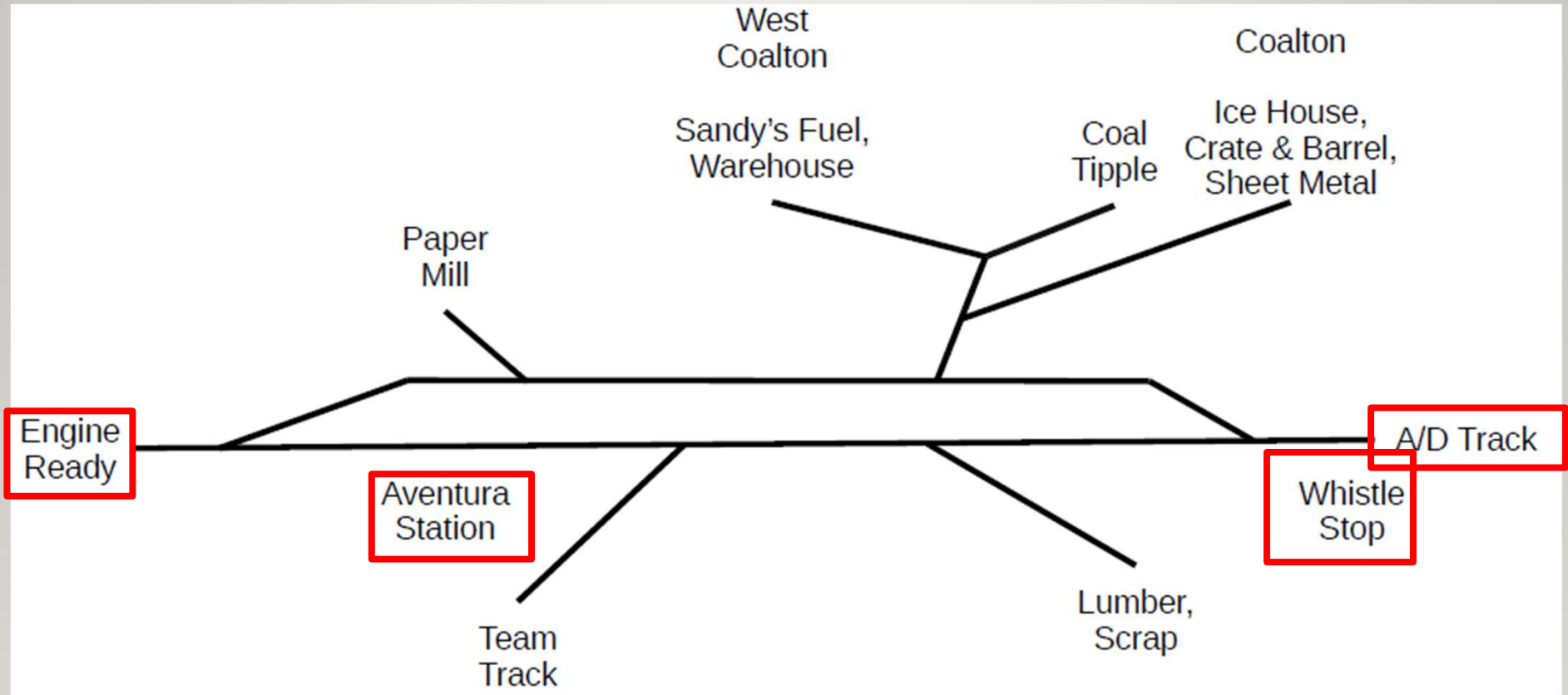
- I have coal export and can handle a small unit train of 10 -15 cars loaded (Metro Ports/oxbow/Koch Carbon). It can be any length on others layouts. I can pass empties back. I take bulk sulfur, borax and pet coke too.
- I take veg/ food grade oils for storage and export (Vopak) I take LPG and crude and ethanol for so call refineries. I have cold storage to send refers. I send containers that can be unloaded at team tracks or inter modal. These can have produce or grain. I have a mill I can send grain. I have paper and plastic for packaging that can be sent. I can interchange from Gardena, the UP, SP and SF/BNSF and western terminal rr

MLA-PHL Industries 122720.xlsx
PHL Industries

Customer	Industry	Site	Cars (AAR)	# Spurs/# Spots	Rail
Toyota Logistics Services	New Vehicles	LB Pier B	Autoracks	2 Spurs 5 cars each	PHL
Vopak	Liquid Bulk	LB Pier B	Tank-Veg, Bio diesel, chem	3 Spots	PHL
Lineage Logistics/Baker Cold Storage	Frozen Produce	LB Pier B	Reefers	3 spots	PHL
Lehrer Industries and Logistics	Perishables	LB Pier B	Box Reefers	2 Spots	PHL
Sears	Gener Merch Distrib	LB Pier B	Box, Flat	3 Spots	PHL
Tate Milling	Corn/Grain Milling, Tortillas	LB Pier B	Cov Hopper Box	2 spots	PHL
Warehouse	General Merch Distrib	LB Pier B	Box, Reefer, Flat	2 spots	PHL
Pacific Container Terminal	Containerized Cargo	LB Pier C	40-53' Well cars	2 Spurs 7 cars each	PHL
National Gypsum	Drywall	LB Pier C	Centerbeam Bulkhead/Flat Box cars	2-3 cars total	PHL
Metro Ports/Oxbow	Pet coke, Sulfur, Borax, Bulk,	LB Pier G	Coal Hoppers Cov Hoppers	4 spurs (2LD, 2MT) 10 cars x4-40 cars	PHL
Cargill Milling	Corn Syrups	Reyes Industrial	Tank-Corn Syrup	2+1 Spurs, 5 cars/ea = 15 cars	PHL
International Paper	Corrugated Paper	Reyes Industrial	Box, Tank	2 spots	PHL
Grow More	Lignin liquor/Urea	Reyes Industrial	Tank, Cov Hop	1 spot	PHL
Epsilon Plastics	Plastic pellets	Reyes Industrial	Cov Hopper	2 Spots	PHL
Potential Industries	Scrap Paper	Reyes Industrial	Gondola	1 spot	PHL
Certainfeed Corporation	Roofing materials	San Pedro	Tank, Box	2 spots	PHL
Rancho LPG	LP Gas	Wilmington	Tank-LPG	4 spots	PHL
Team Track	All	Wilmington	All	3 Spots	PHL



COALTON - IRA



Aventura Station

- 1 -

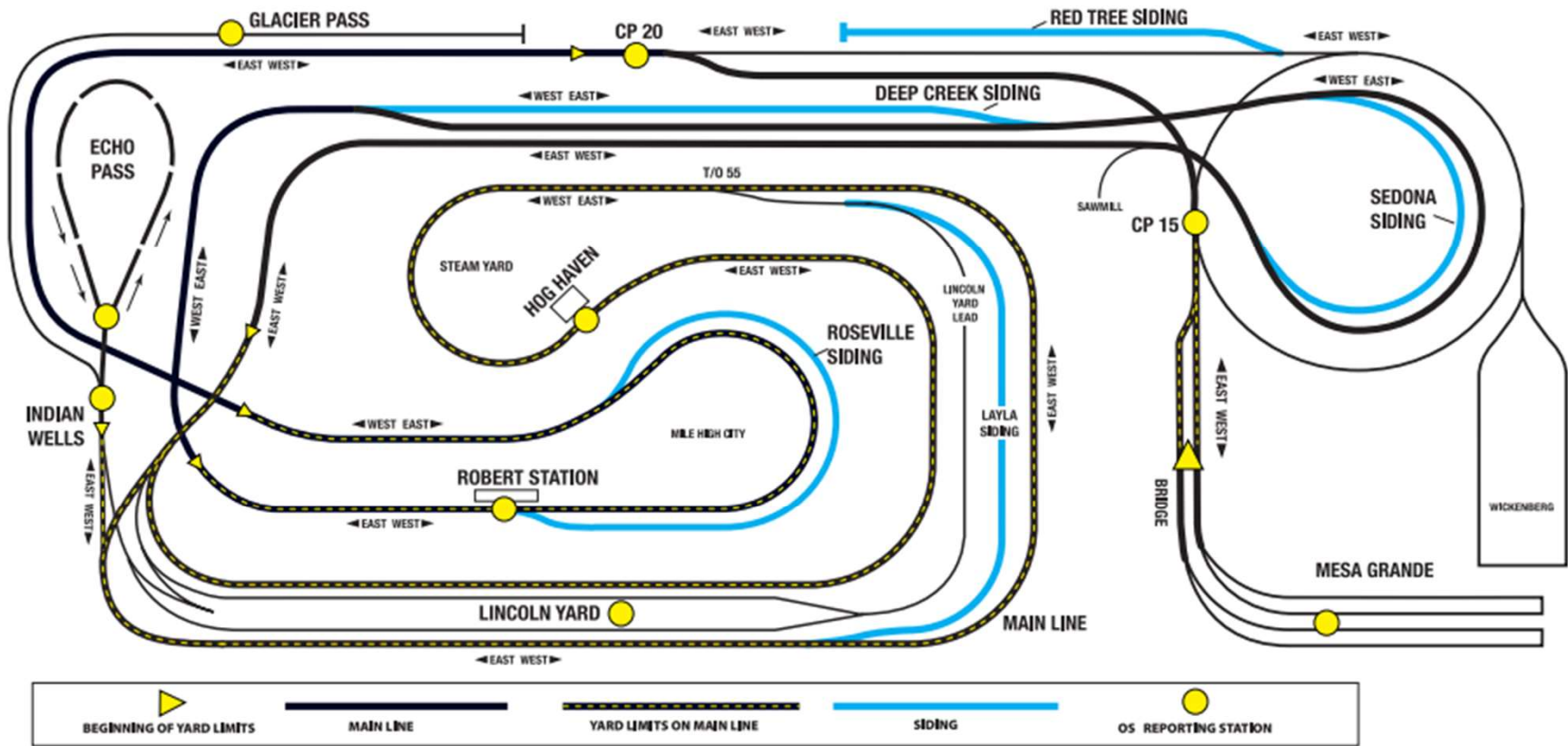
November 11, 2020 2:23 PM

Location	Length	Used	R.S.	Cars	Locos	Pick ups	Set outs
Aventura Station	505	165	3	3	0	1	1
Spur Name							
Platform	400	0	0	0	0	0	0
Team Track	105	165	3	3	0	1	1

Total length 505, total used 165, percentage used 32%

Total rolling stock 3, number of cars 3, number of locomotives 0

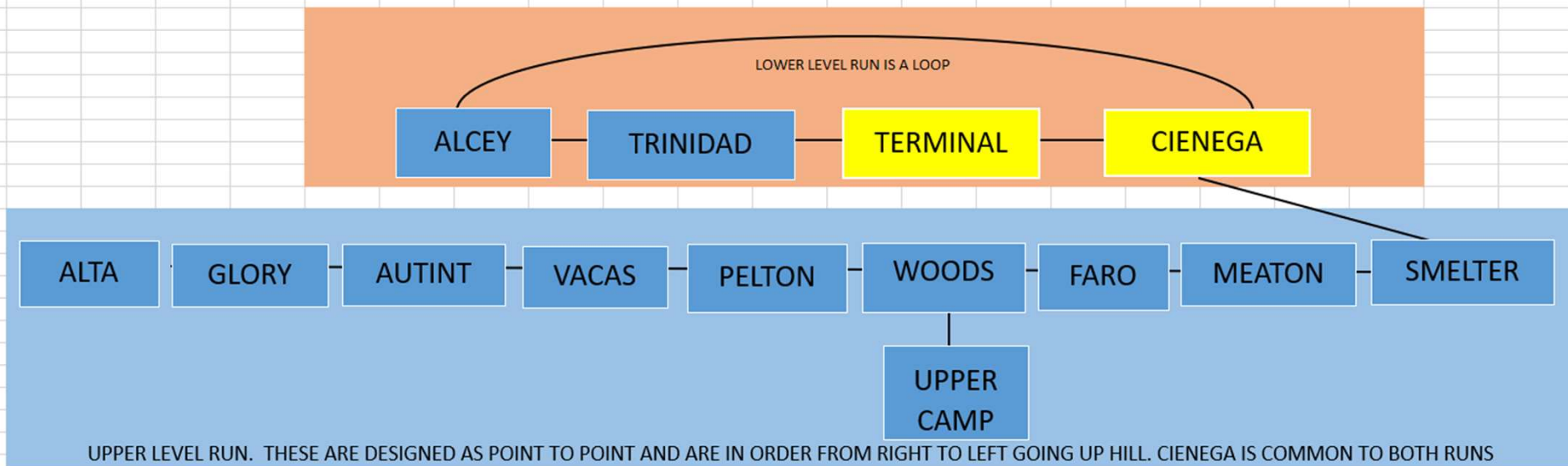
AEWRR



WTRR

WESTERN AND TERMINAL RAILROAD AND NAVIGATION COMPANY

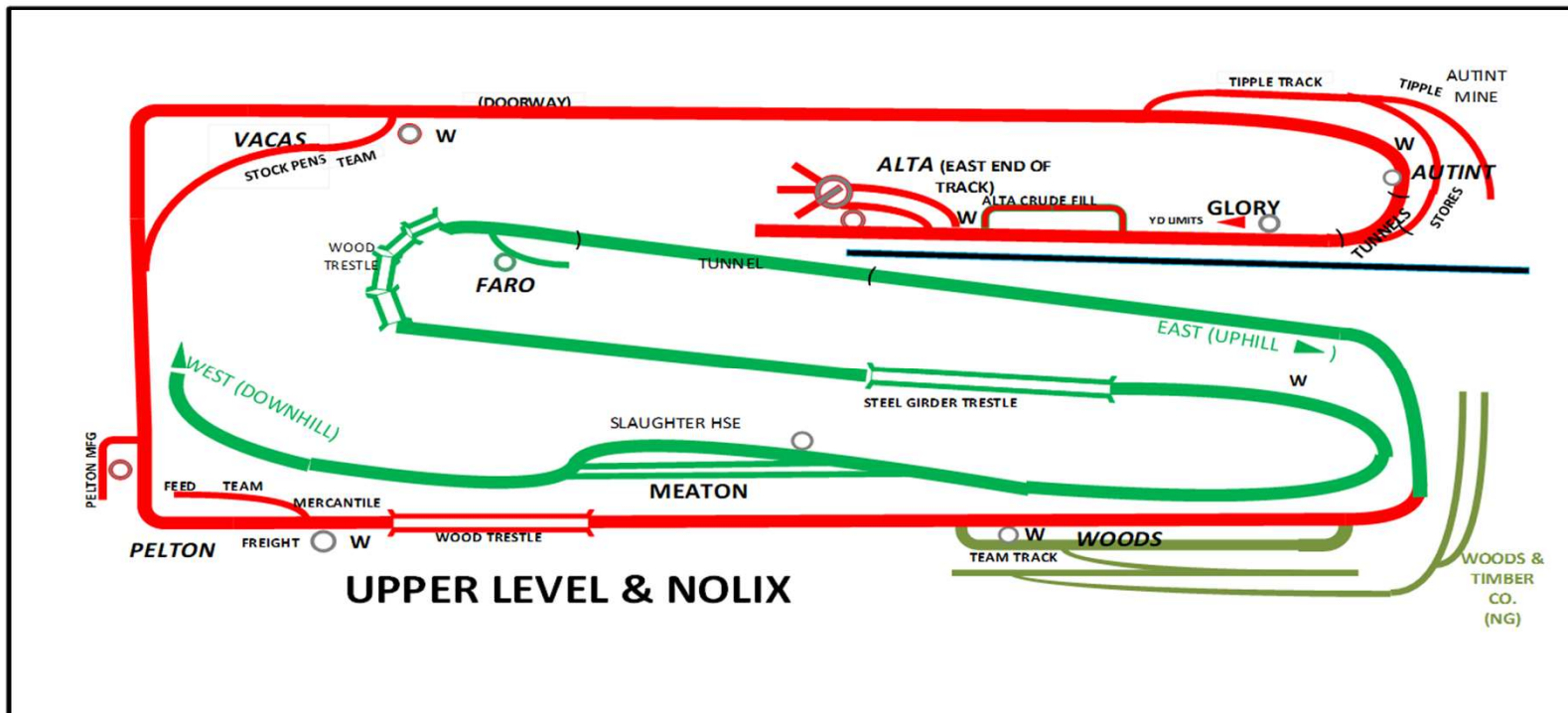
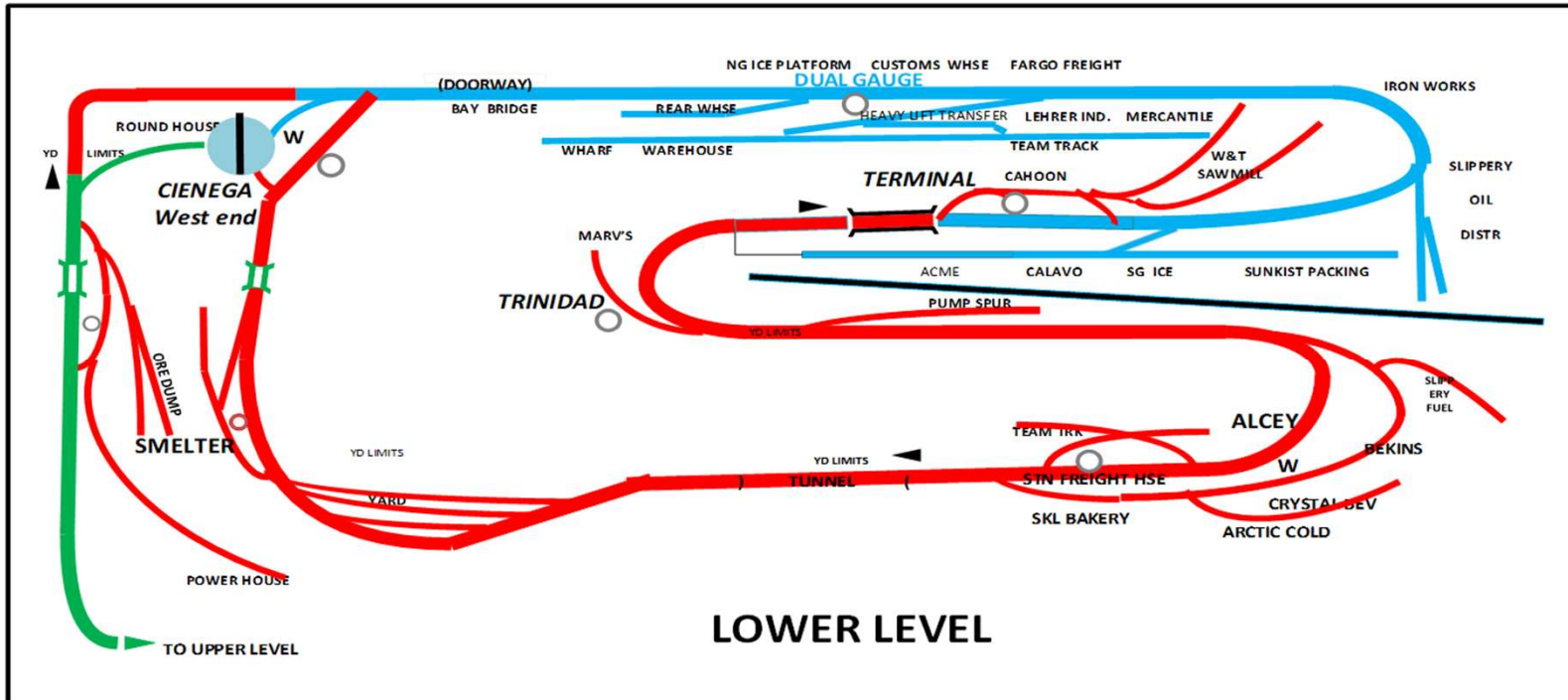
THE TOWNS IN YELLOW ARE DUAL GAUGE
THE TOWNS IN BLUE ARE NARROW GAUGE



UPPER LEVEL RUN. THESE ARE DESIGNED AS POINT TO POINT AND ARE IN ORDER FROM RIGHT TO LEFT GOING UP HILL. CIENEGA IS COMMON TO BOTH RUNS

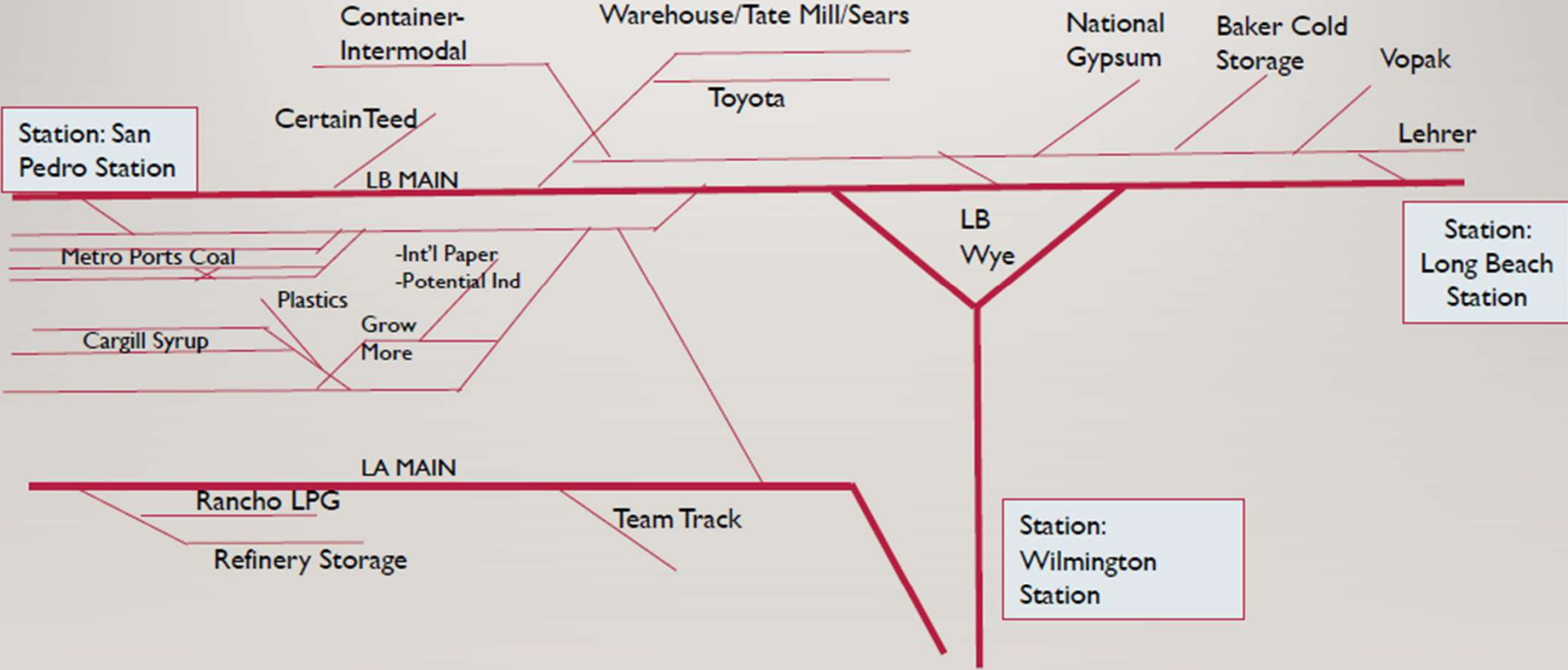
WTRR

WESTERN AND TERMINAL RAILROAD AND NAVIGATION CO.



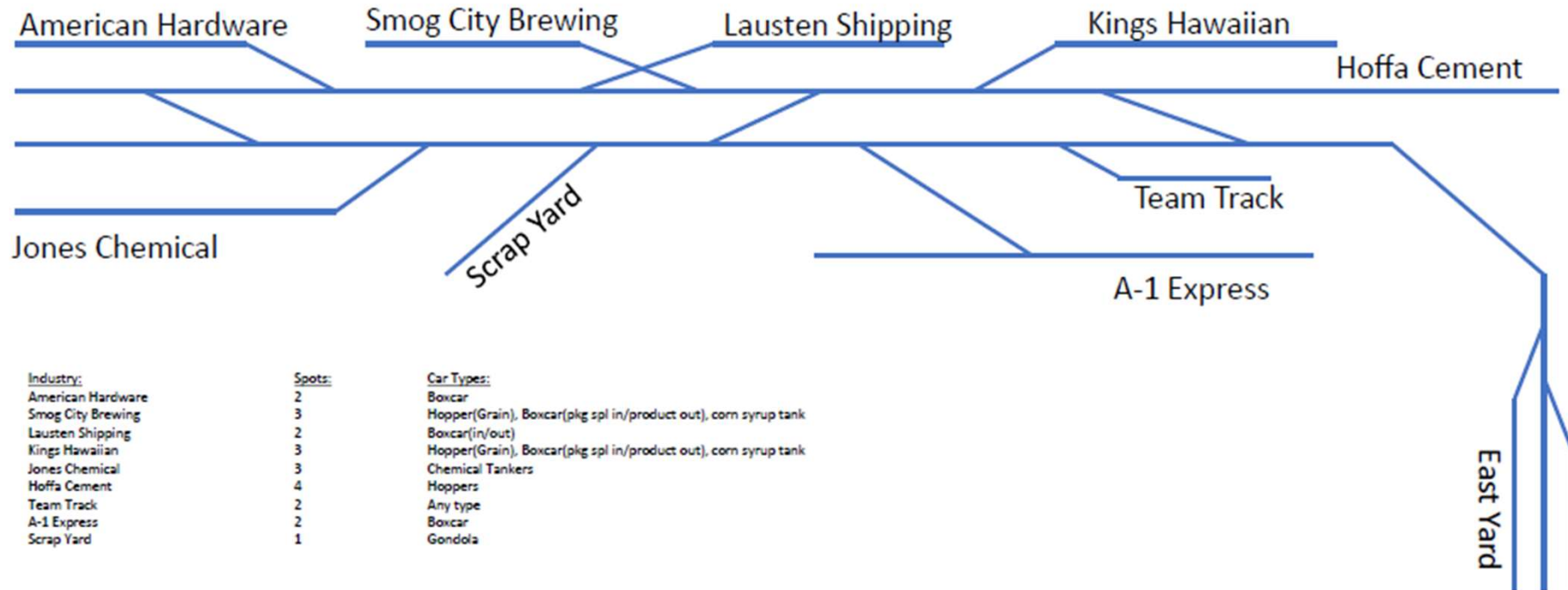
LEGEND	
○	= STATION
▶	= YD LIMITS
Red line	= NARROW GAUGE
Black line	= SCENIC DIVIDER
Blue line	= DUAL GAUGE
Green line	= NG NOLIX
W	= WATER

PHL Track Schematic
Mike Artner



As of 12.27.20

Gardena Railroad



Industry:

American Hardware
 Smog City Brewing
 Lausten Shipping
 Kings Hawaiian
 Jones Chemical
 Hoffa Cement
 Team Track
 A-1 Express
 Scrap Yard

Spots:

2
 3
 2
 3
 3
 4
 2
 2
 1

Car Types:

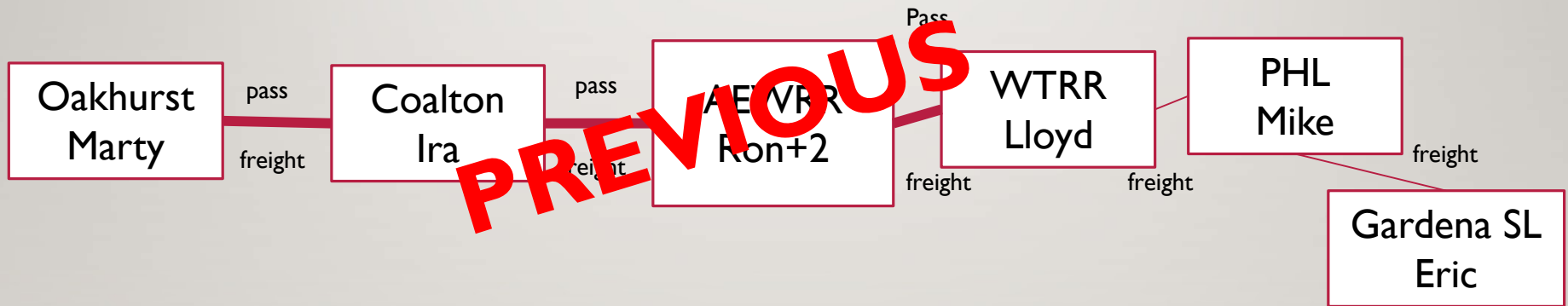
Boxcar
 Hopper(Grain), Boxcar(plg spl in/product out), corn syrup tank
 Boxcar(in/out)
 Hopper(Grain), Boxcar(plg spl in/product out), corn syrup tank
 Chemical Tankers
 Hoppers
 Any type
 Boxcar
 Gondola

East Yard

UPDATED SCHEMATIC (DRAFT)

West

East



1. Most trains pass through AEWRR where we have the most crew and space – the mainline. Also has a main yard and can be a “source and sink” for cars
2. We run trains from the harbor to the mountains and anywhere in between
3. Oakhurst to AEWRR uses a Switch List. AEWRR to Gardena uses Mike’s card method

UPDATED SCHEMATIC

West

East



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