3D Railroad Master

Master

Version 1.6

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Your map to this manual

Tells you what *3D RailRoad Master™ (RRM)* is all about, what kind of computer system you need, how to install the software, what to do if you have questions, and who put *RRM* together.

This section gives some guidance for navigating *RRM*. But not too much because one of the best things about this game is its versatility — you actually get to tailor the game specifically for yourself! You can:

• Set the level of difficulty
• Design your trains — Number and size of trains, type of engine and type of cars
• Create the cargos you want and decide which type of car must be used
• Set your own schedules

We know that just jumping into a new game without at least a little guidance can be difficult. To help you get your "railroad" legs before you head out on your own, we've filled this section with illustrations and instructions for 20 sample layouts that cover the full range of difficulty.

This section is for those of you who just can't seem to leave well enough alone … who just can't resist tinkering to improve an already great thing. It guides you through the process of creating new layouts or revising an existing *RRM* layout — track, stations, buildings, etc.

However, you must have two things to take on this sort of project:
- Abracadata's companion product, *3D Railroad Concept and Design™*
- A lot of courage and patience

This *.rrm sample file listing shows all possible mission parameters and a brief description of each parameter. Take your time and pay close attention to the syntax and your typing — a simple typing mistake can cause some big-time problems when you try to run the game.

The *.rrc layout files let you define stations, animated objects, bumpers, tracks, etc. for *RRM.* This section lists all the available hints and their usage.

Getting On The Tracks

3D Railroad Master™ (*RRM*) is the closest you're going to get to operating a train on your computer. While some artistic license was taken to make *RRM* a fun and challenging strategy game, you're going to get a pretty good feel for what it's like to be a real train engineer.

Features

Take a look at what's in store for you …

- Texture mapped real-time 3D graphics/animations
- Animated 3D objects such as pedestrians, animals, vehicles/aircraft
- Various backdrop scenes/pictures, scenery, buildings, mountains, elevated track, and other structures
- The ability to build/customize cargo, trains, and delivery schedules
- A large selection of ready-to-use rolling stock (cargo and cars)
- A large selection of game layouts (with updates on the web)
- A zoomable overmap showing train and station locations … plus a smaller radar map in the cab
- The ability to run up to four trains at once
- Support for coupling/uncoupling cars, and running trains forward or backward
- The ability to control turnout/switch directions
- Seven different 3D viewing options
  1. Inside the cab
  2. Outside from above the front of the train
  3. Outside from above the back of the train
  4. Overhead helicopter view
  5. From the closest camera to the train as it travels the layout
  6. From a specific camera
  7. Walk-around (3D view)
- Simulated, scaled time (12- or 24-hour time)

- Varying weather conditions (based on the time of year)
- The ability to run trains in simulated day or night
- Optional background music and railroad sound effects
- The ability to import your own *3D Railroad Concept and Design™* layouts
- and much more …

System Requirements

To get *RRM* on your computer and you out on the tracks, you'll need the following minimum equipment:

- *Microsoft Windows 95/98/NT™*, and *DirectX 5™* or later (provided)
- A Pentium 166 (or higher) PC or compatible computer
- A minimum of 32 MB of memory (more is better)
- A display monitor and graphics card running in SVGA resolution (or higher) with capability for 16 bit high color.
- A mouse
- A hard disk drive with a minimum of 45MB (partial install) of free space available. Approximately 100MB is required for a full install.
- A double speed (or higher) CD-ROM disk drive

(The more power/memory, the better … 3D graphics are very demanding)

How To Install 3D Railroad Master On Your Hard Disk

To install *RRM*:

- Close all other applications currently running on your system
- Insert the *RRM* CD-ROM into the CD-ROM drive
- Select RUN from the *START* Menu, then type the CD-ROM letter followed by :\SETUP.EXE, (e.g. E:\SETUP.EXE)
- Click *OK*
- Follow the instructions on your screen

Note: For a partial install, the setup program copies all needed application and data files to your hard drive, and creates the appropriate icons or menu items for *RRM*. When you're running the program, the *RRM* CD-ROM still

needs to be inserted in your drive to access any *RRM* data that remains on the CD-ROM. For a full install, you will need to have the Railroad Master CD in the drive the first time you run the program. Once you have successfully started the program, the CD will not be needed to run the program for that session.

Help! When To Call Technical Support Services

The Abracadata crew appreciates your support and interest in using our products!

If you have questions about *RRM* operations we would appreciate it if you try experimentation first … after all, it is one of the best ways to master the game. A second step would be to check your manual, you'll find many of the answers here — and they're already written down! If you've still not found a solution, give us a call.

We do provide free technical support so, if you have questions about *RRM* , help is only a phone call away. All that we ask is that you pay any long distance charges … that way we can continue to provide economical products for you and all our customers.

If you do call technical support, we'll be there to make the experience as hassle free as possible. After all, we know how frustrating it can be to get technical support at many software companies — we've been in that situation ourselves.

We've come up with the following ways to speed up the process and cut down on the nail biting. Prior to calling technical support:

1. Determine what version of *RRM* you have. *Note*: You can find it by clicking *About* on the *RRM* main menu screen.
2. Have your computer and system configuration information available. We may need to know what computer hardware you have, video card type, resolution, colors, and what version of system software you're using.
3. You should also know the following:
   - How much memory you have in your computer (RAM)
   - Any screen savers you use
   - The amount of free hard drive space (swap drive) you have available

- Other programs you are running at the same time as *RRM*. This includes any programs that are started by Windows but remain running as a background task.
- The file-compression program you are using, if any
- The make and model of your video and sound card (i.e. Diamond Stealth, Sound Blaster, etc...)

4. Call Abracadata's technical support number, 541/342-3030, 8:30 AM to 4:30 PM Pacific Time. *Note*: Please don't call our order lines … those employees are not trained for technical support and will not be able to assist you in correcting the problem.

Who's On The Abracadata Team?

RRM is brought to you by a team of designers, programmers, writers, testers, and other business professionals who pride themselves in providing dynamic, easy-to-use software that enriches your life.

RRM PRODUCTION

Technical Directors:	Rodger Smith and Gregory Zhukov
Programming:	Computer Systems Odessa

THE ARTISTS

Alex Combs 3D Studio Artist	Jeff Farnsworth 3D Studio Artist
John Hadley 3D Artist	Jon Hancock 3D Studio Artist
Alex Lazykin Computer Artist	Kenneth Mayfield 3D Studio Artist
Theodor Severin Computer Artist	Kari Smith Computer Artist
Turlif Vilbrandt Graphic Artist /Applied Vector Modeling	

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Theodor Severin	Bryan Mumme

CONTENT COORDINATORS

Marc LaPalme	Rodger Smith
Gregory Zhukov	

THE COMPUTER SYSTEMS AND TENET CREWS

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Eugene Topilin
Executive Director

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Technical Support and Consulting

Tatiana Yurieva
Bookkeeper

Julia Dedudenkova
Office Assistant

Helen Nersesova
Office Assistant

Eduard Solovyow
Office Assistant

…and many other special people who made this project possible

PROGRAMMERS

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Project Management/Internal Design

Sergy Borenko
Senior Programmer

Stanislav Sedashov
Senior Programmer (Mathematics)

Pavel Skurtul
System Programmer

Oleg Bocharnikov
Programmer

Yuri Chebotarev
System Programmer

Alexander Dubovikov
Network Administrator

Alexander Koshelnik
System Programmer

Dmitry Yunchik
3D Programmer

Marina Yusupova
Quality Assurance

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So You Think You Want To Be An Engineer ...

Do you have what it takes to be a train engineer? Well, you've certainly purchased the right program to find out!

Choose either the diesel locomotive or the futuristic engine for simulated cab controls commonly used in that particular engine. Then pick among the three different levels of difficulty for a variety of ready-to-go game layouts (missions) … and prepare for the challenge!

The clock begins ticking as soon as the action starts! So it's a good idea to review your route and delivery schedule first because, if you're off-schedule for your pickups and deliveries, you're going to lose revenue.

By the way, did we mention that it really isn't a good idea to run over vehicles, animals, or pedestrians? This goes for running into other trains too. So keep an eye out for objects on the track in front of you.

And — if you like being an engineer — driving at reasonable speeds is a definite plus … derailing a train does more than hurt your ego, it's going to do a number on your score/earnings, as well as on your job standing.

Getting to Know Your Way Around

Even though you're eager to get started, there are a few pieces of information that will help start your railroading life off more smoothly. We know that discovering and refining the game for yourself is 90 percent of the fun, so we're not going to take that away from you by telling you *all* of the game secrets. We'll give you the important basics and leave the challenge of the game for you to explore and solve!

Start the program by clicking on your Start button, Programs, and then, 3D Railroad Master. Once you've dodged the oncoming *3D Railroad Maste*r locomotive, it's time to sign in with your name ... a little like punching a timeclock isn't it? Now *RRM* can keep track of all your personal earnings (and deductions for things such as damaging the train and other animate and inanimate objects along your route).

Hint: If you'd like to skip over the introductory screens, just quickly press the *Esc* key. (Don't hold it too long though.)

Main Setup Screen

As you can see, there are five choices — *START GAME, ABOUT, OPTIONS, HELP,* AND *QUIT.* Let's talk about the more informational ones first and then get into the ones that are directly tied to your game plan.

About

You'll find some basic background information here, such as who the programmers, artists, etc. are. You can also find the same information in the *Getting On The Tracks* chapter of this manual.

Help

Always a good thing to have at your finger tips! You can access on-line help at any point of the game by simply pressing the *H* key. There are a number of important things you'll find there.

ENGINE CAB LAYOUT
It won't take long for you to remember just what all the buttons, levers and other controls do … but, until then, we've put in an illustration to help jog your memory.

Engine Cab Layout

SHORTCUTS AND COMMAND KEYS

As you've probably already noticed, there is a hardcopy listing of all the command keys in this section. However we've also provided you with an on-line copy too.

General

The following are several shortcuts/keys that will operate consistently throughout the program:

Enter	Select OK, continue
Esc	Cancel, exit window/game
G	Show mission goal
H	Help
O	Options
P	Pause game

Start-up Menu

> *L*   Open layout

Overview Map

> +   Zoom map In (Keypad only)
>
> -   Zoom map Out (Keypad only)

Double Click…
  A camera or train to make it current
  A turnout to change the switch direction

> *Del*   Delete the current camera

Ctrl+*Del*   Delete the current train

> *E*   Setup trains and delivery schedule

Playing The Game

> *Ctrl*+*H*   Show status report (revenue, accidents, penalties, etc.)
>
> *Ctrl*+*P*   Print current 3D view
>
> *Ctrl*+*S*   Save current 3D view as BMP
>
> *W*   Horn
>
> *T*   Turn textures On/Off
>   (Off = Lower display quality but faster graphics)
>
> *C*   Couple/uncouple, load/unload cars
>
> *L*   Turn headlight On/Off
>
> *R*   Reverse train directions (Only when train is stopped)
>
> *Z*   Apply emergency brake (Only for true emergencies)
>
> *M*   Overview Map
>
> *+,-*   Zoom the cab-view radar map (Keypad only)

Control Keys

After pressing *F2* or *F3*, you can hold the *Ctrl* key and use the *Up/Down* arrow keys to move the camera angle up/down.

> *F1*   View from inside cab
>
> *F2*   View from outside behind train

F3	View from outside ahead of train
F4	View from outside above train (Helicopter)
F5	View from the current camera (Set in overview map)
F6	Auto-change view to nearest camera to train
F7	3D walk-around view (Use mouse/arrows to move)
<	Apply engine brake (does not work with consist attached)
>	Apply train brake (for use when a consist is attached)

Arrows

Left/Right	Change turnout/switch direction
Up/Down	Increase/decrease train speed
1,2,3,4	Change control between trains 1 through 4

Quit

Click this button to quit the game and return to Windows. When in the cab, you may exit the game by pressing the Escape key. This will ask if you wish to exit the game. Click OK to exit and then Quit to exit the program.

Options

The *Options* screen allows you to choose the type of engine cab you want, what time format to use, your window size, whether you want sound effects and/or background music, and texture color values.


Ways to use this window to increase the speed of your game: There are two things you can do on this screen to increase speed: using the smaller window size and using the texture-color values rather than the textures themselves.

Remember you can return to the *Options* screens during the game by pressing the *O* key.

But enough talk! You're impatient to put on your engineer's hat and head for your train.

Start Game

This is the doorway to your game and, as is usual with *RRM*, you have two immediate options: **Training Layout** and **Mission**.
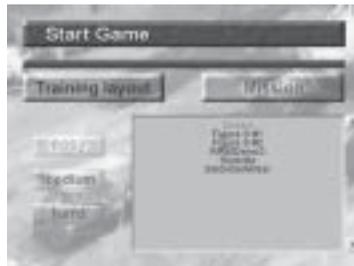
Note: Dependent upon which game you're playing, your screen may appear different than this illustration.

Mission

Selecting one of the layouts in the *Mission* field will let you climb right into your engine and go. There's a variety of preset games — layouts, schedules, cargos, trains, etc. — so you certainly won't be bored.

Levels of Difficulty

There are a number of escalating challenges as you climb the difficulty levels. For instance, you may:

- Have to make more pickups/deliveries
- Pick up or drop off empty cars before you can pick up/deliver cargo
- Switch between more trains
- Travel on more complicated layouts

- Have less time to pickup and deliver your cargos

You can also revise trains, cargo and delivery schedules for any of the *RRM* layouts from within the program itself. (See "Wrench" under the *Detailing the Game Layout* section below.)

TRAINING LAYOUT

Training Layout is primarily used if you have created your own layouts using *3D Railroad Concept And Design* and want to use them in *RRM.* (See the *Creating Your Own 3D Railroad Master Games,* and *Appendix A: Mission Parameters* and *Appendix B: Layout File Hints* in this manual for more information.)

Since there is no mission file for newly created layouts (*.rrc files), you can open one of the listed layouts and then go in and build your own:

- Delivery schedule
- Cargo
- Trains

Once you've created and saved your "new" mission, you can select it from the Mission's list and use it. Remember, you can also revise trains, cargo and delivery schedules for any of the *RRM* layouts from the program itself. (See "Wrench" under the *Detailing the Game Layout* section below.)

Training layouts can also be used if you just wanted to run trains on a layout to practice. There are no time schedules or pick-ups/deliveries to keep track of.

Now, click on your chosen layout.

Your Mission

This screen tells you what your mission is for this game and gives you some hints. *Note*: Dependent upon which game you're playing, your screen may appear different than this illustration.
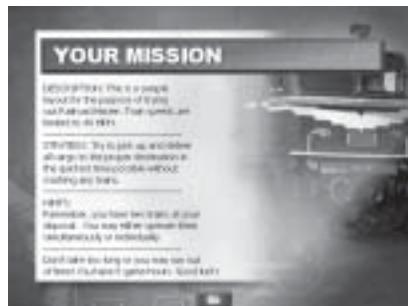
Game Layout Details

Now the fun begins! As you can see on the illustration below, after clicking Start Game and opening a layout, six icons appear along the right side of the layout — a wrench, inward-pointing arrows, outward-pointing arrows, a camera, a locomotive, and a triangle. Each of these will play a major role in your game.

Note: Dependent upon which game you're playing, your screen may appear different than this illustration.

The Wrench Icon

The wrench, just like any other tool, lets you work on your layout. You'll be able to add or remove cars from your trains, specify new cargo and the type of car it must be transported on, and adjust your delivery schedule. To be able to do this work, click on the *Wrench* icon.

A screen with three tabs — Trains, Cargo and Delivery Schedule — across the top appears. It is a good idea to check your Delivery Schedule first so you know what types of cars you'll need and to get the delivery information you'll need to plan your route.

Delivery Schedule Tab

You can now add more (or delete) shippers and destinations, and specify your cargo (using the pull-down menus); shipping and delivery times; the quantity shipped; and the cost per item.

To define a new cargo for pickup/delivery:

1. Select the shipper from the pull-down menu

2. Click the *Add* button to add a new cargo field

3. Select the destination station (business or industry) from the pull-down menu at the bottom of the dialog-box screen

4. Select the cargo from the second pull-down menu at the bottom of the dialog-box screen

5. Supply the remaining information in the input fields at the bottom of the dialog-box screen

6. If you'd like to keep your schedule with this particular layout:
    1) Click the *Save with layout* box
    2) Click the *OK* button and the *Save Mission* screen will come up
    3) Select the level of difficulty at which you want to save your schedule
    4) Click the *Save* button and the schedule will be saved using the same name as the current layout. *If a mission with this name already exists at the difficulty level you've chosen, the existing game level will be overwritten with the newly created (or edited) mission!* But, relax, you will be given the opportunity to cancel the Save.

       If you want to keep your original game mission:
         • Use the *Windows Explorer™* to find the mission files inside the *Missions* subdirectory. They're listed according to their difficulty levels.
         • Give your original mission a different name

Hint: The maximum number of cargo units a single car can carry is 10. If you specify more than 10 cargo units, you'll have to make more than one trip to pickup/deliver all the cargo, or you'll have to use more than one car.

Note: Yes, we know it's probably obvious, but don't forget, the delivery time must be later than the shipping time … you don't want to have to get to your destination before you even leave your pick-up point!

(See the *Creating Your Own 3D Railroad Master Games* chapter of this manual for additional information.)

Print Schedule

It is a good idea to print your schedule to reference once you have started making your pick-ups and deliveries.

The appearance and quality of your printed output is determined by the type of printer and printer driver you have; the paper size; and the printing orientation (If the columns are too tight when you print a delivery schedule in "portrait" orientation, use "landscape" orientation instead.)

Cargo Tab

This tab controls almost every aspect of your cargo — selecting cargo and even defining new types of cargo, as well as determining which cars are compatible with which cargos.
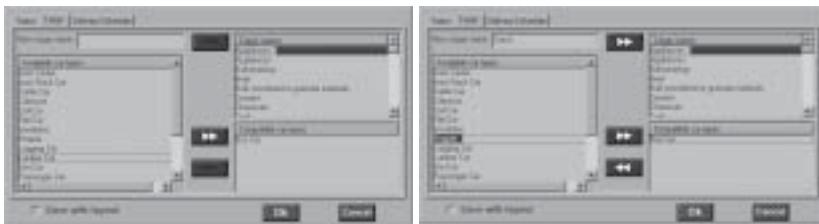
The second example above shows a new type of cargo that can then be added to the cargo list by pressing the top *Right-Facing Arrow* button. The same is true of the car selection. By simply pressing the second *Right-Facing Arrow* button you can add a new car to the list of compatible car types. To remove a car from the list, press the *Left-Facing Arrow* button. When playing the game, you will only be allowed to load cargo to cars that are defined as being compatible with that particular cargo.

Remember, if you'd like to keep your cargo selections with this particular layout:

1) Click the *Save with layout* box
2) Click the *OK* button and the *Save Mission* screen will come up
3) Select the level of difficulty at which you want to save your cargo
4) Click the *Save* button and the schedule will be saved using the same name as the current layout. *If a mission with this name already exists at the difficulty level you've chosen, the existing game level will be overwritten with the newly created (or edited) mission!* But, relax, you will be given the opportunity to cancel the Save.

   If you want to keep your original game mission:

   • Use the *Windows Explorer™* to find the mission files inside the *Missions* subdirectory. They're listed according to their difficulty levels.
   • Give your original mission a different name

Trains Tab

You can add, remove, or change engines, cars and cabooses on this screen by simply clicking on the appropriate button.

As you can see in the second example above, when you add a car, its type and compatible cargo is displayed as well. Fortunately another good feature is that, if you have a longer train — and we know most of you will — just use the *Right-Facing* or *Left-Facing Arrow* buttons to move up and down the length of your train.

It is also possible to place more than one engine in your consist (dummy units). To do this, simply add additional engines to your existing consist. You may place dummy units in either forward or reverse order by choosing

its appropriate position when you add the unit. You may place as many of these units on your train as you like. However, you will not be able to enter the cab view in these additional engines, nor will they increase the power available to you when operating your train. They are simply for looks in the outside views.

Remember, if you'd like to keep your train selections with this particular layout:

1) Click the *Save with layout* box
2) Click the **OK** button and the *Save Mission* screen will come up
3) Select the level of difficulty at which you want to save your train
4) Click the **Save** button and the schedule will be saved using the same name as the current layout. *If a mission with this name already exists at the difficulty level you've chosen, the existing game level will be overwritten with the newly created (or edited) mission!* But, relax, you will be given the opportunity to cancel the Save.

If you want to keep your original game mission:

- Use the *Windows Explorer*™ to find the mission files inside the *Missions* subdirectory. They're listed according to their difficulty levels.
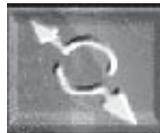- Give your original mission a different name

The Zoom-Out Icon

The arrows on this icon show exactly what it does … it shrinks the size of your layout.

The Zoom-In Icon

These arrows also show exactly what it does … it expands your layout back to its original or larger size.

The Camera Icon

Clicking this icon lets you place a camera at any point on your layout. When you select the spot you'd like to have a camera, just double click your mouse button.

TO DELETE A CAMERA: Simply select it by double-clicking on the camera and press the *Delete* key. (The camera will be outlined in red when it is selected.)

The Locomotive Icon

Clicking this icon lets you place a train (up to four) at any point on your layout. When you select the piece of track you'd like to place your train on, just double click your mouse button.

TO DELETE A TRAIN: Select it by double-clicking on the train, hold down the *Ctrl* key and press *Delete*.

TO REVERSE THE STARTING DIRECTION OF A TRAIN: Delete the train and then place it again, while holding down the Ctrl key as you double-click to place the train.
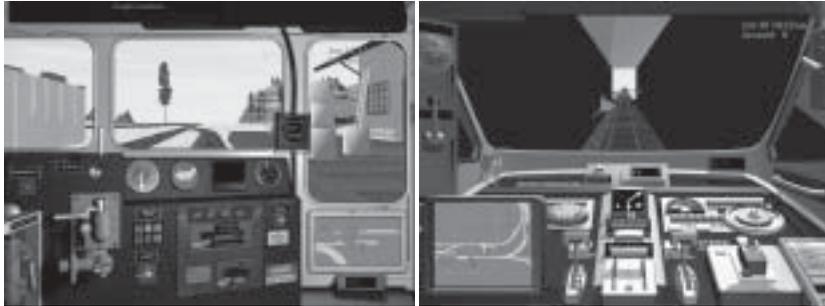
The Triangle Icon

This could be called your "play" button. Once you press it, all the 3D action starts!

The first thing you'll notice is that you're right in the middle of a diesel or futuristic engine cab! To change the engine type you must select the type of cab from the Options menu before choosing your layout.

If you're wise, you'll memorize the Command keys as quickly as possible …
They control almost every action in your game including: blowing the horn,
coupling/uncoupling cars, loading/unloading cars, turning the headlight on/
off, reversing train directions, applying the emergency brake, looking at the
overview map, etc. (See listing under *Short Cuts and Command Keys* earlier in
this section, or in on-screen **Help,** press the *H* key). *Note*: Keep an eye on the
clock, it's timing your pickups and deliveries down to the minute.

Train Car Controls Screen (Operations Button)

Use the *Train Car Controls* screen to load/unload cargo, and to couple/
uncouple cars. To access these controls, press the ***Couple/Uncouple, Load/
Unload Train Cars*** button in the cab view. (The button's location is
dependent upon the cab you've selected. The *Train Car Controls* screen
appears with the current train displayed at the top of the dialog box. A listing
of the cargo (if any) and your train's current location are also shown on the
screen.

Load/Unload Cargo

The quickest way to unload all the cargo for this station is to click the ***Double
Downward-Pointing*** arrows. You can deliver specific cargo by:

1. Clicking a car
2. Clicking the cargo
3. Clicking the *Single Downward-Pointing* arrow.

Couple/Uncouple Cars

COUPLING CARS: To couple to a car (or to recouple to cars you've uncoupled from), simply back up into the cars. The coupling will occur automatically. However, be careful of your speed! If you're going too fast (more than 5 MPH), you'll damage the train. In fact, trying to couple at an extreme speed will even crash the train.

UNCOUPLING CARS: To uncouple a car:

1. Click on the car that's at the point you want to uncouple
2. Click the "coupling" icon beneath the train

The car and any cars following it are uncoupled from the train and you can just pull your train forward to leave them where they are.

A Few Other Things To Be Aware Of

As you play the game, you're going to encounter many different items and situations. Here are a few to look out for.

Damaged or Crashed Trains

Green Locomotive Icon In The Engine Cab Turns Partly or Completely Red

If any part of the green locomotive icon (located about the center of your cab controls) changes to red, it means you've damaged the train by coupling too fast, running into bumpers, or running into other trains, etc. If the damage isn't too severe you can sometimes keep playing. However you may need to repair your train before you can continue playing. To repair the damage, simply click the locomotive icon. However, repairing damage is both expensive and time consuming.

A COMPLETELY CRASHED TRAIN: If a train is completely crashed, it is unrepairable … if it's critical to finishing the game, or is blocking a route needed for pickups/ deliveries, you've lost the game and will have to start over. Click *Esc* to exit the game. If it's possible to continue your pickups/deliveries using another train, you can switch to it and continue playing the game.

Grey Track Sections
Indicates a pick-up/delivery area.

Hollow Circle
A hollow circle on the overview or radar map indicates a switch point. If you want, you can preset switch directions before beginning the game by clicking them on the overview map screen. **Hint:** Presetting switch directions can save you a lot of time during the game.

Message "No compatible car for this cargo."
May mean:
- You may have forgotten to couple to an empty car that is compatible with this particular cargo. (A good reason to review your schedule *before* adding cars to your train.)
- You may be trying to pick up cargo with the wrong train.
- If you're using a "custom" layout (one you've created or edited):
  - You may have built a train without a compatible car
  - If you also created new/custom cargo, you may not have specified the correct cargo to a compatible car type

Crossings

Sign Containing a "W" or "X-ing" Beside the Track
This means you're approaching a crossing and should blow the train horn before the opposite crossing sign is passed. If you don't, you'll get a penalty and too many of these can have a significant negative impact on your game score.

Speed Limits

When approaching a speed zone, you will see a speed limit sign (with red numbers) warning you to reduce your speed. When you arrive at the actual section of track where the speed limit is in effect, the sign will have black numbers on it. Once you reach this second speed limit sign, you will be fined if your speed is faster than the limit on the sign.

Stations (Square With An "S" In It)

Located on the overview map, these indicate shippers and drop-off destinations or stations.

Train Brake Doesn't Stop the Engine

When you're only running an engine with no cars attached and try to use the train brake to stop, it won't function … you *must* use the engine brake.

Winter and Optimized Versions of Layouts

WINTER: The winter version is the same as the standard version except the weather conditions are those of winter (typically January). The ground and hills/mountains are all white, which will allow your display to run slightly faster and smoother.

OPTIMIZED: The optimized versions use hills/mountains that use less memory and display more quickly. However, they don't look quite as realistic as the standard version … but they aren't bad either. Since the optimized layouts also contain fewer scenery objects, you can use them for a notable performance improvement.

Hint: Press *T* immediately after starting a game. It will remove all textures and will use solid colors for even faster performance.

Some Additional Help

The *Layout Illustrations and Game Hints* section can also be a "life saver" in playing the game. It will ease your learning curve by providing illustrations, and game instructions for each layout, including:

• Steps/order of pickups/deliveries

• Coupling to empty cars

• Running two trains at once

Step-By-Step Instructions

Okay. So, now you have all of the basics. You know which button does what and you're ready to tackle a layout, right?…maybe not. This section will give you complete instructions on how to operate the train using either the keyboard or the mouse. The following pointers are for the diesel engine cab specifically. The futuristic cab options may be different.

For your convenience, we've printed the help screen, which can be found on page #9. Once you actually enter the game, you might want to keep this handy until you get the hang of things. Remember all controls can be accessed (moved) using the mouse or the keyboard commands once you're in the game.

If you want to try out your engineering skills without the hassle of keeping a schedule, choose the Training option to the left on the Start Game screen. This will show you the same layouts from which to choose, but there won't be any pick-ups or deliveries.

To get the full effect of the game, use a normal Mission layout. Click on the Anywhere USA name in the box on the right-hand side of the screen. This will forward you into a mission details/goals screen. Click through this screen when you're done reading what your tasks will be.

In the map overview screen, you can customize your train(s), cargo and pick-up/delivery schedule by using the wrench button on the right. After you have everything just the way you want it, hit the arrow key at the bottom of the tool bar and go into the game.

You're in the cab, now what do you do? Let's go through the standard operating procedure for this train.

THE OVERVIEW MAP

A map of the layout can be accessed from within the simulation by clicking on the blue section of screen in the lower right-hand corner of the control panel. This will enlarge the map and shows you the operations screen you saw before entering the simulation. You can watch your trains' progress on this map and control other options that will be explained further on. One of these things includes double clicking on the stations ('S' on map) to bring up the pick-up/delivery schedule for that station.

THROTTLE

Your throttle is what gets your train going. This is the lever that's located on the right part of your instrument panel, next to the number pad. You can also use your up and down arrow keys on your keyboard to accelerate and decelerate. Your speed is shown in the small box above and to the right of the throttle, between the windshields.

BRAKE

Once you get going, you have to stop. The braking options for this cab can all be found on the left-hand side of the instrument panel. You have three different choices that can be used in different situations.

The most used braking device will be the train brake that will stop your engine and all attached cars. Hitting the > key, or using your mouse to pull the brake to the right can activate this. To use the mouse, move your mouse over the brake until a hand cursor appears, click and hold the left mouse button, then drag the brake to the right. You'll hear the brakes squeal to let you know they're working.

The second brake is located directly beneath the train brake. This is known as the engine brake. It is activated in the same way as the train brake and is used when you are piloting only an engine with no cars attached. It can also be activated by hitting the < key.

The final option is only for emergencies, hence the Emergency Brake. This is also activated by using the mouse to drag the lever to the right. This brake can be used at any time, but if you're not in a true emergency situation, you will be fined for using it. You know you're in an emergency situation if the red light above the emergency brake is flashing. You could have an obstacle

in your path that requires some quick reflexes. The emergency brake can also be activated by hitting the Z key.

SWITCHING TRAINS (THE NUMBER PAD)

Inside the cab, you'll notice a keypad with the numbers 1-4. This displays which train you're currently in if you have more than one train on the layout. You also switch between multiple trains by hitting the corresponding number on the keypad. The number will then light up to show which cab you're in.

THE OPERATIONS BUTTON

This is the little gold button located next to the throttle. When you move your mouse cursor over this and it turns to a hand, click the left mouse button once. This will take you into the Train Car Controls screen that will tell you about your train and which cargoes (if any) you're currently hauling. This is also where you'll perform the pick-up and delivery procedures.

The screen consists of the top section that shows your train, engine and how many cars you have. Depending on how long your train is, you may have to use the side scrolling buttons to see the entire train. The button in the middle (it kind of looks like a plus sign) is used for uncoupling cars. Simply pick the point at which you want the cars to be uncoupled by selecting the car and then click on that button.

The screen is then divided into an upper and lower box area. This will display your pick-ups and deliveries for whichever car you have selected. If there's nothing in the car, the upper screen will be blank.

When you pull up to a station where you are going to pick up a cargo, the cargo will show up in the bottom box. Determine which car that cargo will go in and select it by clicking on it with the left mouse button. Once that is done, click on the up arrow key on the left-hand side of the screen. You should now see the cargo assigned to the appropriate car in the upper box area. If you can't get the cargo into that car, you may have the wrong car

type. The cargo will be highlighted in bright green if you have chosen the right car.

To deliver a cargo you have on board, pull up to the right station. Unloading is a snap if you just click on the double down arrow. This will automatically unload any and all cargo that is meant for that station. You can also choose to unload one load at a time by selecting the load in the upper box and clicking on the single down arrow. If you can't select a cargo, that means that it's not meant for delivery at that particular station.

Click OK when you have completed all operations. This will send you back to the main cab view.

Direction:

SWITCHES

The switch box is shown in the upper right hand corner of your instrument panel. The box will remain blank until you come up on a switch that you can throw from that direction. To change the switch, simply click the box with your mouse, using the left mouse button. You will see a green arrow pointing to the current direction of the switch. You may also use the left and right arrow keys on your keyboard to alter the switch.

Switches can also be preset from the map either before entering the simulation or anytime after. This is done by double-clicking on the switches (the blue circles on the track layout) in the map overview. Double-clicking will enlarge the switch and you may then choose the direction by clicking on it.

FORWARD/REVERSE

Your forward and reverse lever is located directly beneath the throttle. This will determine which way you're moving on the track. Just a warning, you must be completely stopped before using this or you wil damage your train. To activate this lever, move the mouse cursor over the lever and click and hold the left mouse button. Drag the lever whichever direction you need to

go. You may not always be able to switch direction, depending on where you are on the layout. If you're having problems, just move forward and try again.
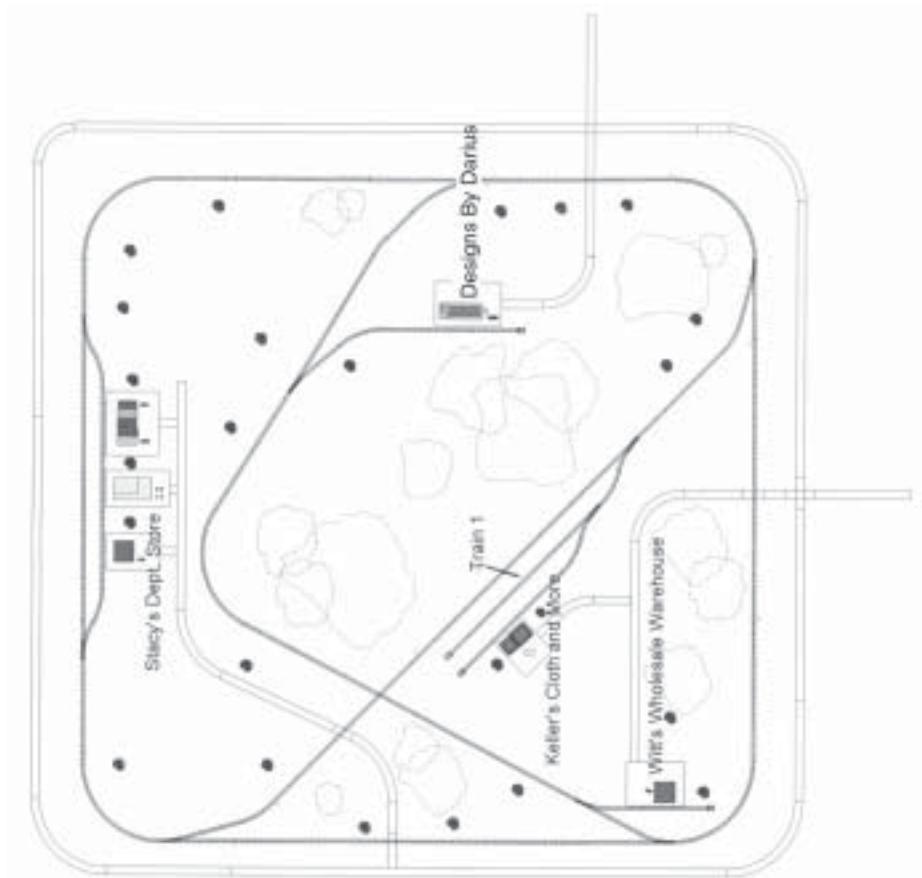
That should be everything you need to know to get you started. If you're ready to tackle the Anywhere USA layout now, turn to pages 30 & 31. This will show you the layout and the step-by-step walkthrough specific to that layout.

Have fun and good luck!

Layout Illustrations and Game Hints

ANYWHERE USA

Designs By Darius

Stacy's Dept. Store

Train 1

Keller's Cloth and More

Witt's Wholesale Warehouse

ANYWHERE USA GAME HINTS

1. Begin by pulling forward past the switch, then back up to Keller's Cloth and More and pick up a load of cloth.

2. Deliver the cloth to Designs by Darius, then pick up two loads of clothing while there.

3. Deliver one load of clothes to Witt's Wholesale Warehouse.

4. Deliver the second load of clothes to Stacy's Department store, then pick up a load of clothing while there.

5. Deliver the clothing to Designs by Darius to complete the schedule.

BREMMERTON

Simeon's Cement
Empty hopper car in front

Carruther's Construction

Gidion's Masonry

Bob's Lumber Yard

Cooper & Sons Lumber Mill

Rocky's Stonecutting

Empty lumber car

Cadey's Pipe & Supply

Empty flat car

Louie's Hardware

Sanderson Logging

Train starts here
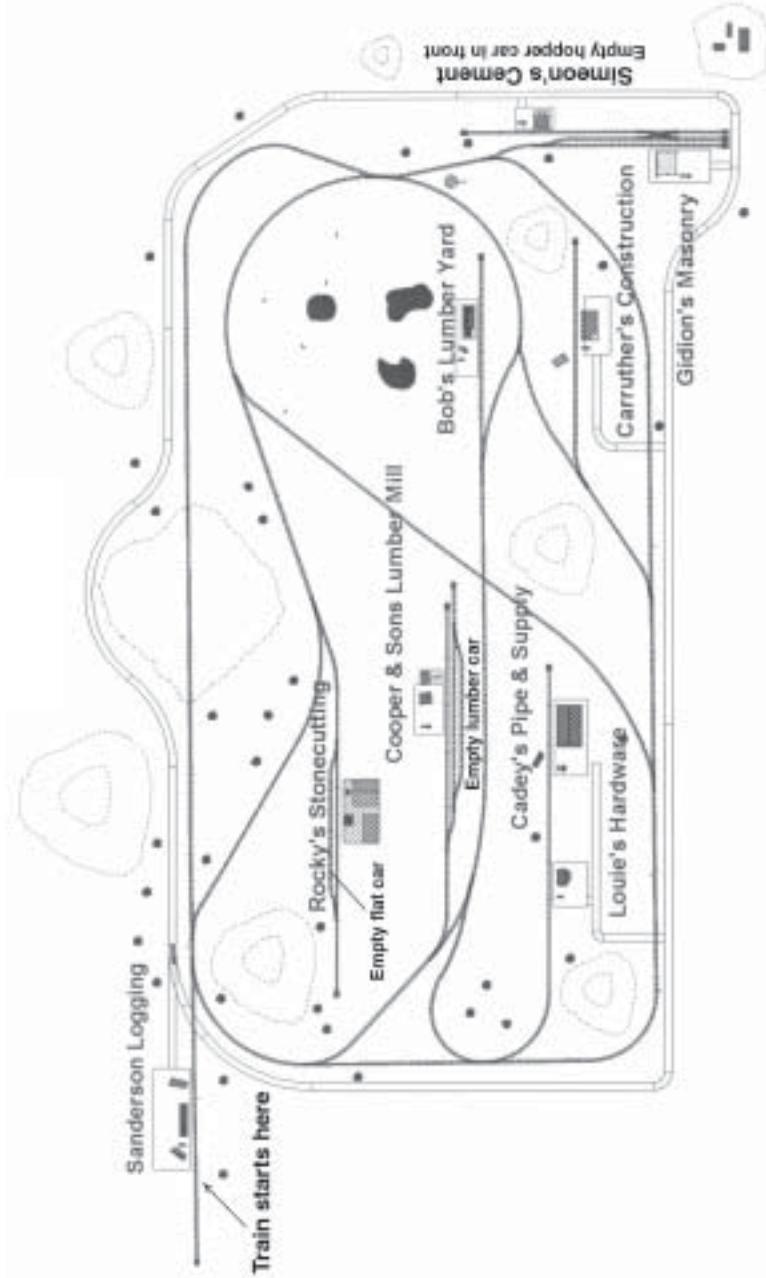
BREMMERTON GAME HINTS

1. Start with Train #2 in front of Sanderson Logging. Pick up logs.
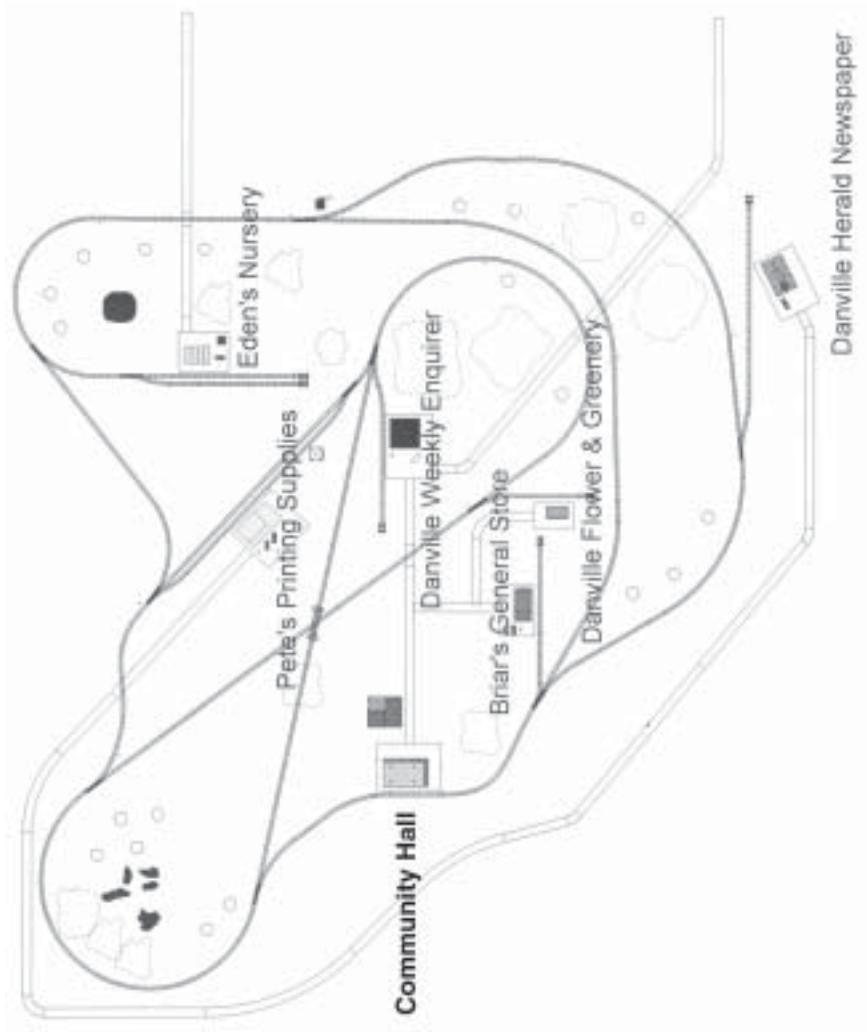
2. Pick up cement at Simeon's Cement. You will need to uncouple your cars and back up to the station, picking up the empty hopper car.

3. Pick up two loads of cinder blocks at Gidion's Masonry.

4. Pick up a load of pipe at Cadey's Pipe & Supply.

5. Deliver the logs to Cooper & Sons Lumber Mill. Pick up the empty lumber car on the side spur in front. You will need to uncouple some of your cars onto the middle track to accomplish this. After you pick up the empty lumber car, pick up two loads of lumber at the mill.

6. Pick up a load of ceiling joists at Bob's Lumber Yard.

7. Pick up the empty flat car on the side spur in front of Rocky's Stonecutting, then pick up stone blocks.

8. Deliver the cement to Carruther's Construction.

9. Deliver the ceiling joists to Carruther's Construction.

10. Deliver the cinder blocks to Carruther's Construction.

11. Deliver the stone to Carruther's Construction.

12. Deliver one load of lumber to Carruther's Construction.

13. Deliver the second load of lumber to Louie's Hardware.

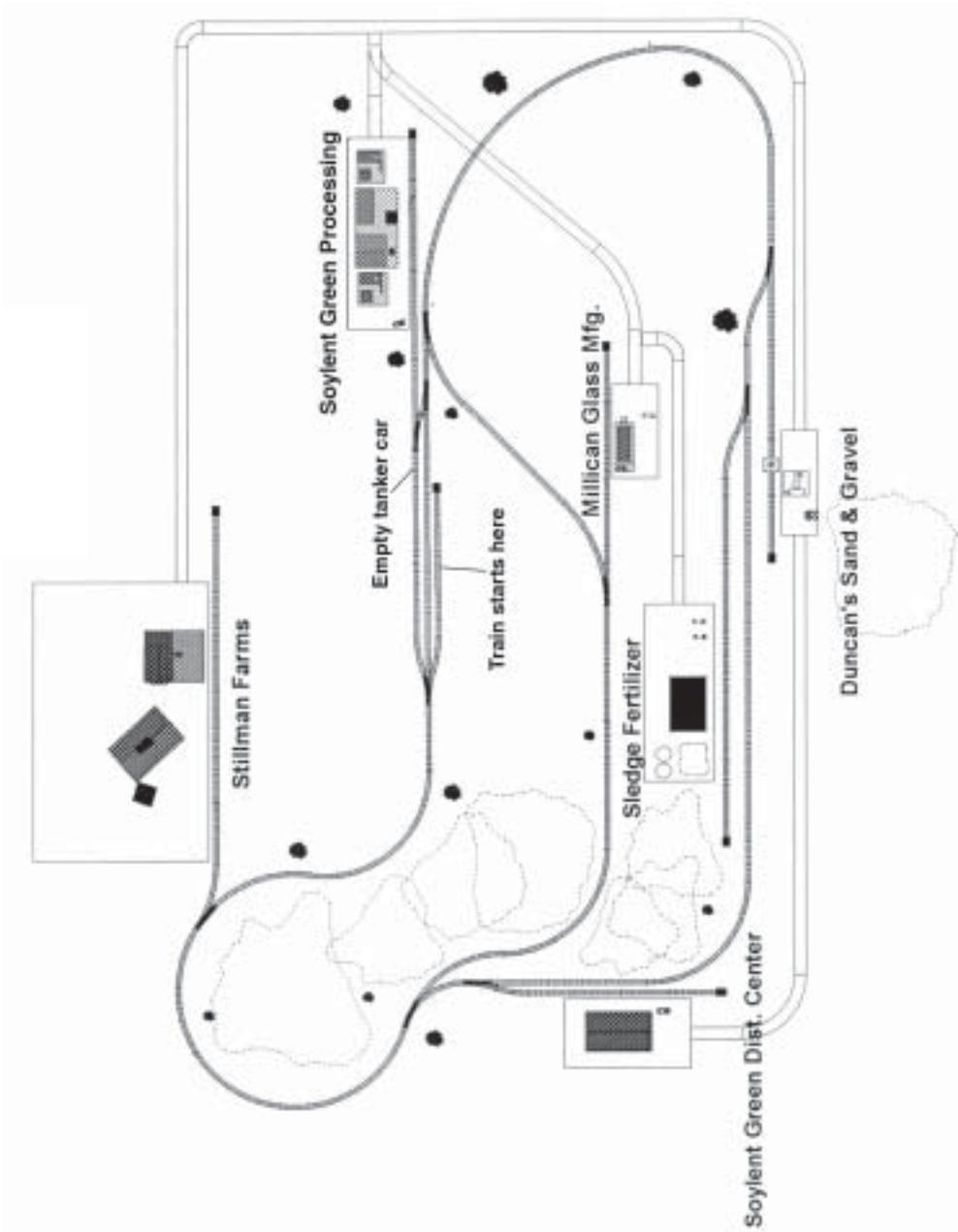14. Deliver the pipes to Louie's Hardware. This will end the scenario.

DANVILLE

Eden's Nursery

Danville Herald Newspaper

Pete's Printing Supplies

Danville Weekly Enquirer

Danville General Store

Briar's General Store

Danville Flower & Greenery

Community Hall

DANVILLE GAME HINTS

1. Start with Train #2 in front of the Community Hall. Proceed to Eden's Nursery. Uncouple the caboose, couple to the reefer car on the parallel track, then recouple to the caboose.

2. Pick up two loads of cut flowers from Eden's Nursery.

3. Deliver one load of flowers to Briar's General Store.

4. Deliver the second load of flowers to the Danville Flower & Greenery.

5. Switch to Train #1 and pick up newspapers at the adjacent Danville Weekly Enquirer.

6. Pull forward, then back up to the upper outer loop. Proceed around the outer loop and pick up papers from the Danville Herald Newspaper.

7. Deliver both loads of newspapers to Briar's General Store.

8. Pick up ink containers and paper from Pete's Printing Supplies.

9. Deliver the ink containers and paper to the Danville Herald Newspaper.

DESERT VALLEY

Soylent Green Processing

Empty tanker car

Train starts here

Millican Glass Mfg.

Stillman Farms

Sledge Fertilizer

Duncan's Sand & Gravel

Soylent Green Dist. Center

DESERT VALLEY GAME HINTS

1. Begin by picking up the tank car on the track adjacent to the start point. Uncouple the caboose and couple to the tank car, then recouple to the caboose.

2. Pick up sand from Duncan's Sand & Gravel.

3. Pick up fertilizer from Sledge Fertilizer.

4. Deliver the fertilizer to Stillman Farms.

5. Pick up soylent green from Soylent Green Processing.

6. Deliver the sand to Millican Glass Mfg.

7. Deliver the soylent green to the Soylent Green Dist. Center.

DESERT

Bohemian Furniture Manufacturing

Sluggo's Brewery

Arclon Oil Refinery
Empty tanker car on spur

Freight Terminal 1

Mt. Vernon Mfg.

Train starts here

Palmer's Serrvice Station

Vulcan Mfg.

Wilson's Bakery

Polucco's Granary

Freight Terminal 2

Eugene Lumber Mill

Braeburn's Machine Shop
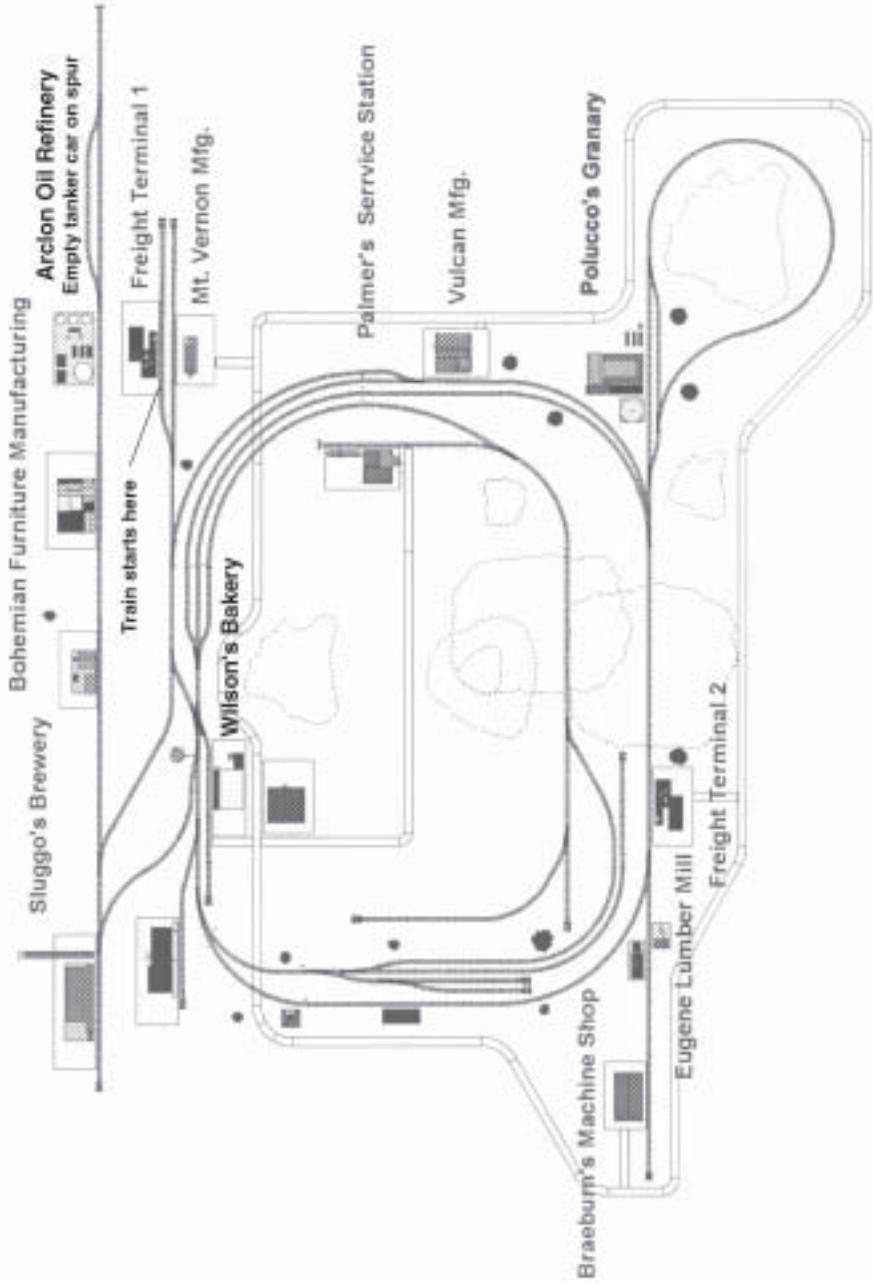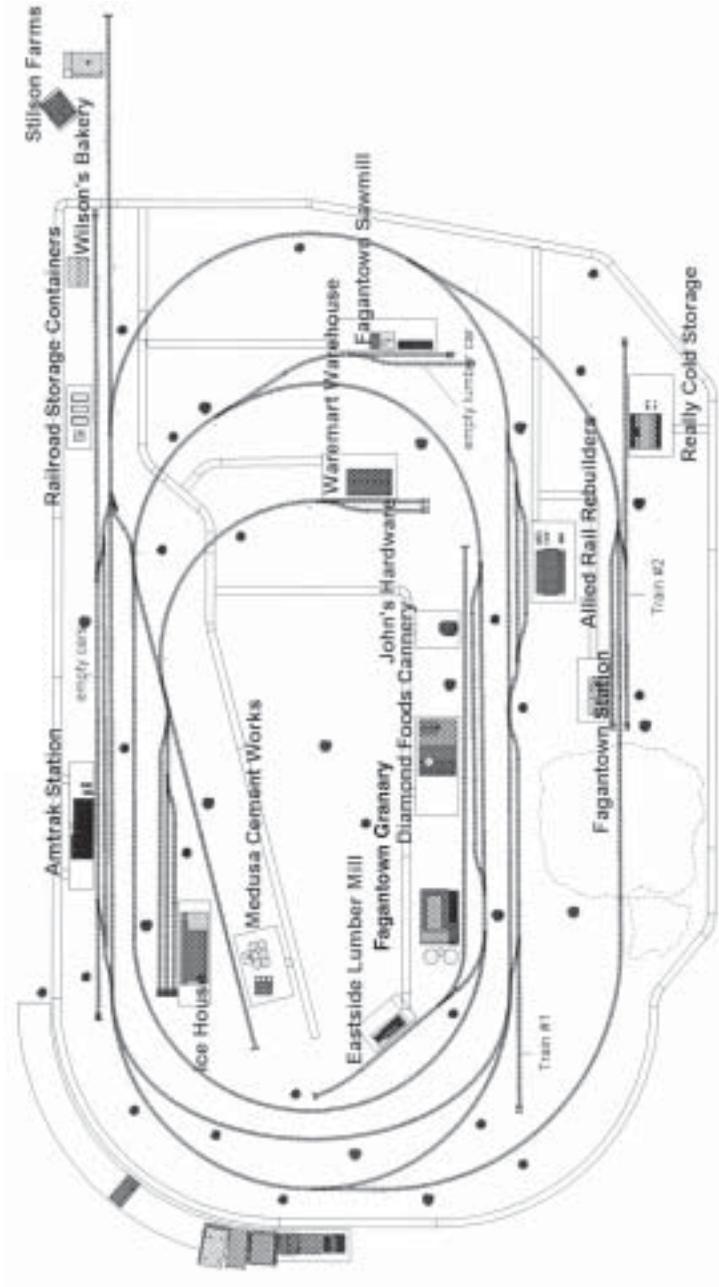
DESERT GAME HINTS

1. Start out at Freight Terminal 1. Pick up furniture.

2. Deliver the furniture to Freight Terminal 2.

3. Pick up grain and flour at Polucco's Granary.

4. Pick up lumber at Eugene Lumber Mill.

5. Pick up two loads of ball bearings at Braeburn's Machine Shop.

6. Deliver flour to Wilson's Bakery.

7. Deliver grain to Sluggo's Brewery.

8. Deliver lumber to Bohemian Furniture.

9. Pick up furniture at Bohemian Furniture.

10. Pick up the empty tanker car on the side spur past Arclon Oil Refinery. You need to uncouple the cars from your engine before you pick up the tanker.

11. Reconnect the cars and load gasoline at the refinery.

12. Deliver the first load of ball bearings to Mt. Vernon Manufacturing.

13. Deliver the second load of ball bearings to Vulcan Manufacturing.

14. Deliver furniture to Freight Terminal 2.

15. Deliver gasoline to Palmer's Service Station. This will end the scenario.

EAST TERRIBLE

East Terrible Mining

Amtrak Station #2

Empty ore car

Jake's Gardening Center

Coal Processing Plant

East Terrible Building Supply

BB Fertilizer Plant

Empty Wood car

Terrible Terry's Furniture

East Terrible Manufacturing

East Terrible Sawmill

East Terrible Manure

Empty hopper car

Amtrak Station #1

Engine 1 starts here

Engine 2 starts here

Empty hopper car

East Terrible Coal

Empty freight cars

East Terrible Co

Empty Amtrak passenger cars

EAST TERRIBLE GAME HINTS

1. Start out in the lower lefthand corner with train #2. Pick up the passenger cars on lower side spur. Proceed to Amtrak Station #1. Pick up passengers.

2. Deliver passengers to Amtrak Station #2. Pick up passengers here and take them back to Amtrak Station #1.

3. At the same time switch to train #1 (also in the lower lefthand corner and Pick up the empty freight cars on the upper side spur. Go to East Terrible Manure and pick up the empty hopper car and then a load of manure.

4. Go to East Terrible Steel. Pick up the two flat cars on the side spur and then pick up 2 loads of steel. Proceed ahead to East Terrible Cement. Pick up the empty hopper car on the spur above, then pick up cement. You will have to maneuver the car so that you can get it behind the engine.

5. Go over the bridge to East Terrible Mining. Pick up the empty ore car on the siding and then pick up the ore. You will once again need to maneuver the car so that it is behind the engine.

6. Deliver one load of steel and one load of cement to East Terrible Building Supply.

7. Deliver manure to BS Fertilizer Plant.

8. Pick up processed fertilizer from BS Fertilizer.

9. Deliver the fertilizer to Jake's Gardening Center.

10. Deliver the coal to the Coal Processing Plant.

11. Pick up the empty lumber car and then the lumber at East Terrible Sawmill.

12. Deliver the lumber and the steel to East Terrible Manufacturing. Pick up furniture

13. Deliver furniture to Terrible Terry's Furniture.

FAGANTOWN

Stilson Farms

Wilson's Bakery

Railroad Storage Containers

Fagantown Sawmill

Waremart Warehouse

Really Cold Storage

Allied Rail Rebuilders

empty lumber car

John's Hardware

Diamond Foods Cannery

Fagantown Granary

Fagantown Station

Eastside Lumber Mill

Medusa Cement Works

Amtrak Station

empty car

Ice House

Train #1

Train #2

FAGANTOWN GAME HINTS

Requires running two trains simultaneously.

1. Start with Train #1, then pick up passengers on the adjacent track at Fagantown Station and go to the Amtrak Station.

2. Switch to Train #2 and pick up rail parts from Allied Rail Rebuilders. Continue toward Stilson Farms then switch to Train #1. Occasionally check the in-route status of Train #2.

3. Deliver the Train #1 passengers to the Amtrak Station, and pick up more passengers from the Amtrak station. Start back toward Fagantown Station, then switch to back to Train #2. Continue monitoring Train #1 periodically. Deliver the passengers to Fagantown Station to complete the schedule for Train #1.

The following applies to Train #2.

4. Pick up produce from Stilson Farms.

5. Near the Amtrak Station, uncouple the caboose, couple to the hopper car on the adjacent track, and recouple to the caboose.

6. Deliver the rail parts to Railroad Storage Containers.

7. Pick up bread at Wilson's Bakery.

8. Adjacent to Fagantown Sawmill, uncouple caboose, couple to the lumber car, then recouple to the caboose.

9. Pick up lumber from Fagantown Sawmill.

10. Deliver the bread to Waremart Warehouse.

11. Pick up ice from the Ice House.

12. Pick up cement from Medusa Cement Works.

13. Deliver the lumber to Eastside Lumber Mill.

14. Deliver the produce to Diamond Foods cannery.

15. Deliver the cement to John's Hardware.

16. Pick up grain at Fagantown Granary.

17. Deliver the grain to Wilson's Bakery.

18. Deliver the ice to Really Cold Storage.

FIGURE 8 #1

Upper Crust Bakery

Claxtonville Lumber

Claxtonville Freight Station

Train #1 starts here

Grainworks Inc.

Loading Crane
(not used)

Pahrump's Furniture

Carlostoppi's Cement Co.

Marvello Meat Co.

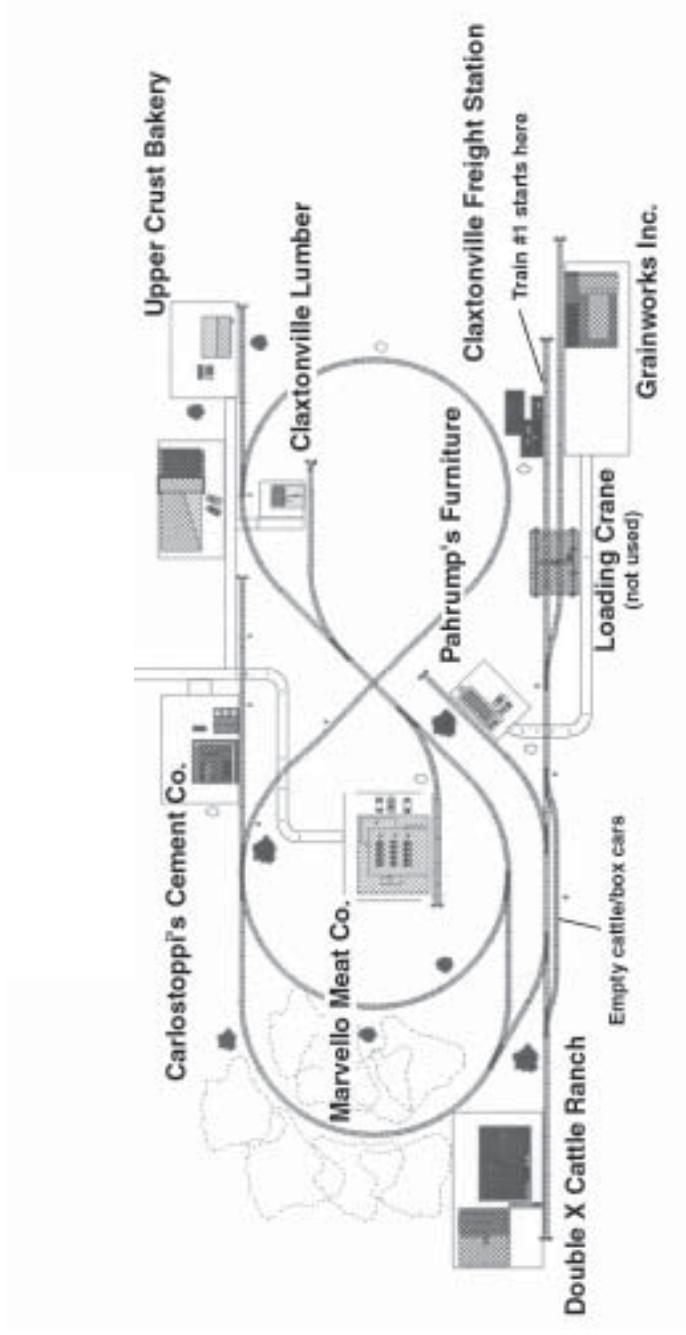Empty cattle/box cars

Double X Cattle Ranch

FIGURE 8 #1 GAME HINTS

1. Start from the front of the Claxtonville Freight Station.

2. Load flour on the adjacent track at Grainworks, Inc.

3. Go forward to siding C and couple to the box car and cattle car.

4. Pick up cattle at Double X Cattle Ranch.

5. Deliver the cattle to Marvello's Meat Company.

6. Deliver the flour to Upper Crust Bakery.

7. Pick up lumber at Claxtonville Lumber.

8. Deliver the lumber to Pahrump's Furniture, and pick up furniture while there.

9. Pick up cement at Carlostoppi's Cement Company.

10. Finish by delivering the furniture and cement to the Claxtonville Freight Station.

Figure 8 #2

Warehouse Transfer Station

Train #1

Ice House

Storage Containers

R&J Frost Co.

Propane Dist.
(empty tanker cars on siding)

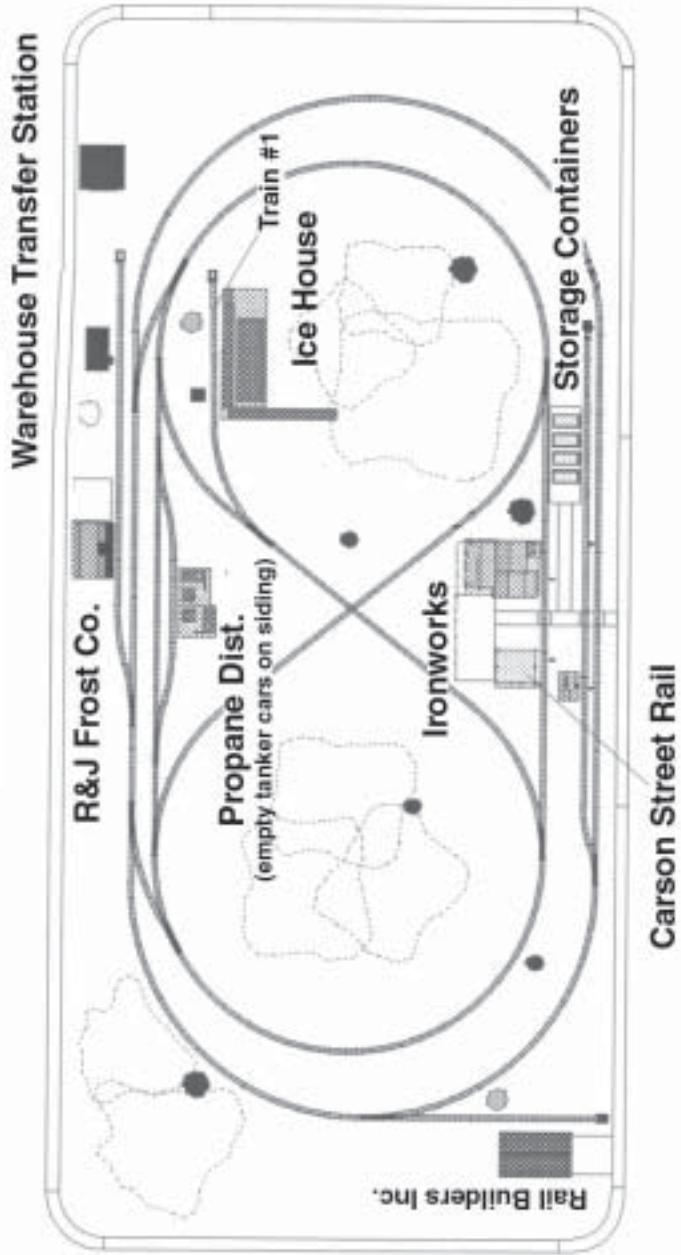Ironworks

Carson Street Rail
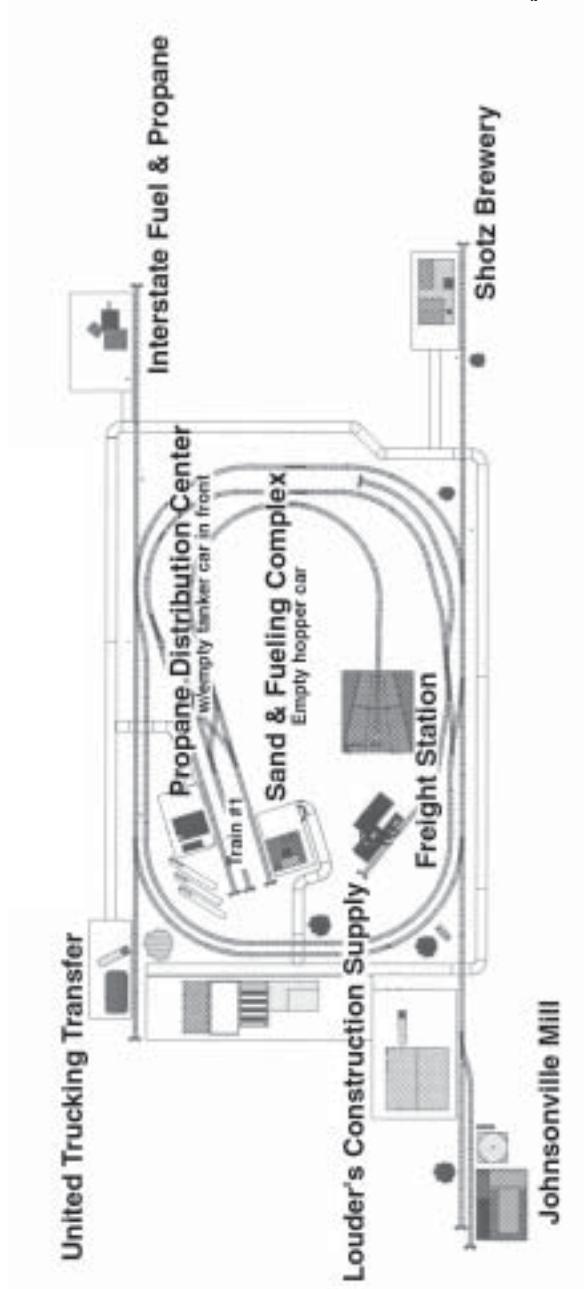
Rail Builders Inc.

FIGURE 8 #2 GAME HINTS

1. Pick up ice cargo from the Ice House (at the start location).

2. Proceed to the track at the Storage Tanks Station and uncouple the caboose.

3. Couple to the tank car adjacent to the Storage Tanks, and pick up butane cargo.

4. Recouple to the caboose.

5. Deliver the ice to the Frost Company.

6. Deliver butane to the Warehouse Transfer Station.

7. Pick up rail supplies at the Carson Street Rail station.

8. Pick up iron from the Ironworks.

9. Deliver the iron to Rail Builders Inc., and pick up rails at the same location.

10. Deliver the rail supplies to the Storage Containers.

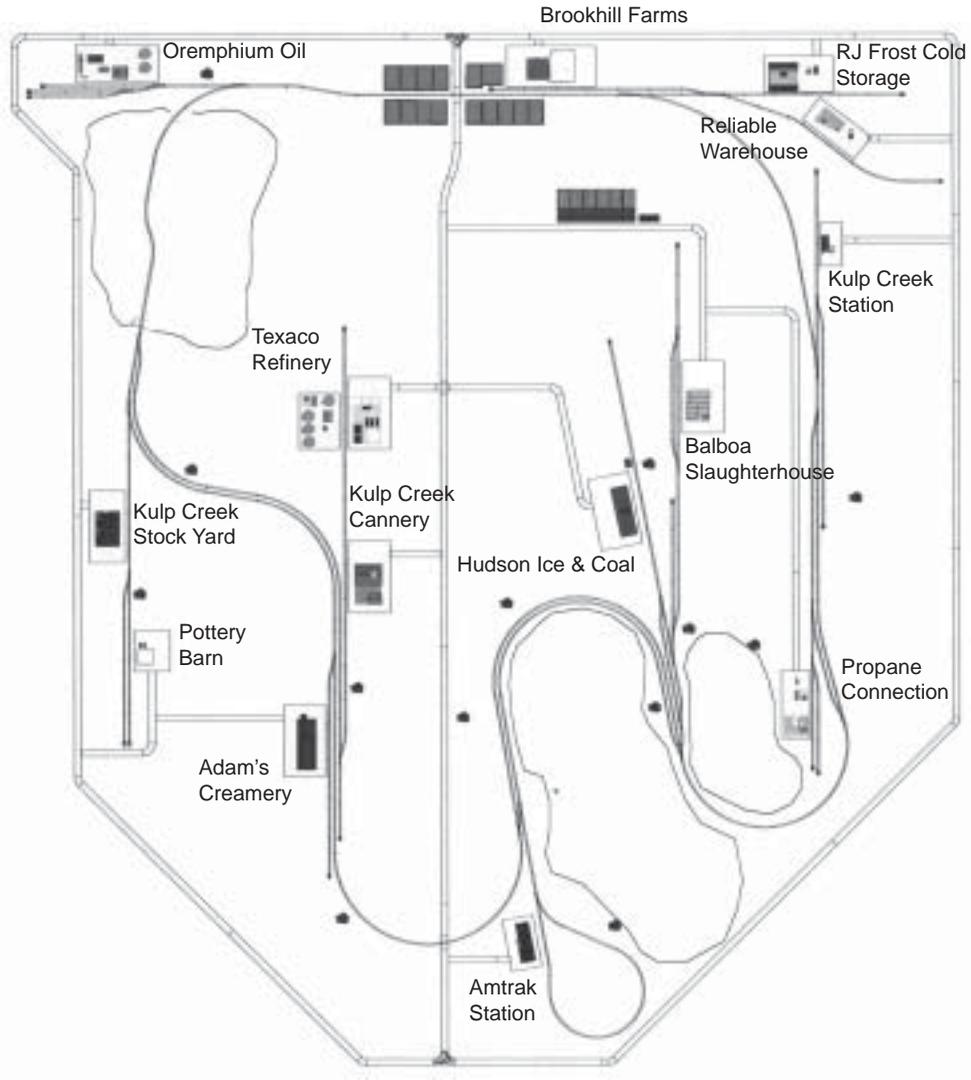11. Deliver the rails to the Warehouse Transfer Station.

JOHNSONVILLE

Interstate Fuel & Propane

Shotz Brewery

Propane Distribution Center
W/empty tanker car in front

Sand & Fueling Complex
Empty hopper car

Train #1

Freight Station

United Trucking Transfer

Louder's Construction Supply

Johnsonville Mill

JOHNSONVILLE GAME HINTS

1. Begin by pulling forward slightly then uncouple the caboose.

2. Couple to the tank car on the adjacent track.

3. Pick up propane at the Propane Distribution Center.

4. Couple to the hopper car on the 2nd adjacent track.

5. Pick up sand at the Sand And Fueling Complex.

6. Recouple to the caboose.

7. Pick up freight at the Freight Station.

8. Deliver the sand to Louder's Construction Supply.

9. Pick up grain from Johnsonville Mill.

10. Deliver the grain to Shotz Brewery.

11. Deliver the freight to United Trucking Transfer.

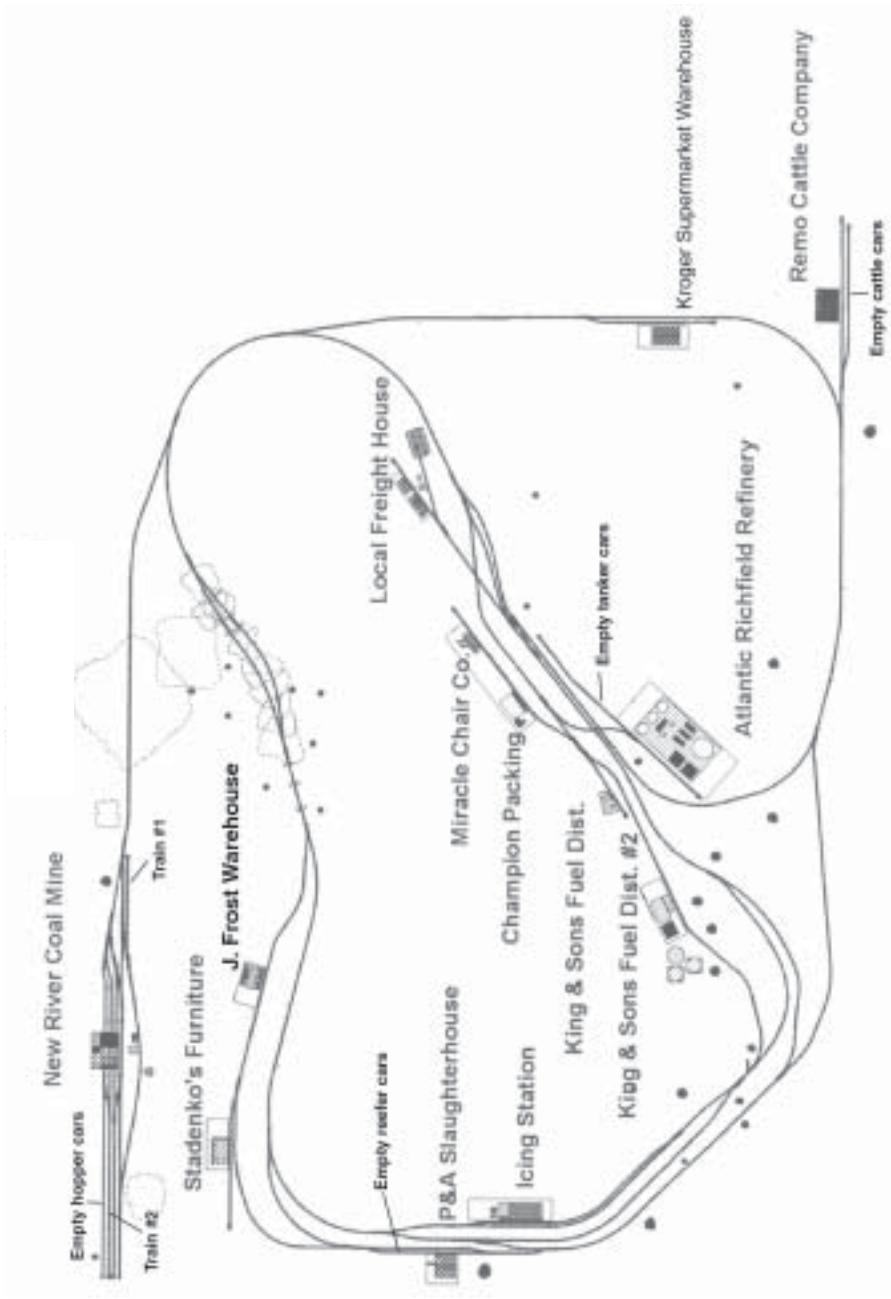12. Deliver the propane to Interstate Fuel And Propane to complete the schedule.

KULP CREEK

Brookhill Farms

Oremphium Oil

RJ Frost Cold Storage

Reliable Warehouse

Kulp Creek Station

Texaco Refinery

Balboa Slaughterhouse

Kulp Creek Cannery

Kulp Creek Stock Yard

Hudson Ice & Coal

Pottery Barn

Propane Connection

Adam's Creamery

Amtrak Station

KULP CREEK DELIVERY SCHEDULE

1. Start in front of Oremphium Oil. Uncouple the consist and hook up to the empty tankers on the side spur. Load the oil and then recouple the two box cars you just uncoupled.

2. Pick up the empty gondola and tanker cars that sit next to Brookhill Farms, then pick up the milk and produce at the farm.

3. Pick up the empty tank car in front of Propane Connection and then load the propane. You will need to maneuver the cars to get the tank cars in the correct position behind the engine and ahead of the rest of the consist.

4. Once on the way to Hudson Ice and Coal with Train #2, back Train #1 (Amtrak train) to the Kulp Creek Station and pick up passengers.

5. Back in train #2, couple to the empty reefer car on the side spur near Hudson Ice and Coal and then pick up ice at Hudson's. At the same time, deliver passengers to Amtrak Station.

6. Pick up passengers at Amtrak Station (you will have some time to wait at this location before departure).

7. Deliver produce to Kulp Creek Cannery. While there, pick up canned foods.

8. Deliver oil and propane to Texaco refinery.

9. Pick up the empty reefer car in front of Adam's Creamery and then pick up ice cream at the creamery.

10. Pick up the two empty cattle cars and one empty box car which are located on the side spur in front of The Pottery Barn, then pick up pottery.

11. Pick up cattle at the Kulp Creek Stock Yard.

12. Deliver the ice cream and ice to RJ Frost Cold Storage.

13. Deliver the canned foods and pottery to Reliable Warehouse.

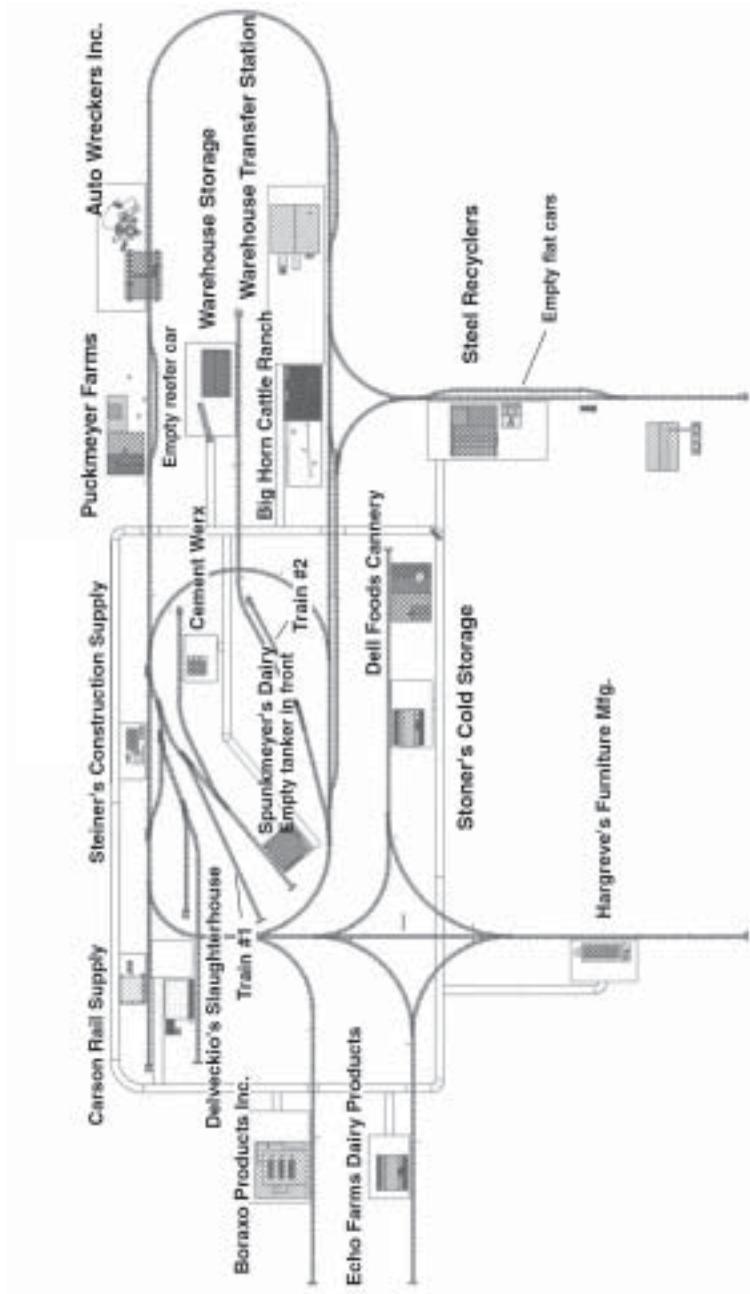14. Deliver the cattle to Balboa's Slaughterhouse to end the scenario.

MILLERSBURG

New River Coal Mine

Empty hopper cars

Train #2

Train #1

Stadenko's Furniture

J. Frost Warehouse

Empty reefer cars

P&A Slaughterhouse

Icing Station

Miracle Chair Co.

Champlon Packing

King & Sons Fuel Dist.

King & Sons Fuel Dist. #2

Local Freight House

Empty tanker cars

Atlantic Richfield Refinery

Kroger Supermarket Warehouse

Remo Cattle Company

Empty cattle cars

MILLERSBURG GAME HINTS

1. In Train #2, pull forward and uncouple the caboose just before the switch, then couple to the hopper cars on the adjacent track to the left.

2. Pick up coal from the New River Coal Mine, then recouple to the caboose.

3. Deliver the coal to King & Sons Fuel Dist..

4. Pick up gasoline from Atlantic Richfield Refinery. Tip: Uncouple caboose, couple tanker car, load gasoline, couple to caboose.

5. Deliver the gasoline to King & Sons Fuel Dist. #2. Leave Train #2 there. Switch to Train #1.

6. Couple to the cattle cars near Remo Cattle Co.

7. Pick up cattle from the Remo Cattle Company.

8. Deliver the cattle to the P&A Slaughterhouse, and pick up meat. Tip: Couple to nearby reefer cars before picking up meat.

9. Pick up ice from the Icing Station.

10. Deliver the ice to the J. Frost Warehouse.

11. Deliver the meat to Champion Packing.

12. Pick up furniture from the Miracle Chair Co..

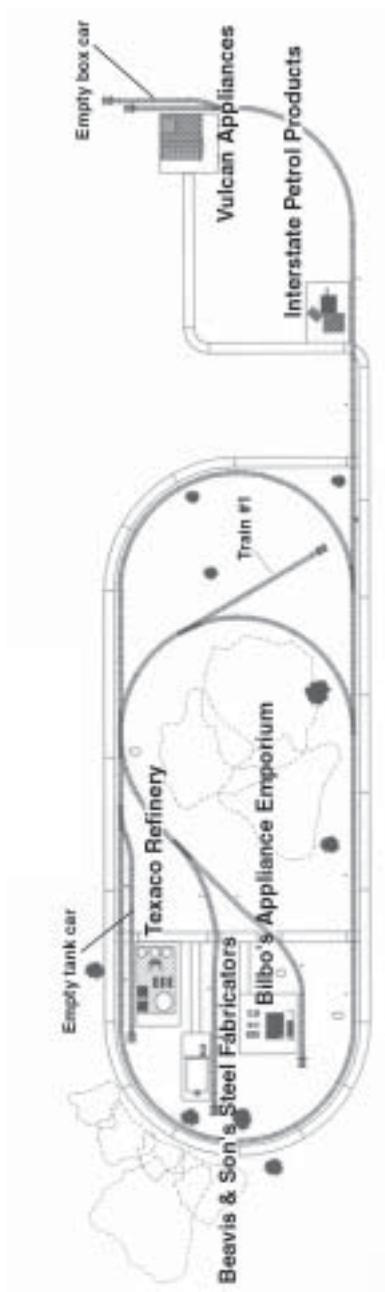13. Deliver the furniture to the Local Freight House to complete the schedule.

MORTVILLE

Auto Wreckers Inc.

Warehouse Storage

Warehouse Transfer Station

Puckmeyer Farms

Empty reefer car

Big Horn Cattle Ranch

Steel Recyclers

Empty flat cars

Steiner's Construction Supply

Cement Werx

Train #2

Spunkmeyer's Dairy
Empty tanker in front

Dell Foods Cannery

Stoner's Cold Storage

Carson Rail Supply

Delveckio's Slaughterhouse

Train #1

Hargreve's Furniture Mfg.

Boraxo Products Inc.

Echo Farms Dairy Products

MORTVILLE GAME HINTS

1. Switch to Train #1. Pull forward just ahead of the first switch and uncouple the caboose.

2. Couple to the tanker car at Spunkmeyer's Dairy.

3. Pick up milk from Spunkmeyer's Dairy, then recouple to the caboose.

4. Couple to the reefer car adjacent to Puckmeyer Farms.

5. Pick up produce at Puckmeyer Farms.

6. Pick up scrap metal in the gondola from Auto Wreckers Inc..

7. Couple to the flat cars adjacent to Steel Recyclers (keeping your caboose at the end).

8. Deliver the scrap metal to Steel Recyclers, and pick up two loads of steel.

9. Deliver the milk to Echo Farms Dairy.

10. Deliver the produce to Dell Foods Cannery.

11. Deliver one load of steel to Carson Rail Supply.

12. Deliver the second load of steel to Steiner's Construction Supply.

13. Switch to Train #2. Load cement from Cement Werx.

14. Pick up cattle from Big Horn Cattle Ranch.

15. Pick up furniture from Hargreve's Furniture Mfg.

16. Pick up soap from Boraxo Products, Inc..

17. Deliver the cattle to Delveckio's Slaughterhouse.

18. Deliver cement to Steiner's Construction Supply.

19. Deliver the soap products to the Warehouse Transfer Station.

20. Deliver the furniture to the Warehouse Storage facility to finish the schedule.
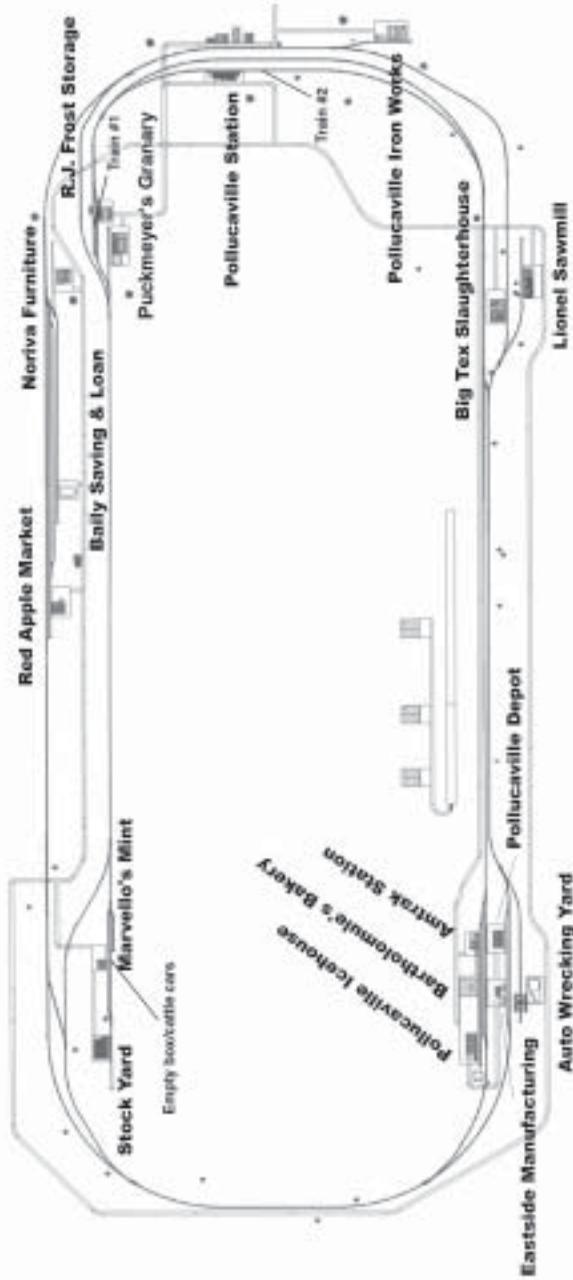
OVAL #1

Empty box car

Vulcan Appliances

Interstate Petrol Products

Train #1

Texaco Refinery

Empty tank car

Bilbo's Appliance Emporium

Beavis & Son's Steel Fabricators

Oval #1 Game Hints

1. Proceed to Texaco Refinery, uncouple the caboose nearby, couple to the tank car, and pick up the gasoline cargo. Next, pick up the caboose again.

2. Pick up steel fabric cargo at Beavis & Son's Steel Fabricators.

3. Deliver the gasoline cargo to Interstate Petrol Products.

4. Go to Vulcan Appliances, drop off caboose temporarily and couple to the box car. Deliver steel fabric, and pick up appliances and caboose.

5. Deliver appliances to Bilbo's Appliance Emporium.

POLLUCAVILLE

Red Apple Market

Noriva Furniture

R.J. Frost Storage

Train #1

Puckmeyer's Granary

Pollucaville Station

Train #2

Pollucaville Iron Works

Baily Saving & Loan

Big Tex Slaughterhouse

Lionel Sawmill

Marvello's Mint

Stock Yard

Empty Stock/cattle cars

Pollucaville Icehouse

Bartholomew's Bakery

Amtrak Station

Pollucaville Depot

Auto Wrecking Yard

Eastside Manufacturing

Pollucaville Game Hints

This schedule runs two trains at once.

1. Begin by switching to Train #1 located near RJ Frost Cold Storage.

2. Pick up flour at Puckmeyer's Granary.

3. Pick up lumber at the Lionel Sawmill.

4. Deliver the flour to Bartholomule's Bakery, and pick up bread while there.

5. Pick up ice next door at the Pollucaville Icehouse.

6. Near Marvello's Mint, uncouple the caboose, then back up the middle track at the three-way switch and couple to the cattle and box cars.

7. Proceed to the upper track at the three-way and pick up money from Marvello's Mint.

8. Pick cattle from the nearby Stock Yard.

9. Recouple to the caboose.

10. Deliver the lumber to Noriva Furniture, and pick up furniture while there.

11. Deliver the money to Baily Savings & Loan.

12. Deliver the bread to the Red Apple Market.

13. Deliver the ice to RJ Frost Cold Storage.

14. Switch to Train #2 then back up to the Pollucaville Station and pick up the passengers. Start moving en route to the Amtrak Station (and deliver the passengers upon arrival).

15. Switch to Train #1 (while continuing to monitor Train #2). Deliver the cattle to the Big Tex Slaughterhouse.

16. Deliver the furniture to the Pollucaville Depot (Train #1).

17. Upon arrival at the Amtrak Station (Train #2), deliver the passengers and pick up mail while there.

18. Deliver the mail back to the Pollucaville Station (Train #2).

19. Pick up scrap iron at the Auto Wrecking Yard (Train #1).

20. Deliver the scrap iron to the Pollucaville Iron Works to complete the schedule.
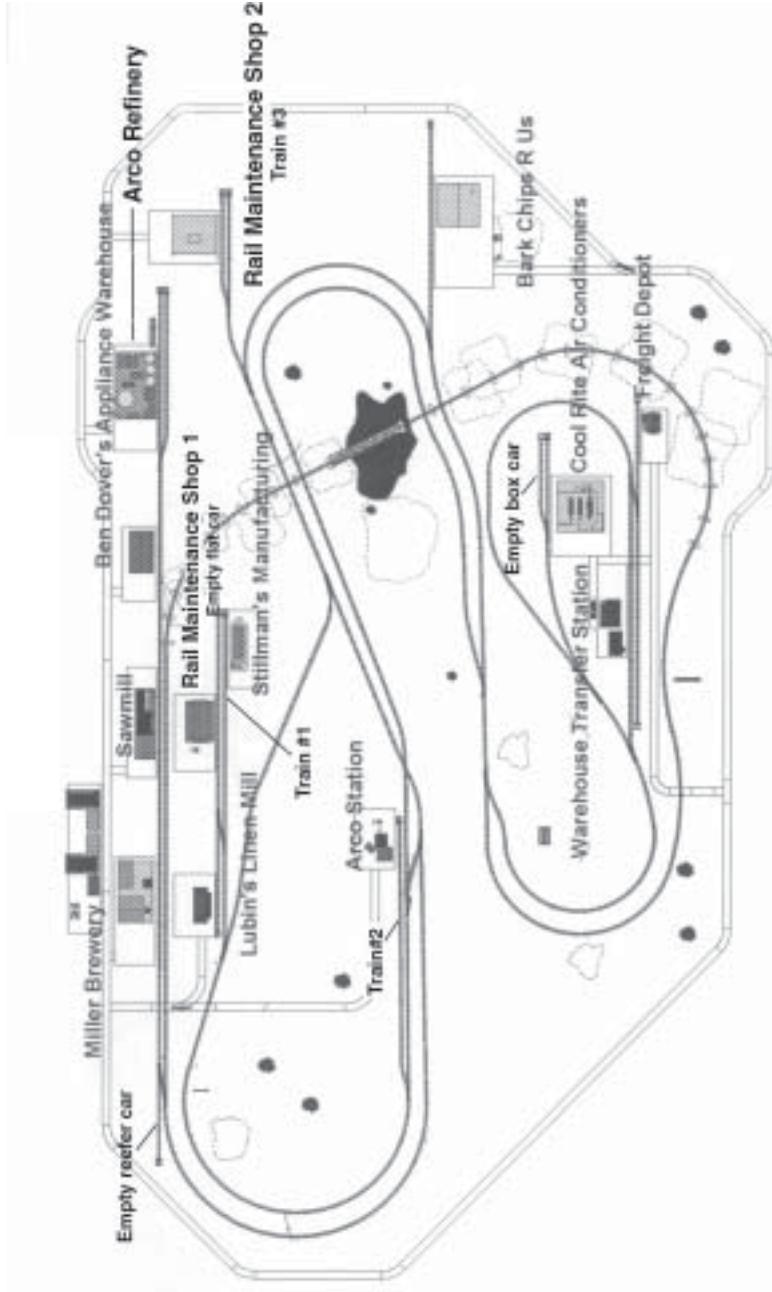
PUZZLE

Loco

Station A

Tank   Other Car
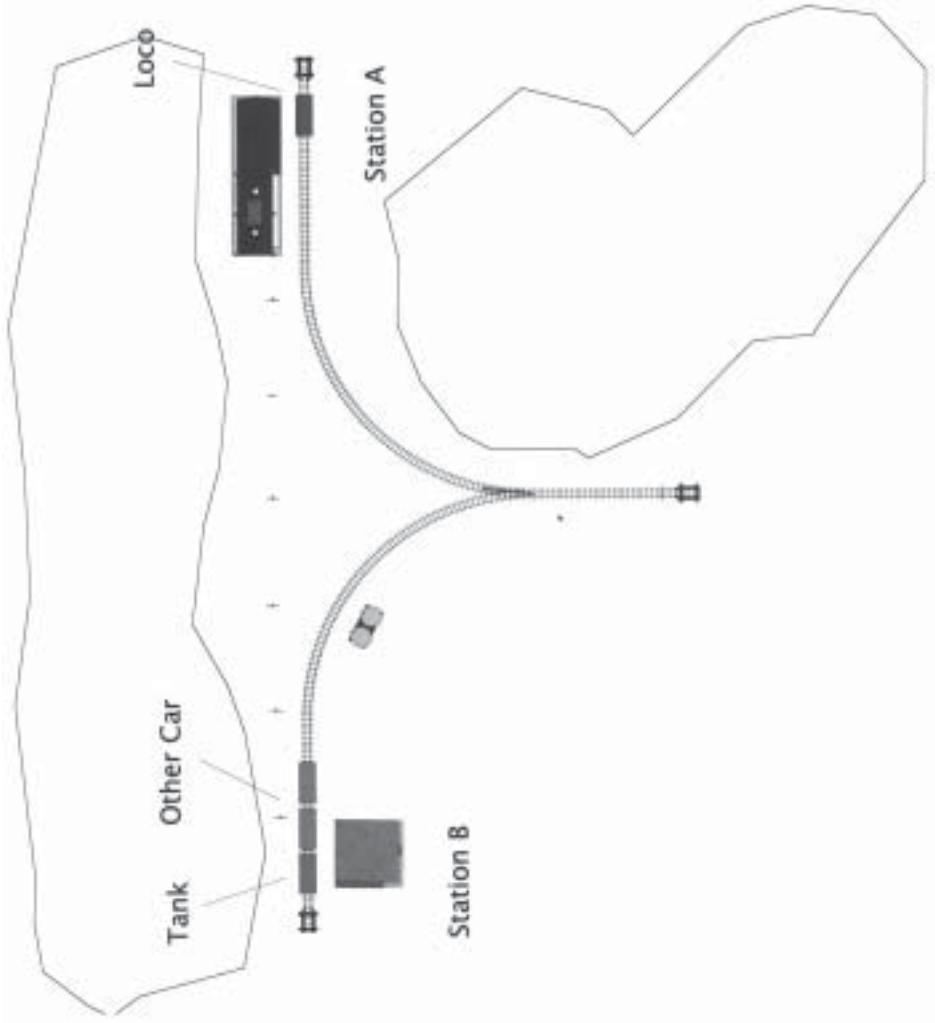
Station B

PUZZLE GAME HINTS

The objective on this user created layout is to pick up some oil at Station A and take it to Station B. But first, you'll need to pick up the empty tanker located in front of Station B.
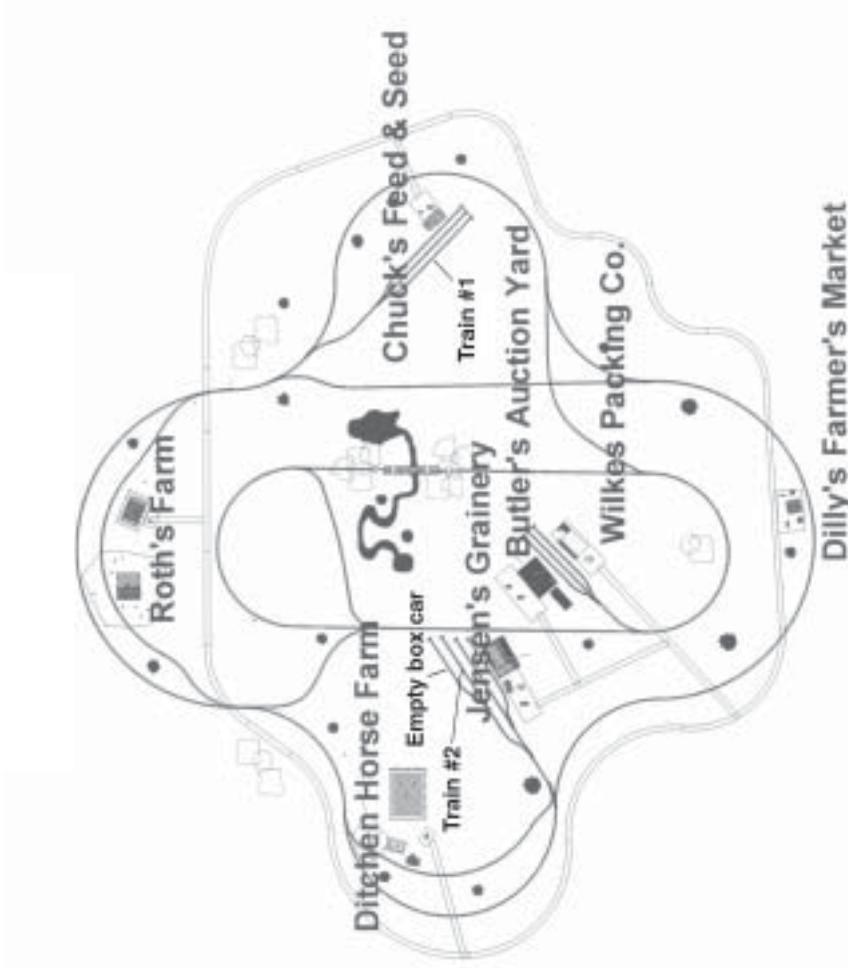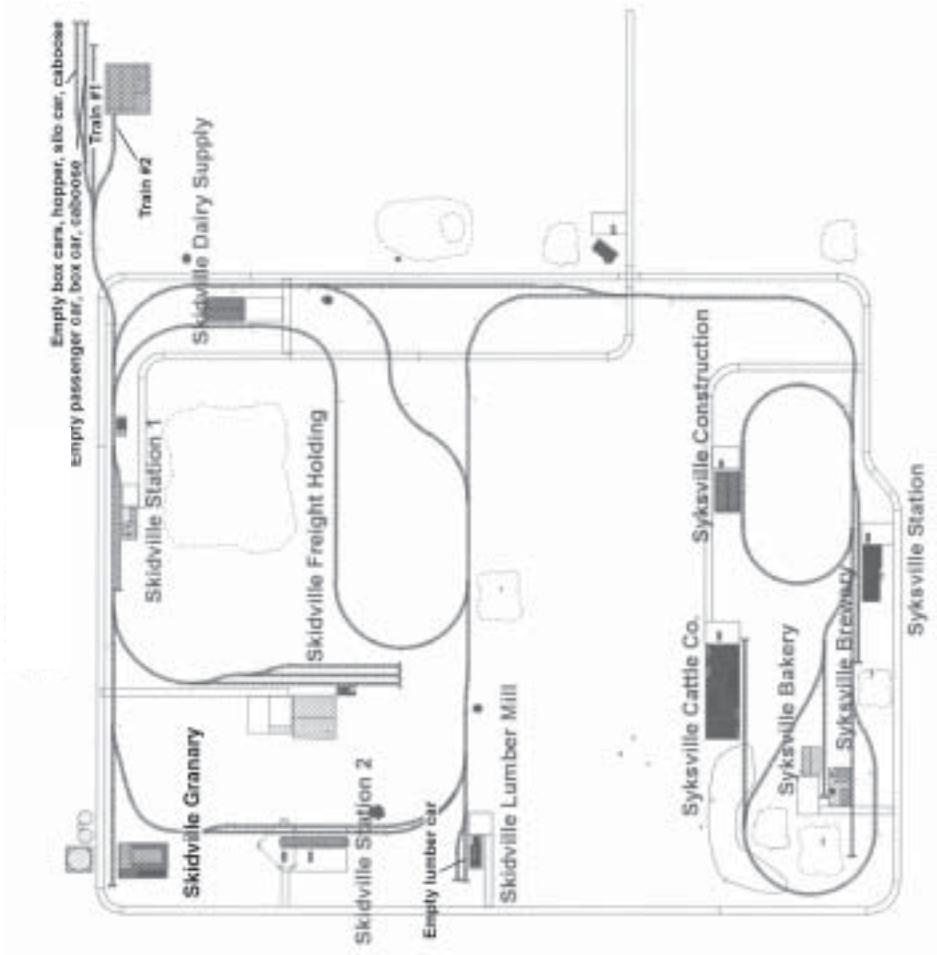
ROUGH & READY

Arco Refinery

Rail Maintenance Shop 2

Train #3

Bark Chips R Us

Ben Dover's Appliance Warehouse

Freight Depot

Cool Rite Air Conditioners

Rail Maintenance Shop 1

Empty flat car

Stillman's Manufacturing

Sawmill

Empty box car

Warehouse Transfer Station

Train #1

Lubin's Linen Mill

Arco Station

Miller Brewery

Train #2

Empty reefer car

ROUGH & READY GAME HINTS

1. Start with train #3. Pick up the empty reefer car located on the spur near Miller Brewery.

2. Pick up beer from Miller Brewery.

3. Pick up bark chips from the Sawmill next door.

4. Pick up gasoline from the Arco Refinery.

5. Deliver the gasoline to the Arco Station. Note: You will need to move Train #2 while in route to the Arco Station, since it is in the way in front of the station (a good temporary place to park it is on the siding near Lubin's Linen Mill).

6. Deliver the bark chips to Bark Chips R Us.

7. Deliver the beer to the Warehouse Transfer Station.

8. At Cool Rite Air Conditioners, uncouple the caboose, couple to the box car on the adjacent track, and recouple to the caboose.

9. Pick up air conditioners at Cool Rite Air Conditioners.

10. Deliver the air conditioners to Ben Dover's Appliance Warehouse.

11. Switch to Train #1 and uncouple the caboose.

12. Pick up fabric at Lubin's Linen Mill on the adjacent track. Note: While en route, you will now need to move Train #2 out of the way. Back it out of the siding, then pull it forward beyond the switch and leave it parked there.

13. Pick up rail parts at Rail Maintenance Shop 1.

14. Recouple to the caboose on the adjacent track and pick up steel fabric at Stillman's Manufacturing.

15. Deliver the rail parts to Rail Maintenance Shop 2.

16. Deliver the steel fabric and the fabric to the Freight Depot to complete the schedule.

RURAL RAILROAD

Chuck's Feed & Seed

Train #1

Butler's Auction Yard

Wilkes Packing Co.

Dilly's Farmer's Market

Roth's Farm

Jensen's Grainery

Ditchen Horse Farm

Empty boxcar

Train #2

Rural Railroad Game Hints

1. Proceed to the nearby Jensen's Granary and pick up two loads of grain.

2. Deliver one load of grain to Ditchen Horse Farm.

3. Deliver the second load of grain to Roth's Farm and pick up produce while there.

4. Deliver the produce to Dilly's Farmer's Market and pick up juice.

5. Deliver the juice to Butler's Auction Yard, then move the train to the middle track next to the auction yard.

6. Switch to Train #1, then proceed to the Ditchen Horse Farm and pick up horses.

7. Back up to the second switch, then deliver horses to Butler's Auction Yard and pick up cattle.

8. Use the crossover inside the inner track loop to reverse the train's direction, then deliver the cattle to Roth's Farm.

9. Near Jensen's Granary, uncouple the caboose and couple to box car, then recouple to the caboose.

10. Pick up grain from Wilkes Packing Co..

11. Deliver the grain to Chuck's Feed & Seed to finish the game.

SKIDVILLE

Empty box cars, hopper, silo car, caboose
empty passenger car, box car, caboose

Train #1

Train #2

Skidville Dairy Supply

Skidville Station 1

Skidville Freight Holding

Skidville Granary

Skidville Station 2

Empty lumber car

Skidville Lumber Mill

Syksville Construction

Syksville Station

Syksville Cattle Co.

Syksville Bakery

Syksville Brewery

Skidville Game Hints

1. Start out with the Train #2 locomotive.

2. Proceed to the adjacent track and couple to a passenger car, box car and caboose.

3. Pick up passengers and mail at Skidville Station 1.

4. Pick up more passengers and mail at Skidville Station 2.

5. Deliver passengers and mail to Syksville Station, then pick up new passengers and mail.

6. Deliver new passengers and mail back to Skidville Station 1, then leave train parked at this location.

7. Switch to Train #1. Couple to the cars on the adjacent track.

8. Pick up grain and flour at Skidville Granary.

9. Proceed to the Skidville Lumber Mill. Uncouple the caboose, then pick up the lumber car that sits in front of the lumber mill.

10. Pick up lumber cargo, and recouple to the caboose.

11. Deliver the flour to Syksville Bakery.

12. Deliver the grain to Syksville Brewery.

13. Deliver the lumber to Syksville Construction, then pick up the building materials cargo at this station.

14. Deliver the building materials to the Skidville Freight Holding warehouse.

15. Pick up livestock feed and supplies at Skidville Dairy Supply.

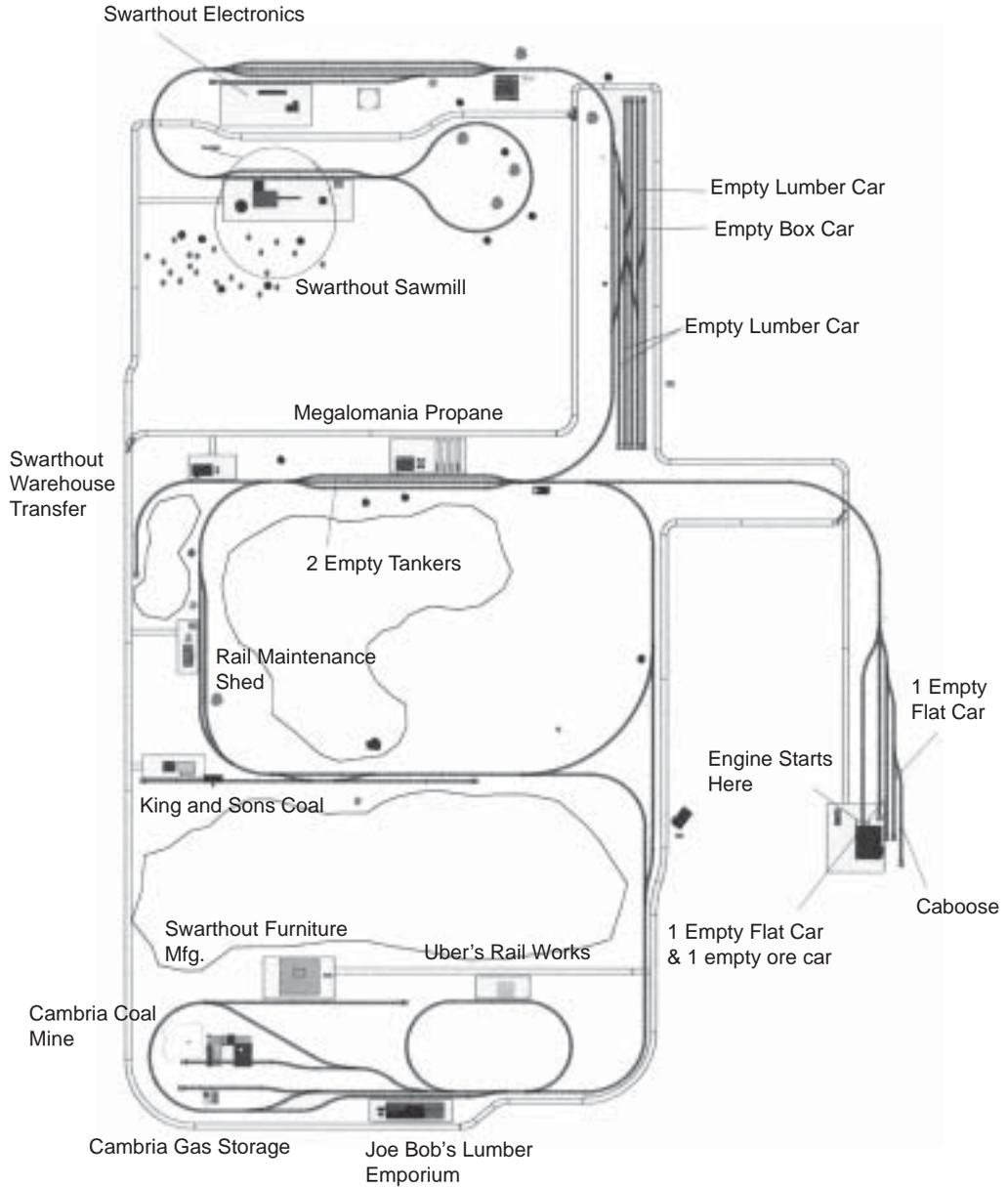16. Deliver the feed and supplies to Syksville Cattle Company to complete the schedule.

SPRINGFIELD

General Auto Plant

Empty auto rack car

Buford Steel Works

Train #1

Leo's Auto Emporium

Monty's Scrap Metal

Paolo's Plastics
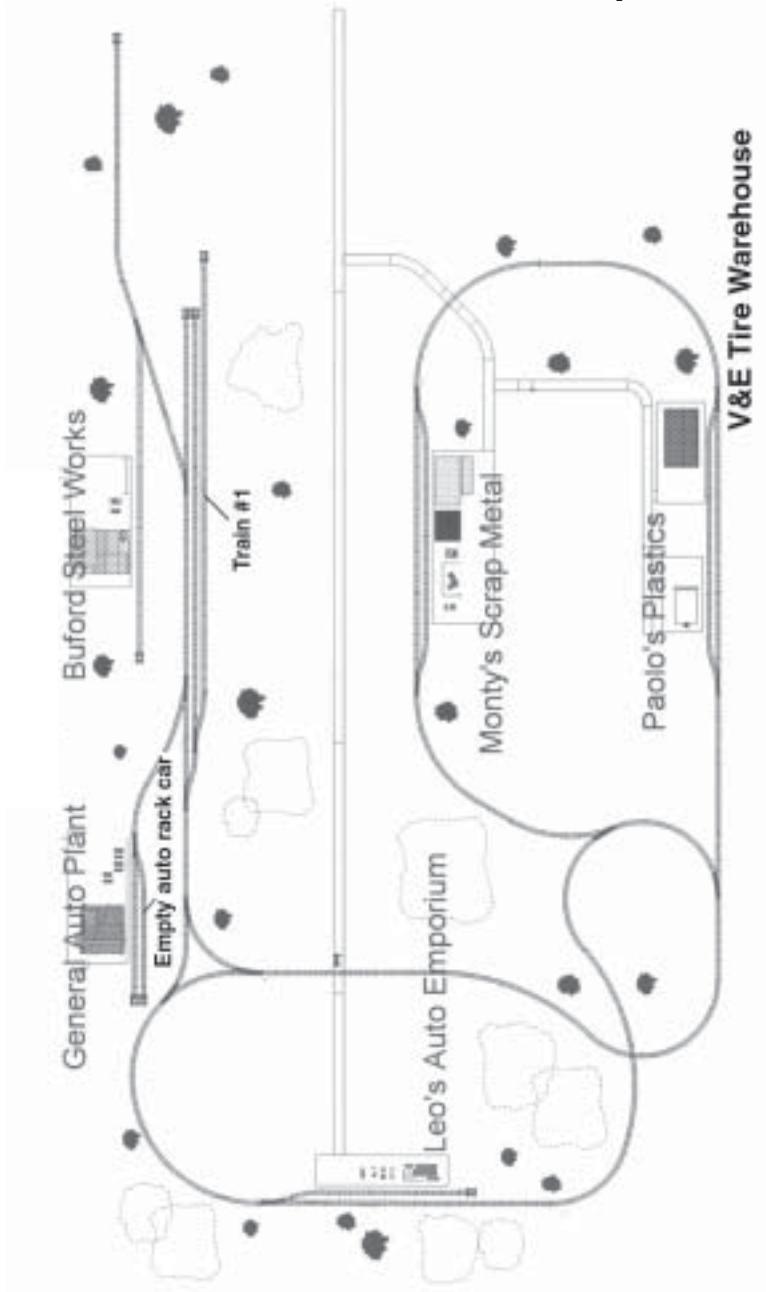
V&E Tire Warehouse

SPRINGFIELD GAME HINTS

1. Go to Paolo's Plastics and pick up a load of plastic.

2. Pick up tires at the V&E Tire Warehouse next door.

3. Pick up scrap metal at Monty's Scrap Metal.

4. Deliver the scrap metal to Buford Steel Works, then pick up steel while there.

5. In front of the General Auto Plant, uncouple a few cars, couple to the auto carrier car on the adjacent track, then recouple to the cars you previously uncoupled.

6. Deliver the plastic, steel, and tires to General Auto Plant, then pick up automobiles while there.

7. Deliver the automobiles to Leo's Auto Emporium to complete the schedule.

SWARTHOUT

Swarthout Electronics

Empty Lumber Car

Empty Box Car

Empty Lumber Car

Swarthout Sawmill

Megalomania Propane

Swarthout
Warehouse
Transfer

2 Empty Tankers

Rail Maintenance
Shed

1 Empty
Flat Car

Engine Starts
Here

King and Sons Coal

Caboose

Swarthout Furniture
Mfg.   Uber's Rail Works

1 Empty Flat Car
& 1 empty ore car

Cambria Coal
Mine

Cambria Gas Storage   Joe Bob's Lumber
                              Emporium

SWARTHOUT DELIVERY SCHEDULE

1. Start out with engine only from the loco maintenance building. Pick up the 2 flat cars and 1 ore car in the yard.

2. Pick up 2 tank cars in front of Megalomania Propane. Load propane.

3. Pick up rails and railroad ties at Uber's Rail Works.

4. Pick up coal at Cambria Coal Mine.

5. Deliver propane to Cambria Gas Storage.

6. Deliver coal to King & Son's Coal

7. Deliver rails and ties to Rail Maintenance Shed.

8. Pick up empty box car and lumber cars at the second yard.

9. Pick up the empty box cars in front of Swarthout Electronics. You will need to place the box car into your consist after loading it with stereos.

10. Pick up lumber at Swarthout Sawmill.

11. Proceed ahead to turn the train around on the reverse loop.

12. Deliver lumber to Joe Bob's Lumber Emporium.

13. Deliver lumber to Swarthout's Furniture Mfg. and pick up the load of furniture.

14. Deliver furniture and stereos to Swarthout Warehouse Transfer to end the scenario.

TITUSVILLE

Milwaukee
Beer & Ale

Redwing Flour Mill

Empty Ore Cars

Freytag Foundry

Train 2
Start Point

Hadley & Sons
Construction

Titusville Steel,
Coke Oven

Titusville Steel,
Blast Furnace

Titusville Steel,
Rolling Mill

3 Empty Tank Cars   3 Empty Flat Cars

Central Gas
Company

2 Empty
Tank Cars

Titusville
Lumber

Titusville Power
& Light

Empty Lumber Cars   4 Empty Hopper Cars

Titusville
Granary

Moxham
Chemicals

Train 1 Starting Position

TITUSVILLE DELIVERY SCHEDULE

1. Pick up empty ore cars on side spur close to the New River Mining Company.

2. Pick up coal at New River Mining.

3. Pick up pellets at Freytag Foundry.

4. Deliver coal to Titusville Steel, Coke Oven.

5. Deliver pellets to Titusville Steel, Coke Oven.

6. Deliver coal to Titusville Power & Light. Leave the train on a side spur.

7. Switch to train #1 and pick up scrap metal at Rollo's Scrap Metal.

8. Pick up grain at Titusville Granary.

9. Pick up lumber at Titusville Lumber.

10. Pick up liquid oxygen at Central Gas Company.

11. Deliver scrap metal to Titusville Steel, blast furnace.

12. Pick up sulfuric acid from Titusville Steel, blast furnace.

13. Pick up steel fabric from Titusville Steel, rolling mill.

14. Deliver steel fabric and lumber to Hadley & Son's Construction.

15. Deliver grain to Milwaukee Beer & Ale and Red Wing Flour Mill.

16. Deliver sulfuric acid to Moxham Chemicals to end the scenario.

VERMONT VALLEY

Train #1

Medusa Cement

Johnson's Lumber

Moore's Furniture Showroom

Portland Appliance Warehouse

Alpine Cement Works

Lionel's Sawmill

Hardwood Furniture Co.
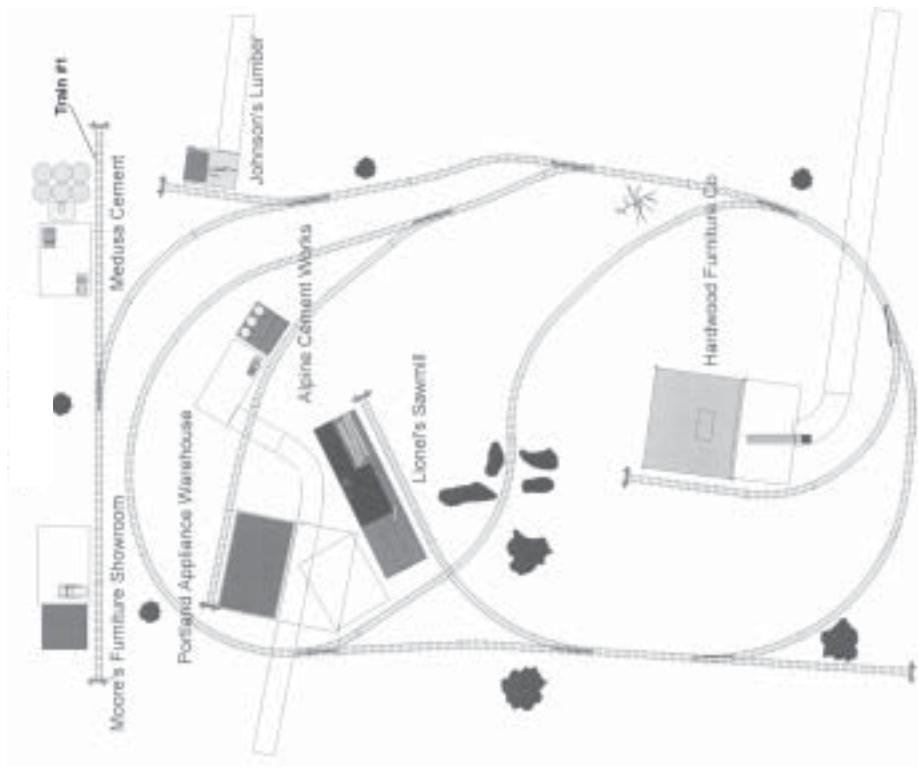
Vermont Valley Game Hints

1. Turn on lights, then pick up cement at Medusa Cement Works (start point).

2. Pick up two loads of lumber at Lionel's Sawmill.

3. Deliver one load of lumber to Hardwood Furniture Co. and pick up one load of furniture.

4. Deliver second load of lumber to Johnson's Lumber.

5. Deliver cement to Alpine Cement Works.

6. Pick up appliances at Portland Appliance Warehouse.

7. Finish the game by delivering the appliances and furniture to Moore's Furniture Showroom.

VERY EZ LAYOUT

Sawmill

Bill's Lumber

Train #1
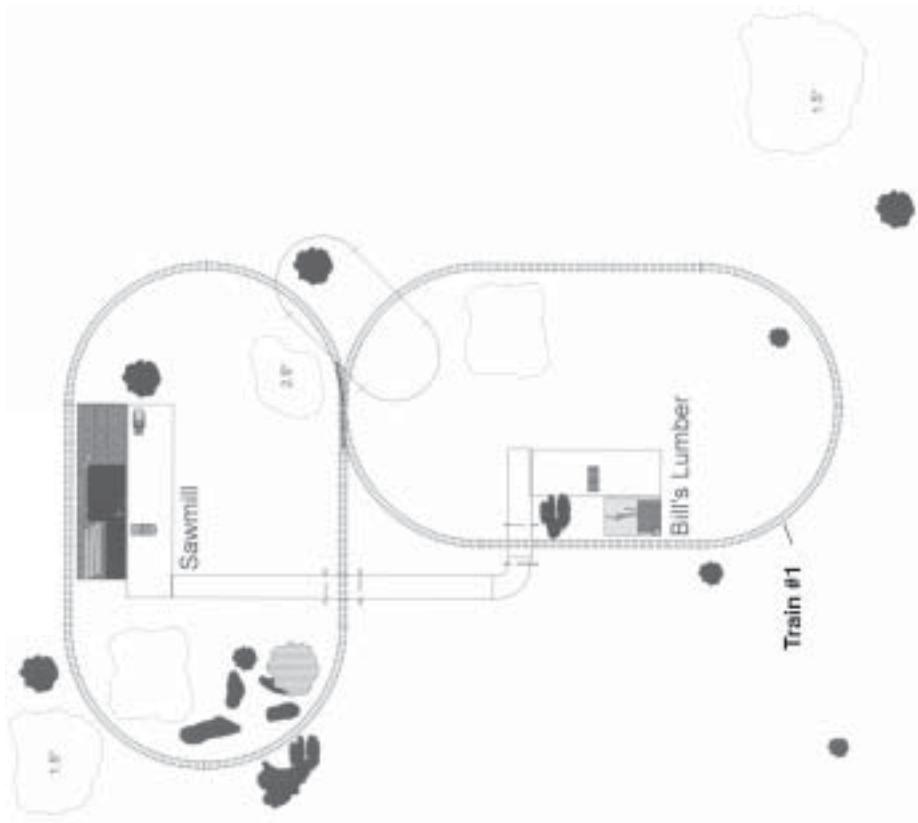
VERY EZ GAME HINTS

A very easy layout for children or to try out 3D Railroad Master.

1. Pick up lumber from the Sawmill.

2. Deliver lumber to Bill's Lumber.

3. Repeat Steps #1 and #2 three times until all lumber is delivered.

X Marks The Spot

Empty ore cars

Coal Mine

Oil Rig

Coal Refinery

Interstate Oil Refinery

Train #1
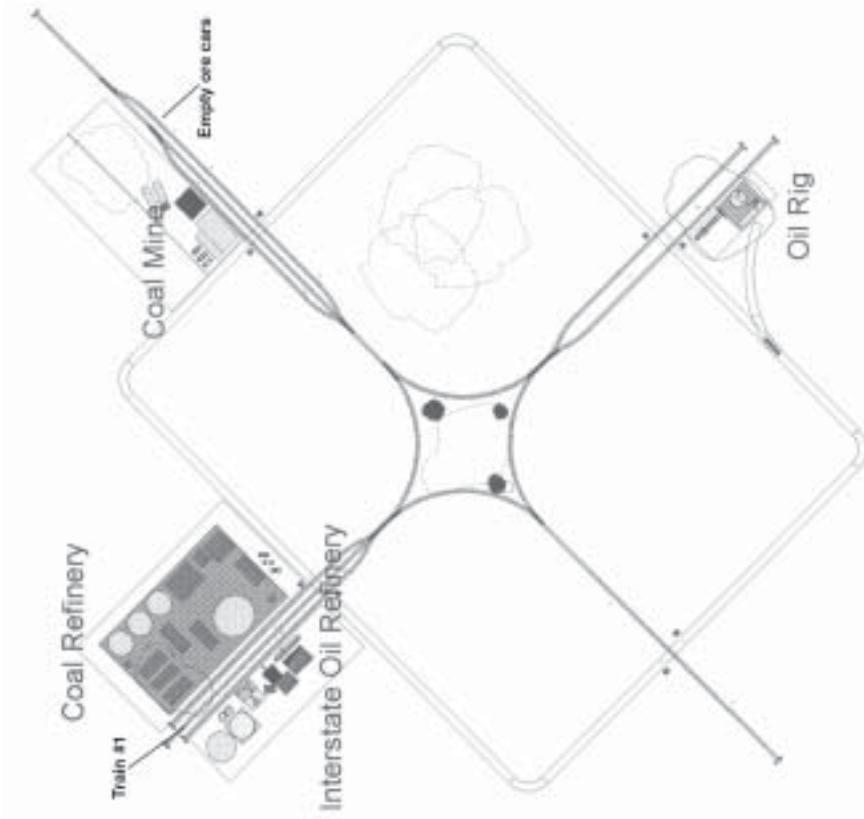
X Marks the Spot Game Hints

1. Proceed to the track adjacent to the Oil Rig and couple to the tanks.

2. Pick up oil at the Oil Rig (it takes both tank cars to hold all of the oil).

3. Deliver oil to Interstate Oil Refinery.

4. Go to the track adjacent to the Coal Mine and couple to the ore cars.

5. Pick up coal at the Coal Mine (it takes both ore cars to hold all of the coal).

6. Deliver the coal to the Coal Refinery to complete the schedule.

Creating Your Own *3D Railroad Master*™ Games

You can revise trains, cargo, and delivery schedules for any of the 3D Railroad Master™ (*RRM*) layouts from within the program itself. However, for those of you that want that extra challenge of creating your own games or revising the existing ones — and we know you're out there — this section is for you!

While it's easy to open a newly created layout and run it in *RRM* as a training layout, other options are limited. For instance, you won't be able to pick up and deliver cargo. That type of extra will take a bit more effort for defining delivery schedules and various other program parameters.

However, this process isn't for the timid. It's involved and time consuming, especially for complex layouts and delivery schedules.

For those of you who can't resist that overwhelming urge to create a new layout, or revise the actual track layout itself (the track, stations, buildings, etc.), you'll need Abracadata's companion product, 3D Railroad Concept And Design™ (3D Railroad). This three-dimensional design program was used to create the included *RRM* layouts. If you don't have 3D Railroad but want to revise one of the existing *RRM* games, refer to the 3D Railroad Master™ "Cargos And Delivery Schedules" section.

Creating a New Game Layout

This section focuses on what you need to prepare a 3D Railroad layout for use in *RRM* games. It does not describe how to use the 3D Railroad program. Please refer to the 3D Railroad manual for those details. It may also be helpful to examine some of the 3D Railroad layout and mission files to see how their various parameters were set up.

Here's a general overview of the process:

1. Use 3D Railroad to create your track layout
2. Add factories, industries and other buildings (stations) where you want cargo shipped and delivered

3. Plan your cargo and delivery schedule (what order cargo will be picked up and delivered between stations)

4. Determine where trains and empty cars will be positioned when the game begins

5. Specify object properties hints/instructions for use in *RRM*

6. Open the layout with *RRM* and build the delivery schedule

Important Performance Tips

By creating fairly complex layouts, you control the level of difficulty in the *RRM* game. However, be conservative with the use of scenery objects — buildings, hills, mountains, trees, etc. (particularly hills and mountains) — or you'll pay a heavy price in load times and game performance.

Overall performance is also significantly impacted by the type of computer system and the amount of memory available. The more powerful and capable your system, the more complex a layout can be. *Note*: Complex layouts require more than 32 MB for the best performance.

Unlike many 3D game engines, *RRM* is content-open-ended. This means that many of the special optimization techniques available to game developers aren't possible since the graphic contents of the layouts can be virtually anything, and can be changed at any time (even by you). This puts additional responsibility on you to organize efficient layouts for the best game playability.

Creating the Layout

Keep your layouts simple until you become familiar with the process. For instance, you might limit your schedule to one train that picks-up and delivers cargo from one or two shippers to only one or two destinations.

1. Create a track layout and run a test train around it to be certain all connections and switches are working properly

2. Determine what factories, industries, and other structures or scenery you want on your layout. You'll find them in the 3D Railroad object libraries. Again, we suggest using only one or two cargo-related stations for your first layout. For example, you might want to pick up building materials and deliver them to a furniture manufacturer. The choice is yours.

Note: You may find it useful to print a copy of your layout as a reference aid for planning deliveries and, later, for building the *RRM* delivery schedule.

Specifying Cargo Stations

Once the stations where cargo will be picked up and delivered are determined, you need to indicate them with special properties hints so that *RRM* can find them. (Any *RRM* building that either ships or receives cargo or passengers is referred to as a station.) A complete description of all *RRM* hints is provided in "Appendix B: Layout File **Hints**."

To specify hints for the stations

1. Right-click on a station to bring up its properties dialog box

2. Type the station hint in the object's database "*Note*" field exactly as shown below. *Note*: Enclose all hints in square brackets

   [~St=#]Station Name

   Replace the # character with a number. Stations are numbered consecutively. The numbers must be unique, that is, no two stations in the same layout may have the same number or *RRM* won't find one of them. You also should not skip any station numbers.

   The station name can be anything, but shouldn't be overly long, as it's displayed when your train approaches the station in *RRM*

   For example, here is what you might enter for the first station you define in your layout: [~St=1]Fred's Building Supplies

   And for the second station: [~St=2]Joe's Furniture

   Continue clicking on station objects and defining the hints as described above until you've defined all the stations that ship/receive cargo. Remember, give each station a unique number (e.g., 1, 2, 3, 4, 5, 6...n).

3. Next, you need to let *RRM* know which piece of track is used for each station. (Stations are normally placed beside the track where the train pulls up to load/unload cargo.)

   • Right-click on the piece of track beside each station and enter the following "Station Cargo" hint in the track properties note field exactly as shown below:

   [~SC]

No additional parameters or numbers are required. *Note*: Be sure to enter this hint for all track pieces located next to stations where cargo is picked up or delivered. Track pieces with this hint assigned will appear grey in the map screen when you run the layout in RRM.

Specifying Train Locations

RRM needs to know how many trains you want and where you want them positioned on your layout at the beginning of the game.

You can have 1 – 4 trains consisting of:

• A locomotive only

• A locomotive and additional cars

• Empty cars sitting on your layout to be picked up by a locomotive during the game

Note: How to determine the make-up of the trains is explained in the "Cargo and Delivery Schedule" section. For creating trains without locomotives, refer to "Appendix A: Mission Parameters."

Normally, at least one train should be defined for your layout:

1. Determine what piece of track you want your train to start from when the game begins

2. Right-click to bring up that piece of track's properties dialog box

3. Type in the train hint exactly as follows. *Note*: This track can also contain other hints, such as station hints. If this is the case, simply move to the end of the note field, press Enter, and type the new hint

> [~T=#d#]

• Replace the first # character with the number of the train (1–4). Normally, the first train will be number one, and so on

• Replace the second # character with a direction number, either 0 or 1. *Note*: If the train isn't facing the desired direction when you run *RRM* change the direction parameter to the opposite setting. (e.g., If it is a 0, change it to a 1.)

Specifying Animated Objects

You can use special track hints to specify the starting position of three types of animated objects — vehicles, pedestrians, and animals.

1. Use the track tools to create a path for animated objects to follow
   - VEHICLES: Lay the track path for vehicles on Layer 6. You can replace the default track and roadbed textures, and change the track's width in the track's properties dialog box to simulate road rather than track. Please review the track properties for some of the provided layouts for an example of road textures that you can use.
   - OTHER ANIMATED OBJECTS: Lay the track for other animated objects on Layer 7. Only the animated objects will be seen as they move along the track path on this layer. The track itself will be invisible inside *RRM*. *Note*: Track can be elevated to simulate aircraft flying through the air.

2. Right-click on the piece of track on which you want the animated object to appear at the beginning of the game to bring up its properties dialog box.

3. Type the animated-object hint in the note field of the track's properties dialog box exactly as follows

   [~AO=#]

   Replace the # character with the number of the animated object. Each object should have a unique number. Begin with the number 0 (zero) and number objects sequentially until finished (e.g., 0, 1, 2...n)

   Note: You can have more than one animated object on a single track path and/or on multiple track paths in the same layout. For example, if Animated Object Number Zero is a '57 Chevy, you can have the Chevy appear twice by specifying the [~AO=0] for two track pieces — either on the same track path, or on different paths. Similarly, you can specify different animated objects for the same track path by following Steps 2 and 3 for each object you want to appear on that path.

   Descriptions of the remaining parameters for animated objects can be found in the layout's *.RRM* mission file. (Refer to the "Mission Files" section for more information and to "Appendix A: Mission Parameters.")

Layouts Folder

Once you have created a layout, defined the hints for it and saved the file, use Windows Explorer™ to place a copy of the layout file in the *RRM* Layouts Folder that's located in the 3DRRMaster root directory. Your layout will then be added to the list of layout choices that appear in the Training Layout category after the Start Game button is clicked.

Note: Remember, since no mission file (as described in next section) has yet been created for your layout after clicking the Start Game button in *RRM*, you must click the left mouse-button on the Training Layout button to see your layout's name.

Mission Files

Files with an extension of *.RRM are used to hold specific parameters defining the various game-play aspects for each layout — what the date/time is at the beginning of the game, what the delivery schedule

is, what cars the trains are comprised of and various other parameters.

Once you've set up the delivery schedule in the program, *RRM* will build this file for you. *Note*: There are some customizations that can't be done within the program. If you create many layouts of your own, you will likely want to review their *.RRM files and possibly perform special minor customizations there.

The *.RRM files are located inside the program's root directory. Open the root directory and find the "Missions" directory. Inside the Missions directory are three additional sub-directories named Easy, Medium, Hard. The *.RRM files are organized according to difficulty levels in these directories. Since the *.RRM files are text files, you can use text editors such as Notepad™ to open, review or change, and resave the files. (A complete listing of an *.RRM file is provided in "Appendix A: Mission Parameters" with a description of all the parameters.)

However, it's not necessary to go into that level of detail for your first layout. The following section, "*RRM* Cargo And Delivery Schedules," explains how to build a delivery schedule. Once you've built a delivery schedule, the program will automatically create an *.RRM file for you according to the difficulty level you choose. If, at a later time, you want to learn more about the *.RRM files, refer to "Appendix A: Mission Parameters" for the details on performing additional customization.

Cargo And Delivery Schedules

With *RRM* you can use a single dialog box to edit trains, cargo, and delivery schedules for your own railroad layouts and for the layouts provided with the program.

To access the dialog box:

1. Click the Start Game button on the program's main menu screen.

2. If you are creating a new delivery schedule for a new layout:
   • Click on the Training-Layout button
   • Click on the layout's name
   • Click on OK

3. If you want to edit an existing game mission:
   • Click on the Mission button (if needed)
   • Click on the desired mission name
   • Click on OK

4. When the layout's map screen appears, click on the Wrench button at the top of the tool bar.

5. The mission-editing dialog box appears.

Mission Editing Dialog Box

You'll see three tabs at the top of the dialog box, Trains, Cargo, and Delivery Schedule.

Cargo Tab

Many types of cargo are already predefined for you. However, if you would like to add other types of cargo, click on the "Cargo" tab at the top of the dialog box. All currently available cargo is listed in the upper right of the dialog box.
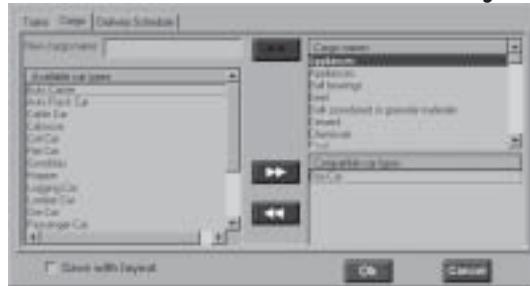
When you click a cargo name, a list of the types of car(s) the cargo can be loaded onto will appear beneath the cargo's name.

To add a new, compatible car type to the list

1. Click on the car you want in the list of available car types.
2. Click on the right-pointing move arrow.

To remove a compatible car type

1. Click on the car you want in the list of compatible car types.
2. Click on the left-pointing move arrow .

To add a new cargo name to the list

1. Type the desired name in the box at the top of the dialog box.
2. Click on the right-pointing arrow beside the new cargo name.
3. Click on those car types you want to be compatible for the new cargo name you added.
4. Click on the right-pointing arrow to add them to the compatible car types list.

Delivery-Schedule Tab

To change or build a delivery schedule, click on the "Delivery Schedule" tab at the top of the dialog box.
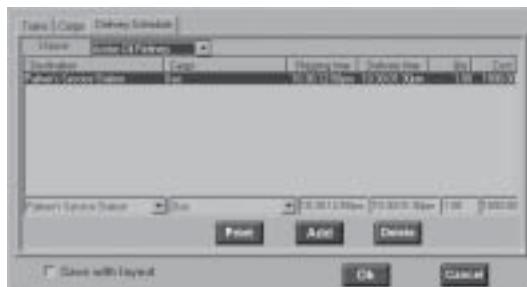
Choose the Shipper (where the cargo will be picked up) from the pull-down menu at the top left corner of the dialog box. *Note*: If you are creating a delivery schedule for a new layout, the station names you defined for station objects in the layout's properties dialog box appear in the Shipper list. (Refer to "Specifying Cargo Stations".)

If no cargo has been designated for this destination, the list of destinations, times, etc. will be empty. Otherwise, the destinations of cargo for the chosen shipper will be listed. You may edit existing cargo and destinations, or add new ones.

To add cargo to be picked up from the current shipper

1. Click on the Add button. A blank cargo field is added at the top of the list.

2. Select the cargo's destination station from the "Destination" pop-up menu at the lower left of the dialog box. Again, these destination stations are defined in the layout's object properties. (Refer to "Specifying Cargo Stations")

3. Choose the type of cargo to be delivered from the Cargo pull-down list. *Note*: Each car can hold as many as 10 units of cargo. If you specify a quantity larger than 10, you will need multiple compatible cars to hold all the cargo, or you will need to make more than one trip to the station.

4. Enter the shipping dates/times, delivery dates/times, quantity (usually 10), and the amount to be paid for delivering the cargo.

5. Repeat the above process until the delivery schedule has been specified to your satisfaction.

6. Click on the "Trains" tab.

Trains Tab

You need to define one or more trains with the correct types of cars for picking up and delivering the cargo specified in your delivery schedule.

1. Select a train name from the "Train" pull-down menu. The train will appear in the dialog box. For a new layout, the train you'll see is based on the program's default settings. In some cases, a default train may work. It depends on whether the default-train's cars are suited for your cargo. However, if you've made many changes to an existing delivery schedule, or are building a delivery schedule for a new layout, you will probably need to customize the trains.

2. Click on a car.

3. Change the type of car by clicking on the Change button.

4. A dialog box appears that lets you choose among available cars. You can also delete or add cars by clicking the Delete or Add button. Edit the trains so they contain all the cars you will need for your cargo.

Adding multiple engines to the consist

It is possible to add multiple engines to your consist. To do so, simply click on the engine at the front of the existing consist and then click the Add button. This will bring up the car list that will allow you to add cars to the consist. Choose one of the available engine types. You may choose to add engines in either a forward or reversed position. Lead engines can only be placed in a forward facing position. Keep in mind, however, that you will not be able to enter the cabs of any engine other than the lead engine. Multiple engines will have no effect on train performance.

Saving Changes

Once the trains have been configured, you need to decide whether to save your edited mission or only use it for this game.

To save your changes for future use

1. Click on the "Save with layout" option at the bottom of the dialog box.
2. Click OK. *Note*: Leave this option disabled if you only want to use your changes to play a single game.
3. Click on the difficulty-level you wish — Easy, Medium or Hard — on the dialog box that appeared if you elected to save your changes.
4. Click OK.

Missions are saved using the same name as the layout. If another mission already exists with that name, you will be given the opportunity to either cancel or rewrite over the existing mission.

Note: It's possible to create more than one mission for the same layout by giving the existing mission another name with the Windows Explorer™. This prevents the new mission from writing over the existing mission. All available missions will appear the next time you click on the Start Game main menu button.

(Refer to "Mission Files" for more about the files and their locations, and to "Appendix A: Mission Parameters" for a list of the contents of a mission file and their descriptions.)

Appendix A: *.rrm Mission Parameters

The following is a sample listing of a *3D Railroad Master*™ (*RRM*) mission file. Mission files are standard text files that have a *.rrm extension. The mission files are located in the Easy, Medium and Hard subdirectories inside the Missions directory, which is itself located in the program's root directory.

You can edit mission files one of two ways:

- Edit the trains, cargo, or delivery schedule from within the program
- Open a mission file with MS Notepad™ or other text editor, make the desired changes, and re-save the file.

Mission files contain additional parameters that cannot be changed from within *RRM*. You may not ever need to change these parameters for a game mission since default settings are used unless you specifically define new settings. These default settings are defined in a Default.rrm mission file inside the program's "Data" directory. Note: The Default.rrm file should never be changed. There is no need to do so since settings in a layout's *.rrm mission file override the same default settings.

Define the settings you want in the layout's mission file and the new settings will be used when playing the corresponding game layout. Note: You don't need to define all settings. Default settings will be used for parameters that are not defined. You need only specify settings that you want changed from the default settings. (The game start time or penalty/fine amounts are a few examples of settings that you might want to customize.)

Train configurations, cargo, and delivery schedules can be more easily edited from within the program and be less error prone. Note: It is recommended that you use the program to define these since a simple typing mistake can cause problems when running the game. (Please refer to *Creating Your Own 3D Railroad Master Games* for a complete description of setting up *RRM* layouts.)

*RRM Sample File Listing

The following *.rrm sample file listing shows all possible mission parameters with a brief description of each parameter. *Lines beginning with a semicolon (;) are comments that are ignored by the program when the game is played.*

Again, not all these parameters need to be defined for every mission. Default settings are used otherwise. To get a better understanding of how the settings are used, open some of the existing game mission files and review the settings. (They may be printed out.)

```
;——————————————————————————————————————————

; SAMPLE.RRM SETTINGS FOR 3D RAILROAD MASTER *.RRM GAME/MISSION FILES

;——————————————————————————————————————————

; The "exact" name of this RRM file's 3D Railroad *.rrc layout file. In this
; case, the layout file is named Sample.rrc (the extension isn't required below).

[PARENT_FILE]

NAME=Sample

;——————————————————————————————————————————

[STARTDATETIME]

; The initial scaled-date/time when the gameplay begins.
; Date format: MM.DD
; Time format: HH:MM in 24 hour time (e.g., 13:00 = 1:00 PM)

DATE=01.1
TIME=9:00

; Note that the program takes into account the different seasons of the
; year for weather conditions, and for the day lengths / sunrise, sunset:
; Winter: Dec 1st  - Feb 28th; benchwork/objects may be snow covered/white
; Spring: Mar 1st  - May 31st; not much snow but still a lot of rain
; Summer: Jun 1st  - Aug 31st; very little snow/rain
; Autumn: Sep 1st  - Nov 30th; more rain/snow

;——————————————————————————————————————————
```

[OPTIONS]

; Maximum number of trains allowed (must be 1-4 only)

; Maximum allowable train speed in miles per hour

MAXTRAINPERMAP=4

MAXTRAINSPEED=100

;——

[MISSION]

; Mission/game type: 0=game ends when the time specified below runs out

;   1=game ends when cargo is delivered or the time runs out

MSTYPE=1

; The mission statement/description that appears before the game begins

MSGOALSTR0= Try to pick up and deliver all

MSGOALSTR1= cargo to the proper destination in

MSGOALSTR2= the quickest time possible without

MSGOALSTR3= crashing any trains.

MSGOALSTR4=.

MSGOALSTR5= Penalties are applied for improper

MSGOALSTR6= use of of the emergencey brake, and

MSGOALSTR7= for reversing while moving. You earn

MSGOALSTR8= less for off-schedule pick-ups and

MSGOALSTR9= deliveries, and receive bonuses for

MSGOALSTR10= being on-schedule.

MSGOALSTR11=.

MSGOALSTR12= Avoid taking sharp curves too fast

MSGOALSTR13= or you may derail (crashing trains

MSGOALSTR14= is very expensive). Also avoid

MSGOALSTR15= running into vehicles, pedestrians

MSGOALSTR16= or animals. GOOD LUCK!

;——

;GAME OVER PARAMETERS

; Time limit. The game ends when the specified time runs out. Set the number

; of days to 30 for virtually unlimited game time. Format: DD:HH:MM

MSTIMETOTAL=00:08:00

; Percentage of cargo that must be delivered to complete game when MSTYPE=1.

MSCARGOTOTAL=100

; Minimum allowable score. If the score/earnings are less, the game ends.

MSMINSCORE=-10000.0

;———

[LOCO]
; YOU SHOULD NEVER NEED TO CHANGE THE DEFAULT SETTINGS FOR THESE

; Defines the number of available locos, their on-screen names, and filenames.

; Total number of loco definitions defined below.

NUM=2

; On-screen names for each loco = LOCONAME1..n

LOCONAME1=Santa Fe
LOCONAME2=Rio Grand

; The *.3DS object filenames for each loco = LOCOFILE1..n

LOCOFILE1=santafe.3ds
LOCOFILE2=gra.3ds

;———

[FREIGHT]
; YOU SHOULD NEVER NEED TO CHANGE THE DEFAULT SETTINGS FOR THESE

; Defines the number of freight/train cars, their on-screen names, and filenames.

; Total number of car definitions defined below.

NUM=38

; On-screen name, Type of car (used for compatible cargo verifications)

FREIGHTNAME1=Bulington Tank Car,Tank Car
FREIGHTNAME2=NYC Cattle Car,Stock Car
FREIGHTNAME3=FEC Gondola,Gondolas
FREIGHTNAME4=GBW Hopper,Hopper
FREIGHTNAME5=COSCO Container,Box Car

FREIGHTNAME6=CSAV Container,Box Car
FREIGHTNAME7=NB America Container,Box Car
FREIGHTNAME8=PST Container,Box Car
FREIGHTNAME9=Santa Fe Container,Box Car
FREIGHTNAME10=Log Car,Logging Car
FREIGHTNAME11=Burlington Log Car,Logging Car
FREIGHTNAME12=Netherlands Millis LUNX,Box Car
FREIGHTNAME13=Netherlands Freight Car,Box Car
FREIGHTNAME14=The Rock Ore Car,Ore Car
FREIGHTNAME15=Santa Fe Caboose,Caboose
FREIGHTNAME16=Swift Refrigerator Car,Reefer
FREIGHTNAME17=Texaco Tank Car,Tank Car
FREIGHTNAME18=Union Pacific Box Car,Box Car
FREIGHTNAME19=Union Pacific Hopper,Hopper
FREIGHTNAME20=APL Eagle Container,Box Car
FREIGHTNAME21=APL Flag Container,Box Car
FREIGHTNAME22=American Box Car,Box Car
FREIGHTNAME23=Dow Tank Car,Tank Car
FREIGHTNAME24=Ralston Purina Box Car,Box Car
FREIGHTNAME25=Fris Co Silos,Silo Car
FREIGHTNAME26=MNS Box Car,Box Car
FREIGHTNAME27=Pacemaker Box Car,Box Car
FREIGHTNAME28=RIO Caboose,Caboose
FREIGHTNAME29=Santa Fe Pref Container,Box Car
FREIGHTNAME30=Interstate Hopper,Hopper
FREIGHTNAME31=Coil Car,Coil Car
FREIGHTNAME32=Well Car,Well Car
FREIGHTNAME33=Lumber Car,Lumber Car
FREIGHTNAME34=Auto Carrier,Auto Carrier
FREIGHTNAME35=Auto Rack Car,Auto Rack Car
FREIGHTNAME36=Spine Car,Spine Car
FREIGHTNAME37=Flat Car,Flat Car
FREIGHTNAME38=Passenger Car,Passenger Car

; The *.3DS object filenames for each train car = FREIGHTFILE1..n

FREIGHTFILE1=bur.3ds
FREIGHTFILE2=cat.3ds

```
FREIGHTFILE3=fec.3ds
FREIGHTFILE4=gbw.3ds
FREIGHTFILE5=grncos.3ds
FREIGHTFILE6=grncsa.3ds
FREIGHTFILE7=grnnba.3ds
FREIGHTFILE8=grnpst.3ds
FREIGHTFILE9=grnsf.3ds
FREIGHTFILE10=log.3ds
FREIGHTFILE11=log2.3ds
FREIGHTFILE12=net.3ds
FREIGHTFILE13=nor.3ds
FREIGHTFILE14=roc.3ds
FREIGHTFILE15=san.3ds
FREIGHTFILE16=swi.3ds
FREIGHTFILE17=tex.3ds
FREIGHTFILE18=uni.3ds
FREIGHTFILE19=unpac.3ds
FREIGHTFILE20=ylfeag.3ds
FREIGHTFILE21=ylfflg.3ds
FREIGHTFILE22=ame.3ds
FREIGHTFILE23=dow.3ds
FREIGHTFILE24=freight.3ds
FREIGHTFILE25=fris.3ds
FREIGHTFILE26=mns.3ds
FREIGHTFILE27=pace.3ds
FREIGHTFILE28=rio.3ds
FREIGHTFILE29=ttt.3ds
FREIGHTFILE30=war.3ds
FREIGHTFILE31=fris.3ds
FREIGHTFILE32=fec.3ds
FREIGHTFILE33=log.3ds
FREIGHTFILE34=fec.3ds
FREIGHTFILE35=fec.3ds
FREIGHTFILE36=fec.3ds
FREIGHTFILE37=fec.3ds
FREIGHTFILE38=mns.3ds
```

;———

[TRAINS]

; IT ISN'T NECESSARY TO EDIT THESE HERE. THEY CAN BE EDITED FROM WITHIN
; THE PROGRAM AT THE MISSION DIALOG.

; Train definitions (1-4), comprised of the above freight/train car numbers
; that are defined via FREIGHTNAME1..n above. For example, number 3 specifies
; the FEC Gondola defined above (FREIGHTNAME3=FEC Gondola,Gondolas).
; The train locations are defined with properties hints in the layout *.rrc file.
; Please see "Creating Your Own 3D Railroad Master Games" for a description
; of these.

; Examples (2nd sample is loco only, no cars):
; TRAIN#=loco number,car number,car number,...
; TRAIN#=1,

TRAIN1=1,26,27,17,30
TRAIN2=2,27,16,10,28
TRAIN3=2,25,3,15
TRAIN4=1,13,21,2

; The on-screen names of the trains

TRAIN1NAME=Train1
TRAIN2NAME=Train2
TRAIN3NAME=Train3
TRAIN4NAME=Train4

; Definitions for train cars only...trains without locos. The train cars can
; be picked up by one of the above trains. These parameters define the
; train cars that correspond to the empty train hints you can define in a
; layout's *.rrc file. If you desire to have train cars pre-positioned on
; a layout, then you must define the *.rrc hints and define the train cars
; below for each hint (e.g., [~ET=1] hint corresponds to TRAIN_WITHOUT_LOCO1)
; below. As for the above trains, the train car numbers below correspond
; to the train cars defined by FREIGHTNAME1..n above. Please see "Creating
; Your Own 3D Railroad Master Games" for hint descriptions.

;TRAIN_WITHOUT_LOCO1=1,2
;TRAIN_WITHOUT_LOCO2=1,2

;———

[CARGO]
; IT ISN'T NECESSARY TO EDIT THESE HERE. THEY CAN BE EDITED FROM WITHIN
; THE PROGRAM AT THE MISSION DIALOG, HOWEVER, YOU CAN ADD NEW
; TYPES OF CARGO TO THE END OF THIS LIST IF DESIRED. DON'T FORGET
; TO UPDATE THE "NUM" AMOUNT IF YOU DO.

; Defines the number of cargo types/names, cost, and compatible train cars

; Total number of cargo definitions defined below.

NUM=50
; On-screen name, Penalty, Compatible train cars (can define multiple cars)
; Complex equations govern the actual amount paid for pickups/deliveries based
; on a variety of factors. To simply things regarding payments, you may want to
; leave the Penalty set to zero. Equations (see CARGO_PARTIES & FINES for more):

; On-schedule delivery: Score=Score+Qty*Payment+FINE_WELLTIMED_DELIVER

; Off-schedule delivery: Score=Score+Qty*Payment-Qty*Penalty+FINE_NOTWELL_DELIVER

CARGONAME1=appliances,0,Box Car
CARGONAME2=beef,0,Reefer
CARGONAME3=building materials,0,Flat Car,Box Car
CARGONAME4=cable drums,0,Flat Car
CARGONAME5=cattle,0,Stock Car
CARGONAME6=cement,0,Hopper,Silo Car
CARGONAME7=chemicals,0,Tank Car
CARGONAME8=coal,0,Hopper,Ore Car
CARGONAME9=coils,0,Coil Car
CARGONAME10=containers,0,Flat Car,Spine Car,Well Car
CARGONAME11=electrical supplies,0,Box Car
CARGONAME12=fertilizer,0,Hopper,Gondola
CARGONAME13=flower,0,Hopper,Silo Car
CARGONAME14=food products,0,Tank Car,Box Car,Reefer
CARGONAME15=frozen products,0,Reefer
CARGONAME16=furniture,0,Box Car
CARGONAME17=gas,0,Tank Car
CARGONAME18=grain,0,Hopper,Silo Car
CARGONAME19=gravel,0,Hopper

CARGONAME20=hardware,0,Box Car
CARGONAME21=horses,0,Stock Car
CARGONAME22=iron,0,Flat Car
CARGONAME23=juice,0,Reefer
CARGONAME24=livestock,0,Stock Car
CARGONAME25=logs,0,Logging Car
CARGONAME26=lumber,0,Lumber Car
CARGONAME27=machinery,0,Flat Car
CARGONAME28=meat,0,Reefer
CARGONAME29=milk,0,Tank Car,Reefer
CARGONAME30=oil,0,Tank Car
CARGONAME31=ore,0,Gondola,Hopper,Ore Car
CARGONAME32=passengers,0,Passenger Car
CARGONAME33=pellets,0,Hopper
CARGONAME34=petroleum,0,Tank Car
CARGONAME35=pipes,0,Flat Car,Lumber Car,Logging Car
CARGONAME36=potatoes,0,Reefer
CARGONAME37=poultry,0,Reefer
CARGONAME38=produce,0,Reefer
CARGONAME39=pulpwood,0,Gondola,Flat Car
CARGONAME40=sand,0,Hopper
CARGONAME41=scraps,0,Hopper,Gondola,Flat Car
CARGONAME42=sheep,0,Stock Car
CARGONAME43=steel fabric,0,Flat Car
CARGONAME44=stone,0,Gondola
CARGONAME45=sugar beets,0,Gondola
CARGONAME46=timber,0,Logging Car
CARGONAME47=trailers,0,Flat Car,Spine Car
CARGONAME48=vegetables,0,Reefer
CARGONAME49=vehicles,0,Flat Car,Box Car,Auto Rack Car,Auto Carrier
CARGONAME50=wood chips,0,Hopper

[CARGO_PARTIES]
; IT ISN'T NECESSARY TO EDIT THESE HERE. THEY CAN BE EDITED FROM WITHIN
; THE PROGRAM AT THE MISSION DIALOG.

; Delivery schedule definitions.

; Total number of definitions specified below.

NUM=1

; Shipper#,Destination#,Quantity,Payment,Shipping/Pick-up Date/Time,Delivery Date/Time

CARGO1=1,2,1,500.00,1:1:12:30,1:1:13:00

; Pick-up at station 1, deliver to station 2, one item for $500,
; Pick-up on Jan 1 at 12:30 PM; Deliver on Jan 1 at 1:00 PM (specified in 24 hour time)

;——

[ANIMATEOBJECTS]
; Definitions for animated objects such as vehicles, pedestrians, or animals.
; For animated objects to appear in the game, they must be defined here and
; in a layout's *.rrc file. Please see "Creating Your Own 3D Railroad Master Games"
; for a description of the animated object properties hints. Note that these
; definitions are optional.

; Defines animated object names that appear on-screen during gameplay, and
; the type of animated object, either a VEHICLE, HUMAN, or ANIMAL.
; The number following AONAME numbers correspond to the numbered [~AO=#]hints
; in the *.rrc layout. The same is true of all of these numbered animation
; parameters.

AONAME0=57 Chevy,VEHICLE
AONAME1=Man,HUMAN
AONAME2=Cow,LIVESTOCK

; Defines the diagonal based size of the animated object (can be decimal).

AODLEN0=3.5
AODLEN1=2
AODLEN2=2

; Specifies the *.3DS file for the 3D object. These can be obtained from
; library object properties, or from the 3D object viewer in 3D Railroad.

AOFILE0=57Chevy.3ds
AOFILE1=Chappy.rwx
AOFILE2=Anmcowa1.3ds

; The speed of each animated object in MPH.

AOSPEED0=20
AOSPEED1=2

AOSPEED2=3

; The initial angle/orientation of the animated objects. If it's desired for
; an object to face the opposite direction, use positive rather negative
; values.

AOANGLE0=-90.0
AOANGLE1=-90.0
AOANGLE2=-90.0

; The sound that is played when the current train passes near an object.

AOSOUND0=Driveby.wav
AOSOUND1=Ahem.wav
AOSOUND2=Voc_s.wav

; The sound that is played when a train crashes into an object.

AOENDSOUND0=Carcrash.wav
AOENDSOUND1=Mendead.wav
AOENDSOUND2=Mendead.wav

;——

[FINES]

; Amounts for fines/bonues in dollars

; Severe disabling train crash: Score=Score+FINE_TRAIN_CRASH
; Crash <= 5 MPH: Score=Score+0
; Crash > 5 MPH and < 20 MPH: Score=Score+FINE_TRAIN_DAMAGE
; Crash >= 20 MPH and < 35 MPH: Score=Score+FINE_TRAIN_DAMAGE*2

FINE_TRAIN_CRASH=-2000
FINE_TRAIN_DAMMAGE=-500

; Train hits vehicle: Score=Score+FINE_ANIM_CRASH
; Train hits pedestrian: Score=Score+FINE_ANIM_CRASH*0.8
; Train hits animal: Score=Score+FINE_ANIM_CRASH*0.2

FINE_ANIM_CRASH=-500

; Train is on track with property hint [~SL=MPH#] and speed > MPH#

FINE_SPEED_LIMIT=-100

; Train is on track with property hint [~CR] and engineer doesn't blow horn

FINE_HORN=-50

; Applies when emergency brake used in non-emergencies (no red warning light)

FINE_BRAKE=-50

; Applies when train is moving and engineer tries to reverse the train

FINE_REVERSE=-50

; Tech supt repair...applies when train damage is repaired
; (green train symbol in cab view was red and is clicked for repairs)

FINE_TECH_SUPPORT=-50

; Bonus for an on-schedule cargo pick-up

FINE_WELLTIMED_LOADING=50

; Bonus for an on-schedule cargo delivery

FINE_WELLTIMED_DELIVER=50

; Penalty for an off-schedule cargo pick-up

FINE_NOTWELL_LOADING=-50

; Penalty for an off-schedule delivery

FINE_NOTWELL_DELIVER=-50

; Penalty for exceeding coupling speed of 5 MPH

FINE_COUPLE_BY_SPEED=-200

Appendix B: *.RRC Layout File Hints

The 3D Railroad Master™ (RRM) object-properties hints let you define special objects/track with 3D Railroad Concept And Design™ that are to be used for stations, animated objects, bumpers, etc. in RRM. The hints are put in the "Note" database fields of object properties, either for the actual 3D object (*.3DS object), for its grouped properties, or for a piece of track's properties. The hints are enclosed in double brackets [ ] and begin with a tilde ~ character.

The following is a listing of the available hints and their usage. (Refer to the layouts in the RRM "Layouts" folder for additional examples of properties for track and objects.)

Station/Shipper Object   [~St=#]Name

This hint designates where cargo is to be picked up and/or delivered.

The # is replaced with a station number and Name is replaced with the name of the station. (Any RRM building that either ships or receives cargo or passengers is referred to as a station.) The numbers must be consecutive and unique, that is, no two stations in the same layout may have the same number or RRM won't find one of them. (e.g., 1, 2, 3, 4, 5, 6...n) For example, select an object, bring up its properties dialog box, then specify the hint in the "Note" database field: [~St=1]Bill's Furniture

Station Cargo Track   [~SC]

This defines a section of track where cargo can be picked up or delivered.

Set this hint for track that is next to the stations defined by the Station/Shipper Object [~St=#] hint.

Bumper Track Object   [~BP]

Designates that a piece of track ends with a bumper object.

Train Track   [~T=#d#]

Designates the section of track where the specified train number (1–4) is to be located when the RRM game begins and the specified direction for the

train (0 or 1). To change the initial direction of a train, select the opposite number parameter.

Empty Train Car Track [~ET=#]

Designates a piece of track that holds empty cars (a train consisting of cars only, without the engine).

The # is replaced by the empty train's number. (e.g. 1 to n) The empty cars are defined in the layout's *.rrm file. (Refer to "Appendix A: Mission Parameters" section for more details)

Speed Limit Track   [~SL=#]

Defines a section of track where a speed limit should be imposed. For example, [~SL=20] limits the speed for track which uses the hint to 20 MPH. Note: Players are penalized if the speed limit is exceeded.

Animated Object Track [~AO=#]

Designates a piece of track where the animated object will be located. Replace # with the object number (0 to n). Animated objects — people, vehicles, or animals — move during a RRM game. The animated objects are defined in the layout's *.rrm file. (Refer to the "Appendix A: Mission Parameters" section for more details.)

Crossing [~CR]

This hint requires the train horn to be blown at least once while on the designated piece of track, or a fine will be imposed. (Refer to the "Appendix A: Mission Parameters" section for details on setting the amount of the fine).

Snow Covered Object   [~ASnowed]

Specifies objects that should be made white to simulate snow.

Generally applied to mountains/ground for a snow-covered scene. Also, since white objects aren't textured, the objects display considerably faster. Note: The objects only display white during Winter (Refer to the "Appendix A: Mission Parameters" section for details on setting the initial date and time for a game).

Display as a CONTAINER type object   [~CONTAINER]

Instructs the program to NOT perform front-to-back sorting of objects. This will increase display speed performance.

Only use this hint when no other objects overlap the specified object in the 3D view. Otherwise objects might appear in front of your object.

No hidden surfaces   [~NOHS]

May achieve minor performance gains by telling RRM not to perform the extra calculations required to remove hidden surfaces for objects. Typical objects that might benefit from this hint are straight track, hills, and mountains.

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RenderWare