Chapter 5 - Setting Up Trains

Setting the Number of Trains

Before we set up our trains, we need to do some more administrative work.

1. Click on "Administration" on the ProTrak toolbar and then select "Limits on Equipment, Railroad & Traffic" from the dropdown list. You will see the window shown in Figure 5-1.

Setting Operating Limits									
For setting the size of datafiles used on the railroad. * This section is used mostly for erasing unwanted data. * To add NEW data, go to the appropriate section which lists the item and select "Edit", "New".									
	Availabl	e	In Use	:					
Freight and passenger cars	107	Set to:	107	÷					
Containers and vans	26	Set to:	26	÷					
Locomotives or units	23	Set to:	19	÷					
Cabooses	7	Set to:	7	÷					
Main line stations	6	Set to:	6	÷					
Staging tracks	4	Set to:	4	÷					
Online customers	14	Set to:	1	÷					
Bills-of-Lading/waybills	72	Set to:		÷					
Train jobs	10	Set to:	9	÷					
<u>C</u> ancel					<u>o</u> k				
De-Activate all Equ All Equipment has	-	e-activ	ated						
Close									

Figure 5-1

2. Click on the last data field (Train jobs) and set this to 2. You may either type the value in, or use the arrows beside the data field to change the value already there.

The purpose of making this change is to get rid of some of the already existing trains that were automatically copied from the sample railroad and that, for the moment at least, we do not need. When we go to run a session, ProTrak expects that every train that is scheduled will run, unless annulled. Since many of these 'left over' trains are set up to run daily, in all likelihood there will be some issues with the trains. It is easier to just 'delete' them by changing the number of trains to 2, than it is to go through and figure out what changes are needed to make them run.

3. Once the data field reads 2, click on "OK". You will be asked to confirm your actions (Figure 5-2).



Figure 5-2

4. Click on "Yes". You will be asked to reconfirm your actions (Figure 5-3).

Deleti	ng Items, Co	mpacting Files	×
8	Are you ab	solutely 100% sure	?
	Yes	No	



5. Again, click on "Yes". The reason for this double checking is to prevent you from accidentally deleting data. Imagine what would happen if you had 30 trains entered and deleted all but 2 of them! Once you've clicked on "Yes" the second time, the limits window is updated. Figure 5-4 shows what the "Setting Operating Limits" window should now look like when it is reopened. To reopen the window, click on "Administration" on the ProTrak toolbar, then select "Limits on Equipment, Railroad & Traffic" from the dropdown list.

	Availab	le [In Use]
Freight and passenger cars	107	Set to:	107	
Containers and vans	26	Set to:	26	
Locomotives or units	23	Set to:	19	
Cabooses	7	Set to:	7	
Main line stations	7	Set to:		
Staging tracks	4	Set to:	4	
Online customers	14	Set to:		
Bills-of-Lading/waybills	72	Set to:	72	
Train jobs	2	Set to:		
<u>C</u> ancel				<u>0</u> K

Figure 5-4

You can see that the "Train jobs" data field now shows 2. Click on "OK" or "Close" to close the "Setting Operating Limits" window.

Two Through Traffic Trains

We're finally going to set up two trains. These will be 'through traffic' trains, i.e. ones that have no switching to do other than at our main yard.

1. Click on "Scheduling" on the ProTrak toolbar and then select "Establish Train jobs and yarding" from the dropdown list. You should now see a window which looks like Figure 5-5. (A larger version of Figure 5-5 can be found in Appendix C).

No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Terminal	E/W	Traf	2nd Train
1	CHNY	NYCH	OK	00	1:01 AM	Daily	Chicago, IL	CHI02s	New York, NY	NYC01s	West		
2	NYCH	CHNY	OK		9:00 AM	Daily	New York, NY	NYC01s	Chicago, IL	CHI02s	West		

Figure 5-5

2. Double-click on the first train on the list (tt). You should see the window shown in Figure 5-6.

Changing train: 1 of: 2		×
Identifier Symbol/number CHNY Class X -	PRO Train Numbers/Symbols #### Symbol	Reports Switchlist Primary
Marketing name Operating Railroad PRO, ProTrak Demonstrator	1 CHNY Chicago, IL 2 NYCH New York, NY 5	Assign work notes at work locations
Work and Blocking Drigin station Chicago, IL Terminal station New York, NY Departure at 1:01 AM on Daily ✓ Yard blocking: 1) 1) CHI02s 6) These are the train 2) FST-Yd 7) reporting locations: 3) NYCD1s 8) 4) 9) 5) 10)		Print yard cutlist by car standing order in train Speeds Maximum allowed speed, mph 40 Minimum speed, based on Drag Tonnage, HP/Ton Ratings Maximum length, in cars 20 or 880 feet Maximum rated tonnage 858 tons 1,716 1:1 tons HP/Ton rating 1.0 HP required 1,716 Lashup/consist 12 with HP/ton 0,0 HP 00
Traffic Itraffic In staging In staging In staging entire train is reversed intact (loop) Equipment exits staging as train NYCH	6b Uncheck for Manual Data Entry	
<u>Cancel</u>		

Figure 5-6

This is the window we'll use to make changes to the trains. The first train that we'll be creating will be one that goes from the staging track representing St. Louis in East Staging to the yard at Actonvale and then returning to the staging track representing Chicago, also in East Staging.

- 3. Click on the "Symbol/number" (tt) data field and change the designator. Since this train travels from (theoretically) St. Louis to Actonvale to Chicago we'll call it SLCH.
- 4. We'll leave the "Marketing name" (tt) data field blank. We'll also leave the "Class" data field as displayed "X".

- 5. If the "Operating Railroad" (tt) data field is not already showing "PRO, ProTrak Demonstrator", click on the arrow to the right of the Operating Railroad" data field and select "PRO, ProTrak Demonstrator" from the list.
- 6. Click on the "Origin station" (tt) data field. In the center panel you should now see all of the staging tracks that have been defined. If the staging tracks are not shown, make sure that the "Show Staging" radio button is selected, and that the "Uncheck for Manual Data Entry" has a checkmark in it. Figure 5-7 shows what the window should look like.

Schanging train: 1 of: 2		×
Changing train: 1 of: 2 Identifier Symbol/number Symbol/number Operating Railcoad PRO, ProTrak Demonstrator Work and Blocking Origin station Chicago, IL Terminal station Peparture at 1:01 AM on Daily Yard blocking 11 Origin station Symbol chicago, IL Terminal station Yard blocking 11 Origin station Symbol chicago, IL Terminal station Yard blocking 11 Origin station Symbol chicago, IL Terminal station Yard blocking 11 Origin station Symbol chicago, IL Terminal station Traffic Traffic All traffic	Staging Siding Numbers #### SPOT City 8 Region 1 NYC01s Chicago, IL 2 2 CHI02s Chicago, IL 2 3 STL03s St Louis, MO 3 4 SEA01s Seattle, WA 5 7 8	Reports Switchlist Primary Assign work notes at work locations Print yard cutlist by car standing order in train Speeds Maximum allowed speed, mph 40 Minimum speed, based on Drag Tonnage, HP/Ton Ratings Maximum rated tonnage 858 HP/Ton rating 1.0 HP/Ton rating 1.0 HP/Ton stating 1.0
What happens in staging In staging entire train is reversed intact (loop) Equipment exits staging as train NYCH Cancel	Show Staging Stations Uncheck for Manual Data Entry	

Figure 5-7

- 7. Double-click on the 3rd entry (STL03s). You should now see that the "Origin station" data field shows "St. Louis, MO" and the entry in the 1st "Yard blocking" (tt) data field has changed as well to read "STL03s". If the 1st "Yard blocking" data field does not show "STL03s", click on the "Yard Blocking 1" data field, then double-click on the 3rd entry in the center panel again.
- 8. Repeat steps 6 and 7 for the "Terminal station" (tt) data field. Use the 2nd staging track (CHI02s). The "Terminal station" data field should now contain "Chicago, IL".
- 9. You will notice that neither the 2nd nor the 3rd "Yard blocking" data fields have changed. In order to update the 3rd "Yard Blocking" data field we need to click on the 3rd "Yard Blocking" (tt) data field. You will notice

that two things have happened: first the title of the center panel has changed to "Possible Train Yardsidings" ⁽¹⁾, and second, this list contains not only the four staging tracks but also "ACT-Yd" and "ST202y". From the center panel, double-click on the "CHI02s" entry again. You should now see "STL03s" in "Yard blocking: 1)" and "CHI02s" in "Yard blocking: 3)".

We've got the two ends of the train's travel, but need to establish one more thing. We also need to change the yard where the cars are to be delivered and/or picked up. Click on the 2nd "Yard Blocking" (tt) data field. The center panel should now show six "Possible Train Yardsidings". The first of these should be "ACT-Yd". Double-click on this and the 2nd "Yard blocking" data field will be updated to read "ACT-Yd".

- 10. Below the "Terminal station" data field is the control for when the train runs, the "Departure at ... on" (tt) data fields. We'll leave the time in the "Departure at" portion at "1:01 AM" and the "on" portion at "Daily". (If your version does not default to these values, adjust the values to make them agree.)
- 11. For now, we'll leave the balance of the data fields unchanged ⁽²⁾. As we get further along we'll look at some of them and make some changes.

Figure 5-8 shows what your finished window should look like. (The information in the center panel may be different depending on what data field your cursor is placed in).

¹ If the heading reads "All stations on PRO", the "Show... Staging" radio button needs to be clicked, then click back on the "Yard blocking: 3)" data field. ² While we did not do it, if you had looked at some of the other fields and checked to see what

² While we did not do it, if you had looked at some of the other fields and checked to see what happened if you changed values, you might have noticed that changing the "Maximum length in cars" data field did not automatically change the "or length" data field beside it. Even though these would seem that if you multiplied the average fleet length by the maximum number of cars you should automatically change the maximum length as well. Jim has indicated that there are only 2 situations where ProTrak adjusts one data field based upon the value entered in another data field. The first is the grade and elevation data fields that we saw in Chapter 2. The other is load weight and volume values that we will discuss in Chapter 12.

Figure 5-8

12. If everything is OK, click on "OK" to continue.

Minimum Data Items - Trains

Origin station (Origin Station) Terminal station (Terminal Station) Yard blocking (Yard Blocking)

(See Default and Minimum Data Items in Chapter 2 for an explanation)

FAQs Trains

Section F of Appendix L deals with **train jobs**, yarding and timetables.

Line-Up

You may see a question box which states "Line-up needs to be updated". Whenever this box appears, always click on "Yes".

If you didn't get the above mentioned message, you should force the update by clicking on "Scheduling" on the ProTrak toolbar, then choosing "Line-up of trains" from the dropdown list.

Before the line-up displays, you may also get the question box "Invalid train yard assignment". You will notice that this is referring to a staging track that no longer exists. If this message appears, click on "No" and the program will erase that train job.

Finally the program will check the status of the line-up and may find trains that do not run today. If there are trains that don't run, the message window shown in Figure 5-9 will be displayed (the number in the message may be different).



Figure 5-9

Again, click on "OK".

At this point, the "Line-up of Trains for..." window is displayed ⁽³⁾. The line-up is simply a list of trains that run today, listed in the order of time-of-departure. At this point, since we've only got 2 trains defined and they both run every day, the line-up and list of trains will look very similar to the "Listing of train jobs". Figure 5-10 shows what the "Line-up of Trains for..." window looks like.

No.	Symbol/Number	Time	Days	Origin Terminal	Final Terminal	Direction
1	SLCH	1:01 AM	Daily	St Louis, MO	Chicago, IL	local
2	NYCH	9:00 AM	Daily	New York, NY	Chicago, IL	West

Figure 5-10

³ If no changes were made to the train line-up, when clicking on "OK" you are returned to the "Listing of train jobs" window. If changes were made, in addition to closing the "Some trains do not run today" window, the "Listing of train jobs" window will also close.

Compare it to the "Listing of train jobs" in Figure 5-11. You can get the "Listing of train jobs" window by clicking on "Scheduling" on the ProTrak toolbar, then choosing "Establish Train jobs and yarding" from the dropdown list.

Ø Li	sting of train j	obs											
No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Terminal	E/W	Traf	2nd Train
1	SLCH	NYCH	OK		1:01 AM	Daily	St Louis, MO	STL03s	Chicago, IL	CHI02s	local		
2	NYCH	CHNY	OK		9:00 AM	Daily	New York, NY	NYC01s	Chicago, IL	CHI02s	West		2223



The trains shown in the two listings – "Line up of Trains" and "Listing of train jobs" are identical. The "Listing of train jobs" display, however, has some additional information shown, namely the Connecting, Mvg, OpRR, Origin, Terminal, Traf and 2nd Train columns.

We can now follow the same process, steps 1 through 13, to set up the 2nd through train. In this case it will travel the reverse of the first train. The train symbol will be CHSL, Origin will be Chicago and terminal will be St. Louis. We'll erase the data in the "Marketing name" data field. Again, it will operate daily. Check to make sure that the yard blocking data fields correspond correctly to their origin and terminal fields. If not already showing 20, change the "Maximum length, in cars" (tt) data field to 20. Similarly, the data field following the maximum car length shows the calculated maximum length (tt). Using the "Fleet average car length" from the bottom of the left hand panel (44) multiplied by the "Maximum length in cars" (20) equals 880 feet. If the maximum length in feet is not shown as 880 feet, correct the data field to show 880 feet. The reason for this will be explained later. For now we will not worry about the "Maximum rated tonnage" data field nor the "Lashup/consist" data field. Your completed update of the 2nd train should look like Figure 5-12 (the data in the center panel may be different, depending on where your cursor is).

Schanging train: 2 of: 2		×
Identifier Symbol/number CHSL Class Marketing name Operating Railroad PRO, ProTrak Demonstrator Work and Blocking Origin station Chicago, IL Terminal station St Louis, MO Departure at 9:00 AM Yard blocking: 1) CHID2s 6) These are the train 2) ACT-Yd Yold 4) 9) 5) 10)	####	Reports Switchlist Primary Assign work notes at work locations Print yard cutlist by car standing order in train Speeds Maximum allowed speed, mph 40 Minimum speed, based on Drag Tonnage, HP/Ton Ratings Maximum length, in cars 20 or Maximum length, in cars 20 or HP/Ton rating 1.0 HP/Ton rating 1.0 HP/ton site 2.716 Lashup/consist 26
What happens in staging In staging entire train is reversed intact (loop) Equipment exits staging as train Fleet average car length is: 44 feet.	Uncheck for Manual Data Entry	
<u>Cancel</u>		

Figure 5-12

13. If everything is OK ⁽⁴⁾, click on "OK" to continue.

⁴ Depending on what data field your cursor was in just prior to clicking on "OK" you may or may not see the green background message at the bottom of the left hand column, the one that reads "Fleet average car length...".

Connecting Trains

You may be wondering how a train that enters a staging yard gets out again. In ProTrak this is done with the "Equipment exits staging as train" data field. The two trains we've just entered are each other's connecting train – the one that each will exit staging as when the next operating session is run.

1. If you do not already have the "Listing of train jobs" window displayed, click on "Scheduling" on the ProTrak toolbar, then choose "Establish Train jobs and yarding" from the dropdown list.

Figure 5-13 shows what you should see from the "Listing of train jobs" window.

🙆 Li	sting of train j	obs											
No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Termi	E/W	Traf	2nd Train
1	SLCH	NYCH	OK		1:01 AM	Daily	St Louis, MO	STL03s	Chicago, IL	CHI02s	local		
2	CHSL		OK		9:00 AM	Daily	Chicago, IL	CHI02s	St Louis, MO	STL03s	local		

Figure 5-13

(Note that the data shown in the 3rd column may differ from what is shown here).

2. Double-click on the first train – the one identified as "SLCH". You should see the window shown in Figure 5-14.

🗳 Changing train: 1 of: 2			×
Identifier	Possible Train Yardsidings		Reports
Symbol/number SLCH Class X 💌	### No. Spot	City	Switchlist Primary
Marketing name Operating Railroad PRO, ProTrak Demonstrator		ACT Yard Interchange	Assign work notes at work locations
Work and Blocking Drigin station St Louis, MD	4 1 NYC01s 5 2 CHI02s	New York, NY Chicago, IL St Louis, MO	Print yard cutlist by car standing order in train
Terminal station Chicago, IL		Seattle, WA	Speeds Maximum allowed speed, mph 40 -
Departure at 1:01 AM on Daily Yard blocking: 1) 1) STL03s 6)			Minimum speed, based on Drag
These are the train 2) ACT·Yd 7) reporting locations 3) CHI02s 8) 4) 9) 9) 5) 10) 10)			Tonnage, HP/Ton Ratings Maximum length, in cars 20 or 880 feet Maximum rated tonnage 858 tons 1,716 1:1 tons HP/Ton rating 1.0 HP required 1,716
Traffic All traffic III traffic	3		Lashup/consist 12 with HP/ton 0.0 HP 00
What happens in staging In staging entire train is reversed intact (loop) Equipment exits staging as train NYCH	Uncheck for Manual Data	Entry	
<u>Cancel</u>			

Figure 5-14

- 3. The last data field in the left hand panel is the "Equipment exits staging as train" (tt). Click on the dropdown arrow beside this data field. From the list that appears choose "CHSL" (the only entry in the list at this time).
- 4. Click on "OK" to return to the "Listing of train jobs" window ⁽⁵⁾. Figure 5-15 shows what that window should now look like.

No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Terminal	E/W	Traf	2nd Train
1	SLCH	CHSL	OK		1:01 AM	Daily	St Louis, MO	STL03s	Chicago, IL	CHI02s	local		
2	CHSL		OK		9:00 AM	Daily	Chicago, IL	CHI02s	St Louis, MO	STL03s	local		1922

Figure 5-15

Note that the column headed "Connecting" now shows "CHSL" for train "SLCH".

⁵ If no changes were made to the train line-up, when clicking on "OK" you are returned to the "Listing of train jobs" window. If changes were made, in addition to closing the "Some trains do not run today" window, the "Listing of train jobs" window will also close.

- 5. You may be asked "Line-up needs to be updated". If this happens, click on "Yes".
- 6. You've indicated that train "SLCH" gets sent back out of staging as "CHSL". It makes sense then, that we need to make the corresponding change to "CHSL" in other words to make it come back out of staging as "SLCH". To make this change, repeat steps 2 through 5 only in this case, working with the second train in the list train "CHSL". The "Equipment exits staging as train" dropdown list should now only show "SLCH" and that is what we'll select. Figure 5-16 shows what that window will look like after we've made the changes.

Symbol/number CHSL Class X Marketing name Operating Railcoad PR0, ProTrak Demonstrator Work and Blocking Origin station Chicago, IL Terminal station St Louis, MO Departure at \$000 AM on Daily Yard blocking: 1) 1) CHO2 6) Yard blocking: 1) 1) CH02 6) These are the train: 2) ACT:Yd 7) reporting locations: 3) STL03s 8) 4) 9) 5) 10) Wath happens in staging In staging entire train is reversed intact (loop)	Identifier	Connecting Train Numb	ers/Symbols	Reports	
Marketing name 0 Operating Railroad PR0, ProTrak Demonstrator Work and Blocking Origin station Chicago, IL Terminal station St Louis, MO Departure at 200 AM on Daily Yard blocking: 1) CHI025 6) These trains connect with CHSL Print yard cutlist by car standing order in train Speeds Maximum allowed speed, mph 40 Minimum speed, based on Orag Tonnage, HP/Ton Ratings Maximum rated tornage 858 tons 1,716 111 tor HP/Ton rating 1.0 HP required 1,716 1.1 tor HP/Ton rating 1.0 HP required 1,716 1.1 tor HP/Ton rating 6 6 6 6 7 1.0 1.0 HP/Ton rating 1.0 HP/Ton rating 1.0 HP/Ton rating 1.0 HP/Ton rol 0,0 HP 00 1.1 tor HP/Ton rating 1.0 HP required 1.716 1.1 tor HP/Ton right (Loop) What happens in staging Instaging entire train is reversed intact (loop) In staging	Symbol/number CHSL Class X 💌	### Symbol	Origin		Primary
	Symbol/number CHSL Class X Marketing name	0 These trains		Switchlist Assign work not Print yard cutlist by Speeds Maximum allowed sp Minimum speed, bas Tonnage, HP/To Maximum length, in Maximum rated tonn HP/Ton rating 1.0	es at work locations car standing order in train seed, mph 40 m Ratings cars 20 or 880 feet sage 858 tons 1,716 1:1 ton HP required 1,716

Figure 5-16

7. Click on "OK" to return to the "Listing of train jobs" window, and Figure 5-17 shows what that window should look like.

											obs	sting of train j	🙎 Li
2nd Train	Traf	E/W	Terminal	Final Terminal	Origin	Origin Terminal	Days	Time	Op RR	Mvg	Connecting	Symbol/Number	No.
		local	CHI02s	Chicago, IL	STL03s	St Louis, MO	Daily	1:01 AM		OK	CHSL	SLCH	1
		local	STL03s	St Louis, MO	CHI02s	Chicago, IL	Daily	9:00 AM		OK	SLCH	CHSL	2
		local	012000	ot Eodis, mo	CHIOZS	Chicago, IE	D'dily	0.00 AM		OIX	ocon.	CHOL	-

Figure 5-17

As you can see, train 'SLCH' connects to train 'CHSL' (line 1) and train 'CHSL' connects to train 'SLCH' (line 2). This means that whichever train

is operating, once it enters the staging track on completion of its run, it will automatically come back out as the other train in the next operating session. (A larger version of Figure 5-17 can be found in Appendix C).

We said we'd explain the reason for changing the "Maximum length, in cars" data field in train CHSL. I'm sure it makes sense that if train SLCH goes into staging with 20 cars and it exits staging as train CHSL with the "entire train is reversed intact (loop)", train CHSL needs to have the same maximum length as train SLCH.

A couple of additional points to note. First we've gone from East Staging to Actonvale and then back to East Staging. It would work just as well if the start and end staging yards for our two trains were different (EAS to ACT to WES for example). The second thing to note is that the train that entered the staging yard is set up to come out exactly as it went in – no switching will happen at the staging yard (see the "In Staging" data field in the left-hand panel of Figures 5-14 and 5-16). We'll get into some of the ramifications of this a little further when we get into setting up waybills.

8. Click on "Close" to close the "Listing of train jobs" window to keep your screen uncluttered.

OK, we've now got two trains that will take cars from offline industries (via the staging tracks) to the main yard at Actonvale, but we still haven't delivered any cars to the end customer. To do this we need to set up a switching train – that is one that will go from the yard at Actonvale and go out on the line and switch cars to the various customers. I know – we haven't set up any customers yet, but we will, along with waybills to tell ProTrak when to send either loads or empty cars to the customers. We'll get to that in a bit, but first let's set up a switching train. In order to set up the switching train, we first need to define a "reporting location".

A Train Reporting Location

In ProTrak, a train works (does setouts and pickups) between two reporting locations. The full list of reporting locations is shown in Appendix A under the heading "Train Reporting Location". For our purposes here, we'll deal with a switching zone and two yard sidings that define the end points of that zone. The two yard sidings that are the endpoints of a zone to be switched can be on different subdivisions and don't have to be at adjacent stations. Note that the term 'zone' as used here is not the SPOT zone code that we've previously talked

about. This is simply an area along a stretch of track where there are customers to be worked, in other words a "train switching zone".

Trains that switch customers frequently work out and back as 'turns'. ProTrak recognizes that a train is a turn if the first and last yard sidings are the same. A turn must have at least 3 reporting locations – one at the origin, one at the terminal and one at the turning point.

The train we'll create will originate at the main yard at Actonvale, work to Berwick then turn, and finally return to the yard at Actonvale. While you can have a train whose turning point is a yard, for this example, we'll go from yard to station to yard.

To create a train reporting location that is not a yard:

 Click on "Traffic" on the ProTrak toolbar then select "Yards and Interchanges" from the dropdown list. The window shown in Figure 5-18 will be displayed.

‡	Yard name	City/State	SPOT	Tracks	Capacity	Storage Yard
0	ACT Yard	Actonvale	bY-TOA	4 tracks		
4	Interchange	Second Station	ST202y	1 track	18	

Figure 5-18

2. Go back up to the ProTrak toolbar and click on "Edit" then select "New yard" from the dropdown list. The window shown in Figure 5-19 will be displayed.

sthisa (ຈີ "Yd" C "y"	A yard with many tracks A yard with one track					ned to t on this t		
	change track (outbound)		Track 1	service	track/no	assignme	nt	
	change track for receiving			*				
Cone/station -								
City, State/Prov	[
'ard name	New Yard							
POT Zone code	AAA appears as AAA	-Yd						
ard								
itorage yard for thi lumber of classific	ation tracks in this yard 1							
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars	ation tracks in this yard 1 ead work on lead is to: West •	▼ East						
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars - based on	ation tracks in this yard 1 ead work on lead is to: West •	▼ East						
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars - based on	ation tracks in this yard 1 ad work on lead is to: • West • on this class lead, at this ya train arrival direction train departure direction	East rd >						
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars - based on - based on Owner and Ter	ation tracks in this yard 1 ad work on lead is to: • West • on this class lead, at this ya train arrival direction train departure direction	East rd >						
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars - based on - based on Owner and Ter	ation tracks in this yard 1 ead work on lead is to: O West O on this class lead, at this ya train arrival direction train departure direction ant Railroads	East rd >	Maximum	number of	blocks	er track	1	
itorage yard for thi lumber of classific Classification-le Primary classificati Work cuts-of-cars - based on - based on Owner and Ter	ation tracks in this yard 1 ead work on lead is to: O West O on this class lead, at this ya train arrival direction train departure direction ant Railroads	East rd >	Maximum	number ol	blocks p	er track	1	

Figure 5-19

- 3. Click on the radio button for " "y" A yard with one track" (tt). Note that as soon as you do that, three things have happened:
 - a. The bottom panel in the left side of the window has disappeared and the vertical size of the window has shrunk;
 - b. The panel above that has changed; and
 - c. In the second panel, the "appears as" data field changes to "AAA02y" and the lower panel on the left hand side has changed (see Figure 5-20).
- 4. Click on the "City, State/Prov" (tt) data field and from the right-hand panel, double-click on "Berwick". You will note that the SPOT Zone code

changes from "AAA" to "BER" and the "appears as" data field now contains "BER02y".

- 5. If it is not already set to "02", change the "SPOT track number" (tt) data field to "02" ⁽⁶⁾.
- 6. At the "Track is used as" data field, click on the dropdown arrow and select "reporting point" from the list. Note that the "Yard name" data field (in the area above labeled "Zone/station") has also changed to "reporting point".
- 7. If it isn't already set to "10", click on the "Yard capacity" (tt) data field and set this to "10". A 10 foot track is too short to set out a car on and thus preserves it as a runaround. As with the track length when we were defining staging tracks, this can be entered in inches with an "i" (lower case) added to the end. In HO, 10 feet can be entered as 1.4i.
- 8. When you changed the radio button from 'Yd' to 'y', you will notice the addition of another group of radio buttons at the bottom of the left hand panel. We'll leave those set to "No re-blocking allowed".
- 9. Figure 5-20 shows what the window should now look like.

⁶ By convention, the main track is track 01. The passing track is 02. If there are multiple main tracks, these are numbered 02, 03 and 04. The main tracks between stations – the interval – is numbered 05. Typically interchange tracks and other special service tracks are numbered in the 90s. Customers' tracks are numbered from 10 and up. A reporting location, which is actually a runaround using the passing siding can be numbered "02" giving a siding number "AAA02y" which is different from track "AAA02".

Is this a 🕤 "Yd" A yard with many tracks	All stations on PRO
"y" A yard with one track Interchange track (outbound) Interchange track for receiving Zone/station City, State/Prov Berwick	### Stations Zor 1 East Staging EAS 2 Castle Rock CAS 3 JT Junction JTJ 4 Berwick BEF 5 Actonvale ACI 6 West Staging WE
Yard name reporting point SPOT Zone code BER appears as BER02y "y" one track SPOT track number 02	4
Track is used as reporting point Yard capacity 10	67
Re-blocking of trains C Allow complete re-blocking C Re-blocking for dynamics O No re-blocking allowed	Show online data

Figure 5-20

10. Click on "OK" to close this window and return to the "Yards and Interchanges" window. You can now see the "reporting point" 'yard' for Berwick displayed in the "Yards and Interchanges" window (Figure 5-21).

Ħ	Yard name	City/State	SPOT	Tracks	Capacity	Storage Yard
0	ACT Yard	Actonvale	ACT-Yd	4 tracks		
4	Interchange	Second Station	ST202y	1 track	18	
5	reporting point	Berwick	BER02y	1 track	0	

Figure 5-21

As a bit of an explanation, the "y" track set up in this way is just an imaginary location, used by the program as a place to report a train. The "y" track does not take away from the passing siding capacity.

If, however, you make a "y" track with a length sufficient to hold cars then cars may be exchanged between trains that report at this location. A "y" track setup this way can be used to bring cars close to a customer when the customer track is overloaded. Another situation where an '02' track may be useful is where both train 1 and train 2 work a particular location. Customer A which is worked by train 1 has cars for customer B but customer B is not worked by train 1 rather by train 2. Train 1 can pick up the cars at customer A, leave them at the 02 track where train 2 will pick them up and deliver them to customer B.

11. You will notice a button at the bottom of the window labeled "Show All Push-to Data". Clicking on this button will switch the window from showing the yard setup to one showing the 'push-to' data. (see Figure 5-22).

#	Siding	Repeats	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7
1	ACT-Yd								
		"	T		-				-



- 12. This window shows what trains are in what track in each yard. At present there are no trains assigned to the 'push-to data' for the only yard that we have defined 'ACT-Yd'. This window also allows you to make corrections to the 'push-to' data.
- 13. You will notice that the "Show All Push-to Data" button now reads "Show Yards". Clicking on this button will now return the window to the yard setup window

14. Click on the "Show Yards" button to return to the first window, and then click on "Close" to close the "Yards and Interchanges" window.

A Switching Train As A Turn

Now that we've got our reporting location in Berwick defined; now we can get on with setting up a switching train.

1. Click on "Scheduling" on the ProTrak toolbar, then choose "Establish Train jobs and yarding" from the dropdown list. The window shown in Figure 5-23 will appear.

🙆 Li	isting of train j	obs											
No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Terminal	E/W	Traf	2nd Train
1	SLCH	CHSL	OK		1:01 AM	Daily	St Louis, MO	STL03s	Chicago, IL	CHI02s	local		
2	CHSL	SLCH	OK		9:00 AM	Daily	Chicago, IL	CHI02s	St Louis, MO	STL03s	local		

Figure 5-23

As you can see, the two trains that run to and from the staging yard are shown, but we need to add a new one.

2. On the ProTrak toolbar, click on "Edit" then chose "New Train" from the dropdown list. Figure 5-24 shows what the window will look like.

😂 Changing train: 3 of: 3		<u> </u>
Identifier	PRO Train Numbers/Symbols	Reports
Symbol/number 3 Class X 💌	#### Symbol Origin	Switchlist Primary 💌
Marketing name	2 CHSL Chicago, IL	Crocense Finitely Finitely Cassign work notes at work locations Print yard cutlist by Car standing order in train Speeds Maximum allowed speed, mph 50 Minimum speed, based on Drag Tonnage, HP/Ton Ratings Maximum length, in cars 10 or 500 feet
4) 9) 5) 10) 7 Traffic Institic All traffic Institution Institutio Institutio Institutionen Institutio Institutionen Institut	 ✓ Uncheck for Manual Data Entry 	Maximum rated tonnage 958 tons 1,716 1:1 tons HP/Ton rating 1.0 I HP required 1,716 Lashup/consist with HP/ton HP
<u>Cancel</u>	1	

Figure 5-24

3. Since this is a local train we're going to call this train number "202" so click on the "Symbol/number" (tt) data field and enter "202" in place of the "3" that is already there.

As an aside, before setting up the trains on your own railroad, you may want to sit down and think about how you're going to number/ID your trains. If you use numbers you may chose, for example, to reserve numbers 1-99 for passenger trains, 100-199 for yard to yard trains, 200 to 299 for local turns, and so on. You also may want to decide, as is a common practice, that odd numbered trains are westbound (or northbound) trains, while even numbered trains are eastbound (southbound). On the other hand, you may choose to use some alphabetic ID such as ACBET to refer to the Actonvale Berwick turn. What you use is up to you but remember in general the symbol or number cannot exceed 6 characters in length $^{(7)}$.

- 4. Leave the "Class" data field (tt) set at "X".
- 5. In the "Marketing name" (tt) data field, let's enter "Berwick Turn".
- 6. Leave the "Operating Railroad" (tt) data field unchanged as "PRO, ProTrak Demonstrator".
- 7. Click in the "Origin station" (tt) data field.
- 8. At the bottom of the center panel are two "Show" radio buttons "Staging" and "Stations". If it is not already selected, click on the "Stations" button. This will show all of the online stations.
- 9. In the center panel, double-click on "Actonvale". You should see the "Origin station" data field changed to "Actonvale" and "Yard blocking: 1)" data field changed to "ACT-Yd".
- 10. Click in the "Terminal station" (tt) data field. Again make sure the "Show" radio button is set to "Stations", then from the center panel double-click

⁷ The statement about train symbol being restricted to 6 characters is technically correct, however for a 'turn' the symbol can be up to 12 characters in length as long as one of the characters is a "/" and the number of characters before the "/" is 6 or less. For example "123456/65432" is a valid symbol for a turn. ProTrak uses 123456 for the outbound leg of the turn and 65432 for the return leg. The 6 character limit come about since all car locations must be six characters or less, and since a train symbol can be a car location, the train symbol therefore must also be 6 characters or less.

on "Berwick". You should now see the "Terminal station" data field read "Berwick", however "Yard blocking: 2)" is blank.

11. Click in the "Yard blocking: 2)" data field and from the center panel, double-click on "BER02y".

You remember we set up a reporting location in Berwick that was identified as "BER02y". Unlike at Actonvale, ProTrak does not automatically select that reporting location for the "Yard blocking: 2)" location for a number of reasons. One is that, while there are no towns/industries between Actonvale and Berwick, we could just have easily made the turn run from Actonvale to Castle Rock and then return switching customers in both Berwick and Castle Rock.

- 12. Click on the "Yard blocking: 3)" data field and from the center panel, double-click on "ACT-Yd". You will notice 2 new things in the window – first, there is now a "radio button" beside the "BER02y" entry, and second, there is a line of text (on a green background) at the bottom of the left hand window which says "Train turns at BER02y".
- 13. Check the "Departure at" line. The first part should show "7:00 AM" If the time shown is incorrect, click on the data field and a window like the one in Figures 5-25 will appear.

	_
12 hour clock	
C 24 hour clock	
Hours Minutes	
07 -: 00 - 0	AM

Figure 5-25

First, make sure the '12 hour clock' radio button is selected in the second panel. Click on the dropdown arrow beside the appropriate number (Hours or Minutes) and select the correct values – 7 for hours and 00 for

minutes. If necessary, correct the AM/PM radio button then click on "OK" to finish the change.

14. Check the second part of the line. If this does not show "Daily", click on the dropdown arrow and select "Daily" from the list.

You should now see a window that looks like the one in Figure 5-26. (As always, the center panel may look different depending on the field your cursor is in).

🕙 Changing train: 3 of: 3		×
Changing train: 3 of: 3 Identifier Symbol/number 202 Class Marketing name Berwick Turn Operating Railtoad PRO, ProTrak Demonstrator Vork and Blocking Origin station Actonvale Terminal station Berwick Departure at 7:00 AM on Daily Yard blocking: 1) 1) ACT-Yd 8) 4) 9) 5) 10) Traffic Traffic Traffic In all traffic In all traffic	Possible Train Yardsidings ### No. Spot City 1 10 ACT-Yd ACT Yard 2 14 ST202y Interchange 3 15 BER02y reporting point 0 5 1 NYC01s New York, NY 6 2 CHI02s Chicago, IL 7 3 STL03s St Louis, MO 8 4 SEA01s Seattle, WA	Reports Switchlist Primary Assign work notes at work locations Print yard cutlist by car standing order in train Speeds Maximum allowed speed, mph 50 Minimum speed, based on Drag Tonnage, HP/T on Ratings Maximum length, in cars 10 or Maximum rated tonnage 858 tons HP/T on rating 1.0 HP/T on rating 1.0 HP/T on rating 1.0 HP/Ton rating HP
Train turns at BER02y	Uncheck for Manual Data Entry	

Figure 5-26

15. Leave all of the following data fields as they are:

- a. Traffic All traffic
- b. Switchlist Primary
- c. Assign work notes at work location unchecked
- d. Print yard cutlist by car standing order in train
- e. Maximum allowed speed 50
- f. Minimum speed, based on Drag
- g. Maximum length, in cars 10
- h. HP/Ton rating 1.0
- i. Lashup/consist blank.

(If any of the fields on your screen do not match those listed, adjust the fields as necessary)

16. The Berwick Turn train is now setup. Click on "OK" to return to the "Listing of train jobs" window. The "Listing of train jobs" window should now look like the one in Figure 5-27.

Listing of train jobs													
No.	Symbol/Number	Connecting	Mvg	Op RR	Time	Days	Origin Terminal	Origin	Final Terminal	Terminal	E/W	Traf	2nd Train
1	SLCH	CHSL	OK		1:01 AM	Daily	St Louis, MO	STL03s	Chicago, IL	CHI02s	local		
2	CHSL	SLCH	OK		9:00 AM	Daily	Chicago, IL	CHI02s	St Louis, MO	STL03s	local		
3	202		OK		7:00 AM	Daily	Actonvale	ACT-Yd	Berwick	BER02y	East		
3	202		OK		7:00 AM	Daily	Actonvale	ACT-Yd	Berwick	BER02y	East		



17. As always, if you are prompted to update the line-up, click on "Yes". Note that if you are not prompted, it is important that you force an update of the line-up. If you do not, you may not see your new train in the list of trains when you're setting up customers, for example. To force an update of the line-up, click on "Scheduling" from the ProTrak toolbar, then select "Line-up of Trains" from the dropdown list. You cannot do any harm by doing an update, even if one is not required. If you ask for an update, you may see the message shown in Figure 5-28.

Correcting Siding SPOTS										
Т 🌍 ті	Update SPOTs on shippers sidings? This change could affect other SPOTs for this industry, OR other SPOTs on same siding.									
	Yes	No								

Figure 5-28

To be safe, click on "Yes".

18. Click on "Close" to close the "Listing of train jobs" window to keep your screen uncluttered.

More information on Turn Train topics can be found in Appendix L

Summary

In Chapter 5 you have done the following:

- Used Limits on Equipment, Railroad & Traffic" Menu under "Administration" heading to reduce the number of train jobs;
- Changed trains and set yard blocking;
- Established a pair of opposite direction, staging-to-staging trains;
- Set up a train reporting location;
- Set up a new train as a turn.

You have learned the following:

- How to set up connecting trains in a staging yard using the "Listing of train jobs" from the "Scheduling" menu;
- How to use the "What Happens in Staging" data field;
- About reporting points including how to change a yard to a reporting point;
- What the "Show Push-to Data" screen shows and what can be used for;
- How to force the update of the train line-up using the "Line Up of Trains" from the "Scheduling" menu;
- That you should always click on "Yes" if there is any doubt about updating.

In chapter 5 we set up some trains. We can now move on to Chapter 6 where we'll set up some customers for our railroad.