

Pacific Surfliner[®]

Los Angeles – San Diego



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1 Route Information



The Pacific Surfliner® route covers a 128 mile stretch along the Southern Californian coast connecting Los Angeles in the North to San Diego to the south.

The route contains a diverse spread of scenery, from the skyscraper skylines in the cities, areas of low lying industry, scrubland, sandy beaches and urban sprawl.

Freight trains are common between Los Angeles and Fullerton due to the many industry sidings and yards. South of Fullerton, freight trains are less common and typically only run at night.

Highlights along the route include the stadium at Anaheim, many marinas and beach vistas, San Onofre Nuclear Power Station and the piers at San Clemente and Oceanside.



The Pacific Surfliner train is operated by Amtrak using “Surfliner” bi-level, high-capacity passenger cars. A fleet of 15 EMD F59PHI engines in matching “Surfliner” livery typically haul the cars, but engines from the long-distance fleet are often used, such as the P42DC. As there is no suitable turning equipment on the route, trains are operated in push-pull mode. Trains run engine first out of Los Angeles Union Station with a cab car at the rear, whereas travel from San Diego to Los Angeles will involve running cab car first.

In addition to the Pacific Surfliner, the Orange County Line, run by Metrolink is a commuter line from Los Angeles to Oceanside which connects with the Coaster commuter service which operates between Oceanside Transit Center and San Diego.

2 EMD F59PHI Amtrak



The EMD F59PHI is a diesel-electric engine which is commonly used on passenger trains throughout North America.

The first F59PHI was built by General Motors Electro-Motive Division in 1994 and was the first train to meet California's strict emission standards. The engine has 3,200 horsepower and is equipped with a turbocharged EMD 12-710E3, 12 cylinder, 2 stroke water cooled "Vee" prime mover. A standard F59PHI has a gear ratio of 56:21 which delivers a top speed of 110 mph.

The F59PHI is also equipped with a Caterpillar C27 genset for Head End Power (HEP) unit. This provides power to the passenger cars which is used for heating, lighting and air conditioning. This HEP is powered by a dedicated second diesel engine, thus removing the electrical power generation from the prime mover. To start this, press 'M' and once the engine starts and revs up, hold 'M' and 'shift' to keep it on. Both keys can then be released

Amtrak Locomotives come with a two-stage solenoid system that allow the horn to be played both loud and soft. To do this, use 'spacebar' for full blast, and 'N' for half blast.

3 Scenarios

The following scenarios are provided as part of the Pacific Surfliner ® Pack:

Tutorial Scenarios:

Training: F59PHI – Simple Controls

Learn how to get moving and how to stop when driving the Pacific Surfliner ® F59PHI.

Training: F59PHI and Surfliner Introduction

An introduction to the F59PHI diesel locomotive and Amtrak's Pacific Surfliner ® equipment and route.

Career Scenarios:

1. Riding the Surf, Part 1

You are the engineer of Amtrak Pacific Surfliner ® Train 582 operating from Los Angeles Union Passenger Terminal (LAUPT) to San Diego. Your power is an EMD F59PHI and you have a standard consist of five bi-level passenger cars. In this first installment of a full Los Angeles to San Diego run over the Pacific Surfliner route, you will be traveling from LAUPT to Irvine and making three intermediate station stops en route. As is so often the case, the Southern California weather is simply marvelous.

2. Riding the Surf, Part 2

As engineer of Amtrak Pacific Surfliner ® Train 582, you have reached Irvine and made up some time after a late departure from Los Angeles. In this second installment of a three-part scenario, you will be continuing southbound from Irvine on to Oceanside with one intermediate stop at famous San Juan Capistrano. Can you make up further time on the way to San Diego?

3. Riding the Surf, Part 3

This is the final installment of a three-part Los Angeles to San Diego journey. As engineer of Amtrak Pacific Surfliner ® Train 582, you made up much of the earlier delays with some good running en route to Oceanside. The last leg of your run is from Oceanside to San Diego, but as it turns out, the final part of the journey won't be quite what you expected.

4. Night Train to LA

You are the engineer of Amtrak Train 595, the last northbound run of the night on the Pacific Surfliner ® route. You will be handling the train on the final leg of its journey from Irvine to Los Angeles Union Passenger Terminal (LAUPT). As is typical for northbound movements, the train is operating in "push" mode with the F59PHI on the rear and you will be running the train from the baggage/coach/control cab.

5. Get Out the Umbrella... Part 1

A powerful Pacific storm has swept onto the Southern California coast, creating operating challenges and disruptions on the Pacific Surfliner® route. You are the engineer of six-car Amtrak Train 768 operating from San Luis Obispo to San Diego. You are stopped just south of Laguna Niguel for a meet and are already running 20 or so minutes late due to the weather. You'll need to continue to safely make the best time possible as you head southbound amid the dangerous storm.

6. ... and Put On the Waders. Part 2

Although the very worst of the Pacific storm is expected to pass over the California coastline soon, the weather conditions remain difficult and there are concerns about possible flood damage to the right-of-way. As engineer of Amtrak Train 768, you will be continuing southbound for San Diego, but operations are far from normal on the railroad today.

7. Big Bay Boom

It is the Fourth of July holiday and you are the engineer of a Los Angeles to San Diego Amtrak special carrying passengers bound for a celebration hosted Naval Base San Diego. As is often the case for specials, Amtrak has put together an extra-capacity Pacific Surfliner® consist of eight cars with F59PHI diesels operating on each end. You are at Sorrento Valley and although only a short portion remains of the southbound journey, you'll need to climb up and over rugged Miramar Hill before dropping down into San Diego.

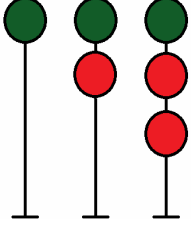
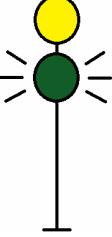
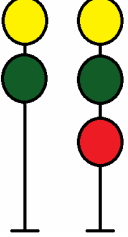
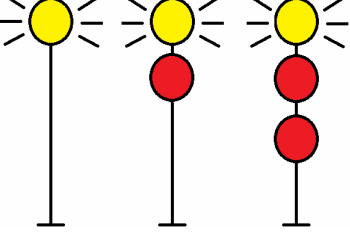
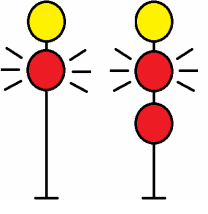
Quick Drive:

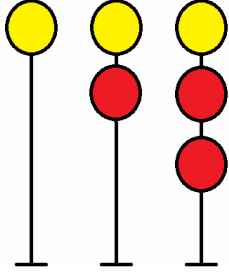
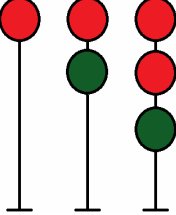

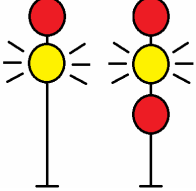
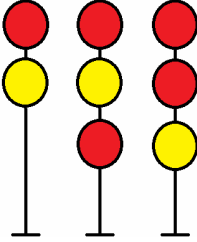
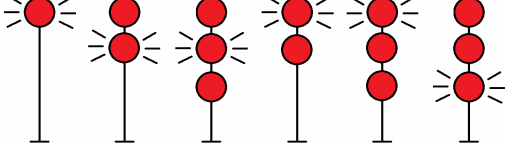
In addition, the Pacific Surfliner® route is set up to use Quick Drive, where you have the freedom to pick a start and end location, time and season and drive any compatible train you own.

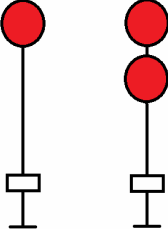
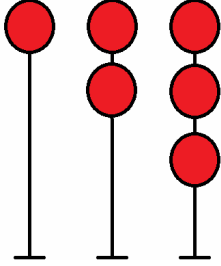
4 Signaling

The signalling for the Pacific Surfliner® route is in accordance with the following practices:

MULTI-ASPECT COLOUR LIGHT SIGNALS:

RULE	ASPECT	NAME	ACTION
9.1.3		Clear	Proceed
9.1.4		Approach Limited	Proceed prepared to pass next signal not exceeding 60 MPH and be prepared to enter diverging route at prescribed speed.
9.1.5		Advance Approach	Proceed prepared to pass next signal not exceeding 50 MPH and be prepared to enter diverging route at prescribed speed.
9.1.6		Approach Medium	Proceed prepared to pass next signal not exceeding 40 MPH and be prepared to enter diverging route at prescribed speed.
9.1.7		Approach Restricting	Proceed prepared to pass next signal at restricted speed.

9.1.8		Approach	Proceed prepared to stop at next signal, trains exceeding 30 MPH immediately reduce to that speed. (Note: Speed is 40 MPH for Amtrak and Commuter trains.)
9.1.9		Diverging Clear	Proceed on diverging route not exceeding prescribed speed through turnout.
9.1.10		Diverging Approach Diverging	Proceed on diverging route not exceeding prescribed speed through turnout prepared to advance on diverging route at the next signal not exceeding prescribed speed through turnout.
9.1.11		Diverging Approach Medium	Proceed on diverging route not exceeding prescribed speed through turnout prepared to pass next signal not exceeding 35 MPH.
9.1.12		Diverging Approach	Proceed on diverging route not exceeding prescribed speed through turnout; approach next signal preparing to stop, if exceeding 30 MPH immediately reduce to that speed. (Note: Speed is 40 MPH for Amtrak and Commuter trains.)
9.1.13		Restricting	Proceed at restricted speed.

<p>9.1.14</p>		<p>Stop and Proceed</p>	<p>Stop, then proceed at restricted speed.</p>
<p>9.1.15</p>		<p>Stop</p>	<p>Stop</p>

5 Speed Limit Signage

Speed limit signs. The upper number (P) indicates maximum permitted line speed for passenger trains and the lower number (F) the maximum permitted line speed for freight trains.



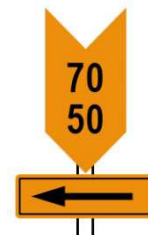
Speed limit for the direction indicated



Warning sign indicating upcoming maximum line speed.



Warning sign indicating upcoming maximum line speed for the direction indicated.



6 Credits

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