Palmdale to Burbank Section Volume 3 User Guide

Volume 3 of the Draft EIR/EIS provides a series of engineering drawings, which present preliminary design information showing alignment, primary features, anticipated right-of-way requirements and temporary construction details in support of the proposed California high-speed rail (HSR) system. It provides a useful tool for stakeholders who want to understand the property, visual and circulation impacts of the Build Alternatives developed and analyzed in the Palmdale to Burbank Project Section.

The Palmdale to Burbank Project Section is approximately 31 to 38-mile long and has six Build Alternatives studied. The northern limit of this section is at Spruce Ct. The information north of this point is shown on the plan for reference only since it has been included in the Bakersfield to Palmdale Project Section.

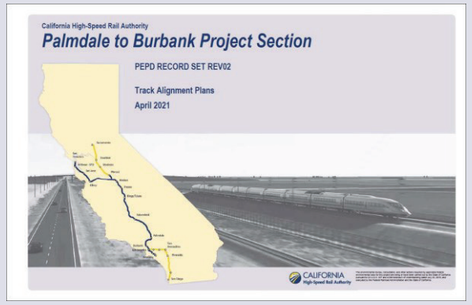
Organization of Volume 3

Volume 3 consists of preliminary engineering design for six Build Alternatives. The Build Alternatives are included in the following drawing sets:

- PEPD Record Set Rev 02 carries Refined SR14, E1 and E2 Build Alternatives.
- PEPD Record Set Addendum carries SR14A, E1A and E2A Build Alternatives.

SR14A Build Alternative is the preferred alternative identified i the EIR/EIS.

The PEPD Record Set is separated by engineering disciplines including Track Alignment, Roadways, Bridges and Elevated Structures, Grading and Drainage, Utility Relocation, Tunnels, Railway Systems and Burbank Station Area. Each discipline has an index, key maps and plans and/or profiles.



Track Alignment Plans Set:

Provides design information about the high-speed rail track alignment including typical sections and plans and profiles.

***Note**: Track alignment plans provides an overview of the design and are a good place to start knowing this project.*

Roadway and Grade Separation Plans Set:

Sections, plans and profiles showing where streets and roads are closed, added, redirected, extended or where grade separations are applied at the rail alignment.

Grading and Drainage Plans Set:

Engineering plans showing design information for moving earth, drainpipes and box culverts and retaining walls.

Construction Staging Plans Set:

Engineering plans for detours, temporary structures, temporary roadways and roadway closures at specific locations where these temporary measures are necessary during construction.

Tunnel Plans Set:

Drawings showing the plan and profile of the tunnels proposed for all Build Alternatives. Typical sections and details provide interesting information for tunnels with different construction methods, for instance, Mined, Cut and Cover or Bored tunnels, as well as features in tunnels.

Bridges and Elevated Structures Set:

This set provides the structures carrying elevated rail tracks or roadways to cross over water, freeway, deep canyons and other existing infrastructures.

Railway Systems Plans Set:

This set provides the railway system design about traction power and automatic train control/communication systems.

Design drawings showing the locations, typical layouts and site plans for electrical power supply facilities that are used to power the high-speed rail train sets, and also, the information showing the location of communication equipment used during the operation of trains on the track.

Utility Relocation Plans Set:

Drawings showing existing and proposed utilities near the project site. These plans also identify utilities that need to be relocated for the construction of the tracks and roadways.

Burbank Station Area Plans Set:

Drawings showing the Burbank Station, including buildings and the station facilities on surface as well as the rail facilities underground, such as train boarding platforms, a station building, a transit center for bus and shuttles, etc.

How to Find a Location in Volume 3 Plans

Readers may seek information about impacts that the project option may have on specific areas or communities. Each disciplinary plan set identifies locations where different types of work will be completed. For a more complete understanding of the project, the reader should repeat the process shown below for each engineering discipline.

The Key Map

The Key Map for each engineering discipline and design option is like a table of contents: a master map of engineering drawings that serves as a "key" for readers to find the detailed map they seek.

The Key Map also contains a Vicinity Map showing the project location as well as surrounding roads and populated areas.

There are Overall Project Segments and/or Key Maps for all sets of PEPD documents.

1 Identify the Location of the Project

Use the Overall Project Segments or Vicinity Map to identify where the project is located compared to surrounding areas.

2 Check the Overall Project Segments and/or Key Map

The Key Map illustrates the drawings numbers for all of the maps. The SR14A Build Alternative is used for this example. The Alignment section Key Map shows the track alignment.

3 Look for Cities, Highways and Landmarks

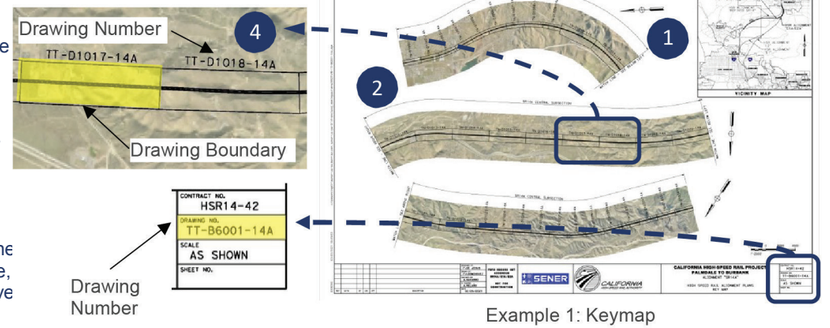
Look at the city and town names, highways or landmarks to find the part of the map where you want to take a closer look. For example, you may want to look in more detail about how the Build Alternative alignment goes next to State Route (SR)14.

4 Find the Drawing Number

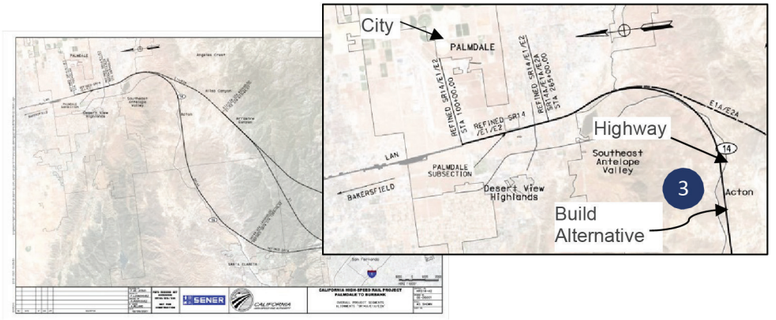
The narrow rectangles represent engineering drawing boundaries. Each boundary has an associated drawing number that will direct you to a sheet that shows the detailed drawing. For example, the drawing number associated with the high-speed rail alignment within the highlighted area is TT-D1017-14A.

5 Go to the Engineering Drawing

Use the drawing number to locate engineering drawings. Use the Index of Drawings to find the specific drawing and drawing number. Alternatively, find the correct page by looking through the plan sheets immediately after the Key Map in that section. The drawing number is located near the bottom right of the drawing. In this example, Alignment drawing TT-D1017-14A shows more detail about how the tunnels are running through the mountains. This could lead the user to look at other sections for more information.



Example 1: Keymap



Example 2: Overall Project Segments

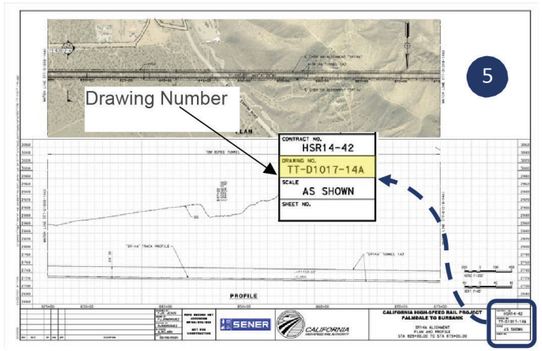
The Index of Drawings

There is a separate Index of Drawings for each engineering discipline, that is located in the General Sheets part near the front of each document. The Index lists the pages (called "drawings") in numerical order, with a column showing a description of the drawing. After finding a location on a Key Map, one may consult the Index of Drawings for the location of the drawing.

Each drawing has a **drawing number**. Drawing numbers on the Key Maps identify which maps illustrate specific geographic locations

The **drawing description** refers to the type of information presented on the sheet, as well as specific station limits, as appropriate.

DRAWING NO.	DESCRIPTION
TT-B0010	GENERAL. INDEX OF DRAWINGS 1 OF 1
TT-B0020	GENERAL. ABBREVIATIONS
TT-B0030	GENERAL. ABBREVIATIONS AND LEGEND
GE-D6001	OVERALL PROJECT SEGMENTS. ALIGNMENTS "SR14A/E1A/E2A"

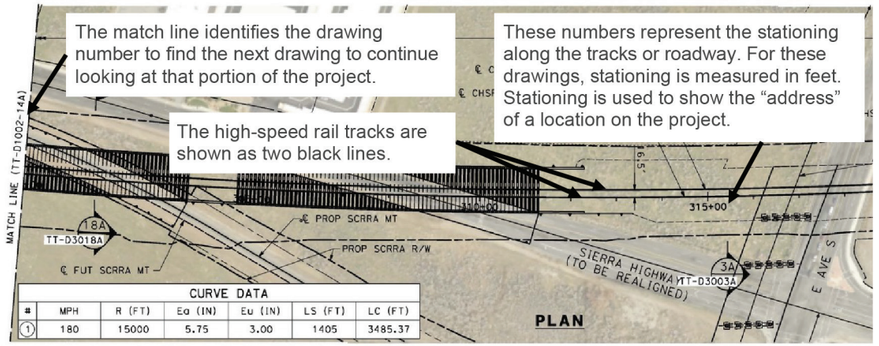


Example 3: Engineering Drawing
– SR14A Build Alternative – Plan and Profile

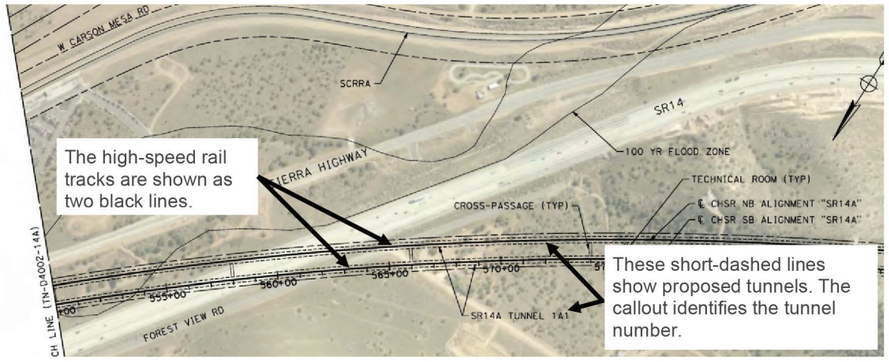
Understanding the Information in Volume 3

Plans

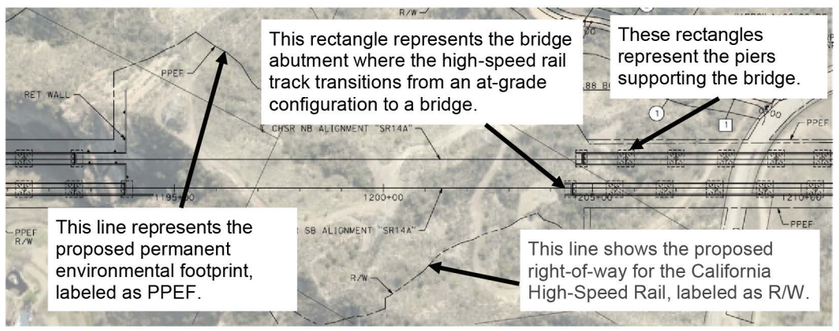
Plans show portions of the project as seen from above. The plans in Volume 3 are detailed drawings of the project corridor that show the location of proposed high-speed rail infrastructure, as well as the extent of existing and proposed rights-of-way, existing road alignments and proposed realignments, utility lines and other features considered by designers. Enlarged sections from several plans are annotated below to help readers understand the different features that are labeled on these drawings.



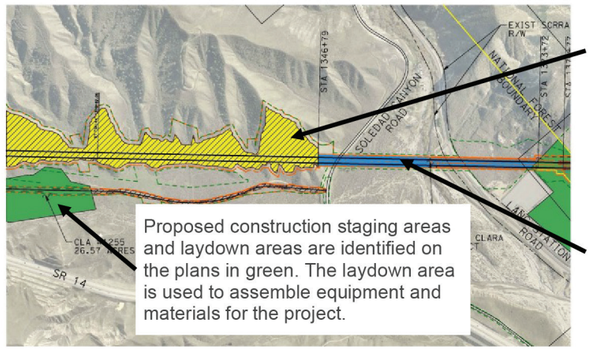
Example 4: PEPD Track Alignment Plans – Plan Portion of Plan and Profile Sheets



Example 5: PEPD Tunnel Plans – SR14A Build Alternative



Example 6: PEPD Construction Staging Plans – SR14A Build Alternative



Example 7: PEPD Construction Staging Plans

On the Construction Staging Plans, the shading represents areas where earth is being placed (cut/fill areas).

The colors along the track represent the suggested phase of construction. In this particular example, according to the legend, the blue means this portion will be constructed in phase 1. The yellow portion will be constructed in phase 2.

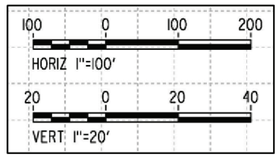
Scales

Various drawings show the width or expanse of the rail alignment, the heights of bridges and viaducts and the right-of way of the alignment in relation to adjacent homes, businesses, farmland and other properties.

The drawings are scaled, meaning the measurements in these drawings are in proportion to the actual locations they represent. For example, one inch of a drawing might represent 100 feet of the alignment. Most drawings show their scale or have real-world measurements depicted on the drawing.

Some drawings have different horizontal and vertical scales. The abbreviations HOR for horizontal and VERT for vertical differentiate the scales. The horizontal scale measures distances in the North, South, East, or West directions. The vertical scale measures distances up and down as if you are looking at them from the side, as in a profile view.

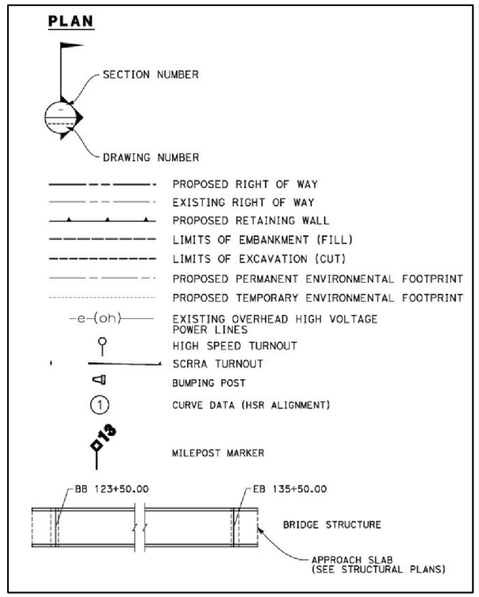
Some drawings have scales that read SCALE APPLICABLE FOR FULL SIZE ONLY. When drawings are printed on paper that is smaller than full size (22 inch by 34 inch), the nominal scale (1" =100' in the example) may not be accurate. Use a ruler to measure the lines on the graphic scale and use those lengths to find distances or heights.



Example 8: Horizontal and Vertical Scales

Legend

The legend defines the meanings of graphics and lines that are shown in the plans and profiles. Legends are provided for each engineering discipline of Volume 3, which can be significantly different according to the elements shown on the engineering drawing. The following sample is the legend from Track Alignment Plans.

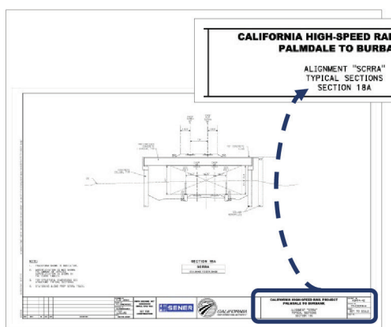


Example 9: Legend of Track Alignment Plans

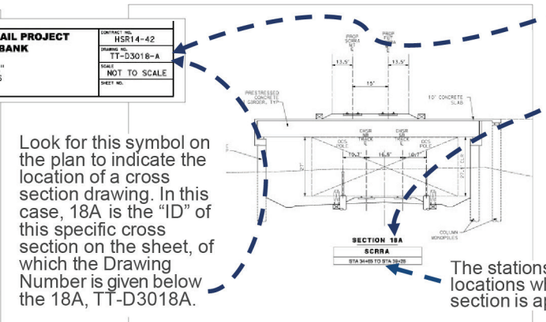
Cross Sections and Vertical Profiles

In addition to the plan view of the rail corridor, various drawings show the width or expanse of the rail alignment, the heights of bridges and viaducts and the right-of way of the alignment in relation to adjacent homes, businesses, farmland and other properties. These dimensions are defined on a cross section view, which is a view generated by an imaginary vertical cut plane to reveal the outlines seen from the angle perpendicular to and along the forward direction.

A vertical profile is a two-dimensional slice of an existing and a proposed surface, taken along an imaginary line, to indicate grades and vertical curves.



Example 10: Section 3A of TT-D3003A



Example 11: Section 18A of TT-D3018A