Organization of Volume 3

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

- PEPD Record Set Rev G2 carries Relaxed 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 in 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.

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.

Example 1: Keymap

1. Identify the Location of the Project
2. Check the Overall Project Segments and/or Key Map
3. Look for Cities, Highways and Landmarks
4. Find the Drawing Number
5. Go to the Engineering Drawing

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.

Example 2: Overall Project Segments

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

Example 3: Engineering 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.
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.

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.

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.

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 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

Example 8: Horizontal and Vertical Scales

Example 9: Legend of Track Alignment Plans

Example 10: Section 3A of TT-D3003A

Example 11: Section 18A of TT-D3018A