

## PART D. COMPARISON OF ALTERNATIVES

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### D.1 INTRODUCTION

This section summarizes and compares the environmental advantages and disadvantages of the proposed project and the alternatives evaluated in detail in this EIR (see Figure D-1). This comparison is based on the environmental impacts of the proposed route and each alternative, as identified in Sections C.2 through C.13. Based on comments submitted on the Draft EIR, the conclusions of this section have changed; these conclusions are presented in Sections D.2 and D.3 below.

Section D.2 includes a summary of the impacts of each alternative in comparison to the proposed route. Section D.3 presents the Environmentally Superior Alternative, including a map (Figure D-2) of the environmentally superior pipeline route. Section D.4 presents a comprehensive alternatives comparison matrix that summarizes the impacts of each alternative by environmental issue area.

### D.2 COMPARISON OF ALTERNATIVES

This section presents a summary comparison of the impacts of the proposed project and alternatives. For the seven alternative route segments (Santa Fe, Cherry, Paramount, Alondra, Bellflower Rail, Artesia, and Shoemaker), as well as the No Project Alternative, summary tables show the differences in environmental impact for each issue area. Because the Alondra Alternative must be compared with both the Bellflower Rail Alternative (in the east) and the Artesia Alternative (in the west), as well as to the proposed project segments, summary tables for these route segments include the proposed project and two separate alternatives (see Sections D.2.4 and D.2.5). Table D.1-1 summarizes the major characteristics of the proposed and alternative route segments.

Following is the methodology that was used to compare alternatives in this EIR:

- Step 1:** An alternatives screening process (described in Section B.7) was used to identify the seven alternative route segments that had the potential to eliminate significant impacts of the proposed pipeline route.
- Step 2:** The environmental impacts of the proposed and the alternative route segments are identified (Sections C.2 through C.13), including the potential impacts of pipeline construction and operation. These impacts are summarized in Table D.4-1.
- Step 3:** The environmental impacts of each alternative segment are compared to the comparable segment of the proposed pipeline route. These comparisons are presented in Sections D.2.1 through D.2.7 below.
- Step 4:** Impacts in the 12 environmental issue areas were evaluated as to their relative importance so that the overall impacts of each alternative could be compared with the proposed project. Potential impacts in six environmental issue areas are considered to be most important in this analysis; these issue areas are system safety, land use, hydrology, socioeconomics, air quality, and transportation. Long-term effects (such as risk of an accident) are given more consideration than short-term effects (such as noise or air emissions during construction). Based on this evaluation, a conclusion is drawn as to the environmental superiority of each segment.

Figure D-1 Map of proposed route and alternatives

**Table D.1-1 Characteristics of Proposed Project and Alternative Segments**

Issues of Concern	Santa Fe Alternative		Cherry Alternative		Paramount Alternative		Central Route Segments			Eastern Route Segments			Shoemaker Alternative	
	Proposed	Alternative	Proposed	Alternative	Proposed (a)	Alternative	Proposed (b)	Alondra Alternative (West)	Bellflower Rail Alternative	Proposed (c)	Alondra Alternative (East)	Artesia Alternative	Proposed (d)	Alternative
<b>Length of Segment (mi.)</b>	0.8	0.6	1.5	1.5	1.0	2.5	2.4	3.0	4.2	2.5	2.1	2.5	0.6	1.5
<b>Type/Location of Waterway Crossing</b>	Open cut crossing of Compton Creek 0.3 mi. N of Santa Fe Ave	Open cut crossing of Compton Creek at Santa Fe Ave	n/a	n/a	n/a	n/a	San Gabriel River on Artesia bridge	San Gabriel River on Alondra bridge	San Gabriel River bored at RR ROW	n/a	n/a	n/a	n/a	n/a
<b>Jurisdiction(s)</b>	LA County	LA County	Long Beach	Long Beach	Long Beach	Long Beach Paramount Bellflower	Bellflower Cerritos	Bellflower	Bellflower Cerritos	Cerritos Norwalk	Bellflower Cerritos Norwalk	Cerritos Artesia	Norwalk	Norwalk
<b>Water Wells</b>	1	0	0	0	3	1	2	3	5	1	1	2	1	1
<b>Non-residential sensitive receptors</b>	0	1	1	2	3	2	8	6	9	7	5	4	1	3
<b>Total residential units*</b>	0**	0	130	160	500	150	300	270	170	250	300	50	110	90

\* Residential units are estimated based on a drive-by survey of the proposed and alternative routes.

\*\* Two mobile home parks are located near the proposed route segment (west of Laurel Park Road and north of Victoria Avenue)

It should be noted that only the portion of the proposed project route that would be replaced by each alternative segment is shown in the comparisons above. The proposed route segments compared:

- a Proposed route segment on Artesia Boulevard (between Paramount and Lakewood Boulevards) was compared to the Paramount Alternative.
- b Proposed route segment on Artesia Blvd (Lakewood Boulevard to the San Gabriel River) was compared to Central Route Segments (Bellflower Rail Alternative and Alondra Alternative, west half)
- c Proposed route segment on Artesia Blvd. (San Gabriel River to Studebaker Road), Studebaker Road (Artesia Blvd. to 166<sup>th</sup> Street), 166<sup>th</sup> Street (Studebaker to Norwalk Blvd.) and Norwalk Blvd. (166<sup>th</sup> to Alondra Blvd.) was compared to Eastern Route Segments (Artesia Alternative and Alondra Alternative, east half)
- d Proposed route segment on Norwalk Blvd. (from Alondra Blvd. to the Norwalk Station) was compared to the Shoemaker Alternative

**D.2.1 Santa Fe Alternative Segment**

The Santa Fe Alternative Segment was determined to be environmentally superior to the proposed route segment. This segment would replace the proposed route segment including the northern part of Laurel Park Road to the corner of Victoria Street and Santa Fe Avenue. Table D.2-1 summarizes and compares the impacts of these two segments for each issue area.

**Table D.2-1 Santa Fe Alternative Compared to Proposed Route**

Issue Areas	Proposed Route Segment	Santa Fe Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Accidents or construction could impact two nearby mobile home parks; no non-residential sensitive receptors	⊕ No residences affected; one sensitive receptor
<b>System Safety</b>	■ Longer route increases probability of an accident during operation	⊕ Shorter route reduces probability of an accident during operation
<b>Hydrology &amp; Water Resources</b>	■ One water well could be affected by an accident	⊕ No water wells that could be affected by an accident
<b>Air Quality</b>	■ Longer route; more emissions from construction	⊕ Shorter route reduces air emissions from construction
<b>Socioeconomics</b>	Similar impacts (both segments would affect businesses)	
<b>Transportation &amp; Traffic</b>	■ Higher traffic volume on Laurel Park; more construction-related traffic impacts	⊕ Lower traffic volumes on Santa Fe Avenue than on Laurel Park Road
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (both routes cross Compton Creek)	
<b>Cultural Resources</b>	■ Could affect site LAN 389; closer to Dominguez Adobe	⊕ No cultural sites would be affected
<b>Environmental Contamination</b>	⊕ No contaminated sites	■ Three medium potential contaminated sites could be encountered in construction
<b>Geology &amp; Soils</b>	Similar impacts (both segments cross the Newport-Inglewood Fault where an earthquake could cause pipeline rupture)	
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.

**D.2.2 Cherry Alternative Segment**

The Cherry Alternative Segment was determined to be environmentally superior to the proposed route segment along South Street and Paramount Boulevard. In the Draft EIR, the proposed route segment was determined to be environmentally superior to the Cherry Alternative Segment. Further analysis of these two segments based on additional information in the comments on the Draft EIR resulted in a revised conclusion. The revised comparison of the impacts of these two segments for each environmental issue area is presented in Table D.2-2.

**Table D-2 Cherry Alternative Compared to Proposed Route**

Issue Areas	Proposed Route Segment	Cherry Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	➕ Pipeline accidents and construction impacts could affect approximately 130 residential units and one non-residential sensitive receptor	➖ Pipeline accidents and construction impacts could affect approximately 160 residential units and two non-residential sensitive receptors
<b>System Safety</b>	Similar impacts (segments are the same length)	
<b>Hydrology &amp; Water Resources</b>	Similar impacts (no wells or waterway crossings)	
<b>Air Quality</b>	Similar impacts (segments are the same length)	
<b>Socioeconomics</b>	➖ Businesses on South Street would experience continued construction disruption	➕ No extended business disruptions
<b>Transp. &amp; Traffic</b>	➖ Ongoing cumulative traffic impacts from construction on South Street	➕ No cumulative traffic impacts
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no biological resources concerns)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	➖ Six high potential sites and twelve medium potential sites could affect construction safety	➕ Two high potential sites and six medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	➕ No liquefaction along proposed route segment	➖ Alternative segment would be installed in an area of moderate susceptibility to liquefaction, potentially causing pipeline rupture. (Note that connection with the Paramount Alternative would avoid this area liquefaction area)
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ➕ Indicates that segment has fewer environmental impacts
- ➖ Indicates that the segment has more environmental impacts.

In addition to the information presented in the table, two facts are noted in support of the Cherry Alternative. First, because the Paramount Alternative was determined to be environmentally superior to the proposed route along Artesia Boulevard (as described in Section D.2.3 below), in order to connect the proposed segment with the Paramount Alternative, one additional mile of pipeline would have to be constructed (as demonstrated in Draft EIR Figure D.2-2) if the Cherry Alternative were not used. Second, the Cherry Alternative Segment and the comparable portion of the proposed route are both within the City of Long Beach. On March 24, 1998, the Long Beach City Council adopted a resolution in support of the Cherry Alternative, citing the reasons described in this section.

**D.2.3 Paramount Alternative**

The Paramount Alternative was determined to be environmentally superior to the equivalent portion of the proposed pipeline route. The major factor in this determination is the significant difference between the numbers of residences along the two segments. The Paramount Alternative is primarily industrial and

commercial, whereas the proposed route segment is mixed land uses with a large number of multi-family buildings located along Artesia Boulevard. Table D.2-3 describes the environmental impacts of the Paramount Alternative segment in comparison to the proposed route for each environmental issue area.

**Table D.2-3 Paramount Alternative Compared to Proposed Route**

Issue Areas	Proposed Route Segment	Paramount Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	➖ Pipeline accidents and construction impacts could affect approximately 500 residential units; three non-residential sensitive receptors	➕ Pipeline accidents and construction impacts could affect approximately 150 residential units; residences generally at greater distance from ROW; two non-residential sensitive receptors
<b>System Safety</b>	➕ Shorter route (reduced probability of an accident)	➖ Longer route (increased probability of an accident)
<b>Hydrology &amp; Water Resources</b>	± Three water wells (Cities of Long Beach and Bellflower) could be affected by a pipeline accident	± One water well (supplying 50-60% of City of Paramount's water) could be affected by a pipeline accident
<b>Air Quality</b>	➕ One mile of construction (fewer air emissions)	➖ 2.5 miles of construction (more air emissions)
<b>Socioeconomics</b>	A similar number of businesses could be affected along proposed and alternative segments	
<b>Transportation &amp; Traffic</b>	± 20,500 - 25,000/day traffic volumes on Artesia Boulevard	± 19,200/day traffic volume along Alondra Boulevard; 29,000/day on Cherry/Garfield
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no biological resources concerns)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	➕ Five medium potential sites could affect construction safety	➖ Eight medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	➖ A substantial area of moderate liquefaction north of Artesia Boulevard could cause pipeline rupture in an earthquake	➕ A small area of moderate liquefaction east of Cherry Ave. in Long Beach could cause pipeline rupture in an earthquake
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

<sup>1</sup> Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ➕ Indicates that segment has fewer environmental impacts
- ➖ Indicates that the segment has more environmental impacts.
- ± Trade-offs between impacts result in overall similar impacts.

**D.2.4 Central Route Segments: Lakewood Boulevard to San Gabriel River**

The central portion of the proposed route offers two alternative segments in addition to the proposed route: the Alondra Alternative and the Bellflower Rail Alternative. The Bellflower Rail Alternative was determined to be environmentally superior in this segment: it would affect fewer residential units, offer safety benefits, and cause few traffic impacts. Table D.2-4 shows the comparison of the impacts of these three routes between Lakewood Boulevard on the west and the San Gabriel River on the east. Note that Figure D-1 shows all of these route segments.

**Table D.2-4 Central Route Segments: Lakewood Boulevard to San Gabriel River**

Issue Areas	Proposed Route Segment (Artesia Blvd. between Lakewood Blvd. and San Gabriel River)	Alondra Alternative (Lakewood Blvd. and Alondra Blvd. to San Gabriel River)	Bellflower Rail Alternative
<b>Major Issues</b>			
<b>Land Use &amp; Recreation; Noise</b>	■ Pipeline accidents and construction impacts could affect approximately 300 residential units; 8 non-residential sensitive receptors	■ Pipeline accidents and construction impacts could affect approximately 270 residential units; 6 non-residential sensitive receptors	+ Pipeline accidents and construction impacts could affect approximately 170 residential units; 9 non-residential sensitive receptors
<b>System Safety</b>	■ Similar impacts (no difference in length; installation of pipeline in city streets results in risk of third-party accidents)		+ Longer route so greater probability of accident due to length, but lower risk of co-locational and third-party accidents
<b>Water Resources; Biological Resources</b>	■ San Gabriel River crossing hung from Artesia Blvd. bridge (accidental rupture would directly contaminate waterways); two water wells could be affected by a pipeline accident	■ San Gabriel River crossing hung from Alondra Blvd. bridge (accidental rupture would directly contaminate waterways); three water wells could be affected by a pipeline accident	+ San Gabriel River crossing would be bored (reduced risk of accident); five water wells could be affected by a pipeline accident
<b>Air Quality</b>	± 2.4 miles of construction in city streets	± 3.0 miles of construction in city streets	± 4.2 miles of construction (2.8 in rail ROW); construction would be faster in rail ROW
<b>Socioeconomics, Public Services</b>	■ Similar impacts (businesses would be affected by construction in city streets)		+ Few businesses would be exposed to construction impacts or accidents; access not affected by construction
<b>Transportation &amp; Traffic</b>	■ 2.4 miles of construction on Artesia Boulevard (20,000 vehicles/day)	■ 3.0 miles of construction on Lakewood and Alondra Blvds. (25,000 - 35,000 vehicles/day)	+ 2.8 miles of construction in rail ROW (5 street crossings); 1.6 miles in Lakewood Blvd.
<b>MINOR ISSUES</b>			
<b>Cultural Res.</b>	Similar impacts (no cultural resources affected)		
<b>Env. Contamination</b>	■ A maximum of six medium potential sites could affect construction safety	■ A maximum of two high potential sites and six medium potential sites could affect construction safety	+ Two medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	Similar impacts (eastern end of all segments has moderate/high liquefaction potential where an earthquake could cause pipeline rupture)		
<b>Visual Resources</b>	Similar impacts (all segments include mixed land uses; construction in streets or rail ROW)		

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- + Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.
- ± Indicates that there are trade-offs between impacts and no segment is clearly advantageous.

**D.2.5 Eastern Route Segments: San Gabriel River to Norwalk Boulevard**

Between the San Gabriel River and Norwalk Boulevard, three pipeline segments could be used: the proposed route, the Alondra Alternative, or the Artesia Alternative. The Artesia Alternative was determined to be the environmentally superior route segment because there are significantly fewer residences that could be exposed to the risk of a pipeline accident and to construction impacts. This factor is considered to outweigh the other issue areas in which impacts would be more severe than those along the proposed or Alondra segments. Also, this portion of the Alondra Alternative could be used only if the western portion of that alternative were found to be environmentally superior, and in the Central Route Segment (as described in Section D.2.4), the Bellflower Rail Alternative is clearly environmentally superior. Therefore, use of the eastern portion of the Alondra Alternative is not feasible.

Table D.2-5 summarizes the environmental impacts of the pipeline segments between the San Gabriel River (on the west) and Norwalk Boulevard (on the east).

**Table D.2-5 Eastern Route Segments: San Gabriel River to Norwalk Station**

Issue Areas	Proposed Route Segment (Artesia Blvd., Studebaker Rd., 166 <sup>th</sup> Street)	Alondra Alternative (San Gabriel River to Norwalk Blvd.)	Artesia Alternative (Artesia Blvd. from SG River to 166 <sup>th</sup> St.)
<b>Major Issues</b>			
<b>Land Use &amp; Recreation; Noise</b>	■ Pipeline accidents and construction impacts could affect approximately 250 residential units; 7 non-residential sensitive receptors	■ Pipeline accidents and construction impacts could affect approximately 300 residential units; 5 non-residential receptors	± Pipeline accidents and construction impacts could affect approximately 50 residential units; 4 non-residential sensitive receptors
<b>System Safety</b>	Similar impacts (no overall difference in segment length)		
<b>Hydrology &amp; Water Res.</b>	■ Pipeline would pass the reservoir on Studebaker Road and one water well could be affected by a pipeline accident	± One water well could be affected by a pipeline accident	■ Two water wells could be affected by a pipeline accident
<b>Air Quality</b>	Similar impacts (no difference in segment length)		
<b>Socioeconomics &amp; Public Services</b>	± Few businesses affected by construction or pipeline accidents	± Some businesses affected by construction on Alondra Blvd.	■ Many businesses affected by construction on Artesia Blvd.
<b>Transportation &amp; Traffic</b>	± Low traffic volume on 166th Street (10,000 vehicles/day)	■ High traffic volume on Alondra Blvd. (40,000 to 47,000 vehicles/day)	■ Higher traffic volumes on Artesia and Norwalk Blvds. (17,000 to 25,000 vehicles/day)
<b>Minor Issues</b>			
<b>Biological Res.</b>	Similar impacts (no waterway crossings or sensitive areas)		
<b>Cultural Res.</b>	Similar impacts (no sites affected)		
<b>Env. Contamination</b>	± A maximum of six medium potential sites could affect construction safety	± A maximum of two high potential sites; six medium potential sites could affect construction safety	± Two high potential sites and three medium sites could affect construction safety
<b>Geology &amp; Soils</b>	Similar impacts (all segments in moderate to high liquefaction area where an earthquake could cause pipeline rupture)		
<b>Visual Resources</b>	No difference (all segments include mixed land uses; construction in streets)		

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts

are based on sensitive land uses.

- ✦ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.

#### **D.2.6 Shoemaker Alternative Segment**

The proposed pipeline route has been determined to be environmentally superior to the Shoemaker Alternative Segment. In the Draft EIR, the Shoemaker Alternative Segment was considered to be environmentally superior to the proposed route. Further analysis of these segments, and additional information presented in comments on the Draft EIR resulted in the revised conclusion, which is explained in Table D.2-6.

The Shoemaker Alternative Segment would eliminate an approximately one-half mile segment of the proposed route involving construction on Norwalk Boulevard (between Alondra Boulevard and the Norwalk Station) and within the Norwalk Station itself. However, construction would occur on Alondra Boulevard (for one mile between Norwalk Boulevard and Shoemaker Avenue) and Shoemaker Avenue (one-half mile from Alondra Boulevard to Excelsior Drive).

Another consideration in evaluation of this segment is that use of the Shoemaker Alternative segment would require that SFPP install a block valve near the corner of Shoemaker Avenue and Excelsior Drive. CEQA requires consideration of the “proponent’s control over alternative sites” [CEQA Guidelines §15126(d)]; because this alternative site is not within SFPP’s control, this is a disadvantage of this alternative.

The City of Norwalk, in its comment letter on the Draft EIR (March 25, 1998), stated a first and second preference for routes affecting the City: the Shoemaker Alternative is the first preference due to the concern regarding existing contamination at the Norwalk Station, and the proposed route is the second preference (acknowledging the several disadvantages of the Shoemaker Alternative described above). There is a potential environmental benefit resulting from consolidation of risk in the Norwalk Station location rather than adding a new risk by installing the new pipeline in Shoemaker Avenue, where no pipelines currently exist between Excelsior Drive and Alondra Boulevard.

The environmental impacts of the Shoemaker Alternative and the proposed route segment are described in Table D.2-6 for each environmental issue area.

**Table D.2-6 Shoemaker Alternative Compared to Proposed Route Segment**

Issue Areas	Proposed Route Segment	Shoemaker Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	<ul style="list-style-type: none"> <li>■ Pipeline accidents and construction impacts could affect approximately 110 residential units and 1 non-residential sensitive receptor</li> </ul>	<ul style="list-style-type: none"> <li>⊕ Pipeline accidents and construction impacts could affect approximately 90 residential units and 3 non-residential sensitive receptors</li> </ul>
<b>System Safety</b>	<ul style="list-style-type: none"> <li>⊕ Shorter route (reduced probability of an accident)</li> <li>⊕ Consolidation of risk at existing industrial site</li> </ul>	<ul style="list-style-type: none"> <li>■ Longer route (increased probability of an accident)</li> <li>■ Addition of new risk to Shoemaker Avenue (no pipelines currently exist between Alondra Blvd. and Excelsior Dr.)</li> </ul>
<b>Hydrology &amp; Water Resources</b>	Similar impacts (one well affected by both segments)	
<b>Air Quality</b>	<ul style="list-style-type: none"> <li>⊕ 0.6 miles of construction (fewer air emissions)</li> </ul>	<ul style="list-style-type: none"> <li>■ 1.5 miles of construction (more air emissions)</li> </ul>
<b>Socioeconomics</b>	<ul style="list-style-type: none"> <li>⊕ No businesses affected</li> </ul>	<ul style="list-style-type: none"> <li>■ Businesses along Shoemaker Avenue and Alondra Blvd. affected by construction or a pipeline accident</li> </ul>
<b>Transportation &amp; Traffic</b>	<ul style="list-style-type: none"> <li>± High traffic volumes on Norwalk Blvd. (27,000 vehicles/day) over 0.6 miles</li> </ul>	<ul style="list-style-type: none"> <li>± Lower traffic volumes on Shoemaker Ave. (10,000 vehicles/day) and Alondra Blvd. (20,000 vehicles/day) over 1.5 miles</li> </ul>
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no waterway crossings)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	<ul style="list-style-type: none"> <li>± Construction through Norwalk Station with contaminated soil and groundwater could affect construction safety</li> </ul>	<ul style="list-style-type: none"> <li>± One high potential contaminated site and two medium sites could affect construction safety</li> </ul>
<b>Geology &amp; Soils</b>	<ul style="list-style-type: none"> <li>⊕ 0.6 miles of construction in area of moderate/high liquefaction where an earthquake could cause pipeline rupture</li> </ul>	<ul style="list-style-type: none"> <li>■ 1.5 miles of construction in area of moderate/high liquefaction where an earthquake could cause pipeline rupture</li> </ul>
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.
- ± Indicates that trade-offs between impacts in this issue area so neither segment has an advantage.

### D.2.7 No Project Alternative

The No Project Alternative is described in Section B.9 and consists of using existing pipelines in combination with significantly increased trucking of petroleum products over time. Although use of existing pipelines under the No Project Alternative would offer short-term environmental advantages when compared to construction of a new pipeline, the long-term continuation and potential increase of truck transportation that is required due to lack of sufficient pipeline capacity render the No Project Alternative environmentally inferior. In contrast, the development and utilization of a new pipeline would substantially reduce the trucking of petroleum products.

No new construction would occur if this alternative were selected, so the short-term construction impacts associated with the Proposed Project or other new pipeline alternatives would not occur. Table D.2-7 summarizes the impacts of the No Project Alternative in comparison to a new pipeline.

**Table D.2-7 No Project Alternative Compared to New Pipeline**

Issue Areas	No Project Alternative	Proposed Route Segment
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Residents and sensitive receptors along truck routes (hundreds of miles of freeways and surface streets) would experience traffic and noise impacts	⊕ Residences and sensitive receptors along the 13-mile pipeline route would experience construction impacts and risk of spill or fire
<b>System Safety</b>	■ The No Project Alternative would require nearly 500 trucks to travel approximately 170 miles per day. Fatality rates for truck transportation are 300 times higher than for pipelines. Spill risks are also much higher because a truck accident would be expected every 4-5 days and 15 to 20 % of accidents result in spilled product. Truck accidents can also result in significant traffic and air quality concerns (from evaporated product), in addition to safety.	⊕ Residential areas, sensitive land uses, businesses, and water resources between Carson and Norwalk would be subjected to new fuel spill risks associated with the proposed 13-mile pipeline project (or pipeline alternatives)
<b>Hydrology &amp; Water Resources; Biological Res.</b>	■ Greater risk that trucking accident would contaminate waterways and affect biological resources	⊕ Less risk that pipeline accident would contaminate waterways and affect biological resources
<b>Air Quality</b>	■ Air pollutant emissions are significantly increased by truck transportation of crude oil, and emissions would occur over many years rather than in a period of months (for pipeline construction). Truck transportation also requires substantially greater consumption of non-renewable fuels.	⊕ Short-term construction emissions would occur
<b>Socioeconomics</b>	■ Increased accident likelihood could affect businesses and utilities along southern California regional roadways	⊕ Short-term construction impacts or pipeline accidents could affect businesses along the 13-mile pipeline route
<b>Transportation &amp; Traffic</b>	■ Long-term traffic impacts would result from increased trucking. The greatly increased truck traffic would affect the regional transportation network.	⊕ Short-term traffic impacts would occur
<b>Minor Issues</b>		
<b>Cultural Res.</b>	± Cleanup of truck spills could impact cultural resources	± Slight possibility that construction could impact unrecorded cultural sites
<b>Geology &amp; Soils</b>	⊕ Trucking is less susceptible to accidents caused by earthquakes	■ New pipeline subject to rupture by the Newport-Inglewood Fault.
<b>Visual Resources</b>	± No new construction would occur; truck traffic would increase	± Short-term construction activities visible

<sup>1</sup> Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that alternative segment has fewer environmental impacts
- Indicates that the alternative segment has more environmental impacts.

### D.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Determination of which of the project alternatives is environmentally superior is quite difficult and depends on many factors. In order to meet the CEQA requirements to identify an environmentally superior alternative, we primarily considered the importance of “major” issue areas that have potential long-term, widespread significant impacts (i.e., land use, system safety, hydrology, and air quality), and the most significant construction impacts (i.e., socioeconomics and transportation). These six issue areas represent the key to the alternatives comparison, as shown in Tables D.2-1 through D.2-7 above. Even in these issue areas, determining a superior alternative is difficult because of the tradeoffs associated with different route segments.

#### D.3.1 Summary of Conclusions

**A New Pipeline vs. No Project Alternative.** As shown in Table D.2-7, the Proposed Project or a new pipeline alternative is environmentally superior to the No Project Alternative by a wide margin. The No Project Alternative would not be the environmentally superior alternative due to the regional, long-term significant and unavoidable risks and impacts associated with extensive trucking of petroleum products from Los Angeles and Colton to various destinations and associated with increased use of existing pipelines. The impacts of trucking offset any advantages of the No Project Alternative with regard to avoidance of short-term construction impacts associated with the proposed project or alternative segments.

**Proposed Project vs. Alternative Pipeline Segments.** As explained in Sections D.2.1 through D.2.6 above, the following alternative segments were found to be environmentally superior:

- Santa Fe Alternative is superior to the proposed route segment (Section D.2.1)
- Cherry Alternative is superior to the proposed route segment (Section D.2.2)
- Paramount Alternative is superior to the proposed segment (Section D.2.3)
- Bellflower Rail Alternative is superior to the proposed segment (Section D.2.4)
- Artesia Alternative is superior to the proposed segment (Section D.2.5)
- Proposed route segment is superior to the Shoemaker Alternative (Section D.2.6).

#### D.3.2 Creation of a Complete Environmentally Superior Pipeline Route

Figure D-2 illustrates the Environmentally Superior Pipeline Route: the route that combines the pipeline segments of the proposed and alternative segments in a manner that reduces the impacts of the proposed project to the greatest extent feasible. It should be noted that this combination route is 14.3 miles long, approximately 1.3 miles (or 10%) longer than the originally proposed route. This additional overall length results in potential increased impacts, particularly in two issue areas:

- **System Safety:** Since the probability of a spill occurring is directly related to the length of the pipeline, a 10% increase in overall length increases the likelihood that an accident could occur. The overall probability of a leak occurring would therefore increase slightly.
- **Air Quality:** A longer pipeline would be expected to produce proportionately more air emissions during

construction. However, since the additional length primarily results from construction in the railroad right-of-way where construction would proceed at a much faster rate, overall emissions are expected to be similar to those of the proposed route.

In spite of these impacts, the additional length is considered to be necessary to reduce significant impacts in other issue areas. These areas of overall superiority include:

- Land Use: The environmentally superior route would affect about half as many residences as the proposed route.
- System Safety: The environmentally superior route includes the opportunity to bore under the San Gabriel River, as well as the use of the railroad right-of-way where third-party and co-locational risk are reduced.
- Hydrology and Water Resources: The environmentally superior route would affect about one third of the water wells that the proposed route would affect.
- Transportation: With the use of the railroad ROW, transportation impacts would be reduced.

#### **D.4 ALTERNATIVES COMPARISON MATRIX**

Table D.4-1 presents the comparison of the proposed project with the seven alternative route segments and the No Project Alternative. The table presents impacts by environmental issue area and impact parameter for Class I and Class II impacts of each of these alternatives. This is described in more detail in Section D.2 (Comparison of Alternatives). Overall conclusions based on this matrix are presented in Section D.3 (Environmentally Superior Alternative).

Figure D-2 map 8.5 x 11 of Environmentally Superior Pipeline Route