4.16 UTILITIES

4.16.1 INTRODUCTION

This section discusses existing utilities within the SVRTC project area. The information provided includes the location, quantity, type of utility, owner/operator, size, and type of materials on the larger utilities that could impact the design configuration and construction of the SVRTC alternatives. The section also describes how the Baseline and BART alternatives, as well as the MOS scenarios, would affect utilities and includes proposed mitigation measures, as needed. More information about utilities along the BART Alternative alignment, including the MOS scenarios, can be found in the Composite Utility Identification Drawings, and the Utility Conflict Identification Drawings, (both prepared by Earth Tech, Inc. 2003).

4.16.2 EXISTING CONDITIONS

The busway connectors to be constructed under the Baseline Alternative would be built on retained fill between or alongside existing roadway ROW. In addition, the majority of the busway connectors would be located in the medians of I-680 and I-880 and outside the ROW of South Grimmer and Fremont boulevards. Utilities are located within the portion of the busway connectors along South Grimmer and Fremont boulevards with extensions to adjacent properties.

The utilities that exist within the SVRTC for the BART Alternative and MOS scenarios are:

- Gas lines
- Petroleum lines
- Electric lines
- Sanitary sewer lines
- Telephone lines
- Water lines
- Storm drains
- Pipes carrying nitrogen (air products)
- Fiber optic cables
- Streetlights and traffic signals

Of the many utilities located along the BART Alternative, Table 4.16-1 identifies 14 utilities that are 36 inches or greater in diameter. From Mission Boulevard to Auburn Court, the Alameda County Flood Control and Water Conservation District (ACFCWCD) maintains a 60-inch storm drain. The San Francisco Water District (SFWD) has two steel water lines 72 and 90 inches in diameter between Kato Road and Curtis Avenue. These pipelines are two of the largest known to exist in the corridor. The SCVWD also maintains two 42-inch water lines from Curtis Avenue to Trimble Road. Between Montague Expressway and Trimble Road, Pacific Gas and Electric (PG&E) owns welded steel pipes that are 24 and 36 inches in diameter. The City of San Jose has multiple sewer and storm drain pipelines stretching from the Lundy Avenue and Sierra Road intersection to downtown San Jose at 4th and East Santa Clara streets. The SCVWD maintains a 66-inch central pipeline storm drain, which parallels the BART alignment south of Berryessa Road and crosses to the west under the existing railroad north of Mabury Road. A 78-inch storm drain is located between Montague Expressway and Trimble Road.

The Union Sanitary District maintains sewer facilities in the City of Fremont, as well as in the cities of Union City and Newark. The Milpitas Sanitary District, City of San Jose, Santa Clara Sewer District (SCSD), and the City of Santa Clara maintain most of the sanitary facilities within the rest of the corridor. Water lines are owned and operated by the San Francisco Water Department, ACWD, the City of Milpitas, the San Jose Water Company, San Jose Municipal Water System, the City of San Jose, and the SCVWD. The storm drains in the proposed BART station areas are maintained by ACFCWCD, City of Milpitas, City of San Jose, City of Santa Clara, and SCSD.
Table 4.16-1: Major Utility Locations Along the BART Alternative

<table>
<thead>
<tr>
<th>Location</th>
<th>Figure/ Stationing</th>
<th>Quantity</th>
<th>Type of Utility</th>
<th>Owner/ Operator</th>
<th>Size (inches)</th>
<th>Type of Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Boulevard to Auburn Court</td>
<td>Figures A-5 to A-8 STA 73+90</td>
<td>1</td>
<td>Storm Drain</td>
<td>Alameda County Flood Control and Water Conservation District</td>
<td>60</td>
<td>Reinforced concrete pipe</td>
</tr>
<tr>
<td>Kato Road to Curtis Avenue</td>
<td>Figure A-19 STA 316+75</td>
<td>2</td>
<td>Water</td>
<td>San Francisco Water District</td>
<td>72 and 90</td>
<td>Steel</td>
</tr>
<tr>
<td>Curtis Avenue to Montague Expressway</td>
<td>Figure A-20 STA 370+00</td>
<td>1</td>
<td>Water</td>
<td>Santa Clara Valley Water District</td>
<td>42</td>
<td>Welded Steel</td>
</tr>
<tr>
<td>Montague Expressway to Trimble Road</td>
<td>Figure A-20 STA 381+00</td>
<td>1</td>
<td>Water</td>
<td>Santa Clara Valley Water District</td>
<td>42</td>
<td>Asbestos clay water pipe</td>
</tr>
<tr>
<td>Montague Expressway to Trimble Road</td>
<td>Figure A-20 STA 382+00</td>
<td>2</td>
<td>Gas</td>
<td>Pacific Gas and Electric</td>
<td>24 and 36</td>
<td>Welded Steel</td>
</tr>
<tr>
<td>Montague Expressway to Trimble Road</td>
<td>Figure A-22 STA 390+00</td>
<td>1</td>
<td>Storm Drain</td>
<td>City of San Jose</td>
<td>78</td>
<td>Reinforced concrete pipe</td>
</tr>
<tr>
<td>Lundy Avenue/Sierra Road Intersection</td>
<td>Figure A-24 STA 489+50 and STA 491+00</td>
<td>2</td>
<td>Sewer</td>
<td>City of San Jose</td>
<td>8 and 36</td>
<td>Vitrified clay pipe</td>
</tr>
<tr>
<td>Berryessa Road to Mabury Road</td>
<td>Figure A-25 STA 520+00 to STA 549+00</td>
<td>1</td>
<td>Storm Drain</td>
<td>Santa Clara Valley Water District</td>
<td>66</td>
<td>Pre-stressed concrete or welded steel</td>
</tr>
<tr>
<td>7th and East Santa Clara Streets</td>
<td>Figure A-33 STA 676+00</td>
<td>2</td>
<td>Sewer</td>
<td>City of San Jose</td>
<td>8 and 72</td>
<td>Vitrified clay pipe and reinforced concrete tube</td>
</tr>
<tr>
<td>6th and East Santa Clara Streets</td>
<td>Figure A-33 STA 680+00</td>
<td>1</td>
<td>Storm Drain</td>
<td>City of San Jose</td>
<td>72</td>
<td>Reinforced concrete tube</td>
</tr>
<tr>
<td>5th and East Santa Clara Streets</td>
<td>Figure A-33 STA 683+50</td>
<td>1</td>
<td>Sewer</td>
<td>City of San Jose</td>
<td>54</td>
<td>Brick</td>
</tr>
<tr>
<td>5th and East Santa Clara Streets</td>
<td>Figure A-33 683+50</td>
<td>1</td>
<td>Storm Drain</td>
<td>City of San Jose</td>
<td>48</td>
<td>Unknown</td>
</tr>
<tr>
<td>4th and East Santa Clara Streets</td>
<td>Figure A-33 STA 687+00</td>
<td>2</td>
<td>Storm Drain</td>
<td>City of San Jose</td>
<td>54 and 60</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Other utilities in the corridor include petroleum lines, which are primarily owned by Chevron and Kinder-Morgan. PG&E controls the electric lines, with some belonging to Silicon Valley Power. The streetlights and traffic signals in the corridor are maintained by the cities of Fremont, Milpitas, San Jose, and Santa Clara, and by Alameda and Santa Clara counties.

Communication networks also interlace the area. Most communication equipment is owned and operated by SBC Communications Inc. (SBC), with the rest owned by MCI, ICG Communications Inc., XO Communications Inc., and the UPRR. Fiber optic cables in the area are owned by SBC, Sprint, Silicon Valley Power, MFS Worldcom, AboveNet, Inc., Level 3 Communications Inc., One World Telecommunications, and XO Communications.

4.16.3 IMPACT ASSESSMENT AND MITIGATION MEASURES

4.16.3.1 Impacts

No-Action Alternative

Projects to be implemented under the No-Action Alternative would undergo separate environmental review to define impacts to utilities. (See Section 3.2.1.2 for a list of future projects under the No-Action Alternative.)

Baseline Alternative

The Baseline Alternative includes three new busway connectors that are primarily in the medians of I-680 and I-880 or on retained fill adjacent to South Grimmer and Fremont Boulevards. Therefore, no major utility impacts are anticipated.

BART Alternative

Table 4.16-1 lists the major utilities known to exist in the corridor. To the extent possible, the BART Alternative and MOS scenarios have been located to avoid conflicts with these major utilities. In certain instances, the location of the BART Alternative and MOS scenarios alignment, station, and ancillary facilities would require that conflicting utilities be relocated. This is particularly true for the tunnel segment of the alignment and for stations to be constructed by the cut-and-cover method, which include the Alum Rock, Civic Plaza/SJ SU, and Diridon/Arena stations. Relocation of utilities to new permanent locations generally would be performed in advance of construction of the BART Alternative and MOS scenarios.

4.16.3.2 Design Requirements and Best Management Practices

Baseline and BART Alternatives

Ongoing coordination with utility providers will be conducted during the Preliminary Engineering, Final Design, and construction phases of the Baseline or BART alternatives, as well as the MOS scenarios, to identify any potential conflicts and formulate strategies to overcome potential problems. Any utility impacts will be scheduled to minimize disruptions in time duration and geographic extent. Adjacent properties will be notified prior to any temporary changes to utility service.
4.16.3.3 Mitigation Measures

No-Action Alternative

Projects to be implemented under the No-Action Alternative would undergo separate environmental review to define impacts to utilities and to determine appropriate mitigation measures.

Baseline Alternative

Implementation of the Baseline Alternative does not result in any long-term impacts to utilities; therefore, no mitigation is required.

BART Alternative

Implementation of the BART Alternative and MOS scenarios does not result in any long-term impacts to utilities; therefore, no mitigation is required. Mitigation measures for short-term construction impacts are discussed in Section 4.19.13.3, Construction/Mitigation Measures for Utilities Impacts.