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 Water District (ACWD) 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 largest is a 78-inch storm drain 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.

Other utilities in the corridor include petroleum lines, which are primarily owned by Chevron and Kinder-

Table 4.16-1: Major Utility Locations Along the BART Alternative

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

Source: Earth Tech, Inc., 2003.

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/SJSU, and Diridon/Arena stations. Relocation of utilities to new permanent locations generally would be performed in advance of construction of the BART Alterative 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*.