

**AGREEMENT
BETWEEN THE CITY OF SAN JOSE
AND THE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY
FOR
THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF THE CITY OF SAN
JOSE – VTA FIBER COMMUNICATIONS WITHIN VTA DUCT BANK**

THIS AGREEMENT (“AGREEMENT”) is made and entered into this _____ day of _____ 2012 (“Effective Date”) by and between the CITY OF SAN JOSE, a municipal corporation of the State of California (hereinafter “CITY”) and the Santa Clara Valley Transportation Authority, a public agency organized as a special district under California law (hereinafter “VTA”). Hereinafter, CITY and VTA may be individually referred to as “Party” or collectively referred to as “Parties.”

WITNESSETH:

WHEREAS, CITY was awarded \$15 million in Proposition 1B Traffic Light Synchronization Program (TLSP) funds to implement transportation projects to optimize traffic flow, reduce vehicle emissions and improve air quality; and

WHEREAS, as part of the TLSP effort, CITY intends to install approximately fifty (50) miles of fiber optic communications infrastructure within the City of San José to support real time traffic management capabilities by December 2012; and

WHEREAS, the Silicon Valley Intelligent Transportation System (SV-ITS) Program (hereinafter “SV-ITS Program”) was formed in 1997 (formerly known as the Silicon-Valley Smart Corridor), and since its formation has been deploying projects to permit multi-agency coordination of traffic operations along freeways, expressways and arterials in Santa Clara County and neighboring counties to improve the efficiency and effectiveness of the overall transportation system; and

WHEREAS, CITY as the Program Manager of the SV-ITS Program, is responsible for the SV-ITS Program consultant contract management; program administration and management; development of Plans, Specifications & Estimates; program agreement development; design/engineering review services; grant management; construction management (when applicable); and the program system operations and management; and

WHEREAS, VTA as the owner and operator of the Combined System Duct (CSD) under the Light Rail Vehicle (LRV) trackway is responsible for the system operations and management of the CSD, including the usage of the CITY’s or third party’s fiber optic cables in the CSD; and access control for construction and maintenance activities by the CITY or third party into LRV facilities, including the CSD; and

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WHEREAS, the existing Single-Mode Fiber (SMF) cable currently used for the SV-ITS Program along First Street between St. James Street and the River Oaks Light Rail Transit (LRT) station at River Oaks Parkway is located within the CSD under the LRV trackway, as depicted in Exhibit A; and

WHEREAS, as part of the TLSP project, the CITY will relinquish to VTA the use and ownership of the existing SV-ITS Program's SMF cable, currently in the CSD under the LRV trackway, and install a new trunk SMF cable in the CSD; and

WHEREAS, CITY and VTA desire to enter into this AGREEMENT to define the roles and responsibilities of each party with respect to the ownership, operations and maintenance, and use of both the existing and new fiber optic cables and VTA conduit and innerducts;

NOW, THEREFORE, in consideration of the mutual promises contained in this AGREEMENT, VTA and CITY agree as follows:

AGREEMENT

1. Definitions

Single Mode Fiber Optic (SMF) Cable – A cable comprised of several optical fiber strands that are used for the transmission of a single ray or mode of light as a carrier, and is used for long-distance signal transmission.

Branch SMF Cable – A SMF cable that is spliced to a SMF mainline trunk cable to serve a building or other transportation field elements.

VTA Combined System Duct (CSD) – A bank of several underground conduits that provides a common and coordinated underground structure for cables and wires for electrical and communications systems along the VTA LRV corridors.

Silicon-Valley ITS Program (VTA/SV-ITS Program) SMF Cable – A 48-strand SMF cable installed by the Silicon-Valley Smart Corridor (SVSC) in the VTA CSD by the Santa Clara County SVSC Phases 1 & 2, East Contract project; whereas, twenty four (24) fiber strands are assigned to be used by the SV-ITS Program and the other twenty four (24) fiber strands by VTA.

Optical Time-Domain Reflectometer (OTDR) – A measurement instrument to document the amount of loss over a distance of optical fiber or at a point where two fiber cables have been spliced together.

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2. Fiber Optic Cable Installation

CITY shall secure a VTA Construction Access Permit to perform construction work within the CSD and VTA facilities and buildings to 1) relinquish to VTA the existing VTA/SV-ITS Program SMF cable, 2) install branch SMF cables to the relinquish SMF cable, and 3) install a new trunk SMF cable as depicted in **Exhibit A** and described below.

- 2.1 CITY will disconnect the existing VTA/SV-ITS Program SMF cable from the existing SMF cables at First Street and Brokaw Road, First Street and Trimble Road, First Street and Montague Expressway, and First Street and River Oaks Parkway, as depicted in **Exhibit A**, and re-splice the fiber strands of the existing VTA/SV-ITS Program SMF cable.
- 2.2 CITY will install a new branch SMF cable and all necessary splices in the existing VTA conduit path between VTA River Oaks LRT station and VTA Office at 3331 N. First Street and terminate the fiber in VTA's Building C, as depicted in **Exhibit A**.
- 2.3 CITY will install new branch SMF cable along First Street and Santa Clara Street from St James Street to VTA's Downtown Customer Service Center located at 2 North First, as depicted in **Exhibit A**.
- 2.4 CITY will install a new trunk SMF cable within the CSD under the LRV trackway along First Street and Tasman Drive, from Santa Clara Street to the VTA Baypointe LRT station on Tasman Drive, as depicted in **Exhibit A**.
- 2.5 CITY will perform Optical Time-Domain Reflectometer (OTDR) testing, as outlined under **Exhibit B**, of the relinquished, new branch, and new trunk SMF cables to ensure work was performed to industry standards. If damage is discovered in the relinquished, new branch, and trunk SMF cables, CITY will perform a point repair and retest the spliced fiber strands.

3. Fiber Optic Cable Use

- 3.1 New trunk SMF Cable (within VTA owned CSD along First Street and Tasman Drive from St. James Street to the VTA Baypointe LRT Station on Tasman Drive)
 - 3.1.1 CITY, on behalf of the SV-ITS Program, shall own, maintain, and operate the new trunk SMF cable. Usage of the new trunk SMF cable is exclusively for the following purposes:
 - 3.1.1.1 To facilitate communications between the SV-ITS Program partner agency Transportation Management Centers (TMC) or the VTA Operations Control Center (OCC).

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- 3.1.1.2 To facilitate communications between the TMCs or OCC and traffic management field devices such as Dynamic Message Signs (DMS) for traveler information dissemination, traffic signal controller assembles, and traffic surveillance systems (both data and video images).
 - 3.1.1.3 To facilitate City staff communications between CITY facilities, such as Fire Stations, Police Substations, Libraries, and Community Centers, for transportation/public safety purposes.
 - 3.1.2 Unused fiber strands in the new trunk SMF cable will be available for use by VTA's or SV-ITS Program partner agency for transportation/public safety related purposes upon written request and approval by CITY.
 - 3.1.3 CITY, on behalf of the SV-ITS Program, shall not sell unused fiber strands in the new trunk SMF cable to other third parties (commercial uses such as an Internet Service Provider (ISP) or telecommunication companies).
 - 3.1.4 CITY, on behalf of the SV-ITS Program, shall have the right to lease the unused fiber strands in the new trunk SMF cable to third parties such as telecommunication companies with the prior approval of VTA.
 - 3.2 Relinquished SMF Cable (along First Street from St. James Street to the VTA River Oaks LRT Station)
 - 3.2.1 VTA shall be the sole owner and shall maintain exclusive rights to use and operate the relinquished SMF cable for purposes it deems appropriate. Title of the relinquished SMF cable shall automatically be conveyed from CITY to VTA upon written notice from CITY of completion of project, which notice shall be provided within 10 days of completion of the project. Completion of the project includes VTA's written acceptance of the required testing set forth in **Exhibit B**.
 - 3.2.2 Upon CITY's completion of the project and VTA's written acceptance of the required testing outlined in **EXHIBIT B**, CITY provides no warranty whatsoever of the reliability, usefulness, availability, or otherwise of the relinquished SMF cable.
 - 3.3 New Branch SMF Cables (between VTA River Oaks LRT station and VTA Office at 3331 N. First Street VTA; and along First Street and Santa Clara Street from St James Street to VTA's Downtown Customer Service Center at 2 North First)
 - 3.3.1 VTA shall own and maintain exclusive rights to use and operate the new Branch SMF cables for purposes it deems appropriate.

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- 3.3.2 Upon completing the required testing outlined in EXHIBIT B, and VTA's acceptance, CITY provides no warranty whatsoever of the reliability, usefulness, availability, or otherwise of the new Branch SMF cables.

4. VTA CSD Innerduct and Conduit Use

- 4.1 VTA authorizes CITY to use one of the four existing innerducts, as designated by VTA, and a 4-inch conduit for the installation of the new trunk SMF cable within the VTA CSD under the LRV trackway along First Street and Tasman Drive, from St James Street to the VTA Baypointe LRT station on Tasman Drive.
- 4.2 VTA also authorizes CITY/SV-ITS Program to use a spare 4-inch conduit at various segments as identified in the subsequent Construction Access permit for the installation of the new trunk SMF cable with the VTA CSD under LRV trackway.

5. Maintenance and Operations

- 5.1 CITY's Roles and Responsibilities, as Program Manager of the SV-ITS Program and on behalf of the SV-ITS Program:
- 5.1.1 CITY shall be responsible for the maintenance and operation of the new trunk SMF cable, including the related peripherals attached to the cable within the VTA CSD under the LRV trackway.
- 5.1.2 Any maintenance work required by CITY within the VTA CSD under the LRV trackway shall conform to the VTA latest Restricted Access Procedures Manual (TTT-RA-0624)
- 5.1.3 CITY or its contractors or representatives who work within the vicinity of the LRV trackway shall have completed the latest VTA Roadway Worker Protection (TTT-RA-0765) training and must have valid Roadway Worker Safety Certification permit.
- 5.1.4 CITY shall be responsible for damage to the innerducts or equipment/cabling within VTA CSD under the LRV trackway caused by or arising out of the actions or omissions of CITY or its contractors or representatives. Prior to performing maintenance work within VTA CSD under the LRV trackway, CITY must provide VTA with evidence of meeting the required insurance coverage outlined in the VTA Construction Access Permit in effect at the time.
- 5.1.5 Fiber optic cable damages caused by the CITY or its contractors or representatives that affect VTA operations shall be repaired by CITY. The

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damaged fiber optic cable shall be temporarily, if applicable, repaired within four (4) hours (if damage occurred during business working hours between 8 am and 5 pm), and eight (8) hours (if damage occurred during non-business working hours) of the damage occurrence to restore full communications. If the end equipment is not communicating after the temporary repair has been completed, then the temporary repair shall be re-done within one (1) hour after being notified of the temporary repair failure. City shall use its reasonable efforts to complete the repairs within thirty (30) days after the acceptance of the temporary repair. The permanent repair shall be performed at a time not to disrupt system operations and repairs shall not exceed four (4) hours in duration within a 24 hour period. Seven (7) days prior to performing any permanent work, notice shall be given to VTA.

- 5.1.6 CITY shall contact VTA to obtain an Emergency Restricted Access Permit if emergency repairs are required for the new trunk SMF cable.

5.2 VTA Roles and Responsibilities

- 5.2.1 VTA shall maintain and operate the existing relinquished SMF cable along First Street from St. James Street to the River Oaks LRT station upon written notice from CITY of the completion of the project, and VTA's written acceptance of the required testing set forth in **Exhibit B**.
- 5.2.2 VTA shall maintain and operate the new branch SMF cables between VTA River Oaks LRT station and VTA Office at 3331 N. First Street VTA; and along First Street and Santa Clara Street from St James Street to VTA's Downtown Customer Service Center at 2 North First Street, upon written notice from CITY of the completion of the project and VTA's written acceptance of the required testing set forth in **Exhibit B**.
- 5.2.3 VTA shall maintain and operate all interduct systems within the VTA CSD under the LRV trackway regardless of which party's SMF cable is contained within, upon written notice from City of the completion of the project and VTA's written acceptance of the required testing set forth in **Exhibit B**.
- 5.2.4 Fiber optic cable damage within the VTA CSD under the LRV trackway caused by the VTA staff or its contractors or representatives that affect CITY/SV-ITS Program operations shall be repaired by VTA. VTA, at its sole option, may engage CITY to make the repair and reimburse CITY for all incurred repair costs. The damaged fiber optic cable shall be temporarily, if applicable, repaired within four (4) hours (if damage occurred during business working hours between 8 am and 5 pm), and eight (8) hours (if damage occurred during non-business working hours) of the damage occurrence to restore full communications. If the end equipment is not communicating after the temporary repair has been completed, then the

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temporary repair shall be re-done within one (1) hour after being notified of the temporary repair failure. VTA shall use its reasonable efforts to complete repairs within thirty (30) days after the acceptance of the temporary repair. The permanent repair shall be performed at a time not to disrupt system operations and shall not to exceed four (4) hours in duration within a 24 hour period. Seven (7) days prior to performing any permanent work, notice shall be given to CITY.

5.2.5 Fiber optic cable damage caused by a third party who secured a VTA Construction Access permit, Restricted Access permit, and Emergency Restricted Access permit that affect CITY/SV-ITS Program operations shall be repaired by VTA as outlined in the Section 5.2.4 above.

5.2.6 VTA shall be responsible for the administration of Restricted Access permits, including Emergency Restricted Access permits; and providing Roadway Worker Protection training to CITY/SV-ITS Program staff or its representatives.

6. CITY/SV-ITS Program Future Construction within VTA CSD

This Agreement only covers the use by CITY and by CITY for the SV-ITS Program of one of four interducts and a 4-inch conduit within the VTA CSD under the LRV trackway for the installation of the new trunk SMF cable along First Street and Tasman Drive from St James Street to the VTA Baypointe LRT station on Tasman Drive.

Installations of new cables beyond those listed above shall require amending this Agreement or entering into a new agreement, and securing a VTA Construction Access Permit. This Agreement does not imply future access rights will be granted by VTA to CITY or its partners for future installation of cables or conductors within other parts of the CSD.

7. Future Opportunities to Use CITY/SV-ITS Program Conduits and Innerducts within CITY Right Of Way (ROW)

CITY, as program manager of the SV-ITS Program, and VTA shall work cooperatively in the future to allow VTA an opportunity to use CITY's and/or the SV-ITS Program communications conduits. VTA shall secure a CITY encroachment permit and necessary approval for installation of communications media in CITY or SV-ITS Program conduits within CITY ROW.

8. Hold Harmless / Indemnification

In lieu of and notwithstanding the pro rata risk allocation which might otherwise be imposed between the PARTIES pursuant to Government Code Section 895.6, the PARTIES agree that all losses or liabilities incurred by either Party shall not be shared

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pro rata. Instead, the PARTIES agree that, pursuant to Government Code Section 895.4, each PARTY hereto shall fully defend, indemnify and hold harmless the other PARTY, its officers, council members, employees, and agents, from any claim, loss or liability arising from or as a result of the death of any person or any accident, injury, loss or damage caused to any person or property of any person occurring by reason of the willful or negligent acts (active or passive) or omissions of the indemnifying PARTY, its officers, employees or agents, arising out of or relating in any way to the indemnifying PARTY's performance of this AGREEMENT.

9. Entire Agreement

This AGREEMENT contains the entire agreement between the PARTIES relating to the PROJECT. Any prior agreements, promises, negotiations, or representations not expressly set forth in this AGREEMENT are of no force or effect.

10. Governing Law and Venue

This AGREEMENT shall be governed and construed in accordance with the laws of the State of California. In the event that suit is brought by either PARTY, the PARTIES agree that trial of such action shall be exclusively vested in a state court in the County of Santa Clara or, if federal jurisdiction is appropriate, in the United States District Court for the Northern District of California, San Jose, California.

11. Acquisition of Property

It is understood and agreed that the project as described herein is totally within existing VTA rights-of-way and no property acquisition or dedication is necessary.

12. Term of Agreement

The term of this AGREEMENT shall commence upon execution of the AGREEMENT by both PARTIES and shall extend until terminated by mutual agreement of the PARTIES. The PARTIES may at any time mutually agree to amend this AGREEMENT in whole or in part by written amendment.

13. Severability

Should any part of this AGREEMENT be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect the validity of the remainder of this AGREEMENT which shall continue in full force and effect; provided that the remainder of the AGREEMENT, absent the excised portion, be reasonably interpreted to give effect to the intentions of the PARTIES.

14. Non Waiver

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A failure by either PARTY to require full compliance with any requirement or condition of this AGREEMENT shall not be deemed to be waiver of that requirement or condition or of any subsequent breach of the same or any other requirement or condition. Acceptance of performance or fulfillment of a requirement or a condition by the other PARTY shall not be deemed to be a waiver of any preceding breach, regardless of knowledge or such preceding breach at the time of acceptance.

15. Notices

All notices required to be given hereunder, or which either PARTY may wish to give, shall be in writing and shall be served either by personal delivery or by mail, postage prepaid, addressed as follows, or to such other place as either PARTY may designate by written notice:

Mr. Gary Miskell
Chief Information Officer
Santa Clara Valley Transportation
Authority
3331 North First Street, Bldg C-1
San José, CA 95134
Attn: Richard D. Bertalan

Mr. Hans Larsen
Director of Department of Transportation
City of San José
200 East Santa Clara Street, 8th Floor Tower
San José, CA 95113
Attn: Lily Lim-Tsao

Notice shall be deemed effective on the date personally delivered or, if mailed, three (3) days after deposit in the United States mail.

16. Dispute Resolution

If a question arises regarding interpretation of this Agreement or its performance, or the alleged failure of a Party to perform, the Party raising the question or making the allegation shall give written notice thereof to the other Party. The Parties shall promptly meet in an effort to resolve the issues raised. If the Parties fail to resolve the issues raised, alternative forms of dispute resolution, including mediation, may be pursued by mutual agreement. It is the intent of the Parties to the extent possible that litigation be avoided as a method of dispute resolution.

17. Amendments

Future amendments to this Agreement shall be processed by mutual written agreement of the Parties. Unless otherwise provided herein, any amendments to this Agreement must be approved by CITY's Manager. Whenever possible, notice to amend this Agreement shall be provided ninety (90) calendar days prior to the desired effective date of such amendment.

18. Warranty of Authority to Execute Agreement

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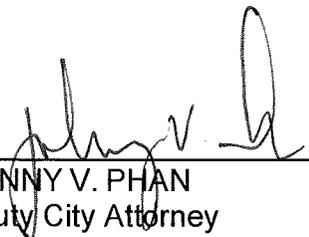
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Each Party to this Agreement represents and warrants that each person whose signature appears hereon has been duly authorized and has the full authority to execute this Agreement on behalf of the entity that is a Party to this Agreement.

WITNESS THE EXECUTION HEREOF the day and year first hereinabove set forth.

APPROVED AS TO FORM:



JOHNNY V. PHAN
Deputy City Attorney
10/6/12
Date

“CITY”

CITY OF SAN JOSE,
A Municipal Corporation

By _____
DENNIS D. HAWKINS, CMC
City Clerk
Date

APPROVED AS TO FORM:



EVELYN JEAN
VTA COUNSEL
9/19/12
Date

“VTA”

SANTA CLARA VALLEY TRANSPORTATION
AUTHORITY
A public agency

By 

MICHAEL T. BURNS
General Manager
3331 North 1st Street
San Jose, CA 95134
9/25/12
Date

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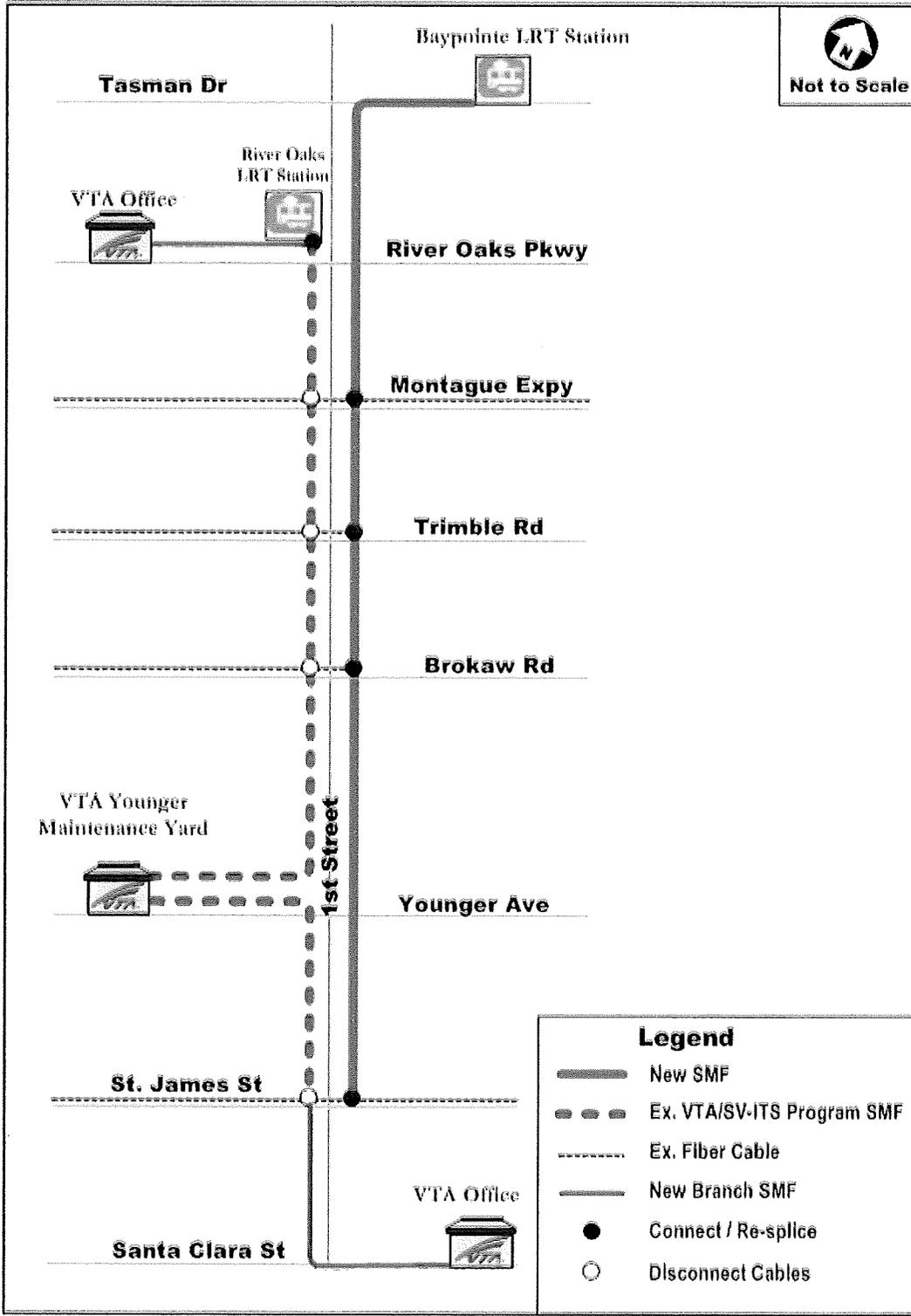
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EXHIBIT A
Fiber Optic Cable Installation Scope of Work



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EXHIBIT B
FIBER OPTIC CABLE TESTING REQUIREMENTS

CITY shall notify VTA of its intent to proceed with testing forty eight (48) hours prior to commencement of each test.

Cable Reel Acceptance Test – For new branch SMF and new trunk SMF cables, a Cable Reel Acceptance Test shall be performed within ten (10) workings from the time the fiber optic cable is received from the supplier. Only one direction needs to be tested with an Optical Time Domain Reflectometer (OTDR). This test is intended to verify that the fiber received from the supplier is in sound condition and without manufacturing defects. Fiber optic cable that does not meet the requirements listed below under the section “General Testing requirements,” shall be replaced.

At the time of testing, the CITY shall inspect the fiber optic cable and record any visible signs of defects. CITY shall note any anomalies on the test results and rescale the OTDR scale for clarity and record. Any anomalies shall be reported immediately to the supplier/manufacturer. CITY shall also note any differences between the 1550nm trace and the 1310nm trace. CITY shall compare the test results to the manufacturer’s specifications and note any discrepancies. CITY shall install heat shrink or other protective covering to the cable end to prevent the entry of moisture or other contaminants.

Test results shall be summarized on the form used by the CITY for Capital Improvement Program projects.

Cable Installation Acceptance Test – For new branch SMF and new trunk SMF cables, a Cable Installation Acceptance Test shall be performed as described in the Cable Reel Acceptance test, except the Installation Test is conducted from both ends of the fiber optic cable. The Installation Test shall be performed within ten (10) workings from the time the fiber optic cable is installed, and before splices or connectors are added.

In addition to the requirements outlined under the Cable Reel Acceptance Test, CITY shall note the differences in measurements taken from opposite directions.

Test results shall be summarized on the form used by the CITY for Capital Improvement Program projects.

Final Acceptance Test - For the relinquished SMF, new branch SMF, and new trunk SMF cables a Final Acceptance Test shall be conducted from both ends of the fiber optic cable within ten (10) working days after all splices have been installed to evaluate total end-to-end loss, splice and connector loss and backreflection, and overall reflectance levels. The end-to end Final Test shall consist of performing OTDR testing; including optical loss and reflection testing with an optical loss test set (OLTS). OLTS test shall be performed for only fiber strands with end connectors.

Test results shall be summarized on the form used by the CITY for Capital Improvement Program projects.

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Optical Loss Test Set - The OLTS shall consist of a light source and power meter that meets the following minimum requirements.

1. Provide dual laser light sources with central wavelengths of 1310 nm (± 20 nm) and 1550 nm (± 20 nm).
2. Output power of -10 dBm minimum.

Power Meter:

1. Provide 850 nm, 1300/1310 nm, and 1550 nm wavelength test capability.
2. Power measurement uncertainty of ± 0.25 dB.

OTDR Test Equipment - The OTDR used shall be provided with certification of its most recent calibration which shall be within twelve (12) months from the date of the testing.

The OTDR operator shall hold a current operators certificate for the equipment used. This certificate shall represent not less than 16 hours of training from the equipment manufacture. This certificate shall be presented to the Engineer at the start of testing.

The OTDR shall have a distance measurement accuracy of $\pm 0.01\%$ and meet the following minimum requirements.

Singlemode OTDR

1. Wavelengths of 1310 nm (± 20 nm) and 1550 nm (± 20 nm).
2. Event deadzones of 2 m maximum at 1310 nm and 2 m maximum at 1550 nm.
3. Attenuation deadzones of 15 m maximum at 1310 nm and 15 m maximum at 1550 nm.
4. Distance range not less than 10,000 m.
5. Dynamic range at least 10 dB at 1310 nm and 1550 nm

General Testing Requirements - All test measurements shall be measured at the wavelengths outline below.

<u>Wavelengths</u>	<u>Attenuation</u>
@ 1,300 nm	≤ 0.4 dB/km
@ 1,550 nm	≤ 0.3 dB/km

A 1,000 meter launch cable, or launch box, shall be used to overcome the dead zone of the OTDR inserted between the OTDR and the optical link.

The OTDR testing shall be done at a scale of at least 1 dB per division on the vertical scale.

Splice Testing - Splice insertion loss shall not exceed 0.1dB mean (0.3dB maximum) as specified in TIA/EIA-758, "Customer Owned Outside Plant Telecommunication Cabling Standard," when measured in accordance with ANSI/ TIA/EIA-455-8, "Measurement of Splice and Connector Loss and Reflectance Using an OTDR."

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